14. Section 69.303 is amended by revising paragraph (c) to read as follows:

§ 69.303 Station equipment.

* * * * *

(c) Investment in all other station equipment shall be apportioned between the Special Access and Common Line elements on the basis of the relative number of equivalent lines in use, as provided herein. Each interstate or foreign Special Access line, excluding lines designated in § 69.115(e), shall be counted as one or more equivalent lines where channels are of higher than voice bandwidth, and the number of equivalent lines shall equal the number of voice capacity analog or digital channels to which the higher capacity is equivalent. Local exchange subscriber lines shall be multiplied by the interstate separations factor for non-traffic sensitive plant to determine the number of equivalent local exchange subscriber lines.

* * * * *

15. Sections 69.304 is amended by revising paragraph (a) and (b) to read as follows:

§ 69.304 Customer OSP.

(a) Investment in local exchange subscriber lines shall be assigned to the Common Line element.

(b) Investment in interstate and foreign private lines and interstate WATS access lines shall be assigned to the Special Access element.

* * * * *

16. Section 69.305 is amended by revising paragraph (b) to read as follows:

§ 69.305 Carrier OSP.

* * * * *

(b) Carrier OSP, other than WATS access lines, not assigned pursuant to paragraph (a) of this section that is used for interexchange services that use switching facilities for origination and termination that are also used for local exchange telephone service shall be apportioned between the dedicated Transport and Common Transport elements. Such OSP shall be assigned to the Dedicated Transport element if it is used exclusively for the interexchange services of a particular carrier.

* * * * *

[FR Doc. 86-6838 Filed 3-28-86; 8:45 am]
BILLING CODE 6712-01-M

INTERSTATE COMMERCE COMMISSION

49 CFR Part 1051

[No. MC-C-10939]

Motor Carriers; Petition for Waiver or Modification of the Recordkeeping Requirements for Shipments of Low Value Packages

AGENCY: Interstate Commerce Commission.

ACTION: Final rule.

SUMMARY: On January 27, 1986, the Commission issued a decision granting a waiver to United Parcel Service (UPS) from the recordkeeping requirements of 49 CFR 1051.1 [51 FR 3516, January 28, 1986]. In that decision we announced that we would examine further the possibility of waiving the recordkeeping provisions with respect to all general freight carriers. The Commission has determined that such proposal has merit and, therefore, is adopting rules allowing waiver of the recordkeeping requirements of 49 CFR 1051.1 for all common carriers and shippers where packages designated as low value are involved.

EFFECTIVE DATE: April 30, 1986.

FOR FURTHER INFORMATION CONTACT: Robin Williams Denick, (202) 275-7711.

or

Howell I. Sporn, (202) 275-7691.

SUPPLEMENTARY INFORMATION:

PART 1051—[AMENDED]

Title 49 of the CFR is amended as follows:

1. The authority citations following § 1051.1 and § 1051.2 are removed and an authority citation for 49 CFR Part 1051 is added to read as follows:

Authority: 49 U.S.C. 10321 and 11144; 5 U.S.C. 553.

2. Section 1051.1 is amended by adding new paragraph (c) to precede the cross reference to read as follows:

§ 1051.1 Information to be shown.

* * * * *

(c) The carrier and shipper may elect to waive the above provisions and use a more streamlined recordkeeping or documentation system, as devised by the common carrier, for distribution of "low value" packages. Election of this waiver includes the option of shipping such packages under the released rates provision of 49 U.S.C. 10730. The shipper has the ultimate responsibility for determining which of its packages should be designated as low value. A useful guideline for such a determination is an invoice value less than or equal to the costs associated with preparing a loss or damage claim.

* * * * *

Additional Information

Additional information is contained in the Commission's decision. To purchase a copy of the full decision, write to T.S. Infosystems, Inc., Room 2229, Interstate Commerce Commission Building, Washington, DC 20423, or call 289-4357 (D.C. Metropolitan area) or toll free (800) 424-45403.

Energy and Environmental Considerations

The final rule, as shown in this notice, will not affect significantly the quality of the human environment or the conservation of energy resources.

Regulatory Flexibility Analysis

The Commission certifies that adoption of the rule modification approved in this proceeding will not have a significant economic impact on a substantial number of small entities because only recordkeeping requirements are waived for certain shipments.

The index terms for 49 CFR Part 1051 are as follows: Buses, Freight, and Motor Carriers.

Decided: March 6, 1986.

By the Commission, Chairman Gradison, Vice Chairman Simmons, Commissioners Sterrett, Andre, and Lamboley. Commissioner Lamboley commented with a separate expression. Vice Chairman Simmons dissented with a separate expression.

James H. Bayne,

Secretary.

[FR Doc. 86-6974 Filed 3-28-86; 8:45 am]
BILLING CODE 7035-01-M

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Endangered Status and Critical Habitat for the Desert Pupfish

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines the desert pupfish (*Cyprinodon macularius*) to be an endangered species. Critical habitat is also designated for this species in Imperial County, California, and Pima County, Arizona. Viable, self-

sustaining populations of desert pupfish are now believed to exist in only two of the historic habitats in the United States. The remaining populations in Mexico are also reported to be declining or vulnerable. The surviving natural populations are impacted by competition from exotic fishes for food and space, predation by exotic fishes, water pollution, ground-water pumping, agricultural pesticide drift, stream channelization, and possibly the habitat modifications associated with flooding in the Colorado River delta in 1983 and 1984. Designation of the desert pupfish as an endangered species affords this species the full protection provided by the Endangered Species Act of 1973, as amended.

DATE: The effective date of this rule is April 30, 1986.

ADDRESS: The complete file for this rule is available for inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Lloyd 500 Building, Suite 1692, 500 NE., Multnomah Street, Portland, Oregon 97232.

FOR FURTHER INFORMATION CONTACT: Mr. Wayne S. White, Chief, Division of Endangered Species, at the above address, (503/231–6131 or FTS 429–6131).

SUPPLEMENTARY INFORMATION:

Background

The desert pupfish (*Cyprinodon macularius*) is a small, laterally-compressed fish with a smoothly rounded body shape. Adult fish rarely grow larger than 75 millimeters (3 inches) in total length. Males are larger than females and during the reproductive season become brightly colored with blue on the dorsal portion of the head and sides and yellow on the caudal fin and the posterior part of the caudal peduncle. Females and juveniles typically have tan to olive backs and silvery sides. Most adults have narrow, vertical, dark bars on their sides, which are often interrupted to give the impression of a disjunct, lateral band. The desert pupfish was described in 1853 by Baird and Girard from specimens collected in the San Pedro River of Arizona.

The desert pupfish was once common in the desert springs, marshes, and tributary streams of the lower Gila and Colorado River drainages in Arizona, California, and Mexico. It also formerly occurred in the slow-moving reaches of some large rivers, including the Colorado, Gila, San Pedro, and Santa Cruz. The species is currently known from only two historic locations in the United States. In California, it still exists in two Salton Sea tributaries (San Felipe Creek system and its associated wetland San Sebastian Marsh, Imperial County, and Salt Creek, Riverside County) and a few shoreline pools and irrigation drains along the Salton Sea in Imperial and Riverside Counties. In Arizona, it still inhabits Quitobaquito Spring within the Organ Pipe Cactus National Monument in Pima County. The species is also believed to inhabit the Colorado River system in the Rio Sonoyta drainage and Santa Clara Slough in Sonora, Mexico. Recent surveys of Salt Creek and the irrigation drains around the Salton Sea (Moore, 1983) and the Rio Sonoyta (McMahon and Miller, 1985) indicate that the populations there may now be reduced to such low levels that they are no longer viable. The current status of the population in Santa Clara Slough is unknown. However, the floods that inundated vast reaches of the Colorado River delta in 1983 and 1984 may have given tilapia (*Tilapia zillii*), largemouth bass (*Micropterus salmoides*), and other exotic fishes that compete with, or prey upon, the desert pupfish, access to this slough. These recent high flows also may have enhanced habitat conditions for exotic fishes by improving water quality in the delta.

Refugia populations of desert pupfish have been established in Arizona at Bog Hole (Santa Cruz County), Research Ranch (Santa Cruz County), Arizona-Sonora Desert Museum (Pima County), Boyce Thompson Arboretum (Pinal County), and Arizona State University (Maricopa County). The Bog Hole and Research Ranch populations are believed to be derived from Quitobaquito Spring. The fish at Arizona-Sonora Desert Museum and Boyce Thompson Arboretum were obtained from Dexter National Fish Hatchery, which obtained its fish from the Santa Clara Slough population. Two populations have been established in refugia at Arizona State University, one derived from Quitobaquito Spring and the other from Santa Clara Slough.

In California, refugia populations exist at Salton Sea State Park (Riverside County), the Living Desert Reserve (Riverside County), and three separate locations in Anza-Borrego State Park (San Diego County). The populations in Salton Sea State Park and the Living Desert Reserve are derived from Salton Sea Stock. Two of the refugia populations at Anza-Borrego State Park (Palm Spring and the Visitor Center) are derived from the Salton Sea; the third (Palm Canyon) is derived from San Felipe Creek. Most of these refugia populations are maintained in highly artificial environments, and contain relatively small numbers of fish.

Desert pupfish are also being held at Dexter National Fish Hatchery, Dexter, New Mexico. These fish were obtained from Santa Clara Slough. They are being maintained in that facility for use in research and for future reintroduction efforts in Arizona.

Desert pupfish were recently introduced into one natural and two manmade spring habitats on Bureau of Land Management (BLM) land in Arizona. These populations, which were established from the stock at Dexter National Fish Hatchery, are located at Peoples Canyon in the Bill Williams River drainage (Yavapai County), Howard Well in the Gila River drainage (Graham County), and Mesquite Spring in the Gila River drainage (Pinal County). However, it will be some time before it is known whether these introductions have resulted in the establishment of self-sustaining populations that can survive the local climatic regime.

Land ownership of the remnant natural habitats in the United States is divided between private and Federal interests. Quitobaquito Spring is entirely on National Park Service Lands within the boundaries of Organ Pipe Cactus National Mounment. Title to the lands along San Felipe Creek is arranged in a checkerboard pattern, about evenly divided between Federal and private holdings.

Desert pupfish are adapted to harsh desert environments and are capable of surviving extreme environmental conditions. They have been reported to survive water temperatures in excess of 43.3 Centigrade (110 Fahrenheit) (Moyle, 1976), oxygen levels as low as 0.1 to 0.4 parts per million (Lowe *et al.*, 1967), and salinities nearly twice that of seawater (Barlow, 1958). They are also capable of surviving extreme fluctuations in temperature (Lowe and Heath, 1969) and daily salinity changes of as much as 10 to 15 parts per thousand (Kinne, 1960). Although desert pupfish are extremely hardy in many respects, they cannot tolerate competition or predation and are thus readily displaced by exotic fishes.

Desert pupfish mature rapidly and may produce up to three generations per year. Spawning males typically defend a small spawning and feeding territory in shallow water. The eggs are usually laid and fertilized on a flocculent substrate and hatch within a few days. After a few hours, the young begin to feed on small plants and animals. Spawning occurs throughout the spring and summer months. Individuals typically survive for about a year.

These characteristics, along with the adaptability of the desert pupfish to laboratory aquaria, make it a valuable research animal for ichthyologists and

other biologists. A great deal has been learned from this species about fish ecology, genetics, behavior, and physiology. In addition, the rapidity with which the desert pupfish and other members of the genus *Cyprinodon* differentiated into distinct species may give scientists valuable insights into the process of speciation.

The precarious status of the desert pupfish is recognized by the State of California, which has classified the desert pupfish as an "endangered" species, and by the State of Arizona, which has included the desert pupfish on its list of native species that are in danger of being extirpated from the State. The desert pupfish was included in the Service's December 30, 1982, Review of Vertebrate Wildlife for Listing as Endangered or Threatened Species (47 FR 58454). In that review, the desert pupfish was classified as a category 1 species, indicating that the Service had substantial information on hand to support a proposed rule to list the species as endangered or threatened. On April 12, 1983, the Service was petitioned by the Desert Fishes Council to list the desert pupfish. The Service published a notice of finding on June 14, 1983 (48 FR 27273), announcing that the petition had presented substantial information indicating that listing may be warranted. On May 16, 1984, the Service published a proposed rule to list the desert pupfish as an endangered species and declare critical habitat (49 FR 20739), in accordance with Section 4(b)(3)(B)(ii) of the Endangered Species Act of 1973, as amended.

Summary of Comments and Recommendations

In the May 16, 1984, proposed rule (49 FR 20739) 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 governments, Federal agencies, foreign governments, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices were published in the *Arizona Republic*, the *Tucson Citizen*, and *Ajo Copper News* on June 13, 1984, and in the *Imperial Valley Press* on June 15, 1984, which invited general public comment. The Service received written comments from 28 interested parties in response to these notifications and newspaper notices. These comments are grouped together by subject matter and are discussed below, together with the Service's response. Four of the commentors expressed support for the proposed rule, and one commentor submitted recommendations for protecting critical habitat without expressing support or opposition.

Comments were received from the Arizona Game and Fish Department (AGFD), Bureau of Land Management (BLM) and Arizona-New Mexico Chapter of the American Fisheries Society (AFS) expressing support for listing the desert pupfish as endangered but recommending that introduced populations in all or parts of Arizona be excluded. The Service replies that the reintroductions already conducted and those proposed in Arizona are essential for recovery of this species. The Service does not believe this rule is the appropriate mechanism for excluding such populations from the protection afforded by the Endangered Species Act. When the Act was reauthorized in 1982, it was amended to authorize the Secretary to designate introduced populations, including those introduced before a species is listed, as experimental, if circumstances warrant such designation. Populations that are determined to be experimental, and not essential to the survival of the species, pursuant to section 10(j) of the Act are exempt from the formal consultation requirements prescribed in section 7. The 1982 Amendments to the Act also provide greater flexibility with respect to the taking of endangered species from experimental populations. Section 9 of the Act generally prohibits the taking of endangered species of fish and wildlife. However, experimental populations are treated as threatened species even though the donor populations from which they are derived are listed as endangered. If an introduced population is determind to be experimental, and thereby threatened for the purposes of Section 9, the Secretary may impose less restrictive prohibitions on the take of animals from that population pursuant to section 4(d) of the Act. In view of the increased flexibility provided by the 1982 Amendments relative to experimental populations, the Service believes that the appropriate mechanism for responding to the concerns expressed by BLM, AGFD, and AFS regarding the proposed introductions is through a separate rulemaking conducted pursuant to section 10(j).

