

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status and Critical Habitat for Borax Lake Chub (*Gila Boraxobius*)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine the Borax Lake chub to be an Endangered species and Borax Lake, Harney County, Oregon to be its Critical Habitat. This action is being taken because the distribution of the Borax Lake chub is limited to Borax Lake, its outflow, and Lower Borax Lake in Harney County, Oregon. Geothermal development in and around Borax Lake and human modification of the lake threaten the integrity of the species' habitat and, hence, its survival.

DATES: Comments from the public must be received by December 15, 1980. A public meeting and a public hearing will be held on November 13, and December 2, 1980, respectively.

ADDRESSES: Interested persons or organizations can obtain information from the Regional Director, U.S. Fish and Wildlife Service, Lloyd 500 Building, Suite 1092, 500 N.E. Multnomah Street, Portland, Oregon 97232.

The public meeting and the public hearing will be held at the Museum Club Room, 18 West D. Street, Burns, Oregon, beginning at 10:00 a.m. on November 13, and December 2, 1980, respectively.

FOR FURTHER INFORMATION CONTACT: For further information on this proposed rule contact Mr. John L. Spinks, Jr., Chief, Office of Endangered Species, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240 or phone (703/235-2771).

SUPPLEMENTARY INFORMATION:**Background**

The Borax Lake chub is found only in Borax Lake (a small 10.2-acre, natural, thermal lake), its outflow, and Lower Borax Lake located in the Alvord Basin of south-central Oregon. It inhabits the highly mineralized, thermal lake that is fed by a thermal spring. The fish feeds on a variety of aquatic invertebrates.

Over time, the precipitation of minerals from the spring water maintaining the level of Borax Lake has raised the perimeter of the lake approximately eight meters above the valley floor and isolated the chub from

the surrounding watershed. The perched nature of the lake compared to the surrounding land make it extremely susceptible to human disturbance. Present modification of the perimeter diverts water from the lake and lowers its level. The lowering levels adversely affect the chub by decreasing habitat and increasing water temperature.

A second major threat to the Borax Lake chub is geothermal development. The entire Alvord Basin is a Known Geothermal Resource Area (KGRA) within which the Bureau of Land Management has already leased rights for geothermal exploration to private oil- and geothermal companies. Such development adjacent to Borax Lake could adversely impact the species' habitat. One of the problems of exploratory drilling in this area is the possibility of interconnecting aquifers or springs. This kind of interconnection could, in effect, drain the lake which is at a higher elevation than the valley floor where much of the drilling will be occurring. This drilling also could disrupt the hot water aquifer feeding the lake, thus changing the aquifer pressure or temperature and consequently change the lake. This alteration could range from a simple change in the temperature to a complete elimination of the flow. The threats to Borax Lake resulted in an emergency rule listing the Borax Lake chub as Endangered on May 28, 1980. (45 FR 35821-35823).

The Critical Habitat encompasses Borax Lake and the aquatic environments associated with its outflow located in T37S; R33E; SW ¼ Sec. 11, W ¼ Sec. 14, and SE ¼ Sec. 15, Harney County, Oregon. Some of the Critical Habitat is privately owned, but most is federally owned (Bureau of Land Management).

Section 4(a) of the Act (16 U.S.C. 1531 *et seq.*) states:

"General—(1) The Secretary shall by regulation determine whether any species is an endangered species or a threatened species because of any of the following factors:

- (1) The present or threatened destruction, modification, or curtailment of its habitat or range;
- (2) Overutilization for commercial, sporting, scientific, or educational purposes;
- (3) disease or predation;
- (4) the inadequacy of existing regulatory mechanisms; or
- (5) other natural or man-made factors affecting its continued existence."

This authority has been delegated to the Director.

