

## DEPARTMENT OF THE INTERIOR

## 50 CFR Part 17

## Endangered and Threatened Wildlife and Plants; Interior Least Tern Proposed as Endangered

**AGENCY:** Fish and Wildlife Service, Interior

**ACTION:** Proposed rule.

**SUMMARY:** The Service proposes to determine endangered status for the interior least tern (*Sterna antillarum athalassos*), a small bird. Formerly abundant in the Mississippi basin, the tern has been eliminated from most stretches of the Mississippi River and its tributaries. Nesting islands in rivers have been permanently inundated or destroyed by reservoirs and channelization projects. Alteration of natural river dynamics has caused unfavorable vegetational succession on many remaining islands, curtailing their use as nesting sites by terns. This proposal, if made final, will provide protection under the Endangered Species Act of 1973, as amended. The Service seeks data and comments from the public on this proposal.

**DATES:** Comments from all interested parties must be received by July 30, 1984. Public hearing requests must be received by July 13, 1984.

**ADDRESSES:** Comments and materials concerning this proposal should be sent to the Endangered Species Coordinator, U.S. Fish and Wildlife Service, Federal Building, Fort Snelling, Twin Cities, Minnesota 55111. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

**FOR FURTHER INFORMATION CONTACT:** Mr. James M. Engel, Endangered Species Coordinator (see ADDRESSES section), (612/725-3276 or FTS 725-3276).

**SUPPLEMENTARY INFORMATION:****Background**

The interior least tern, described by Burleigh and Lowery in 1942, is one of four recognized subspecies of a New World bird, *Sterna antillarum*, three of which inhabit the United States. The interior least tern historically bred along the Colorado (in Texas), Red, Arkansas, Missouri, Ohio, and Mississippi River systems from central North Dakota through South Dakota, Nebraska, eastern Colorado, Iowa, Kansas, Missouri, Illinois, Indiana, Oklahoma, Arkansas, Tennessee, Kentucky, eastern New Mexico, Texas, Louisiana, and Mississippi (American Ornithologists Union, 1957). The actual wintering area

for this population is unknown; however, least terns are found along the northern coast of South America and west along the coast of Central America in the winter.

The eastern least tern (*Sterna antillarum antillarum*) breeds along the Atlantic Coast from Massachusetts to Georgia, along the Gulf Coast from Florida to Texas, and in the Bahamas and Caribbean Islands. The California least tern (*Sterna antillarum browni*), which has been listed as an endangered species since 1970 (32 FR 16047), breeds along the Pacific Coast from central California to Baja California.

Massey (1976) reported no consistent morphological, behavioral, or vocal differences between *antillarum* and *browni*. In Texas where *antillarum* and *athalassos* are sympatric, the differentiation of skins of the two subspecies is not possible and the present taxonomy is probably tentative (Thompson, 1981). However, the subspecies status of the interior least tern does not affect the proposed listing because subspecies and distinct population segments of a vertebrate species may be listed under the Endangered Species Act.

Least terns are the smallest members of the subfamily Sterninae, measuring 20-22 cm long with a 50 cm wingspread. Sexes are alike, characterized by a black crown, white forehead, grayish back and dorsal wing surfaces, snowy white undersurfaces, orange legs, and a black-tipped yellow bill. Immature birds have darker plumage, a dark bill, and dark eye stripes on their white heads.

Hardy (1957) presents the only substantial field study of the interior least tern. Ducey (1981) provides the most current and comprehensive summary of available published and unpublished information on the interior least tern. The tern exhibits a localized pattern of distribution and its breeding biology centers around three ecological factors. These include: (1) The presence of bare or nearly bare alluvial islands or sand bars, (2) the existence of favorable water levels during the nesting season, and (3) the availability of food.

Under natural river conditions islands are created and destroyed by the river's erosion and deposition processes. Periodic inundation maintains some islands in the barren or sparsely vegetated condition required by terns for nesting. Although most nesting is in rivers, the interior least tern also nests on the barren flats of saline lakes and ponds such as on the Salt Plains National Wildlife Refuge, Oklahoma.

The nest is a simple unlined scrape containing 2 to 4 brown spotted buffy eggs. Breeding colonies or terneries are

usually small (up to 20 nests) with spaced far apart. Egg/laying and incubation occur from late May to July depending on the geographical location and availability of habitat. After a 20-day incubation period the chicks will fledge in another 20 days. Little is known about the tern's specific food preferences but small fish constitute its prey.