AGFD and AFS also recommended that the final rule identify the status of introduced populations throughout the desert pupfish's historic range. AFS further recommended that a survey be conducted in Santa Clara Slough to assess the impact that the recent high flows in the Colorado River delta have had on that habitat. The Service replies that the current status of all known introduced and refugia populations of desert pupfish is discussed in the background section. Continued monitoring of the desert pupfish and its habitat, including Santa Clara Slough, will be part of the recovery effort.

BLM noted that the proposal failed to recognize that BLM has designated the area around San Sebastian Marsh in Imperial County, California, as an Area of Critical Environmental Concern (ACEC), and that BLM and other agencies are involved in cooperative efforts to acquire private inholdings within that ACEC. The Service acknowledges that BLM and other agencies are cooperating in efforts to secure the integrity of the critical habitat, and appreciates such efforts.

AGFD, BLM, and AFS expressed concern about a lack of interagency coordination during the development of the proposed rule. The Service acknowledges that some misunderstandings occurred as a result of differing interpretations of decisions reached at a 1981 meeting attended by representatives of all affected agencies. Measures have been taken to insure that adequate coordination occurs on all future actions involving the desert pupfish.

One letter of support for the rulemaking, as proposed for California populations, was received from the Western Regional Office (WRO) of the National Park Service (NPS). However, support was withheld for the listing and designation of critical habitat at Quitobaquito Spring, Arizona, pending the completion of ongoing studies. The WRO expressed concern that listing the desert pupfish would mandate single species management actions for the area, thus precluding research and management activities that are needed to maintain other native species at the Monument. The WRO noted that threats to Quitobaquito Spring include pesticide drift from new agricultural uses in Mexico and groundwater pumping that could conceivably eliminate spring flow to that entire ecosystem. The Service responds that it is not appropriate to exclude the population at Quitobaquito Spring from the application of the final rule. That determination is based on threats to the habitat that are cited in the proposed rule and that are reiterated by the WRO in its comments on the proposal. Section 4(b)(1) of the Endangered Species Act specifies that determinations to list a species shall be based solely on the best scientific and commercial data available regarding the status of a species. Pursuant to section 4(b)(2) of the Act, the Service may exclude an area from critical habitat if

the benefits of such exclusion outweigh the benefits of inclusion, unless the failure to designate the area will result in extinction of the species. The NPS, however, did not provide any information or data to indicate that the benefits of excluding Quitobaquito Spring and its riparian area outweigh the benefits of its inclusion as critical habitat. The Service recognizes that the NPS has a responsibility to conserve other native species that occur at Quitobaquito Spring, but considers that listing the desert pupfish and designating its critical habitat are compatible with NPS conservation responsibilities.

Comments were received from four user groups expressing concern or opposition to the proposed rule. Two of these, the Coachella Valley Water District (CVWD) and Imperial Irrigation District (IID) shared several concerns and doubted that the desert pupfish qualifies for listing under the Endangered Species Act. The two districts contended that the range of the desert pupfish and the amount of available habitat is greater today than it was prior to the formation of the Salton Sea in 1905. They also contended that the construction of agricultural drains around the Salton Sea and the establishment of refugia at Anza-Borrego State Park and other locations have increased the amount of desert pupfish habitat over what was available historically. On this basis, they asserted that the range and habitat of the desert pupfish is not in danger of destruction, significant modification, or curtailment. The Service responds that the decline in the distribution and abundance of the desert pupfish is well documented in the proposed rule. The Service rejects contentions by the two districts that the distribution of the desert pupfish is greater today than prior to 1905 because of the formation of the Salton Sea. Although the desert pupfish was once abundant in the Salton Sea and its tributaries, this species has now been extirpated from all but one of its historic habitats in Arizona, from all but one of its historic habitats in California, and from all but one or two of its historic habitats in Mexico.

CVWD and IID noted that no information is presented in the proposed rule to indicate that the desert pupfish is overutilized for commercial, recreational, scientific, or educational purposes. The Service responds that overutilization for commercial, recreational, scientific, or educational purposes is not a significant current threat to the survival of the desert pupfish.

CVWD and IID questioned the validity of the sampling techniques and methodology used to estimate desert pupfish numbers in and around the Salton Sea, and they viewed as spurious those reports in the literature that indicate a decline in desert pupfish abundance since 1960. They projected that the Salton Sea would contain 239,000 pupfish if the population density is only one desert pupfish per acre. On this basis, they contended that the threats related to predation and disease are not adequately documented, and therefore, listing of the desert pupfish as endangered is not justified. The Service responds that the sampling techniques used to document the decline of desert pupfish in the Salton Sea and its tributaries are scientifically valid. All of the published data indicate that desert pupfish numbers in the Salton Sea have declined drastically in the last 20 to 30 years. The two districts did not present any data to support their projection that the Salton Sea may have a population of 239,000 desert pupfish. For that projection to be valid, desert pupfish would have to be uniformly distributed throughout the Sea and have an average population density of a least one desert pupfish per acre. The Service does not accept the validity of either assumption. Historical observations indicate that the desert pupfish was never very common in the open waters of the Salton Sea, and recent collection records show the desert pupfish to be extremely rare or absent from the inshore areas. In 1983, the California Department of Fish and Game (CDFG) surveyed a variety of Salton Sea habitats. Its surveys involved over 13,000 trap-hours and yielded only six desert pupfish. These six fish represented less than 0.1% of the total number of all fish collected. The Service believes these survey data, in conjunction with the results summarized by Black (1980), McMahon and Miller (1985), Miller (1943), Miller (1961), and Schoenherr (1980) provide adequate documentation to support a finding that the desert pupfish population has declined and that the species is endangered.

Both CVWD and IID commented that existing land uses within Organ Pipe Cactus National Monument are controlled to insure protection of the desert pupfish at that site. They also stated that BLM and NPS have designated desert pupfish habitats as protected and manage them accordingly. They noted that the State of California has placed the desert pupfish on its endangered species list. On this basis, they contended that existing regulatory mechanisms are adequate to insure the continued existence of the desert pupfish. The Service responds that some protective actions have been taken by State and Federal agencies to help prevent the extinction of the desert pupfish. However, the Service does not believe these actions are sufficient to insure the species' continued existence. This determination is supported by the comments of the Resources Secretary of the State of California, who noted that, subsequent to State listing, CDFG has requested emergency Federal listing of this critically endangered fish on three occasions.

CVWD and IID also contended that other natural or manmade factors do not support a finding that the desert pupfish is endangered. They commented that *Hydrilla* is not currently present in desert pupfish habitat, and therefore, no scientific basis exists for believing this plant is a threat to this species. They further commented that the Service failed to provide any scientific evidence that pesticides are significantly reducing the pupfish population or that a major pesticide spill is probable. The Service agrees that *Hydrilla* is not present in desert pupfish habitat, but the Service disagrees with the conclusion that it is not a potential threat. *Hydrilla* has invaded many aquatic habitats and the distinct possibility exists that it could become established in the fish's habitat. If this plant does invade the ecosystem, extreme control methods (mechanical, chemical, and biological) will likely be recommended. As an example, CVWD has proposed using grass carp to control aquatic weed growth in the Imperial and Coachella Valleys. If *Hydrialla* becomes established in the irrigation drains and canals around the Salton Sea and grass carp are used as a control, the carp may compete for food and space with the desert pupfish. With respect to the contention that pesticide drift is not a problem, the Service notes that the National Park Service's comments on the proposed rule also indicate that pesticide drift from Mexico is a significant potential threat to the population in Quitobaquito Spring.

The CVWD and IID commented that section 4(b) of the Endangered Species Act requires the Secretary to take into consideration the efforts being made by any State, or any political subdivision of a State, to protect a species. They stated that the State of California has placed the desert pupfish on its endangered species list and that this action provides prohibitions against taking the fish without a permit. They noted that CDFG has been working with the Federal Government to establish an Area of Environmental Concern and an

Outstanding Natural Area in the San Felipe Creek watershed to protect the desert pupfish. They noted that desert pupfish have been established in refugia at Anza-Borrego State Park and other locations. They also noted that Riverside, San Diego, and Imperial Counties are required, under the California Environmental Quality Act, to mitigate impacts related to development that might adversely affect the desert pupfish. They concluded that because of these conservation actions, the desert pupfish is not in danger of extinction throughout all or a significant portion of its range, and, therefore, it does not need to be listed as endangered. After consulting with the affected States, the Service has determined that existing conservation efforts are not adequate to insure the continued existence of the desert pupfish. That determination is based on the comments submitted by State Officials from Arizona and California, which are summarized herein.

IID, CVWD, and the two other water user groups, Imperial Dam Advisory Board (IDAB), and Yuma County Water User's Association (YCWUA), expressed concern that listing the desert pupfish would adversely affect operation and maintenance activities associated with irrigation. In addition, YCWUA contended that the maintenance work performed by water related agencies has been beneficial to the desert pupfish because the amount of usable fish habitat has been increased by the periodic removal of aquatic vegetation; hence, the desert pupfish should not be listed as endangered. IID requested that all maintained systems currently used for irrigation or the diversion of runoff or flood waters be excluded from the application of the final rule. The Service responds that the dredging activities carried out by water districts to maintain the irrigation drains and canals around the Salton Sea have not been a significant factor in the recent decline of the desert pupfish. Prior to the invasion of tilapia and sailfin mollies into these habitats, desert pupfish were present in large numbers and survived the districts' periodic dredging operations without apparent ill effect. Even though desert pupfish are now truly scarce or entirely absent from these habitats, the Service recognizes that there is still some potential for incidental take to occur in the course of the districts' normal maintenance operations. However, the Service has determined that it does not have the authority under the Endangered Species Act to exclude the districts' irrigation drains and canals from the application of the final rule. That determination is based on section (4)(b)(1) of the Act, which specifies that determinations to list a species shall be based solely on the best scientific and commercial data available. The Service notes, however, that incidental take of an endangered species may be authorized pursuant to section 7 or section 10(a) of the Endangered Species Act.

CVWD requested that the listing process be extended for six months to allow time for additional data to be obtained. The Service replies that it does not believe that substantial information has been presented to show that CDFG's collection data are either insufficient or inaccurate.

A letter of support was received from the Organ Pipe Cactus National Monument. In addition, it recommended expanding the critical habitat to be designated at Quitobaquito Spring to include a buffer zone. The Service considers the proposed critical habitat to be sufficient to delineate the areas essential to the conservation of the desert pupfish. If future surveys indicate the existence of additional areas warranting designation as critical habitat, the Service will consider making such a designation.

Three California State agencies expressed support for listing the desert pupfish as endangered. The Secretary of the State of California commented that he and Governor Deukmejian fully support including *Cyprinodon macularius* on the Federal list of endangered species, and endorse the designation of critical habitat as proposed. The CDFG supported listing the desert pupfish as endangered and concurred with the proposed critical habitat. CDFG also noted that it had asked the Service to list this species on an emergency basis on three separate occasions. The California Department of Parks and Recreation suggested that Salt Creek in Imperial County should be added as critical habitat, and that the critical habitat in the San Felipe Creek drainage should be expanded to provide a buffer zone large enough to protect the hydrologic features that sustain perennial flows in San Felipe Creek and San Sebastian Marsh. The Service responds that it has decided to retain critical habitat as described in the proposed rule. That determination is based on the information and recommendations submitted by CDFG. If future surveys document the occurrence of viable populations of desert pupfish in other habitats or demonstrate that protection of the designated critical habitat along San Felipe Creek is not adequate for the conservation of the population there, the Service will consider revising the critical habitat.

Two county agencies in California, the Riverside County Parks Department and the Riverside County Planning Department, submitted comments supporting the proposed rule.

Dr. Robert R. Miller, University of Michigan Museum of Zoology; Dr. Larry C. Oglesby, Pomona College; Dr. Jonathan Baskin, California State Polytechnical University; Dr. Allan Schoenherr, Fullerton College; and Mr. J.A. St. Amand, and Mr. K.E. Moore, CDFG Biologists, provided personal observation data on the decline of pupfish numbers. These biologists also provided additional support for the Service's conclusions on the species, and they provided some views on other potential threats. Specifically, Dr. Oglesby was concerned that the brackish water snail of the family Thiaridae, a recent introduction into the Salton Sea system, could compete with the pupfish for food. Mr. J.A. St. Amand reported that the fish could be threatened by lining of the drains and canals for water conservation and potentially by geothermal developments in the Imperial Valley. The Service agrees that these factors could also threaten the continued existence of the desert pupfish.

Dr. Schoenherr also stated that based on his survey results he believes San Felipe Creek contains the only viable California population of the species. The Service agrees that this may be true but believes more study is required before a final determination can be made.

Three conservation organizations, the Desert Fishes Council (DFC), International Union for Conservation of Nature and Natural Resources (IUCN), and Arizona Wildlife Federation (AWF) submitted comments expressing support for listing the desert pupfish as endangered and provided additional information or recommendations concerning the proposed rule. DFC and AWF recommended various measures to protect the remaining desert pupfish habitats. IUCN submitted a draft data sheet on the desert pupfish, prepared for inclusion in the forthcoming IUCN Fish *Red Data Book*, and indicated that the desert pupfish will probably be categorized as endangered in that publication.

Four conservation organizations (Defenders of Wildlife, Desert Tortoise Council, Lower Basin Native Fishes Subcommittee, and Yuma Audubon Society) submitted general comments expressing support for the proposed

rule, but they did not provide any additional information or recommendations concerning the desert pupfish or its habitat.

The Imperial County Planning Department commented that the California Department of Parks and Recreation is considering expansion of the Ocotillo Wells Recreational Area and noted that off-road vehicular use in the San Felipe Creek watershed could adversely affect the critical habitat, but it did not offer an opinion on the rule. The Service agrees that off-road vehicular use may pose a threat.

The Coachella Valley Water District, the Imperial Irrigation District, and the Imperial Dam Advisory Board each requested that a public hearing be held on the proposed rule. On August 13, 1984, the Service published a notice in the **Federal Register** (49 FR 32320) announcing that a public hearing was scheduled to receive public input on this proposal. The hearing was held in Imperial, California, on August 30, 1984. Testimony was presented at this hearing by representatives of four organizations. Two of the representatives spoke in opposition to the proposal, one spoke in support of the proposal, and one spoke in support of expanding critical habitat in the San Felipe Creek watershed, without expressing support or opposition to the proposal as it related to listing the desert pupfish as endangered. A summary of the testimony presented at this hearing is given below along with the Service's response.

