DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AB31

Endangered and Threatened Wildlife and Plants; Neosho Madtom Determined To Be Threatened

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Fish and Wildlife Service (Service) determines a fish, the Neosho madtom (*Noturus placidus*), to be a threatened species under the authority of the Endangered Species Act of 1973 (Act), as amended. The madtom is currently known from the Neosho River (Grand River in Oklahoma) drainage: in the Neosho, Cottonwood, and Spring Rivers in southeastern Kansas, southwestern Missouri, and northeastern Oklahoma. Habitat destruction and modification, principally due to impoundments, dredging activities, and increased water demands, have decreased the distribution and abundance of the species and isolated it into three populations. This rule identifies the taxon as one in need of conservation, implements protective measures, and makes available recovery measures provided by the Act.

EFFECTIVE DATE: June 21, 1990.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours at the Service's Kansas State Office, Fish and Wildlife Enhancement, 315 Houston Street, Suite E, Manhattan, Kansas 66502.

FOR FURTHER INFORMATION CONTACT: Daniel Mulhern, at the above address, telephone (913) 539-3474.

SUPPLEMENTARY INFORMATION:

Background

Gilbert's (1886) collection of a *Noturus* specimen from the Neosho River near Emporia, Kansas, apparently is the first known record of the Neosho madtom. Two more specimens were taken from the Neosho River in Coffey County by the University of Kansas Biological Survey in 1912 (Wagner et al. 1984). Additional collections were made in 1951 and 1952 in the Neosho River in Kansas and Oklahoma, and also the Cottonwood River in Kansas (Taylor 1969, Wagner et al. 1984). Specimens of Neosho madtom were collected in the Spring River in Kansas in 1963 and in Missouri in 1964 (Wagner et al. 1984). The Cottonwood and Spring Rivers are part of the Neosho River drainage.

Specimens misidentified as furious madtom (*Schilbeodes eleutherus*) and grindled madtom (*Schilbeodes miurus*) also were collected from the Illinois River in Sequoyah County, Oklahoma, in 1946 (Moore and Paden 1950). Subsequent collections in 1948 and 1950 confirmed the presence of Neosho madtom in the lower Illinois River (Wagner et al. 1984). These are the only recorded occurrences of this species outside of the Neosho River drainage. Moss (1981) made later collections at three historical sites on the Illinois River, but found no Neosho madtoms. He concluded that hypolimnetic discharges from Tenkiller Ferry Dam may have produced temperatures that were too low for successful reproduction and growth of the species. It is believed the species is extirpated from the lower Illinois River (Wagner et al. 1984).

Sixty-eight percent of the known collections of this species are from 21 locations in the Neosho River (Wagner et al. 1984). The most upstream location is in Lyon County, Kansas, and the most downstream is near Miami, in extreme northern Ottawa County, Oklahoma, indicating the species is occupying at least the northern portion of its historic range. Although its original range included the entire Neosho (Grand) River drainage mainstreams, Moss (1981) was unable to locate specimens in suitable habitat between the reservoirs along this river in Oklahoma, indicating that reservoir construction has had an adverse impact on Neosho madtom populations.

Records of Neosho madtom from the Cottonwood River, which is a tributary of the Neosho River, are from 8 localities and 22 collections, with the confluence with Middle Creek near Elmdale, Chase County, Kansas, the most upstream locality. Collections made in 1983 along the Cottonwood River indicate that the species is relatively stable in this river (Wagner et al. 1984).

The distribution of this species in the Spring River is limited to only seven collections from three localities (Wagner et al. 1984, Moss 1981, Pflieger 1971, Branson et al. 1969). Collections from both Kansas and Missouri were taken very near the State line.

The current distribution of the Neosho madtom is restricted to the Neosho River drainage: the Neosho River in Kansas (Lyon, Coffey, Woodson, Allen, Neosho, Labette, and Cherokee Counties) and Oklahoma (Ottawa and Craig Counties); the Cottonwood River in Kansas (Lyon and Chase Counties); and the Spring River in Missouri (Jasper County) and Kansas (Cherokee County). With the exception of mainstream Federal reservoirs, and Flint Hills National Wildlife Refuge at the upper end of John Redmond Reservoir, all stream reaches in the range of the Neosho madtom are in private ownership.