Summary of Factors Affecting the Species

These findings are summarized herein under each of the five criteria of Section 4(a) of the Act. These factors, and their application to the Borax Lake chub, are as follows:

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

The Borax Lake chub is endemic to Borax Lake and its outflow. Borax Lake is an extremely fragile aquatic ecosystem which, because of its position above the valley floor, is vulnerable to destruction by human modification for irrigation. Recently a number of channels have been chipped along its perimeter. These channels direct water toward the eastern side of the lake instead of allowing the outflow to follow its natural pathway toward a marsh located on the western side of the lake. If flows through the natural outlet are sufficient, water flows through the marsh and into Lower Borax Lake where it provides additional chub habitat. Because of the artificial diversion, the lower lake may be completely dry during some years. Historically, because of its intermittent nature, the lower lake has probably never provided permanent chub habitat.

In contrast, much of the marsh area retains permanent water and provides suitable chub habitat. Much of this marsh habitat currently is dry because of the unnatural water diversion from the upper lake. If more diversions are constructed in the lake perimeter, the lake level will continue to decline, the marsh will continue to dry, and the continued existence of the chub will be increasingly threatened.

Development of the geothermal resource poses a substantial threat which may adversely affect the Borax Lake chub by modifying or destroying its aquatic habitat. Considerable interest in geothermal exploration has been demonstrated in the Alvord Basin, an area designated by the U.S. Geological Survey as a Known Geothermal Resource Area because of its geothermal potential. Some geothermal leases in the basin have already been issued by the Bureau of Land Management. The private land on which Borax Lake is located has been leased to an oil company for geothermal development. Additional leasing of Federal land in the Critical Habitat area is scheduled. The original leases released by BLM were offered in 1975, and there have been a number of offers since. Some of these leases have been reoffered, most recently in April 1980. Some leases have been issued and three tracts are

presently pending. Although BLM has indicated that it will be anywhere from 4-6 months before exploratory drilling actually begins, processing of applications for drilling permits and BLM stipulations to drilling plans will be taking place in the near future.

Development of a hot springs resort at Borax Lake for recreational purposes has been considered by the land owner, but because of the lakes remoteness this appears unlikely.

2. *Overutilization for commercial, sporting, scientific or educational purposes.*

None.

3. *Disease or predation.*

None.

4. *The inadequacy of existing regulatory mechanisms.*

None.

5. *Other natural or man-made factors affecting its continued existence.*

None.

Critical Habitat

The Act defines "Critical Habitat" to include (a) areas within the geographical area occupied by the species at the time that species is listed which are essential to the conservation of the species and which may require special management considerations or protection and (b) specific areas outside the geographic area occupied by the species at the time, upon a determination by the Secretary that such areas are essential for the conservation of the species.

Critical Habitat for the Borax Lake chub is proposed as follows:

Oregon, Harney County, Borax Lake and aquatic environments associated with the outflow from Borax Lake located within T37S;R33E; SW ¼ Sec. 11, W ½ Sec. 14, and SE ¼ Sec. 15.

These areas provide the Borax Lake chub with all the necessary requirements for suitable survival and reproduction such as food, spawning habitat, water temperatures, etc.

Section 4(b)(4) and 4(f)(4) of the Act require, to the maximum extent practicable, that Critical Habitat determinations be accompanied by a brief description and evaluation of those activities which, in the opinion of the Secretary, may adversely modify such habitat if undertaken, or those Federal actions which may be impacted by such designation. Such activities are identified below for this species. It should be emphasized that Critical Habitat designation may not affect each of the activities listed below, as Critical Habitat designation only affects Federal agency activities through Section 7 of the Act.

Activities which occur within the proposed Critical Habitat include cattle

grazing, nature study, swimming, geothermal exploration, irrigation, and hunting. Of these activities grazing, hunting, nature study, and swimming do not appear to adversely modify the habitat, to any substantial degree.

Geothermal exploration may adversely modify the habitat should it occur within the area adjacent to Borax Lake or its outflows or should it modify the spring flow and/or its water temperature.