The testimony of CVWD and IID was essentially the same as presented in the written comments that were submitted by the two districts regarding the proposed rule. The Service has already responded to these issues. The testimony of the Imperial County Planning Department (ICPD) was also similar to that presented in its written comments on the proposal. In addition, ICPD noted that Imperial County requires a permit for water wells that are drilled in Imperial County and requested the Service to notify ICPD if it becomes aware of attempts to utilize water wells in the vicinity of San Sebastian Marsh. ICPD requested that the critical habitat be expanded to include the area described as critical habitat by Lebo *et al.* (1982). The Service has previously responded to the issue of whether the critical habitat in California should be expanded, and will notify ICPD if it becomes aware of any new well activity in the vicinity of San Sebastian Marsh. The CDFG presented testimony in support of listing the desert pupfish as endangered and responded to several points that were raised by CVWD and IID.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the desert pupfish (*Cyprinodon macularius*) should be classified as an endangered species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424; revised to accommodate 1982 Amendments—see 49 FR 38900, October 1, 1984) were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the desert pupfish (*Cyprinodon macularius*) are as follows:

(A) *The present or threatened destruction, modification, or curtailment of its habitat or range.* At the beginning of the 20th century, the desert pupfish was widespread throughout the lower Gila River and its tributaries, the San Pedro and Santa Cruz Rivers, and the lower Colorado River in Arizona, California, and Baja California; and Sonora, Mexico. Starting in the 1880's many desert rivers began experiencing major erosional cycles that resulted in the loss of permanent waters in numerous pupfish streams and the drying up of the shallow, littoral areas preferred by this species. Miller (1961) related this increase in erosion to overgrazing. The construction of mainstream dams on the Gila, Colorado, and Salt Rivers for irrigation and flood control dewatered the lower Gila and Salt Rivers and eliminated the marshy sidepools in the Colorado River that were utilized by desert pupfish. After this occurred, the pupfish were forced into the mainstream channels of the remaining permanent streams where they were eaten by predators or outcompeted by native and exotic species.

The desert pupfish is now known to exist only in two locations in the United States, the Salton Sea area and Quitobaquito Spring. The desert pupfish in the Salton Sea area have been severely reduced in numbers and distribution as the result of the introduction of exotic fish species, modifications to the water conveyance facilities used for irrigating and draining agricultural lands, the application of agricultural pesticides, the dewatering of some natural spring habitats by groundwater pumping, and the inundation of other spring habitats by the rising waters of the Salton Sea. These factors, in combination, have reduced pupfish numbers in most habitats to such low levels that long-term survival prospects are poor.

The only known habitat in California in which the desert pupfish make up a dominant part of the fish fauna is a short reach of San Felipe Creek and two small tributaries near San Sebastian Marsh (Black 1980). However, the integrity of this habitat is threatened by proposals to convert the privately owned lands to irrigated agriculture. The removal of large volumes of ground-water from the aquifers that feed San Felipe Creek could cause the marsh to become desiccated and destroy its habitat value for pupfish. Geothermal development is also a potential threat to this habitat. Geothermal lease applications have been filed with the Bureau of Land Management for some tracts in the vicinity of San Sebastian Marsh. If geothermal energy is discovered in this area in commercially marketable quantities, it is likely the privately owned lands around San Sebastian Marsh would be developed with adverse consequences to pupfish habitat. The Federal lands around San Sebastian Marsh have been leased for oil and gas exploration with a no surface occupancy stipulation. Oil and gas development on the adjacent privately owned lands could adversely affect desert pupfish habitat, particularly if there are significant surface disturbances. The Federal lands around Salt Creek have been leased for geothermal development and oil and gas exploration.

The population in Quitobaquito Spring is located downwind from nearby farms in Mexico that are sprayed with organophosphates and chlorinated hydrocarbons. Recent studies of this population (Kynard, 1981) revealed that the fish in Quitobaquito Spring contained detectable levels of both parathion and DDT derivatives in the late 1970's. Because of the extremely restricted range of the desert pupfish, any major accidental spills or increased levels of pesticide drift could have a devastating impact on the entire population in Quitobaquito Spring.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* A few individuals may occasionally be taken incidentally from the Salton Sea by anglers collecting sailfin mollies (*Poecilia latipinna*) for bait. However, there is no evidence that desert pupfish are currently overutilized for any purpose.

C. *Disease or predation.* Several known predators and competitors of

desert pupfish have become established in the natural and manmade tributaries of the Salton Sea, including tilapia (*Tilapia mossambica* and *Tilapia zillii*), sailfin mollies, shortfin mollies (*Poecilia mexicana*), mosquitofish (*Gambusia affinis*), pothole livebearers (*Poeciliposis gracilis*), and several members of the families Centrarchidae, Ictaluridae, and Cyprinidae. Desert pupfish populations in the Salton Sea area have also been infected by a parasitic copepod (anchor worm) of the family Lernaidae. In Arizona, desert pupfish have been displaced from many of their historic spring habitats by largemouth bass.

Recent studies have shown that juvenile tilapia compete with desert pupfish for many of the same food items, and that adult tilapia prey on fish and fish eggs. Field and laboratory observations have revealed that tilapia also interfere with the reproductive behavior of desert pupfish (Schoenherr, 1980). The extent to which this type of interference has suppressed pupfish reproduction is not known. Largemouth bass are voracious predators that are capable of eliminating pupfish completely from small spring habitats (Miller and Pister, 1971).

D. *The inadequacy of existing regulatory mechanisms.* California State law (The Endangered Species Act of 1970, Chapter 1510, Stats. 1970) prohibits the taking of desert pupfish without a permit. That law was recently amended (Chapter 1240, Stats. 1984) to require State agencies to consult with CDFG on State projects that may affect State listed species. However, few of the activities that pose a threat to the desert pupfish in California are likely to require State agency approval. Hence, California's endangered species law does not provide an adequate regulatory mechanism to protect the remaining desert pupfish habitats. The Service is not aware of any regulatory mechanisms that have been established to protect the surviving Mexican populations and their habitats, or to alleviate the threats to the Quitobaquito Spring population that are associated with aerial pesticide spraying and increased ground-water pumping in Mexico.

E. *Other natural or manmade factors affecting its continued existence.* The exotic aquatic weed, *Hydrilla verticillata*, was recently introduced into the All American Canal. This plant is capable of spreading rapidly and is very difficult to control. Consequently, it is possible that this aquatic weed may soon find its way into habitats that support desert pupfish. It is not known what the direct effect of its establishment would be on desert pupfish. However, the extreme methods of chemical, mechanical, and biological control that have been used in other areas where this plant has become established would be likely to have a detrimental effect upon pupfish habitat.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action is to list the desert pupfish as endangered with critical habitat. The now localized distribution of this fish, competition from exotic species, predation pressure, and continued adverse modifications of habitat (i.e., ground-water pumping, pesticide applications, and changes in water conveyance facilities) indicate it is imminently threatened with extinction. Therefore, endangered classification is warranted.

Critical Habitat

Critical habitat, as defined by Section 3 of the Act means: (i) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection, and (ii) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Section 4(a)(3) of the Act requires that critical habitat be designated to the maximum extent prudent and determinable concurrently with the determination that a species is endangered or threatened. Recent status surveys have been instrumental in assessing essential habitat and the present condition of the desert pupfish. Overcollection is not the primary threat facing the desert pupfish. For these reasons the Service does not believe that determining critical habitat for the desert pupfish will contribute to a further decline in the species; hence, critical habitat is designated by this rule. Critical habitat is being designated for the desert pupfish at Quitobaquito Spring, Organ Pipe Cactus National Monument, Pima County, Arizona, and along portions of San Felipe Creek, Carrizo Wash, and Fish Creek Wash, Imperial County, California. The areas designated as critical habitat include approximately one-half acre of aquatic habitat at Quitobaquito Spring and a 100 foot riparian buffer around the spring, and approximately 11 miles of stream channel along San Felipe Creek and two of its tributaries and a riparian buffer zone of 100 feet on both sides of the stream channel. A riparian buffer zone of 100 feet around Quitobaquito Spring and at least 100 feet on each side of the stream channel are deemed necessary because any activities that are carried out adjacent to these areas may have a direct impact on the quality of aquatic habitat for desert pupfish. Constituent elements for all four areas designated as critical habitat include clean unpolluted water that is relatively free of exotic organisms, especially exotic fishes, in small slow-moving desert streams and spring pools with marshy backwater areas. The "Regulations Promulgation" section contains a legal description of the critical habitat.

The areas being designated as critical habitat satisfy all known criteria for the ecological, behavioral, and physiological requirements of the species. The species successfully reproduces in Quitobaquito Spring and the designated reaches of San Felipe Creek, Carrizo Wash, and Fish Creek Wash. These areas also provide adequate food and cover. Perhaps most importantly, these areas are also isolated or at least partially isolated from predatory and competing exotic fishes. Because the desert pupfish is non-migratory, the areas it inhabits must fulfill all the requisites for survival and successful reproduction.

Section 4(b)(8) requires, for any proposed or final regulation that designates critical habitat, a brief description and evaluation of those activities (public or private) which may adversely modify such habitat or may be affected by such designation. It should be emphasized that critical habitat designation may not affect each of the activities listed below, as critical habitat designation affects only Federal agencies through section 7 of the Act.

1. Withdrawal of water either directly or indirectly from San Sebastian Marsh could destroy or reduce the suitability of this habitat for desert pupfish.

2. Stocking of additional exotic fish or other non-endemic species into waters within the critical habitat, or into waters through which such fish may gain access to the critical habitat, may introduce parasites and increase the incidence of predation on desert pupfish.

3. Other activities (which, though not anticipated at this time, could conceivably occur in the foreseeable future) could also reduce the habitat's suitability for desert pupfish. These activities include geothermal development, oil or gas development, stream channelization, intensive

recreational use, and the siting of transmission lines, roads, canals, or irrigation drains within the designated areas.

Section 4(b)(2) of the Act requires the Service to consider economic and other impacts of designating a particular area as critical habitat. The Service has considered the critical habitat designation in light of relevant additional information obtained and concludes that no significant economic or other impacts are expected to result from the critical habitat designation. The designation of critical habitat is apparently compatible with NPS conservation objectives for Organ Pipe Cactus National Monument. Some geothermal and oil and gas leases have been issued by BLM within or in the vicinity of the critical habitat area in California. BLM, however, has informed the Service that it does not expect that geothermal or oil and gas exploration and development will occur in the foreseeable future. BLM's current management of the portion of critical habitat within the San Sebastian Marsh/San Felipe Creek ACEC and interagency land exchange efforts in progress since 1980 are also apparently compatible with the critical habitat designation. In addition, there is no known involvement of Federal funds or permits for the private land included in the critical habitat designation. For these reasons, no adjustments to the boundaries of the proposed critfcal habitat were warranted.

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 practices. 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 and harm 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. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402 and are now under revision (see proposal at 48 FR 29990; June 29, 1983). Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed 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. Federal activities that may affect the desert pupfish and its habitat in the future were previously discussed in the "Critical Habitat" section of this rule.

The Act and its implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that had been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife species under certain circumstances. Regulations governing permits are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship that would be suffered if such relief were not available.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined by 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).

Regulatory Flexibility Act and Executive Order 12291

The Department of the Interior has determined that designation of critical habitat for this species will not constitute a major action under Executive Order 12291 and certifies that this designation will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*).

Land use in the critical habitat is currently limited to recreation, scientific research, and oil and gas leasing. The public lands adjacent to the critical habitat were recently leased for geothermal exploration. The potential for geothermal or oil and gas development in the area is considered to be low in view of the negative results obtained from nearby test wells. The management objectives of NPS and BLM, for those portions of critical habitat within Organ Pipe Cactus National Monument and the San Sebastian Marsh/San Felipe Creek ACEC, respectively, are compatible with the designation of critical habitat There is also no known involvement of Federal funds or permits for the private land included as critical habitat. No other Federal activities are presently known or anticipated that would adversely affect or be adversely affected by the critical habitat designation. Therefore, no significant economic or other impacts are expected to result from the critical habitat designation for the desert pupfish. In addition, no direct costs, enforcement costs, or information collection or recordkeeping requirements are imposed on small entities by this designation. These determinations are based on a Determination of Effects that is available at the Regional Office, U.S. Fish and Wildlife Service, 500 N.E. Multnomah Street, Suite 1692, Portland, Oregon 97232.

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Authors

The primary authors of this rule are Mr. Edward M. Lorentzen and Dr. Kathleen E. Franzreb, Sacramento Endangered Species Office, U.S. Fish and Wildlife Service, 2800 Cottage Way, Room E–1823, Sacramento, California 95825 (916/484–4935 or FTS 468–4935).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulations 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: Pub. L. 93–205, 87 Stat. 884; Pub. L. 94–359, 90 Stat. 911; Pub. L. 95–632, 92 Stat. 3751; Pub. L. 96–159, 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. Amend § 17.11(h) by adding the following, in alphabetical order under "FISHES," to the List of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
FISHES							
Pupfish, desert	*Cyprinodon macularius*	U.S.A. (AZ, CA) Mexico	Entire	E	222	17.95(e)	NA

3. Amend § 17.95(e) by adding critical habitat for the desert pupfish as follows: The positions of this entry under § 17.95(e) will follow the same sequence as the species occurs in 17.11.

§ 17.95 Critical habitat—fish and wildlife.

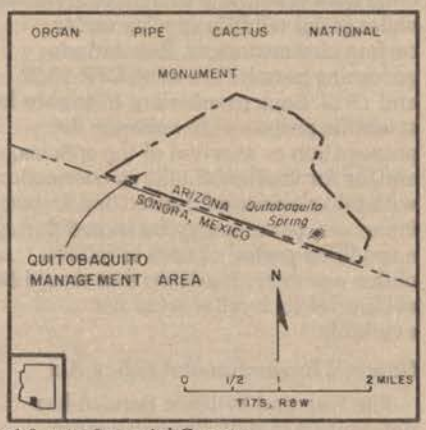
(e) * * *

* * * * *

Desert Pupfish (*Cyprinodon macularius*)

Arizona: Pima County.

1. *Quitobaquito Spring*, approximately 25 miles WNW Lukeville, Arizona in Organ Pipe Cactus National Monument, in T17S R8N; and a 100-foot riparian buffer zone around the spring.