The Neosho madtom is small, with adults averaging less than 7.5 cm (3 inches) long. It is characterized by having a midcaudal brownish stripe of pigment and a relatively deep body. The humeral process is moderately long, with somewhat reduced serrations of the pectoral spine. The adipose fin is well connected with the caudal fin. The mottled skin pigment readily distinguishes this species from other species belonging to the same genus found within its range (Taylor 1969, Wagner et al. 1984).

The species is almost exclusively found in riffles (Cross and Collins 1975, Deacon 1961), but exceptions to this generalization may be observed during early life stages and during spawning periods. Moss (1981) found that the Neosho madtom demonstrates a strong selection for small gravel substrates, usually less than 25 mm (1 inch) in diameter, and is only abundant on riffles with 8–16 mm (⅜ to ⅝-inch) gravel prevalent. The substrate must be loosely packed so the Neosho madtom can "wriggle" down into the gravel.

Adults utilize moderate to swift currents, while juveniles are most often found in areas of low current. Juveniles are found in depths from 0.1–1.0 m (4 to 39 inches), while adults tend to use depths less than 0.3 m (12 inches) (Moss 1981). Wagner et al. (1984) found that habitat use appeared to be very specific and suitable habitat was easy to identify. Moss (1981) speculated that spawning occurs in late June and July, and that madtoms feed primarily on aquatic insects.

On two occasions in the recent past, Neosho madtom populations have suffered severe reductions. A drought in 1952–56 depleted Kansas population levels, but the species has subsequently returned to earlier levels of abundance (Deacon 1961). A second reduction was documented in 1967 when Cross and Braasch (1968) found the species absent from all their sample stations in the Neosho River and at the confluence of the Cottonwood River and the South Fork of the Cottonwood River. The species had been locally abundant at these same stations in 1951 and 1952. Cross and Braasch (1968) attributed the decline to numerous fish kills in 1966 and 1967 caused by runoff from cattle feedlots. Pollution laws regulating feedlot runoff were passed in 1967, and

collections made by Moss (1981) in these areas indicate that the species' population had returned to earlier levels of abundance.

Removal of sand and gravel may have drastic short-term effects, but over a longer time period the species may be able to recover due to the natural depositional process that takes place after the disturbance ceases (Wagner et al. 1984). Reservoir construction is a major threat to the species (Moss 1981, Wagner et al. 1984). No specimens have been collected from five reservoirs constructed within the species' range, and habitat inundation is assumed to have caused local extirpation. The lower section of the Neosho River in Oklahoma is a series of reservoirs that has eliminated as much as one-third of the original range of the species (Wagner et al. 1984). Efforts to capture specimens in suitable habitat between the Oklahoma reservoirs in 1975 were unsuccessful (Moss 1981).

On December 30, 1982, the Service announced in the **Federal Register** (47 FR 58454) that the Neosho madtom, along with 146 other fish species, was being considered for addition to the List of Endangered and Threatened Wildlife. Under contract with the Service, a status report on the Neosho madtom was prepared by the Oklahoma Cooperative Fishery Research Unit (Wagner et al. 1984). The species was included in the Service's September 18, 1985, Notice of Review of Vertebrate Wildlife (50 FR 37958) as a Category 1 species, indicating that the Service had substantial biological data to support a proposal to list the species as endangered or threatened. On May 19, 1989, the Service announced in the **Federal Register** (54 FR 21635) that it was proposing to list the Neosho madtom as a threatened species.

Summary of Comments and Recommendations

In the May 19, 1989, proposed rule 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 inviting general public comment was published in the Topeka Capitol-Journal on June 10, 1989; in the Pittsburg Morning Sun on June 11, 1989; and in the Joplin Globe on June 16, 1989. Eleven comments were received from three Federal and six State agencies, one university researcher, and one private fisheries organization.

Comments received during the public comment period are covered in the following summary. Comments of a similar nature or point were grouped into three general issues. These issues, and the Service's response to each, are discussed below.

Issue 1: Threats to the Species

Response: One commentor questioned whether or not small tributary watershed structures would prove a threat to Neosho madtom habitat. The Service believes that these structures could result in either beneficial or adverse effects, depending on circumstances. For example, stabilized flows could benefit the species if they reduce the threat of low-flow drought conditions, while elimination of peak flood flows could adversely affect the madtom by reducing the rate of removal of silt and debris from gravel riffles. Section 7 consultation procedures will allow us to coordinate with Federal action agencies to evaluate each situation on a case-by-case basis.