Such disturbances from geothermal development would include, but would not be limited to, subsidence problems and/or modifications in the hydrology of the area that may affect the springs supporting Borax Lake. Full scale development of a geothermal plant may have negative effects on the lake due to air pollution, possible ground water contamination, subsidence, and other related impacts. If geothermal development occurs in the Alvord Basin (no plant construction is now known to be scheduled), it will probably entail only small-scale plants.

Construction of such plants on Federal land may be restricted so as not to adversely affect the proposed Critical Habitat. Development on private land could proceed unencumbered provided no Federal approval or funding is involved.

The Service is required to consider economic and other impacts of specifying a particular area as Critical Habitat. The Service has begun this process with a draft impact analysis. The Service is notifying Federal agencies that may have jurisdiction over the land and water under consideration in this proposed action. These Federal agencies and other interested persons or organizations are requested to submit information on economic or other impacts of this proposed action.

The Service will prepare a final impact analysis prior to the time of preparing a final rule and will use this document as the basis for its decision as to whether or not to exclude any area from Critical Habitat for the Borax Lake chub.

The 1979 Amendments to the Endangered Species Act require Federal agencies to confer with the Service on any agency action which is likely to jeopardize the continued existence of any species proposed to be added to the List of Endangered and Threatened Species of Wildlife and Plants or result in the destruction or adverse modification of Critical Habitat proposed to be designated for such species. The purpose of this requirement is to identify and resolve all potential conflicts between a proposed action and conservation of Endangered and

Threatened species at an early point in the decision-making process. That purpose is to be achieved with respect to proposed species through informal/formal discussions between the Federal agency and the Service on potential impacts of a proposed action on proposed species or proposed Critical Habitat.

Effect of This Proposal if Published as a Final Rule

Endangered Species regulations already published in Title 50 17.21 of the Code of Federal Regulations set forth a series of general prohibitions and exceptions which apply to all Endangered species. The regulation referred to above which pertain to such species are summarized below.

With respect to the Borax Lake chub, all prohibitions of Section 9(a)(1) of the Act, as implemented by 50 CFR 17.21, will apply. These prohibitions, in part, would 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 this species in interstate or foreign commerce. It also would be illegal to possess, sell, deliver, carry, transport, or ship any such wildlife which was illegally taken. Certain exceptions would apply to agents of the Service and State conservation agencies.

Regulations published in the Federal Register of September 28, 1975, (40 FR 44412), codified at 50 CFR 17.22 and 17.23 provide for the issuance of permits to carry out otherwise prohibited activities involving Endangered species under certain circumstances. Such permits are available for scientific purposes or to enhance the propagation or survival of the species. In some instances, permits may be issued during a specific period of time to relieve undue economic hardship which would be suffered if such relief were not available.

If published as a final rule this determination would require Federal agencies not only to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the Borax Lake chub, but would also require them to insure that their actions do not result in the destruction or adverse modification of the Critical Habitat which has been determined by the Secretary. Provisions for Interagency Cooperation are codified at 50 CFR Part 402.

Pursuant to Section 4(b) of the Act, the Director will notify the Governor of Oregon with respect to this proposal and request his comments and

recommendations before making a final determination.

Public Comments Solicited

The Director intends that the rules finally adopted will be as accurate and effective as possible in the conservation of any Endangered or Threatened species. Suggestions from the public, other concerned governmental agencies, the scientific community, industry, private interests, or any other interested party concerning any aspect of these proposed rules are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial, or other relevant data concerning any threat (or the lack thereof) to the species included in this proposal;

(2) The location of and the reasons why any habitat of this species should or should not be determined as Critical Habitat, as provided by Section 4 of the Act;

(3) Additional information concerning the range and distribution of this species; and

(4) Current or planned activities in the subject areas, probable impacts on such activities if the area is designated as Critical Habitat, and any foreseeable economic and other impacts of the Critical Habitat designation on federally funded or authorized projects.

§ 17.11 Endangered and threatened wildlife.