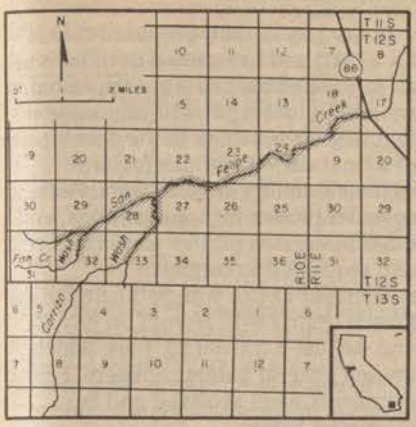


California: Imperial County.

1. *San Felipe Creek.* Approximately 8½ stream miles and 100 feet on either side of San Felipe Creek or the stream channel commencing at the State Highway 86 bridge crossing (approximately ¼ mile south of intersection of Hwy. 78 and Hwy. 86) upstream to the eastern boundary of Section 31, T12S; R10E; including those areas of the stream channel in: T12S; R11E; Section 17, 18, and 19; T12S; R10E; Section 22, 23, 24, 26, 27, 28, 29, and 32.

2. *Carrizo Wash.* Approximately 1¾ stream miles and 100 feet on either side of or the stream channel commencing at the confluence of Carrizo Wash with San Felipe Creek upstream to the southern boundary of N½ Section 33; T12S; R10E; including those areas of the stream channel in T12S; R10E; Section 27, 28, and N½ Section 33.

3. *Fish Creek Wash.* Approximately three-fourths of one stream mile and 100 feet on either side of the stream channel from the confluence of Fish Creek Wash with San Felipe Creek upstream to the southern boundary of N½ Section 32; T12S; R10E; including those areas of the stream channel in T12S; R10E; Section 29 and N½ Section 32.



Constituent elements for all four areas designated as critical habitat include clean unpolluted water that is relatively free of exotic organisms, especially exotic fishes, in small slow-moving desert streams and spring pools with marshy backwater areas.

* * * * *

Dated: February 28, 1986.

P. Daniel Smith,

Deputy Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 86-6980 Filed 3-28-86; 8:45 am]

BILLING CODE 4310-55-M

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50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Final Rule Determining the June Sucker (Chasmistes liorus) To Be an Endangered Species With Critical Habitat

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service has determined the June sucker (*Chasmistes liorus*) to be an endangered species and has designated its critical habitat under the authority of the Endangered Species Act of 1973, as amended. The June sucker occurs only in Utah Lake, Utah, and its major tributaries. It uses the lower portion of the Provo River, the largest tributary of Utah Lake, for spawning and larval rearing. It is threatened with habitat alteration through dewatering and degrading water quality, competition and predation by exotic species, and killing during the spawning run. Also, it has been suggested that the Central Utah Project (portions of the Bonneville Unit), presently under construction, could impact this species by reducing and changing flows in the Provo River, the major spawning site of the June sucker, and affect portions of Utah Lake resulting in habitat loss for the species while potentially increasing habitat for exotic species. This determination will provide opportunities for protection and management under the Endangered Species Act of 1973, as amended.

EFFECTIVE DATE: April 30, 1986.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours at the Regional Endangered Species Office, U.S. Fish and Wildlife Service, 134 Union Boulevard, fourth floor, Lakewood, Colorado and the Endangered Species Office, U.S. Fish and Wildlife Service, 2078 Administration Building, 1745 West 1700 South, Salt Lake City, Utah 84104–5110.

FOR FURTHER INFORMATION CONTACT: Mr. Robert G. Ruesink, Field Supervisor, Endangered Species Staff, U.S. Fish and Wildlife Service, 2078 Administration Building, 1745 West 1700 South, Salt Lake City, Utah 84104 (801/524–4430 or FTS 588–4430).

SUPPLEMENTARY INFORMATION:

Background

The June sucker (*Chasmistes liorus)* is endemic to Utah Lake in Utah and uses the lower portion of the Provo River, the largest tributary of Utah Lake, for spawning and larval rearing. Utah Lake is a 38,000 hectare (94,000 acres) (approximately 38 kilometers (23.6 miles) long and 21 kilometers (13 miles) wide at the maximum points) remnant of ancient Lake Bonneville. The lake is shallow, slightly saline, turbid, and highly eutrophic, and is the largest freshwater lake located entirely in Utah. The lake has an average depth of 2.9 meters (9.5 feet) and a maximum depth of 4.2 meters (13.8 feet). In 1885, the compromise elevation (maximum level to which Utah Lake would be allowed to fill) was established at 1,368.35 meters (4,489.34 feet) (Radant and Sakaguchi, 1981).

The June sucker was first collected and described by David S. Jordan in 1878 (Jordan, 1878). The common name June sucker is based on the fact that peak spawning time for this species occurs during the month of June. Some confusion has existed over the systematics of Utah Lake suckers in recent years. It has been reported that at least three species of suckers occurred in Utah Lake (Stubbs, 1966; Lowder, 1951; and Jordan, 1878). However, recent information presented by Miller and Smith (1981) suggested that only two species, the Utah sucker (*Catostomus ardens*) and the June sucker occurred in Utah Lake. June suckers are readily distinguished from Utah suckers by their subterminal mouth, relatively smooth divided lips, broad skull, and greater numbers of gill rakers. The June sucker spawns in June while Utah suckers spawn in early April (Radant and Hickman, 1984).

Recently, Miller and Smith (1981) concluded that the June suckers present in Utah Lake today are different from the June suckers collected prior to 1900. They have hypothesized that the June and Utah suckers hybridized during the 1932 to 1935 drought when fish populations were stressed. As June suckers returned to abundance, the new genes were incorporated into the population and have become normal characteristics. They have assigned the name *Chasmistes liorus liorus* to specimens collected in the late 1800's and *Chasmistes liorus mictus* to specimens collected after 1939. However, to avoid confusion, this final rule is viewing the June sucker as a full species, since it has maintained its distinctiveness from other suckers and is not known to hybridize with any species today.

Decline in abundance of June suckers can be attributed to habitat alteration through dewatering and degrading water quality, competition and predation by exotic species, commercial fishing, and killing of the adults during the spawning run.

Historically, the June sucker was very abundant in Utah Lake. Jordan (1891) reported millions of suckers existing in the lake when he visited there in 1889. As a result of this visit, he proclaimed Utah Lake as: " . . . the greatest sucker pond in the universe." In the late 1800's it was estimated that 361 metric tons (398 tons) of spawning suckers were killed in 3.3 kilometers (2.1 miles) of the Provo River due to dewatering (Carter, 1969). Carter (1969) again reported that 2.3 metric tons (2.5 tons) of suckers were removed from a dewatered irrigation ditch during the early 1920's.

Utah Lake suckers were an important part of the total commercial fish harvest until their numbers became too low. Cope and Yarrow (1875) reported that the June sucker was extremely numerous and the fishermen considered them a nuisance; however, they sold readily in the winter for an average price of 2½ cents per pound (Cope and Yarrow, 1875, reported that fresh trout were selling for 30 cents per pound during this same period). In the early 1900's, commercial fishermen were still reporting large catches of suckers annually. Between 1901 and 1905, an average of 162 metric tons (178.6 tons) of suckers were harvested annually

(Carter, 1969). Large numbers of suckers were still being caught in the early 1950's; Lowder (1951) reported that in 1951, as many as 1,350 suckers could still be taken in a single day of commercial seining. Today, few, if any, suckers are captured in the nets of commercial fishermen in Utah Lake.

Hundreds of tons of suckers were lost during the 1932 to 1935 drought due to crowding and freezing when irrigation practices nearly drained Utah Lake dry (Tanner, 1936). Tanner (1936) reported that in the spring of 1935 there were no suckers running up the Provo River to spawn, "Something that had never happened before in the history of Utah Lake."

In 1951 suckers were still considered to be the second most abundant species in Utah Lake. However, the 1959 suckers were the fourth most abundant species in the lake with gillnet catch rates of 0.16 suckers per net hour (Arnold, 1959). Similar gillnetting efforts in 1970 captured only 0.01 suckers per net hour (White and Dabb, 1970). During this 1970 study, suckers were reported to be the sixth most abundant species in the lake.

An intensive inventory of the Utah Lake fishery during 1978 and 1979 using a variety of sampling gear resulted in 2,097 separate net collections which captured 34,292 adult fish. However, only 102 (0.3 percent of the total catch) were identified as June suckers, while only 18 were identified as Utah suckers. The Utah sucker is still abundant in areas outside Utah Lake. No young-of-the-year suckers were taken during the study. Gillnetting collections during this study produced no suckers (Radant and Sakaguchi, 1981).

The decline of sucker numbers to present levels appears to correspond closely with the introduction of white bass and walleye in the mid-1950's. Competition and predation from exotic species is one of the serious threats to the survival of the June sucker. Over 20 exotic fish species have been introduced into Utah Lake during the past 100 years. Radant and Sakaguchi (1981) reported that the most successful introductions of exotic species have been with the carp (1886), largemouth bass (1890), black bullhead (1893), channel catfish (1919), walleye (1955), and white bass (1956). The dominant fishes in Utah Lake today are the white bass, walleye, channel catfish and carp, all exotic species.

Prior to 1978, biological information for the June sucker was virtually nonexistent, and even today much remains to be learned about this species. Due to its rarity, few biological data have been collected pertaining to its life history requirements in the lake. Much of the information pertaining to biological requirements of the species deals with the spawning and larval rearing period in the Provo River. June sucker spawning is restricted primarily to the Provo River, with limited spawning possibly occurring in the Spanish Fork River, (Radant and Sakaguchi, 1981; Shirley, 1983; Radant and Hickman, 1984). The adult June sucker ascends the Provo River during the second or third week of June and completes spawning within 5 to 8 days. It can travel as far as 7.8 kilometers (4.9 miles) upstream to a diversion barrier that bars further upstream movement. Spawning occurs throughout the reach of river below the diversion barrier. Details on spawning behavior, habitat, water velocities, hatching time, larval development, etc., can be found in papers by Shirley (1983) and Radant and Hickman (1984).

Young-of-the-year June suckers have been collected in the Provo River up to five months after hatching. However, no young-of-the-year or juvenile suckers are known to have been collected from Utah Lake in recent years. Accurate population estimates for the June sucker have not been made. It is suspected that there are less than 1,000 adults (based upon spawning run estimates) today. They all appear to be over 15 years in age. It is possible that the June sucker population existing today is very old, with little or no recruitment occurring.

Past actions affecting this taxon began on December 30, 1982, when the Service included the June sucker in a notice of review published in the **Federal Register** (47 FR 58456). This notice pertained to vertebrate species that were currently under review for listing as endangered or threatened. This notice indicated that substantial information was available to support the biological appropriateness or proposing to list this species as endangered or threatened. On April 12, 1983, a petition was received by the Service from the Desert Fishes Council requesting that the June sucker be listed as an endangered species. A notice of finding on this petition was published by the Service in the June 14, 1983, **Federal Register** (48 FR 27273). This notice stated that the petition was accepted and that the Service had one year from the date that the petition was received to publish its findings in the **Federal Register**. On July 2, 1984, the Service published a proposed rule (49 FR 27183) to list the June sucker (*Chasmistes liorus*) as an endangered species with critical habitat, in accordance with Section 4(b)(3)(B)(ii) of the Act.

Summary of Comments and Recommendations

In the July 2, 1984, proposed rule (49 FR 27183) 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 governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. A newspaper notice was published in the Provo, Utah, *Daily Herald* on July 30, and August 6, 13 and 20, 1984, which invited general public comment. Four comments were received and are discussed below.

Comments were received from the Governor of Utah, the Bureau of Reclamation, the Central Utah Water Conservancy District, and the Provo River Water Users Association.

The Governor of Utah agreed that the June sucker (*Chasmistes liorus*) met the criteria prescribed for listing by the Endangered Species Act. He urged the Service to expedite the listing process and make funds available to develop and implement a recovery plan.

The Central Utah Water Conservancy District (CUWCD) and Provo River Water Users Association (PRWUA) pointed out the taxonomic confusion over Utah Lake suckers and doubted that laymen could distinguish between the June sucker (*Chasmistes liorus*) and the Utah sucker (*Catostomus ardens*). The Service agrees that the taxonomic status of suckers in Utah Lake was confusing until Miller and Smith (1981) clarified the problem. They provide several distinguishing characteristics between the two species. A public information program could be part of a recovery plan for the June sucker.

The Bureau of Reclamation (BR), CUWCD and PRWUA questioned the statement that listing the June sucker was compatible with development of the Central Utah Project (CUP). The Service agrees that this statement is confusing and should have stated, in effect, that listing could be compatible with CUP provided that certain modifications and conservation measures could be developed to protect and enhance June sucker survival. However, the question of any Federal action jeopardizing the continued existence of proposed or listed species or adversely affecting critical habitat would be determined on a case-by-case basis through the consultation process under Section 7 of the Endangered Species Act of 1973, as amended.

BR and CUWCD pointed out that some systems of the CUP may increase spring and summer flows in the Provo River, thereby enhancing June sucker spawning and young-of-the-year survival. The Service agrees that increased flows in the Provo River during spring and summer could be beneficial to the June sucker.

The CUWCD and PRWUA questioned that water diversion and upstream impoundments are the main threats to June sucker survival. They cite continued survival of the June sucker following most of the water diversions at the turn of the century and the apparent recovery of the species following the drought conditions of the 1930's. Carter (1969) reported instances where water diversions killed suckers in the Provo River and irrigation ditches. Tanner (1936) reported hundreds of tons of suckers killed when irrigation practices nearly drained Utah Lake between 1932 and 1935. As a result, in the spring of 1935 there were no suckers running up the Provo River to spawn; something that had never happened before in the history of Utah Lake (Tanner 1936). Thus, the Service feels that water diversions have in the past and potentially could in the future threaten June sucker survival. Upstream impoundments could benefit June sucker spawning and young-of-the-year survival by releasing optimal amounts of water at critical times.

The CUWCD and PRWUA doubted that the killing of June suckers is a significant factor in their decline since it has occurred for decades. The Service agrees that the killing has probably occurred for a long time, but feels that it is a significant mortality factor with the current low numbers. Protection given the species by the State of Utah has not prevented this killing.

The CUWCD, PRWUA, and BR felt that predation by white bass and walleye in Utah is the main threat to June sucker survival and that listing will not remove this threat. The Service agrees, but listing is followed by recovery planning and actions. The State of Utah is currently implementing portions of its June Sucker Management Plan to ensure the survival of the species and attempt to overcome the impacts of predation. Section 7 consultations could also ensure that Federal projects would not benefit the predator species at the expense of the June sucker.