Another commentor stated that hydropower operations at mainstream reservoirs appear to be a major threat to the species, as opposed to reservoirs operated for flood control. The Service accepts the feasibility of this suggestion, and this is addressed in Section A of "Summary of Factors Affecting the Species."

Issue 2: Critical Habitat

Response: Two commentors suggested that critical habitat should be designated: One, to facilitate the regulation of agricultural pesticide use; and the other, to provide an additional deterrent to continued habitat destruction by impoundments. Both points are well-founded and were given consideration during initial and subsequent evaluation of this question.

With regard to the first point, it is not necessary to formally designate critical habitat to protect endangered and threatened species from pesticide use. Once the Neosho madtom is listed, the Environmental Protection Agency (Agency) will need to reinitiate consultation with the Service on the registration or reregistration of pesticides. The Service will, at that time, provide a biological opinion to the Agency, including information identifying Neosho madtom habitat areas. The Agency can then use this information to implement appropriate restrictions for pesticides that might be used in or near these areas.

With regard to the second point, it is questionable as to whether critical habitat can be definitively determined and whether such determination would provide benefits above and beyond species listing. The species is widespread (though not abundant) and mobile throughout linear stream drainages. Though gravel riffle areas are clearly important, they may not be the only important habitat areas for the Neosho madtom. And, though it appears possible to delineate specific gravel riffle areas that the species is presently using, some Neosho madtom may shift usage to new gravel riffle areas arising from changes in stream dynamics. The only way to legitimately identify all important riffle habitats would be to designate all gravel riffles within the three rivers in question. This, in effect, would state that any impact at or upstream of any riffle could constitute an effect. This could be viewed as an overly protective approach for conserving the species. Instead, it may be better to use a more judicious combination of Federal and State protection mechanisms, i.e., (a) Federal species protection measures under sections 7 and 9 of the Act and (b) State species and habitat protection measures to protect the Neosho madtom. A more detailed discussion of this latter approach may be found in the section on "Critical Habitat".

A third commentor supported a decision not to designate critical habitat, citing reasons which echo some of the Service's concerns and conclusions. These reasons are included in the section on "Critical Habitat".

Issue 3: Impacts to Agriculture

Response: One commentor questioned the economic impact that final listing may have on agricultural pesticide use. This is a valid concern, no doubt shared by other parties along the affected river drainages. The impacts of Federal listing of the Neosho madtom on all parties will be the same as presently occurs with other listed species. Any action which is authorized, funded, or permitted by a Federal agency must undergo review to ensure the action is not likely to jeopardize the continued existence of any listed species. In the case of Environmental Protection Agency registrations, provisions would be determined, if necessary, to avoid or minimize impacts to the Neosho madtom and all other listed or proposed species.

A comment also was made regarding anticipated problems with compliance by pesticide applicators, if restrictions are placed on pesticide use. It is premature to discuss restrictions that may be necessary to avoid jeopardy to the Neosho madtom as a result of pesticide use. The determination that a specific pesticide is likely to jeopardize

the continued existence of the Neosho madtom will depend on numerous factors including the specific pesticide (toxicity), crops grown in the vicinity of the Neosho madtom, terrain, drift, and other factors submitted to the Service by the Agency at the time of the consultation request. The Agency will welcome any ideas or suggestions on measures to preclude jeopardy to the madtom while minimizing impact to pesticide users.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the Neosho madtom 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 (50 CFR part 424) promulgated to implement the listing provisions of the Act 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 Neosho madtom (Noturus placidus are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Habitat modification, both existing and potential, comprises the major threat to the survival of the Neosho madtom. Deacon et al. (1979) recognized the species as threatened because of present or potential threats to its habitat or range. Such modification includes, among other things, water diversion, impoundment, reallocation, channelization, flood control, water pollution, and dredging for sand and gravel. This modification has resulted in the complete destruction or curtailment of a portion of the historic habitat and modification of much of the remaining habitat.

The construction of reservoirs causes the inundation of riffle habitat and changes turbidity, nutrient levels, and water temperatures downstream. No specimens have been captured in a reservoir, and habitat inundation is assumed to have caused local extirpation of the species (Wagner et al. 1984, Moss 1981). The construction of John Redmond Reservoir on the Neosho River in Kansas destroyed known riffle habitat.