Public Meetings

The Service hereby announces that a public meeting will be held on this proposed rule. The public is invited to attend this session and to present opinions and information on the proposal. Specific information relative to the public meeting is set out below:

Public Meeting

Place: Museum Club Room, 18 West D. Street, Burns, Oregon
 Date: November 13, 1980
 Time: 10:00 a.m.
 Subject: Borax Lake Chub

Public Hearing

Place: Museum Club Room, 18 West D. Street, Burns, Oregon
 Date: December 2, 1980
 Time: 10:00 a.m.
 Subject: Borax Lake Chub

National Environmental Policy Act

A draft Environmental Assessment has been prepared and is on file in the Service's Area Office, U.S. Fish and Wildlife Service, 2800 Cottage Way, Sacramento, California 95825, (FTS 468-4106 or 916/484-4106). The assessment will be the basis for a decision as to whether this determination is a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National

Environmental Policy Act of 1969.

The primary authors of this rule are Dr. Kathleen E. Franzreb, U.S. Fish and Wildlife Service, Endangered Species Staff, 2800 Cottage Way, Sacramento, California 95825 (FTS 468-4106 or 703/235-1975) and Dr. James D. Williams, U.S. Fish and Wildlife Service, Office of Endangered Species, Washington, D.C. 20240 (FTS 235-1975 or 703/235-1975). The following sources were used in the preparation of this proposed rulemaking:

Williams, J. E. and K. M. Howe. Environmental Assessment for the protection of the Borax Lake area, Harney County, Oregon. Unpub. report to Unique Wildlife Ecosystem Program, U.S. Fish and Wildlife Service, Boise, Idaho. 35 p.

Williams, J. E. A preliminary report on the taxonomic status of *Gila* inhabiting Borax Lake, Harney County, Oregon. Unpub. report. Dept. of Fisheries and Wildlife, Oregon State University, Corvallis, Oregon (perp., 1977) 5 p.

Williams, J. E. and C. E. Bond. 1980. A new species of cyprinid fish from southeastern Oregon with a comparison to *Gila alvordensis* Hubbs and Miller. Proc. Biol. Soc. Wash. 92(2)291-298.

Regulations Promulgation

It is proposed to amend § 17.11 by adding in alphabetical order under "Fishes," the following to the list of animals.

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Chub, Borax Lake	<i>Gila boraxobius</i>	USA (Oregon) ...	Entire	E	17.95(e)		N/A

§ 17.95 [Amended]

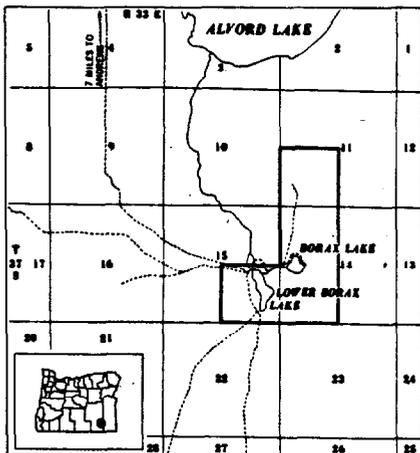
It is proposed to amend § 17.95(e), Fishes, by adding Critical Habitat of the Borax Lake chub after that of the slender chub as follows:

Borax Lake Chub

(*Gila boraxobius*)

Oregon, Harney County. Borax Lake and aquatic environments associated with the outflow from Borax Lake located within SW ¼ Sec. 11, W ½ Sec. 14, and SE ¼ Sec. 15; T37S; R33E.

**Borax Lake Chub
Harney County, Oreg.**



Principal constituent elements of this habitat for the Borax Lake chub are considered to be the constant temperature and flow of water into Borax Lake and its natural flow out of Borax Lake into associated aquatic environs and the aquatic and terrestrial food organism of this ecosystem.

Note.—The Department of the Interior has determined that this rule is not a significant rule and does not require preparation of a regulatory analysis under Executive Order 12044 and 43 CFR Part 14.

Dated: October 8, 1980.

Lynn A. Greenwalt,
Director, Fish and Wildlife Service.

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