The CUWCD and PRWUA felt strongly that the economic impacts of listing and recovery should be published for public review and comment prior to proceeding with listing. An economic analysis of designating critical habitat is a part of this final rule. The cost breakdown of recovery actions for State and Federal governmental agencies will be included in the recovery plan when it is finalized. The final recovery plan will be made available to the public.

Both the CUWCD and PRWUA felt that important data are currently lacking, without which listing should not proceed. The Service feels that the drastic decline in June sucker numbers, the apparent lack or recruitment to the population, and the threats of predation and habitat alteration warrant listing the June sucker as an endangered species with critical habitat.

The BR questioned designating the Spanish Fork River as critical habitat because instream diversions block access and virtually dewater the stream in July and August. June suckers in spawning condition have been captured in the Spanish Fork River during the month of June, but no young-of-the-year June suckers have been found. Much of the habitat below major diversions consists of a silt substrate which is not suitable for spawning. Therefore, based on this biological information and reevaluation of the Spanish Fork River proposed critical habitat, and Service agrees with BR and is removing the Spanish Fork River from consideration as critical habitat.

The CUWCD and PRWUA pointed out that measuring critical habitat from the rivers' confluence with Utah Lake is impossible with the current high water level of Utah Lake. The Service agrees and the upper limit of critical habitat on the Provo River is now defined by the Columbia Lane (Tanner Race) diversion in the SW¼, NE¼, SW¼, section 36, T6S, R2E SLB&M, which represents a barrier to any further upstream movement.

Section 4(b)(5)(E) of the Endangered Species Act of 1973, as amended, requires that a public hearing be held, if requested within 45 days of the publication of the proposed rule. On August 14, 1984, the Service received requests for a hearing on the June sucker from Attorney Dave McMullin, Payson, Utah, on behalf of the East Bench, Lake Shore, Lake Side, Salem, South Field, and West Field Irrigation Companies. Additional requests for a hearing were received from Mayor Janes E. Ferguson, Provo, Utah and the Central Utah Water Conservancy District, Orem, Utah.

Subsequently, a notice of public hearing and reopening the comment period was published in the September 25, 1984, **Federal Register** (49 FR 37649). A newspaper notice was published in the Provo, Utah, *Daily Herald* on September 17 and 24, and October 1 and 8, which announced the public hearing and reopened the comment period until October 21, 1984.

The public hearing was held October 11, 1984, from 6 p.m. to 9 p.m., at the Provo City Building, the City Council Chambers, 359 W. Center Street, Provo, Utah.

A total of thirteen statements were received at the public hearing from: Dave McMullin, an attorney representing the Spanish Fork West Field Irrigation Company, Spanish Fork South Field Irrigation Company, Spanish Fork East Bench Irrigation Company, Lake Shore Irrigation Company and Salem Irrigation Company; Leland Gamette, representing Mayor Ferguson of the City of Provo, Utah; Lynn Ludlow, general manager and secretary for the Central Utah Water Conservancy District; Marion Hinckley; William Loy, a commercial fisherman; C. Neal Sorensen; Margaret Rasmussen, neighborhood chairman for the Fort Utah Neighborhood in Provo; Phil Edwards; Jim Pissot, president of the Utah Audubon Society; Dorothy Harvey; Peter Hovingh, representing the Utah Nature Study Society and Federation of Western Outdoor Clubs; Hugh McKellar, superintendent for the Provo River Water Users Association; and Ray Aitken.

Mr. Ludlow raised serveral questions about the taxonomic status of the June sucker, i.e., is it a true species, how can it be distinguished from the Utah sucker and are suckers with June sucker characteristics found in other waters? The Service believes that the taxonomic confusion was clarified by Miller and Smith (1981); they give several distinguishing characteristics between Utah and June suckers, recognize the June sucker as a distinct taxon, and in their searching have not found *Chasmistes liorus* in any other location. Mr. McKellar shares the belief that more effort should be made to determine if June suckers are found elsewhere. While the possibility of other June sucker populations exists, the Service feels that a considerable effort has been made through searching collections and contacts with university and State wildlife agencies to locate other June sucker populations, and the probability of finding a new population is very low.

Mr. Ludlow disagreed with statements in the proposed rule that alteration of habitat due to water impoundments, irrigation, killing of spawning adults, water pollution and development of the Central Utah Project (CUP) are threats to June sucker survival. Carter (1969) documents instances where suckers were killed by water diversions and killing has continued in spite of

protected status by the State of Utah in 1983. The CUP has the potential to affect June suckers by removing lake habitat and altering flows in the Provo River (Radant 1983). The Service believes that the evidence is contrary to Mr. Ludlow's position.

Mr. Ludlow believed that predation by white bass and walleye in Utah Lake is the reason for decline of the June sucker and that listing is meaningless until this problem is resolved. The Service agrees that predation is a major factor in the lack of recruitment to the June sucker population, and that listing, by itself, will not remove the predators. However, listing allows recovery planning and activities which attempt to remove threats and recover the species. Failing to list the June sucker, which is drastically declining in numbers, would be avoiding Service responsibilities under the Endangered Species Act. Threats to the June sucker are complex and not easily removed; therefore, a cooperative agreement in lieu of listing, as Mr. Ludlow suggests, is not being pursued.

Mrs. Rasmussen opposed listing of the June sucker because she fears her neighborhood would be flooded if dredging the Provo River is prohibited. Listing the June sucker would not expressly prohibit dredging. If the dredging would be done by a Federal agency or if Federal permits were required, the project impacts would be analyzed under provisions of section 7 of the Endangered Species Act, as amended. State or private dredging would not require section 7 consultation if there was no Federal involvement. The Service believes that section 7 offers the flexibility to deal with situations such as flooding without causing undue risk to human life or property.

Mr. Pissot, Ms. Harvey and Mr. Hovingh gave statements supporting listing the June sucker and designating critical habitat. Additionally, Mr. Hovingh recommended designating the entire Utah Lake as critical habitat. While the entire lake is presently occupied by June suckers, the Service feels that current information indicates that critical habitat designation is only necessary for spawning and larval rearing areas. The Service will evaluate all new information that indicates changes, additions, or deletions to critical habitat, as needed in the future.

Mr. McMullin, Mr. Ludlow, Mr. Loy, Mr. Sorensen, and Mr. Aitken questioned designating the Spanish Fork River as critical habitat, citing access barriers and poor habitat conditions. The Service agrees with this position and is removing the Spanish Fork River from designated critical habitat.

Mr. Gamette, Mr. McKellar, and Mr. Ludlow questioned designating the Provo River as critical habitat citing the predation problem and need for economic analysis. The lower 7.8 kilometers (4.9 miles) of the Provo River is the only area where June sucker spawning has been documented and young-of-the-year found. If a self-sustaining June sucker population is to continue in Utah Lake, this spawning and rearing habitat must be protected. An economic analysis of designating critical habitat for the June sucker was prepared in conjunction with this rule.

Mr. Gamette, Mr. Ludlow, and Mr. McKellar felt that the data are currently inadequate and incomplete and do not justify listing the June sucker as an endangered species. The Service feels that the drastic decline in the June sucker population, and apparent lack of recruitment, threats posed by predators, and habitat alteration all support the need for urgent listing of the June sucker as an endangered species with critical habitat. New information will continually be sought during listing and recovery programs.

Five comments were received after reopening the comment period until October 21, 1984, from: the Bonneville Chapter of the American Fisheries Society; Dennis K. Shiozawa, assistant professor of zoology, Brigham Young University; Mr. Karl H. Alleman; Peter Hovingh, Utah vice president, Federation of Western Outdoor Clubs; and Hugh McKellar, superintendent, Provo River Water Users Association.

The comments of Mr. McKellar and Mr. Hovingh are very similar to their statements at the public hearing, and have already been addressed.

The Bonneville Chapter, American Fisheries Society, felt that existing data clearly indicate the future existence of the June sucker is in jeopardy. The Chapter urges prompt action by the Service to protect the June sucker under the Endangered Species Act and fund recovery actions.

Dr. Shiozawa supported additional study of the June sucker in Utah Lake. He feels that the diking of Goshen Bay (a proposed element of the Bonneville Unit, Central Utah Project) would adversely affect the June sucker population. Mr. Alleman feels that diking Goshen Bay and Provo Bay will improve Utah Lake for the June sucker. Radant (1983), in analyzing impacts of the Bonneville Unit, CUP, reported habitat losses for the June sucker resulting from diking Provo and Goshen Bays. The Service agrees with Mr. Radant.

Dr. Shiozawa doubted that the Spanish Fork River provides essential habitat for the June sucker, but stresses the importance of the Provo River to the species. The Service has already responded to concerns about the Spanish Fork River proposed critical habitat in previous comments.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the June sucker (*Chasmistes liorus*) should be classified as an endangered species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (50 CFR Part 424) were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the June sucker (*Chasmistes liorus*) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Alteration of habitat has been a major factor in the decline of this species. Currently, the main threats to the June sucker are (1) habitat modification through the diversion of water for irrigation, municipal, and industrial purposes; and (2) the possibility of habitat modification from upstream impoundments associated with the Central Utah Project. Alteration of habitat through water diversions and intermittent releases from upstream impoundments could seriously impact the spawning habitat of the June sucker. If a large volume of water was diverted during a drought year, it could adversely modify the lake habitat.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* Killing of the adult June suckers occurs during the spawning migration. This is done with guns, arrows, rocks, nets, etc. Although the State of Utah has included this species on its protected list, illegal killing still occurs, especially during low water years. The species is very vulnerable during this time period. It is possible that a majority of the entire June sucker population is concentrated in one section of the Provo River during this 3 to 4 week period. Some commercial fishing occurs on Utah Lake, but does not constitute any threat to the June sucker.

C. *Disease or predation.* The June sucker currently faces predation and competition from various piscivorous fishes which have been introduced into Utah Lake. The decline of sucker numbers to present levels appears to correspond closely with the introduction of white bass and walleye in the mid-1950's. Competition and predation from exotic species is one of the serious threats to the survival of the June sucker. Over 20 exotic fish species have been introduced into Utah Lake during the past 100 years. Radant and Sakaguchi (1981) reported that the most successful introductions of exotic species have been with the carp (1886), largemouth bass (1890), black bullhead (1893), channel catfish (1919), walleye (1955), and white bass (1956). The dominant fishes in Utah Lake today are the white bass, walleye, channel catfish, and carp, all exotic species.

Although parasitism is not a known problem at this time, very little information is available. More work needs to be done on impacts of various diseases on the June sucker (Hickman, 1984).

D. *The inadequacy of existing regulatory mechanisms.* Although the State of Utah lists the June sucker as a protected species, illegal killing still occurs. Protected species status by the State of Utah does not provide any protection for the habitat of the June sucker.

E. *Other natural or manmade factors affecting its continued existence.* The impact of pollution from local communities may be adversely affecting this species but more information is needed to document this threat.

The Service has carefully assessed the best scientific and commercial information available, regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action is to list the June sucker as an endangered species. The habitat of this fish is threatened with alteration through dewatering and degrading water quality, competition by exotic species, and illegal killing during the spawning run. These threats are to the entire occupied range and are too significant to merit a listing status of "threatened." A decision to take no action would exclude the June sucker from needed protection and would be contrary to the intent of the Endangered Species Act.

Critical Habitat

Critical habitat, as defined by Section 3 of the Act means: (i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection, and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Section 4(a)(3) of the Act requires that critical habitat be designated to the maximum extent prudent and determinable concurrently with the determination that a species is endangered or threatened. Critical habitat is being designated for the June sucker to include the lower section of the Provo River, a major tributary of Utah Lake. Included as critical habitat is the lower 7.8 kilometers (4.9 miles) of the main channel of the Provo River from the Lake upstream to the Tanner Race diversion. Based on additional biological information brought forward in written comments and at the public hearing, the Spanish Fork River is no longer included as critical habitat. Critical habitat in the Provo River remains unchanged. A measurement error, however, was made in estimating the Provo River portion of proposed critical habitat. The recalculated estimate for the length of the Provo River proposed critical habitat is 7.8 kilometers (4.9 miles). This recalculation does not change the boundaries of the Provo River portion of critical habitat originally described in the proposed rule. This section of the Provo River is located in Utah County, Utah. The upper limit is defined as the Columbia Lane (Tanner Race) diversion in the SW¼, NE¼, SW¼, section 36, T6S, R2E SLB&M. While the June sucker is found throughout Utah Lake, this area is vital to its reproduction and requires special management considerations. In the future, however, suitable habitat in Utah Lake and additional sections of the Provo River could be proposed as critical habitat if it is found to be essential to the conservation of the species.

Section 4(b)(8) requires, for any proposed or final regulation that designates critical habitat, a brief description and evaluation of those activities (public or private) which may adversely modify such habitat or may be affected by such designation. Any activities such as habitat alteration or increased water use from Utah Lake and the Provo River could be detrimental to this species and would need to be examined on a case-by-case basis. Additionally, the introduction of exotic species into the June sucker's habitat along with their associated parasites, could harm the June sucker through predation, competition and possible parasitism. It has been suggested that the Municipal and Industrial System (M&I System) of the Central Utah Project (a Federal project funded by the BR) presently under construction, could impact this species by reducing and changing flows in the Provo River, the major spawning site of the June sucker, and affect portions of Utah Lake resulting in habitat loss for the species while potentially increasing habitat for exotic species. This project and any other Federal activities planned for the Provo River (portion designated as critical habitat), which might affect the sucker or its habitat, would require section 7 consultation to prevent any adverse impacts.

Section 4(b)(2) of the Act requires the Service to consider economic and other impacts of designating a particular area as critical habitat. The Service has considered the critical habitat designation in light of all additional relevant information obtained. This information was obtained during the comment period, at the public hearing, and from discussions with the Federal, State and local officials cited in the economic analysis. The information concerned flows in the Provo River, flooding of residential areas, dredging of the Provo River, zoning and land uses along the critical habitat portion of the Provo River. With the exception of the M&I System, there is no known involvement of Federal funds or permits for the State, county, city, or private activities within or adjacent to the proposed critical habitat designation.

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 practices. 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 prohibitions against taking and harm, 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. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402, and are now under revision (see proposal at 48 FR 29990; June 29, 1983). Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed 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. Since there is Federal funding involved in the Central Utah Project, formal consultation will be required when this listing and critical habitat designation is finalized.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that had been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife species under certain circumstances. Regulations governing permits are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities.