Efforts to capture specimens in suitable habitat between reservoirs in Oklahoma have been unsuccessful (Moss 1981). The lower section of the Neosho (Grand) River in Oklahoma is a series of reservoirs that have eliminated as much as one-third of the original range of the species (Wagner et al. 1984). The disappearance of Neosho madtoms from the lower Illinois River in Oklahoma is attributed to hypolimnetic discharges from Tenkiller Ferry Dam which produced temperatures that were too low for successful reproduction and growth of the species (Moss 1981).

Frank Cross, University of Kansas, in litt., 1989, believes that discharges from hydropower dams eliminate Neosho madtoms from streams below these dams. He notes the disappearance of the species in and downstream from all reservoirs in the basin which generate hydroelectric power (Oklahoma), whereas the species persists downstream from flood control reservoirs not used for hydropower generation (Kansas). The water chemistry and temperature changes associated with abrupt daily release patterns are problems specific to the generation of hydroelectricity, and may well be the cause for many local extirpations.

The increasing demand for water for agricultural and municipal use will continue, with a projected increase in demand of 35 percent over the next 50 years in the Neosho River Basin (Kansas Water Office 1987), further impacting Neosho madtom habitat. An example of the effects of a decrease in flow occurred during the drought of 1952–1956 when the Neosho River lacked surface flow along most of its length for several months. The species suffered a dramatic decline and did not become common again until the third consecutive summer of continuous flow (Deacon 1961).

The Soil Conservation Service has proposed a project to construct as many as 11 small dams within the South Fork watershed of the Cottonwood River. Additionally, the Army Corps of Engineers (Corps) is investigating the possibility of constructing up to 112 small dams within the Cottonwood and Upper Neosho River watersheds. The Corps is also investigating the possibility of reallocating storage in existing Federal reservoirs in the Neosho River basin. All of these Federal actions have the potential to alter and/or reduce flows within the Neosho madtom's habitat. The Wolf Creek Nuclear Generating Station, near Burlington, Kansas, uses water from John Redmond Reservoir, which is operated by the Corps. To meet the station's legal water allocation, the elevation of the conservation pool may have to be increased in the future, further depleting flows in the Neosho River.

Runoff containing agricultural chemicals may affect the species directly or indirectly through impacts on water quality. Growth of filamentous algae in riffles in the Neosho River during low flows suggests that fertilizer runoff also may be affecting habitat (David Wiseman, Flint Hills National Wildlife Refuge, in litt., 1989). Discharges from municipalities along the Neosho and Cottonwood Rivers are another source of contamination of Neosho madtom habitat.

The Spring River drainage in Kansas and Missouri is rich in lead, zinc, and coal reserves; development of these resources has been extensive and can be expected to continue. Documented effects include elevated levels of sulfate and trace metals in stream water (Spruill 1984). The lower Spring River in Missouri has also been polluted by sewage and industrial effluents (Dieffenbach and Ryck 1976). Additionally, the Neosho River flows through numerous oil fields in southeastern Kansas, presenting the threat of oil spills into the river. Cross, pers. comm., 1988, believes that runoff from livestock feedlots is still a potential threat to the species.

Sand and gravel dredging has been demonstrated to affect fish communities in the lower Kansas River, with the extent of the effects being dependent on the age and location of the dredging site (Cross et al. 1982). The short term effects on the Neosho madtom of dredging activities in streams utilized by the species may be drastic, but over a longer time period the species may be able to recover if the situation is not compounded by additional threats.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* There is no evidence to suggest overutilization of the Neosho madtom for any of these purposes.

C. *Disease or predation.* There is no evidence of threats to the Neosho madtom from disease. Efforts to improve the sport fishery in the three States have resulted in an increase in such predators as white bass (*Morone chrysops*) and walleye (*Stizostedion vitreum*) in most reservoirs, and it is likely these predators have also increased in the associated rivers. It is not known whether predation on Neosho madtom has increased, but this species' habit of occupying the gravel of riffle bottoms may preclude such a threat.

It is unknown what role interspecific competition may play in determining Neosho madtom abundance, though there is evidence suggestive of detrimental interspecific competition with the slender madtom (*Noturus exilis*) in the Spring River. The slender madtom is generally found in habitat

typically occupied by Neosho madtom, with Neosho madtom found in more marginal habitat (Cross, pers. comm., 1988). The slender madtom has not been found at localities in the Neosho or Cottonwood Rivers where Neosho madtom is most abundant.

D. *The inadequacy of existing regulatory mechanisms.* The Neosho madtom is officially listed as threatened by the State of Kansas, and endangered by the States of Oklahoma and Missouri. All three States prohibit taking or possession of this fish without a State permit, and all three regulate impacts to stream resources within State boundaries. However, these States have limited or no authority to deny applications for some or all water projects based on impacts to the State-listed Neosho madtom or its habitat.

The Kansas Department of Wildlife and Parks has identified portions of the Cottonwood, Neosho, and Spring Rivers as State-designated critical habitat for the Neosho madtom. The Kansas Department of Wildlife and Parks also requires a permit for publicly funded or permitted actions in Kansas which have the potential to destroy individuals of an endangered or threatened species or their critical habitat. However, the penalty for violating a Kansas permit for a threatened species is a maximum fine of $500 and/or 30 days in jail, which is probably not sufficient to deter adverse actions from occurring for large projects.

As noted under Factor A, the Corps is investigating the possibility of constructing up to 112 small dams in the upper Neosho River drainage that have the potential to alter and/or reduce flows within Neosho madtom habitat. The Corps is also investigating the possibility of reallocating storage in existing Federal reservoirs, and may modify operation of John Redmond Reservoir to meet the Wolf Creek Nuclear Generating Station's legal water allocation—all of which would alter flows in the Neosho River drainage. The Soil Conservation Service has proposed a project to construct as many as 11 small dams within the South Fork watershed of the Cottonwood River. However, these Federal actions are not subject to State law, e.g., the permitting requirement, unless specifically provided by Congress.

In Missouri and Oklahoma, the Missouri Department of Conservation and the Oklahoma Department of Wildlife Conservation review applications for projects that might have adverse impacts on State-endangered species. However, these agencies have no authority to deny these applications, if necessary, to protect the Neosho madtom.

Thus, it appears that in some aspects, existing State regulatory mechanisms are inadequate to protect the Neosho madtom. Federal listing would provide additional protection by requiring Federal permits for taking the fish and increasing penalties for unauthorized take. More importantly, Federal listing would result in mandated review of Federal actions that might impact the Neosho madtom and its habitat to insure that any action authorized, funded, or carried out by a Federal agency is not likely to jeopardize the continued existence of the Neosho madtom.

E. *Other natural or manmade factors affecting its continued existence.* The Neosho madtom has recently exhibited severe population declines due to pollution and drought (Deacon 1961, Cross and Braasch 1968). While drought is a natural phenomenon, the effects of drought are intensified by human degradation. The species occupies a very specialized macrohabitat, and its range has significantly decreased in the last 20 years. The species' range is now divided into three populations: In the Neosho and Cottonwood Rivers above John Redmond Reservoir in Kansas; the Neosho River below John Redmond Dam in Kansas downstream to Grand Lake in Oklahoma; and in one reach of the Spring River in Kansas and Missouri. The separation of these populations (by John Redmond Dam or by distance) would diminish the rate of recolonization from another population should any population suffer a major decline.

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 Neosho madtom as a threatened species. The original range of the species has decreased to three populations in three rivers. The historical factors which brought the species to this condition remain current threats. Because the species remains abundant in some locations, it is unlikely the species will become extinct in the foreseeable future. Therefore, endangered status is considered inappropriate. For reasons given below, the Service is not designating critical habitat.

Critical Habitat

Section 4(a)(3) of the Act requires, to the maximum extent prudent and determinable, that the Secretary designate critical habitat at the time a species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not presently determinable or prudent for this species.

Though it is clear that the Neosho madtom prefers gravel riffle habitat, it has been found in other types of habitat during early life stages and during spawning periods. Precise spawning sites or habitats are not known with certainty, nor is there much information on species dispersal. In addition, as noted in the "Summary of Comments and Recommendations," gravel riffle habitat may change within the mainstream. Hence, important habitat areas are not specifically determinable.