National Environmental Policy Act

The Fish and Wildlife 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** of October 25, 1983 (48 FR 49244).

Regulatory Flexibility Act and Executive Order 12291

The Department of the Interior has determined that designation of critical habitat for this species will not constitute a major action under Executive Order 12291 and certifies that this designation will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*).

No significant economic or other impacts are expected to result from the proposed critical habitat designation. This conclusion is based on BR's awareness of the critical habitat designation and the uncertainty concerning future needs for flow augmentation due to the M&I System; the absence of Federal involvement for State, county, city, and private lands fronting the critical habitat; and the unquantifiable benefits that may result from the designation of critical habitat for the June sucker. In addition, no direct costs, enforcement costs, or information collection or recordkeeping requirements are imposed on small entities by this designation. These determinations are based on a Determination of Effects that is available at the Regional Endangered Species Office, U.S. Fish and Wildlife Service, 134 Union Boulevard, fourth floor, Lakewood, Colorado; and at the Salt Lake City Field Office, U.S. Fish and Wildlife Service, 2078 Administration Building, 1745 West 1700 South, Salt Lake City, Utah 84104–5110.

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Authors

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List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulations 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: Pub. L. 93–205, 87 Stat. 884; Pub. L. 94–359, 90 Stat. 911; Pub. L. 95–632, 92 Stat. 3751; Pub. L. 96–159, 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. Amend § 17.11(h) by adding the following, in alphabetical order under

"FISHES," to the List of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
FISHES							
Sucker, June	*Chasmistes liorus*	U.S.A. (UT)	Entire	E	223	17.95(e)	NA

3. Amend § 17.95(e) by adding critical habitat of the June sucker (*Chasmistes liorus*) as follows: The position of this entry under § 17.95(e) will follow the same alphabetical sequence as the species occurs in 17.11.

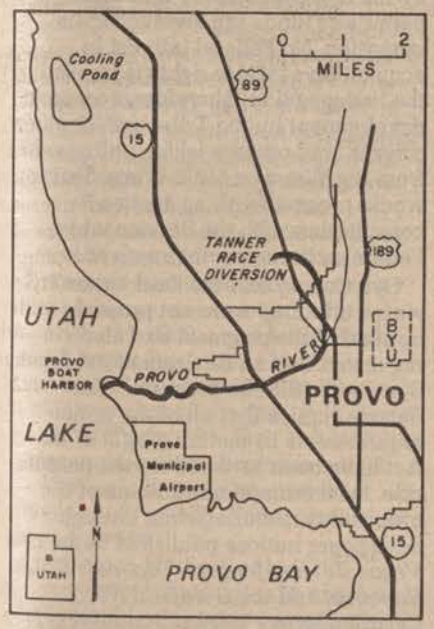
§ 17.95 Critical habitat—fish and wildlife.

(e) Fishes.

* * * * *

June Sucker (*Chasmistes liorus*)

Utah, Utah County. Provo River, Sec. 5, T7S, R2E; to Sec. 36, T6S, R2E, the lower 7.8 kilometers (4.9 miles) of the main channel of the river as measured from it confluence with Utah Lake, upstream to the Tanner Race diversion.



Known constituent elements of the critical habitat include one to three feet of high quality water constantly flowing over a clean, unsilted gravel substrate. Larval June suckers require shallow areas with low velocities connected to the main channel of the river.

* * * * *

Dated: February 26, 1986.

P. Daniel Smith,

Deputy Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 86-6979 Filed 3-28-86; 8:45 am]

BILLING CODE 4310-55-M

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50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Threatened Status and Critical Habitat for the Railroad Valley Springfish

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines the Railroad Valley springfish (*Crenichthys nevadae*) to be a threatened species with critical habitat. This action is being taken because suitable habitat for this species has decreased since its discovery and the publication of the original description in 1932. Primary threats to the species include the presence of exotic fishes, habitat alterations, and ground water depletion in the Railroad Valley basin. The Railroad Valley springfish occurs only in thermal springs located in Railroad Valley, northeastern Nye County, Nevada. The final rule would provide protection to all populations of this species. Critical habitat is designated for those habitats within the species' native range. A special rule is included which would allow take for certain purposes in accordance with Nevada State laws and regulations.

EFFECTIVE DATE: April 30, 1986.

ADDRESS: The complete file for this rule is available for inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Suite 1692, Lloyd 500 Building, 500 NE. Multnomah Street, Portland, Oregon 97232.

FOR FURTHER INFORMATION CONTACT: Mr. Wayne S. White, Chief, Division of Endangered Species, at the above address (503/231-6131 or FTS 429-6131).

SUPPLEMENTARY INFORMATION:

Background

Hubbs (1932) described the genus *Crenichthys* and the species (*Crenichthys nevadae*) based on specimens collected from thermal springs in the Duckwater area of Railroad Valley in central Nevada. Since Hubbs described the genus *Crenichthys*, a second species, *C. baileyi* from the White River of eastern Nevada, has been placed in the genus (La Rivers 1962, Williams and Wilde 1981). Thus, *Crenichthys* consists of two species confined to separate valleys in central and eastern Nevada.

The Railroad Valley springfish is native to four thermal springs near Locke's Ranch (Big, North, Hay Corral, Reynolds) and two thermal springs on the Dockwater Shoshone Indian Reservation (Big Warm and Little Warm), all in Railroad Valley, Nye County, Nevada. Additionally, the species has been introduced into Chimney Springs, approximately six miles south of Locke's Ranch, a seepage area which forms small thermal ponds at Sodaville in Mineral County, Nevada, and into springs at the source of Hot Creek, approximately 40 miles west of Locke's Ranch. In these springs, it inhabits the springpools, their outflow, and adjacent marshy areas.

The long term threat to the Railroad Valley springfish is the alteration of its thermal spring habitats and the introduction of exotic organisms, especially fishes. All of the springs historically inhabited by the Railroad Valley springfish have been altered by man's activities, and springfish populations have decreased in all habitats throughout its range. Diking of springpools, diversion of outflows, and channelization of outflow creeks have reduced suitable habitat for the Railroad Valley springfish at Big, Hay Corral, Big Warm, and Little Warm Springs. Aquatic and riparian habitat around North Spring is also subject to being trampled by the large number of cattle watering in the spring and outflow. The thermal spring habitat of the Railroad Valley springfish is further threatened by pumping of underground aquifers, which may result in spring failures. The threat of reduced spring flows was realized during 1981 when the habitat of the introduced springfish population at Chimney Springs was lost after spring discharge decreased. Springfish were subsequently reintroduced into Chimney

Springs when flows resumed. Several other springs to the south of Locke's Ranch also failed during 1981. The adverse effect of increased ground water pumping on the Railroad Valley springfish countinues to threaten this species. Threats to the survival of the Railroad Valley springfish were reviewed by Williams and Williams (1981) and Hardy (1979). The Nevada Fish and Game Commission lists the species as protected (NRS 503.065).

The presence of exotic fishes in the extremely limited habitat of the Railroad Valley springfish represents a serious threat to this species. Guppies *(Poecilia reticulata)* have become established in Big Warm Spring and have nearly eliminated springfish from the main springpool area. Development of one outflow channel of Big Warm Spring as a catfish farm has resulted in escape of catfish into the spring system. The presence of guppies and channel catfish *(Ictaclurus punctatus)* in Big Warm Spring greatly increases the possibility that these species will be introduced into nearby Little Warm Spring.

On December 30, 1982, the Service published a Notice of Review of Vertebrate Wildlife for Listing as Endangered or Threatened Species (47 FR 58454). The Railroad Valley springfish was included in the review as a category 1 taxon, indicating that the Service has substantial information on hand to support the proposal of this fish for protection under provisions of the 1973 Endangered Species Act, as amended. On April 12, 1983, the Service was petitioned by the Desert Fishes Council to list the Railroad Valley springfish. The Service reviewed and evaluated the petition and determined that it did present substantial information that the petitioned action might be warranted. The notice of finding for this petition was published in the **Federal Register** on June 14, 1983 (48 FR 27273). The proposed rule to list the Railroad Valley springfish as threatened with critical habitat was published in the **Federal Register** on April 17, 1984, and represented the Service's finding that the petitioned action is warranted in accordance with section 4(b)(3)(B)(ii) of the Act.

Summary of Comments and Recommendations

In the April 17, 1984, proposed rule (49 FR 15109) 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 governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices were published in the *Las Vegas Review Journal* (May 25, 1984) and the *Tonopah Times Bonanza* and *Goldfield News* (May 31, 1984), which invited general public comment. A total of seventeen letters were received and are discussed below. A public hearing was requested by Nye County, and was held at the Duckwater Shoshone Indian Reservation, Duckwater, Nevada, on August 16, 1984. The hearing announcement was published on July 31, 1984 (49 FR 30554) and the comment period extended until August 31, 1984. Comments received during the public hearing are also included and discussed.

Comments opposing the proposed action came from Nye County, the Duckwater Shoshone Tribe, Nevada Fish Growers, Inc., Nevada Department of Wildlife, and Nevada Executive Office. Comments in support of the proposed action were received from the Nevada Division of State Parks, International Union for Conservation of Nature and Natural Resources (IUCN), a graduate student at Sacramento State University, Toiyabe Chapter of the Sierra Club, the Desert Fishes Council, Professor of Biology at the University of Nevada, Las Vegas.

Additional comments, voicing neither support nor opposition, were received from the Bureau of Land Management, Nevada Lieutenant Governor, Nevada Division of State Lands, Nevada Division of Historical Preservation and Archaeology, Nevada Division of Water Resources, and research associate at the University of Nevada, Las Vegas.

Opposition to the proposed rule by Nevada Department of Wildlife, Nevada Fish Growers, Inc., Nye County, Duckwater Shoshone Tribe, and Nevada Executive Office was primarily focused on the potential effects of the listing and critical habitat designation on the existing commercial catfish rearing facility at Big Warm Spring, on existing and future oil production in the area, and on general economic development on the Duckwater Shoshone Indian Reservation and other private lands. The Service responds that the 1982 Amemdments to the Endangered Species Act (ESA) require that determinations to list species as threatened or endangered be based solely on the best available scientific and commercial information available for the species. Thus, economic impacts are not to be considered when determining biological justification for listing. The ESA specifies, however, that the economic impact(s) of designating a particular area as critical habitat must be considered. Critical habitat designation may then be modified by excluding any area if it is determined that the benefits of such exclusion outweigh the benefits of specifying the area as part of the critical habitat. However, the area may not be excluded from critical habitat if it is determined, based on the best scientific and commercial data available, that failure to designate an area as critical habitat will result in extinction of the species concerned. The Service has accordingly prepared an economic analysis of these areas determined in this rule to be critical habitat.

Critical habitat designations only affect Federal actions (see Critical Habitat section of this rule). The designated springfish critical habitat occurs on private lands on the Duckwater Reservation and at Locke's Ranch and has no impact under section 7(a)(2) of the Act when purely private actions are involved

The Service states the designation of critical habitat will have no effect on the existing catfish facility since this facility is privately owned and is on private land. This enterprise could be affected by the designation only if Federal permits or funds are involved in its operation. No Federal interest in acquisition of water rights is implied by the listing action. Therefore, economic development by the Tribe and/or other private land owners which utilize water from Big Warm or Little Warm Springs would proceed without section 7 consultation with the Service when Federal actions are not involved.

Nye County and the Duckwater Tribe stated that they were not properly notified of the proposal and also requested that an Environmental Impact Statement (EIS) be prepared. The Service replies that all of the notice requirements in section 4(b)(5) of the Act have been satisfied for the proposed rule. Furthermore, notification of the proposal was made public through newspaper notices published in the *Las Vegas Review-Journal, Tonopah Times-Bonanza,* and the *Goldfield News.* Certified letters were sent notifying Nye County, the Duckwater Tribe, and the owners of the Locke's Ranch property of the proposed rule. On May 30, 1984, Fish and Wildlife Service biologists from the Great Basin Complex office assured Nye County officials that Fish and Wildlife Service would honor Nye County's request for a public hearing. With respect to preparation of an EIS, the Service replies that NEPA documentation need not be prepared for regulations adopted under section 4(a) of the Act. See 48 FR 49244 (October 25,

1983). Therefore, the development of an EIS is not required for this action.

Nevada Fish Growers, Inc., Nevada Executive Office, Nevada Department of Wildlife, and Nevada Division of State Lands stated that the presence of natural populations of springfish in at least six individual springs in Railroad Valley, and in three habitats outside the known native range, was sufficient to insure the species' survival. Nevada Fish Growers, Inc., also stated that listing the springfish as threatened was unjustified since no springfish population estimates had been conducted and thus no decline in numbers of fish could be demonstrated. The Service replies that the ESA specifically identifies factors which the Secretary is to utilize in determining whether a species is threatened or endangered. One of these is "the present or threatened destruction, modification, or curtailment of its habitat or range." The Service has received comments stating that all springs where the springfish is known to occur naturally have been modified by channelization, diking, etc.; one is occupied by exotic fishes known to displace other fishes closely related to the Railroad Valley springfish by competition and predation; and four are threatened by ground water pumping. These comments were presented by a Professor of Biology and a graduate student, both of whom have conducted field research on springfish habitats in Railroad Valley. Service biologists are also familiar with proposals for additional ground water removal in Railroad Valley and observations by investigators who have documented a decline in range and numbers of springfish of both Big and Little Warm Springs on the Duckwater Indian Reservation since introduction of guppies and channel catfish (D.W. Sada and J.E. Williams, U.S. Fish and Wildlife Service, pers. comm., September 1984; G.L. Vinyard, Biology Department, University of Nevada, Reno, pers. comm., July 1984).

The Service also notes that documentation of a decline in numbers of individuals or populations is not required for consideration for listing. In this case, the identified threats to the springfish's habitats and the limited extent of natural habitat are sufficient justification under the Act to list the species as threatened.

Nye County, the Duckwater Shoshone Indian Tribe, and Nevada Fish Growers, Inc., commented that guppies and channel catfish have not detrimentally influenced springfish in Big Warm Spring. The Service replies that comments provided by its own personnel, personnel from the University of Kentucky, Universities of Nevada at Reno and Las Vegas, and private individuals have reported a decline in the numbers of springfish in the springpool and outflows since the introduction of catfish and guppies. Nevada Fish Growers, Inc., also questioned the predatory nature of catfish by stating that analysis of stomachs from catfish within Big Warm Spring failed to identify the presence of any springfish or other prey items. The Service replies that predation by channel catfish on other similar desert fishes has been well documented (Stevens 1959, Bell 1959, Minckley 1973, Busbee 1968, Miller 1966, Jerald and Brown 1971).