The Service also finds that designation of critical habitat is not prudent. Although intentional taking of the Neosho madtom is presently not known to be a problem, the species is vulnerable to this threat. The fish is typically found in very specialized, easily identifiable habitat (gravel riffles), and most of the inhabited stream reaches are easily accessible by road. The potential threat of vandalism, though small, could be exacerbated by the publication of a detailed critical habitat description and maps.

More importantly, the Service doubts that designation of critical habitat will provide net benefits to the species above and beyond species listing when combined Federal and State protections are considered. By listing the species as threatened, the Act will protect the species through section 7 consultation (requiring consultation for Federal actions) and section 9 (prohibiting take of the species). Therefore, future Federal activities such as water development or management actions contemplated by the Soil Conservation Service and the Corps that might impact the Neosho madtom will have to undergo section 7 consultation. Since the Corps operates John Redmond Reservoir, any allocation of water for Wolf Creek Nuclear Generating Station would have to undergo consultation. Hydropower operations require issuance of Federal Energy Regulatory Commission licenses, which must undergo section 7 consultation. Pesticides undergoing registration or reregistration by the Environmental Protection Agency will have to be consulted on with respect to the Neosho madtom. Finally, Federal penalties under the Act for take of a listed species, in which an individual may be fined up to $50,000 or imprisoned up to a year, would provide an additional deterrent against unauthorized take.

The States' protective mechanisms will continue to have an important role in Neosho madtom protection. As noted previously, the Neosho madtom is State-

listed by all three States in which it is found, and all three States regulate impacts to stream resources within State boundaries. Kansas pollution laws regulating feedlot runoff appear to have helped the Neosho madtom already. Dredging for sand and gravel requires a permit from the Kansas Division of Water Resources. In addition, the Kansas Department of Wildlife and Parks would have to issue a threatened and endangered species permit allowing take if a State-listed species is involved. Since the Neosho madtom is listed as threatened in Kansas, the Department of Wildlife and Parks may deny a threatened and endangered species permit to the applicant to prevent dredging activities detrimental to the Neosho madtom. In Oklahoma and Missouri, dredging activities require permits, and the combination of State and Federal listing of the Neosho madtom is expected to create a greater awareness of the need to protect the Neosho madtom in permitting decisions in these States.

All involved agencies will be informed of the location of existing populations of the Neosho madtom and the importance of protecting this species' habitat. No further notification benefits would accrue from designating critical habitat. Therefore, in light of the above, it would not be prudent to determine critical habitat for the Neosho madtom.

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. 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, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

Federal involvement is expected to include Soil Conservation Service water retention practices, Corps stream modification and reservoir management practices, Federal Energy Regulatory Commission licensing, and Environmental Protection Agency registration of pesticides. The Soil Conservation Service conducts water retention projects within the watersheds of the three river systems sustaining the Neosho madtom. The Corps conducts activities and issues permits to applicants for activities such as impoundment, channelization, flood control, and dredging. The Federal Energy Regulatory Commission licenses hydropower operations on hydroelectric facilities. The Environmental Protection Agency registers pesticides. If a proposed activity involving these agencies may affect the Neosho madtom, the above agencies would be required to consult with the Service to ensure that the activity is not likely to jeopardize the continued existence of this species.

The Act and its implementing regulations found at 50 CFR 17.21 and 17.31 set forth a series of general prohibitions and exceptions that 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 has 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 threatened wildlife species under certain circumstances. Regulations governing permits are at 50 CFR 17.22, 17.23, and 17.32. 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. For threatened species, there are also permits for zoological exhibition, educational purposes, or special purposes consistent with the purpose of the Act. In some instances, permits may be issued for a specified period of time to relieve undue economic hardship that would be suffered if such relief were not available. Such permit action is not expected on this species.

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** on October 25, 1983 (48 FR 49244).

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Author

The primary author of this final rule is Daniel W. Mulhern, Fish and Wildlife Service, Fish and Wildlife Enhancement, Manhattan, Kansas (913/539–3474, see **ADDRESSES** above).

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

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

PART 17—[AMENDED]

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

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1543; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

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.

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Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
FISHES							
*	*	*	*	*	*	*	
Madtom, Neosho	*Notorus placidus*	U.S.A. (KS, MO, OK)	Entire	T	388	NA	NA
*	*	*	*	*	*	*	

Dated: May 15, 1990.

Richard N. Smith,

Acting Director, Fish and Wildlife Service.

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