The Duckwater Tribe also commented that "existing habitat on the reservation is being maintained and protected adequately to insure survival." The Service replies that recent actions by the Tribe resulted in severe channelization and alteration of the Little Warm Spring's system, until then the most pristine springfish habitat within Railroad Valley. These types of actions, in fact, resulted in alterations occurring at several springfish habitats and are identified in the proposed rule as some of the primary threats to the species' continued survival. The biology professor from the University of Nevada, in his comment letter, referenced the habitat alteration of Little Warm Spring and noted that "recent drainage of the marsh system connected to the spring has severely decimated the population."

Nye County asked if the Service was "positive the springfish does not occur in any other area in the world" and whether the Desert Fishes Council is, in fact, a "convenient cover" for Service-initiated petitions. The Service replies that the Desert Fishes Council is an international organization composed of approximately 400 individuals including professional biologists from many colleges and universities; State wildlife agencies; Federal agencies such as the Bureau of Reclamation, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service, and the National Park Service; private conservation organizations; and interested private citizens. The Council petitioned the Service to list the Railroad Valley springfish; the Service did not initiate the petition process, nor did it use the Council as a "cover" to begin the procedure for listing this species. The Service has reviewed, and concurs with, scientific literature accepted by ichthylogists, fishery managers, and other scientists, as correctly identifying the Railroad Valley springfish as a unique species endemic to a limited number of habitats within Railroad Valley, Nye County, Nevada. No scientific information has ever been presented to the contrary.

During the public hearing, one individual raised the issue of conflict of interest if Fish and Wildlife Service biologists working on the proposed listing of the springfish were also members of the Desert Fishes Council, the petitioning organization. Several Service biologists, including some associated with this final rule, are members of the Desert Fishes Council. However, no Fish and Wildlife Service biologist participated in any way in the decision made by the Council's executive committee to petition for the listing of the springfish. The Service's biologists have participated in Council meetings only in a general way through the preparation and presentation of various scientific papers and through other scientific activities appropriate for general membership in a professional society given only a general involvement by Service employees in the Desert Fishes Council's activities. The Service concludes that there has been no conflict of interest under these circumstances for this rulemaking.

Nevada Fish Growers, Inc., stated that the "record of action" by the Nevada Department of Wildlife invalidated the Service's conclusion that listing is necessary to protect the species because of the inadequacy of existing regulatory mechanisms. The Service replies that protection of the springfish under a "protected" classification by the Nevada Department of Wildlife prohibits taking without a scientific collecting permit, but does not afford any habitat protection. Furthermore, no management or recovery plan exists or is planned for this species. Listing would provide greater habitat protection, mandate development or a recovery plan, and also provide the opportunity for ESA Section 6 funds to be utilized by the Nevada Department of Wildlife for identified recovery actions.

The Nevada Division of State Parks (NDSP) supported the proposed listing as being in the best interest of the citizens of Nevada. NDSP stated that the Duckwater area is listed in the Nevada Natural Heritage Program, a program designed to identify and preserve areas which contain the "best representative examples of Nevada's natural heritage including plants, animals, and geologic formations, as well as scenic and scientific areas." Other letters from the biology professor, Toiyabe Chapter of the Sierra Club, Desert Fishes Council,

IUCN, and the graduate student supported the proposal because of the springfish's vulnerability to identified threats of habitat alteration, ground water depletion, and introduced species.

The Nevada Department of Wildlife (NDW) and the Nevada Executive Office commented that monitoring of springfish populations and implementation of measures to enhance the species' status should be undertaken in lieu of listing. The Service recognizes the value of population surveys and has discussed this with NDW and presented proposals to the Duckwater Shoshone Indian Tribe. Such estimates have not occurred, partially because access to Big and Little Warm Springs on the Duckwater Reservation was denied Service biologists by the Tribal Council. The Service does not believe, however, that specific information regarding population size is a prerequisite to competently analyze the present status of this springfish.
This status is well presented in information which shows that the species has undergone severe declines in several of its habitats, and that there are serious threats to the livelihood of each population posed by competition and predation by exotic species, habitat alteration, and/or ground water depletion.

Nye County, the Duckwater Shoshone Indian Tribe, and the Nevada State Lands Division questioned whether livestock grazing had impacted any spring areas and commented that any detrimental effects of grazing on spring habitats could be controlled in some way other than listing. The Service replies that although grazing does not currently appear to be a problem at Big or Little Warm Springs, livestock continues to have a major impact on the habitat at North Spring and its outflow, a portion of which is on public land. The Service recognizes that overgrazing around the springs and outflow would be controlled by management practices that do not require listing in order to be accomplished. However, listing is necessary to address the primary threats of habitat alteration, ground water pumping, and introduction of exotic species.

Nye County and the Nevada State Lands Division commented that the identified threat of ground water pumping was not justified because the Nevada State Engineer controls use of the ground water resource. The Service replies that it recognizes the jurisdiction of the State Engineer and his regulatory authority to prevent ground water removal in excess of natural recharge for a basin. However, the possibility that pumping may result in local "cones of depression" in ground water levels, consequently affecting spring discharge, is recognized by the State Engineer's well spacing requirements for ground water pumps, such as anticipated in Desert Land Entry and Carey Act applications to the Bureau of Land Management (BLM).

Despite the controls exercised by the State Engineer, local spring failure or decreased discharge due to ground water depletion has been documented in such areas as Ash Meadows and the Pahrump Valley in southern Nevada. Discharge of Big Spring at Locke's Ranch has decreased from 1,500 gallons per minute (gpm) to 520 gpm, a decrease of 65 percent since drilling of a nearby flowing well (Mifflin 1968).

Evidence of the influence this may have on adjacent spring discharge is well presented in the State Engineer's comment letter (Nevada Division of Water Resources) stating that although "ground water depletion is not occurring at the present time . . . there may be some lowering of the ground water table or depletion in localized areas due to a concentration of pumping." The potential for localized, detrimental effects of ground water pumping in Railroad Valley is recognized since the letter also states that the State Engineer has received a large number of applications to appropriate ground water in Railroad Valley. This comment letter goes on to state that "these applications, if allowed, could possibly have some effect on the habitat of the Railroad Valley springfish." Similarly, the BLM's Environmental Assessment for Classification of Agricultural Lands in Northern Railroad Valley (BLM 1984) recognizes the possibility that "for Locke's Station area, it is uncertain what the minimum long-term average discharge can be without adversely affecting the wildlife habitat . . . a moderate impact could be adverse."

The Nevada Division of State Lands also commented that the proposed listing and designation of critical habitat could lead to public land withdrawals to prevent ground water extraction, and could decrease values of the limited private lands in the area. The Service replies that the designation of critical habitat is not anticipated to require the withdrawal of any public lands. Apart from critical habitat, however, the Act does not permit the Service to consider the impacts posed by a proposed listing to a particular economic activity.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the Railroad Valley springfish should be classified as a threatened species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424) were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in Section 4(a)(1). These factors and their application to the Railroad Valley springfish (*Crenichthys nevadae*) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* All of the habitats occupied by the Railroad Valley springfish have been altered by human activities. Some of these activities have resulted in greater population declines than others; all have, however, concomitantly reduced the total habitat and population throughout the species' range. Activities planned for the future also threaten habitats and populations.

In the spring of 1984, the outflow channel from Little Warm Spring was channelized and its bordering marsh dried and burned to modify and improve diversions to nearby agricultural lands. Population surveys have not been conducted since this alteration; however, research conducted in many stream environments throughout North America show that channelization decreases the size and biomass of fish populations, and changes aquatic species' composition (Menzel and Fierstine 1976, Griswold *et al.* 1978). This indicates the existing springfish population is likely to be much smaller than that existing prior to channelization. Prior to this action, habitat in Little Warm Spring was the most stable environment occupied by the springfish. Springfish habitat in the channel was approximately 400 yards long, 2 yards wide, and 1 yard deep, lightly vegetated, and bordered by deeply recessed undercut banks supporting mature marsh vegetation. Since channelization, this quality habitat is approximately 20 yards long and 1 yard wide.

Alterations at Big Warm Spring have been both physical and biological. Physically, the habitat has been reduced by alterations occurring in both the north and south outflow channels. Available habitat in the north channel was reduced from an estimated 0.27 acre (a channel 0.38 mile long) to 0.16 acres (a channel 0.21 mile long) by installing a delivery pipe diverting the entire flow carried by this channel. The south

outflow channel has been altered by construction of facilities for channel catfish aquaculture. These facilities, located approximately 0.38 mile downstream from the springpool, initially consisted of plastic-lined raceways placed in the stream channel. Observations made shortly after this construction sighted no springfish either in or downstream from this area (Sada fieldnotes 1980, 1981, 1983). It is doubtful that construction of this facility eliminated the springfish; the piscivorous food habits of channel catfish make it more likely that disappearance of the springfish resulted from catfish predation (Miller 1966). J.E. Williams (pers. comm. 1982) stated that the greatest concentration of springfish in the Big Warm Spring system prior to construction of this facility was located at the site of the facility. Location and design of facility raceways has changed since initial construction. They are now concrete and located off-channel. Efforts to control entrance of catfish into the spring system have been unsuccessful, and numerous 12-inch to 15-inch individuals reportedly reside throughout the system (Sada fieldnotes 1983, Vinyard pers. comm. 1984). Observations made since 1979 note a continual decline in this springfish population. Hardy (1979) recorded the presence of a large springfish population. Sada (fieldnotes 1981, 1983) recorded the decline of this population and Vinyard (pers. comm. 1984) reported the virtual elimination of the springfish in this spring. This decline is believed to be largely attributable to the introduction of channel catfish and guppies. During 1983 and 1984, Nevada Department of Wildlife personnel noted springfish only in portions of the spring outflow. Estimates of population size were not made at this time. No comparison of the population before and after introduction of catfish resulted from these observations. The impacts of exotic species on this springfish are discussed further in the section entitled "Disease or Predation."

Springfish habitat in the outflow channel from Big Spring at Locke's Ranch was reduced by an estimated 10 percent (to 0.1 acre) during the recent construction of diversion canals directing springflow away from good quality habitat and into narrow, steeply-sloped channels and a plastic-lined pool. The impact of this action on this springfish population was great not only because occupied habitat was decreased, but because high water temperatures eliminate the use of much of the upstream aquatic habitat for springfish reproduction. Diversion removed water from downstream areas where water temperature had cooled adequately to permit spawning and placed it into poor quality habitats. Although 90 percent of occupied habitat remains, excessive water temperatures and poor quality habitat combine to support a much smaller portion of spawning habitat. Spawning habitat has been reduced approximately 20 percent (J.E. Williams pers. comm. 1983).

Other habitats at Locke's Ranch (North, Reynolds, and Hay Corral Springs) are small (discharging between 200 and 425 gallons per minute or gpm) and presently impacted mostly by overgrazing. This activity is not known to eliminate springfish populations; however, numerous investigations show how overgrazing degrades the quality of aquatic habitats (BLM 1975, Platts 1982).

Future viability of discharge from springs occupied by Railroad Valley springfish is questionable. Mifflin (1968) reported that Big Spring has decreased from 1500 gpm to 520 gpm because of the drilling of a nearby flowing well. Decreases in discharge for Hay Corral Spring have also been recorded over the past several decades (Mifflin 1968). The BLM is presently considering releasing land in northern Railroad Valley through its Desert Land Entry program. Hydrology reports, prepared to analyze the impact of this release and the resulting utilization of ground water for agriculture, state that there is a potential for a moderate to extreme impact on discharge from springs at Locke's Ranch.

The species occurs in three spring habitats outside of its historic distribution. Two of these habitats, Chimney Spring and Hot Creek, are located within the pluvial Lake Railroad basin, and an unnamed spring at Sodaville, Mineral County, Nevada, is located approximately 200 miles west of Railroad Valley. Little security is afforded these populations. Chimney Spring is located on public domain lands approximately six miles south of Locke's Ranch. It supports a sizable population, established in 1978, in artificial pools. However, varying hydrologic conditions influence spring discharge to the extent that the population was extirpated during the summer of 1981. The population was reestablished upon resumption of spring discharge.

The population in Hot Creek was established by transplant from populations existing at Lockes Ranch during the past several years. Recent surveys record the population as sizable and doing well in waters diverted for agricultural irrigation (Pedretti *et al.* 1984). The population occurs only on private land.

Railroad Valley springfish were introduced into a small thermal spring at Sodaville by Nevada Department of Wildlife personnel during 1947 (La Rivers 1962). This small spring (50 gpm) is located on private land where it is frequently disturbed by channelization activities intended to increase the efficiency of water movement. This water is used for recreation and culinary purposes.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* There is no indication that the Railroad Valley springfish is overutilized for any of these purposes.

C. *Disease or predation.* The development of a catfish farming operation at Big Warm Spring in 1982 has permitted the introduction of channel catfish (*Ictalurus punctatus*) into this spring. Operation of the catfish farm adjacent to Big Warm Spring has permitted introduction of predaceous channel catfish into the spring and its outflow, which could result in the total loss of Railroad Valley springfish in Big Warm Spring. A naturally steep gradient apparently prevents the movement of channel catfish from the Big Warm Spring outflow into Little Warm Spring, which is located approximately one mile away. Channel catfish are opportunistic feeders and are known to prey on fishes (Stevens 1959, Bell 1959, Minckley, 1973, Busbee 1968). In the upper Gila River in Arizona, catfish were a significant predator on young razorback suckers (Paul Marsh, Assistant Professor for Research, Arizona State University, pers. comm., November 1984).

D. *The inadequacy of existing regulatory mechanisms.* The State of Nevada lists the Railroad Valley springfish as a protected species. This classification by the Nevada Department of Wildlife prohibits taking without a scientific collecting permit. However, no protection of the habitat is included in such a designation and no management or recovery plan exists for this species.

E. *Other natural or manmade factors affecting its continued existence.* Guppies (*Poecilia reticulata*) have become established in Big Warm Spring and appear to have almost eliminated Railroad Valley springfish from the springpool area. Guppies compete with the Railroad Valley springfish for habitat and food resources. Establishment of exotic fishes in numerous aquatic habitats of the southwestern United States often results in the elimination or severe decrease of native fish populations (Deacon *et al.* 1964; Hubbs and Deacon 1964; Williams and Wilde 1981; Schoenherr 1981).

Exotic fishes are increasing in Nevada waters, especially in spring systems in the southern portion of the state (Courtenay and Williams 1982; Courtenay and Deacon 1983; Deacon and Williams 1984).

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action is to list the Railroad Valley springfish as threatened with critical habitat. Threatened status is appropriate because of the restricted and reduced range of the species, and because of the threats to the fish and its remaining habitat. If this species is not protected pursuant to the Endangered Species Act, it could reasonably be expected to become endangered within the foreseeable future and thus not listing would be a violation of the Act's intent. Since the species is still extant in several locations and the threats to the species are generally localized, the species is not currently in danger of extinction and thus endangered status would not be appropriate at this time. An explanation of the critical habitat designation is presented in the "Critical Habitat" section of this rule.

Critical Habitat

Critical habitat, as defined by section 3 of the Act means: (i) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection, and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Section 4(a)(3) of the Act requires that critical habitat be designated to the maximum extent prudent and determinable concurrently with the determination that a species is endangered or threatened. Critical habitat is being designated for the Railroad Valley springfish. It includes six springs within the native range of the species, their outflow pools, associated streams and marshes, and a 50-foot riparian zone around the springs, their outflow pools, and associated streams and marshes located in two areas of northeastern Nye County, Nevada. The riparian zone is necessary to protect and maintain the physical and chemical characteristics, such as temperature, clear water, pH, etc., of the aquatic environment. The Service believes that the riparian area is essential for the conservation of the Railroad Valley springfish and it is, therefore, included as critical habitat. The designated critical habitat is located in the Duckwater area (Big Warm and Little Warm Springs) and Lockes Ranch area (Big, North, Hay Corral, and Reynolds Springs).

The area designated does not include the entire habitat of this species. Railroad Valley springfish occur in marginal habitat in the outflow creek of Big Warm Spring downstream from the designated critical habitat. Also, no critical habitat is designated for the introduced populations near Sodaville in Mineral County, Nevada, and in Chimney Springs and Hot Creek in Nye County, Nevada.

Section 4(b)(8) requires, for any proposed or final regulation that designates critical habitat, a brief description and evaluation of those activities (public or private) which may adversely modify such habitat or may be affected by such designation. Any activity lessening spring flows or significantly altering the natural outflow channels and temperature regimes in springs inhabited by the Railroad Valley springfish could adversely impact its critical habitat. Such activities include, but are not limited to, excessive ground water pumping, impoundment, and water diversion. Any activity extensively altering the channel morphology in these springs could adversely impact the critical habitat. Such activities include, but are not limited to, channelization, grazing and other watershed disturbances that result in excessive sedimentation, impoundment, deprivation of substrate source, and riparian destruction. Any activity which would significantly alter the water chemistry in these springs could adversely impact the critical habitat. Such activities include, but are not limited to, release of chemical or biological pollutants into the waters at a point source or by dispersed release.

Federal agencies which might be planning to construct, fund, authorize, or license projects in the future that could adversely impact the critical habitat of the Railroad Valley springfish include the Bureau of Land Management (BLM) and the Bureau of Indian Affairs (BIA).

The only known activities of BLM that might affect the proposed critical habitat of the Railroad Valley springfish are leasing of public lands near North Spring for cattle grazing and leasing for geothermal and oil and gas exploration. Currently, cattle graze extensively in a marshy area along the outflow of North Spring. This marshy area is inhabited by springfish where they are subjected to excessive silt loads, trampling, increased turbidity, and water pollution by the presence of cattle. Virtually all public land in Railroad Valley is leased for oil and gas, including the land around North Spring, although there has been no activity within several miles of the critical habitat area and none is foreseen.

Activities of BIA that might be affected by the designation of critical habitat include funding and permitting of programs proposed by the Duckwater Shoshone Tribe that might affect the outflows of Big and Little Warm Springs and that could thus render these habitats unsuitable for the springfish.

Section 4(b)(2) of the Act requires the Service to consider economic and other impacts of designating a particular area as critical habitat. The Service has carefully considered all information obtained during the comment period before proceeding with the critical habitat designation. An economic analysis was accordingly prepared, which determined that the critical habitat designation, as defined in the proposed rule, did not bring forth any significant economic or other impacts to warrant consideration of adjusting the boundaries of the proposed critical habitat designation.

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 practices. 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 and harm 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. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402 and are now under revision (see proposal at 48 FR 29990; June 29, 1983). Section 7(a)(2)

requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed 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. Possible Federal involvement with respect to the Railroad Valley springfish was discussed in the above "Critical Habitat" section.

The Act and implementing regulations found at 50 CFR 17.21 and 17.31 set forth a series of prohibitions and exceptions that generally apply to all threatened wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that had been taken illegally. Certain exceptions would apply to agents of the Service and State conservation agencies. General regulations governing the issuance of permits to carry out otherwise prohibited activities involving threatened wildlife species under certain circumstances are set out at 50 CFR 17.32.

The Secretary has discretion under section 4(d) of the Act to issue such special regulations as are necessary and advisable for the conservation of a threatened species. The springfish is threatened primarily by habitat disturbance or alteration, not by intentional, direct taking of the species or by commercialization. Given this fact, and the fact that the State regulates direct taking of the species through the requirement of State collecting permits, the Service has concluded that the State's collection permit system is adequate to protect the species from excessive taking, so long as such takes are limited to: educational purposes, scientific purposes, the enhancement of propagation or survival of the species, zoological exhibition, and other conservation purposes consistent with the Endangered Species Act. Therefore, the special rule allows take to occur for the above-stated purposes without the need for a Federal permit if a State collection permit is obtained and all other State wildlife conservation laws and regulations are statisfied. It should be recognized that any activities involving the taking of this species not otherwise enumerated in the special rule are prohibited. Without this special rule all of the prohibitions under 50 CFR 17.31 would apply. The Service believes that this special rule will allow for more efficient management of the species, thereby facilitating its conservation. For these reasons, the Service has concluded that this regulatory action is necessary and advisable for the conservation of the Railroad Valley springfish.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under 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).

Regulatory Flexibility Act and Executive Order 12291

The Department of the Interior has determined that designation of critical habitat for this species will not constitute a major action under Executive Order 12291 and certifies that this designation will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C 601 *et seq.*). The Department of the Interior has determined that, although the critical habitat designation as defined in the proposal may affect or be affected by some BLM and BIA activities, the proposed rule did not bring forth any significant economic or other impacts to warrant consideration of adjusting the boundaries of the critical habitat designation. The critical habitat designation is not expected to affect privately-funded or implemented activities on private lands or Indian Reservation lands. This rule contains no information collection or recordkeeping requirements as defined by the Paperwork Reduction Act of 1980. These determinations are based on a Determination of Effects that is available from the Regional Director, U.S. Fish and Wildlife Service, Suite 1692, Lloyd 500 Building, 500 NE. Multnomah Street, Portland, Oregon 97232

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Author

The author of this rule is Dr. Randy McNatt, U.S. Fish and Wildlife Service, Great Basin Complex, 4600 Kietzke Lane, Building C, Reno, Nevada 89502 (702/784–5227 or FTS 470–5227).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulations 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: Pub. L. 93–205, 87 Stat. 884; Pub. L. 94–359, 90 Stat. 911; Pub. L. 95–632, 92 Stat. 3751; Pub. L. 96–159, 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. Amend § 17.11(h) by adding the following, in alphabetical order under "Fishes," to the List of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
FISHES							
Springfish, Railroad Valley	*Crenichthys nevadae*	U.S.A. (NV)	Entire	T	224	17.95(e)	17.44(n)

3. Add the following as special rules to § 17.44.

§ 17.44 Special rules—fishes.

* * * * *

(n) Railroad Valley springfish *(Crenichthys nevadae).*

(1) No person shall take the species, except in accordance with applicable State fish and wildlife conservation laws and regulations in the following instances: for educational purposes, scientific purposes, the enhancement of propagation or survival of the species, zoological exhibition, and other conservation purposes consistent with the Act.

(2) Any violation of applicable State fish and wildlife conservation laws or regulations with respect to the taking of this species will also be a violation of the Endangered Species Act.

(3) No person shall possess, sell, deliver, carry, transport, ship, import, or export, by any means whatsoever, any such species taken in violation of these regulations or in violation of applicable State fish and wildlife conservation laws or regulations.

(4) It is unlawful for any person to attempt to commit, solicit another to commit, or cause to be committed, any offense defined in paragraphs (n)(1) through (n)(3) of this section.

* * * * *

4. Amend § 17.95(e) by adding critical habitat of the Railroad Valley springfish as follows: (The position of this entry under Section 17.95(e) will follow the same sequence as the species occurs in § 17.11).

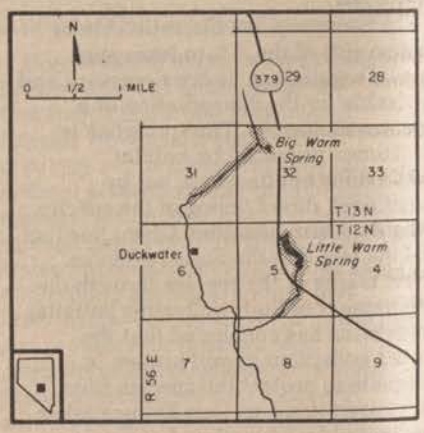
§ 17.95 Critical habitat—fish and wildlife.

(e) * * *

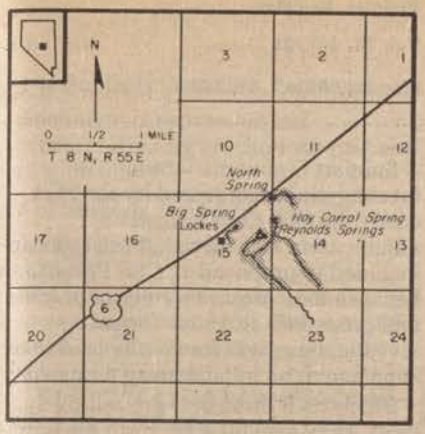
* * * * *

Railroad Valley Springfish *(Crenichthys nevadae)*

1. Nevada, Nye County, Duckwater area. Big Warm Spring and its outflow pools, streams, and marshes and a 50 foot riparian zone around the spring, outflow pools, streams, and marshes in T13N, R56E, NE¼ Sec. 31, SE¼ Sec. 31, NW¼ Sec. 32. Little Warm Spring and its outflow pools, streams, and marshes, and a 50-foot riparian zone around the spring, outflow pools, streams, and marshes in T12N, R56E, Sec. 5.



1. Nevada, Nye County, Lockes Area. North, Hay Corral, Big, and Reynolds Springs and their outflow pools, streams, and marshes, and a 50-foot riparian zone around the springs, outflow pools, streams, and marshes in T8N, R55E, SW¼ Sec. 11, NW¼ Sec. 14, SW¼ Sec. 14, SE¼ Sec. 15, NE¼ Sec. 15, SW¼ Sec. 15.



Known constituent elements for all areas of critical habitat of the Railroad Valley springfish include clear, unpolluted thermal spring waters ranging in temperature from 29° to 36°C in pools; flowing channels; marshy areas with aquatic plants, insects, and mollusks.

* * * * *

Dated: February 28, 1986.

P. Daniel Smith,

Deputy Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 86-6978 Filed 3-28-86; 8:45 am]

BILLING CODE 4310-55-M

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[Docket No. 50329-5115]

50 CFR Part 285

Atlantic Tuna Fisheries

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Notice of Incidental longline category closure.

SUMMARY: NOAA issues this notice to close the fishery for Atlantic bluefin tuna conducted by vessels permitted in the Incidental longline category in the area south of 36°00′ N. latitude. Closure of this fishery is necessary because the annual catch quota of 115 short tons (st) for this area will be attained by the effective date. The intent of this action is to insure that the overall U.S. quota for Atlantic bluefin tuna in the Western Atlantic Ocean will not be exceeded.

EFFECTIVE DATES: The Incidental longline category fishery is closed 0001 hours local time, March 29, 1986, through December 31, 1986.

FOR FURTHER INFORMATION CONTACT: William C. Jerome, Jr., 617-281-3600, extension 262, or David S. Crestin, 617-281-3600, extension 253.

SUPPLEMENTARY INFORMATION: Regulations promulgated under the authority of the Atlantic Tunas Convention Act (16 U.S.C. 971-971h) regulating the take of Atlantic bluefin tuna by persons and vessels subject to U.S. jurisdiction were published in the **Federal Register** on October 25, 1985 (50 FR 43396).

Section 285.22(f)(1) of the regulations provides for an annual quota of 145 short tons (st) of Atlantic bluefin tuna to be taken by vessels permitted in the Incidental longline category in the regulatory area. Of this amount, no more than 115 st may be taken in the area south of 36°00′ N. latitude. The Assistant Administrator for Fisheries, NOAA (Assistant Administrator), is required under § 285.20(b)(1) to monitor the catch and landing statistics and, on the basis of these statistics, to project a date when the total catch of Atlantic bluefin tuna will equal any quota under § 285.22. The Assistant Administrator, further, is required under § 285.20(b)(1) to prohibit the fishing for, or retention of, Atlantic bluefin tuna by the type of vessels subject to the quotas. The Assistant Administrator has determined, based on the reported catch of Atlantic bluefin tuna of 100 st, and the recent catch rate, that the annual quota of Atlantic bluefin tuna allocated to vessels permitted in the Incidental longline category fishing south of 36°00′ N. latitude will be attained by the effective date. Fishing for and retention of any Atlantic bluefin tuna by these vessels in this area must create at 0001 hours, local time, on March 29, 1986.

Vessels permitted in the Incidental longline category fishing north of 36°00′ N. latitude may continue to fish for and retain Atlantic bluefin tuna until the total annual quota of 145 st is achieved.

Notice of this action has been mailed to all Atlantic bluefin tuna dealers and vessel owners holding a valid vessel permit for this fishery.

Other Matters

This action is taken under the authority of 50 CFR 285.20, and is taken in compliance with Executive Order 12291.

List of Subjects in 50 CFR Part 285

Fisheries, Penalties, Reporting and recordkeeping requirements.

(16 U.S.C. 971 *et seq.*)

Dated: March 26, 1986.

Carmen J. Blondin,

Deputy Assistant Administrator for Fisheries Resource Management, National Marine Fisheries Service.

[FR Doc. 86-7058 Filed 3-26-86; 4:48 pm]

BILLING CODE 3510-22-M