The Endangered Species Act of (16 U.S.C. 1531 *et seq.*), as amended requires determination of whether species of wildlife and plants are endangered or threatened, based on the best available scientific and commercial data. The Service was originally petitioned in 1975 by the Oklahoma Ornithological Society to list the interior least tern as an endangered species. The Service has indicated intent to propose the species for listing. On December 1982, the Service published a notice for review in the *Federal Register* (47 58454) identifying vertebrate taxa native to the U.S., being considered for addition to the List of Endangered and Threatened Wildlife. The notice included the interior least tern. A review of existing data, including status surveys and consultation with biologists, formed the basis for the present proposed listing of this subspecies as endangered.

Historical trends of the interior least tern population are poorly known. Reliable estimates of original numbers are available. However, it is widely accepted that populations have undergone significant declines because of a large documented loss of nesting habitat. Moreover, the obvious continued loss or degradation of nesting islands coupled with an estimated population of 1,250 interior least terns (Downing 1980) has led to considerable concern for this subspecies. This population level is almost the same as the endangered California least tern (currently numbers about 1,200 breeding pairs, but stood at 600 pairs when as endangered in 1970). Because of the scarcity of the interior least tern and the continuing decline and anticipated further loss of habitat, the Service is proposing endangered status for this subspecies.

Hardy (1957) reviewed the literature for breeding occurrences and mapped breeding locations and 13 other locations where breeding of interior least terns was not confirmed. He reported many breeding locations have gone unreported and Hardy's accurate breeding distribution is therefore conservative. For example, he did not report any colonies in North Dakota along the Niobrara River. Nebraska's latter harbors one of the largest

populations today. There is, however, reference to the interior least tern being common on the Niobrara River and specimens collected in Montana and North Dakota in the early 1800's and 1870's. Lewis and Clark frequently observed the interior least tern along the length of the Missouri River and described the species in detail. They believed the tern "to be a native of this country and probably a constant resident." Clearly, the interior least tern was probably common before the construction of dams on the Missouri River in the Dakotas and Montana, which changed over 90 percent of the river from a dynamic free-flowing state to a river containing numerous reservoirs. Thirty-five years ago, this once common bird was found at only 9 sites along the remainder of the Missouri River between Sioux City, Iowa and St. Louis, Missouri. Even those 9 breeding sites are no longer being used by terns. The tern has been extirpated along this stretch of the Missouri River.

In Nebraska, breeding locations have been located on the Platte River in recent years as a result of intensive searches. However, there is a reduced quantity of nesting habitat for the tern which historically nested on the entire stretch of the river. Recent research indicates that the tern may be in danger of further decline along the Platte River (Faanes, in press).

In Kansas, recent research on the interior least tern indicated low numbers (100 birds), low reproductive success, and continued threats to the tern's breeding habitat (Schulenberg and Schulenberg, 1983). The tern no longer breeds along the river systems in the northern part of the state.

The status of the interior least tern in Oklahoma and Texas is poorly known. The three current breeding locations in Oklahoma are fewer than the historic eight breeding sites. Only a few colonies remain on the Red River between Texas and Oklahoma.

Although once present in small numbers along the upper Mississippi River and its tributaries, the tern is now extirpated from this region (Thompson and Landin, 1978). Two to 3 small colonies exist on the lower Ohio River. The remaining and most substantial breeding population of terns occurs on the Mississippi River between the southern tip of Illinois and Osceola, Arkansas. Downing (1930) estimated 600 birds in 1975 based on the 300 observed. Recent surveys recorded 239 terns. Along the remainder of the Mississippi River the tern is now apparently absent. It was once very common near Vicksburg, Mississippi. There have been

no recent records of terns on the rivers in Louisiana.

#### Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*), as amended, and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424; proposed revision: 48 FR 36062-36069, August 8, 1983) set forth the procedures for adding species to the Federal lists. The Secretary of the Interior shall determine whether any species is an endangered species or a threatened species due to one or more of the five factors described in Section 4(a)(1) of the Act. These factors and their application to the interior least tern (*Sterna antillarum athalassos*) are as follows:

**A. The present or threatened destruction, modification, or curtailment of its habitat or range.** The construction of reservoirs has permanently eliminated islands and prevents their formation. Such reservoirs exist along hundreds of miles of rivers of the Mississippi basin. Stretches of river below dams are so regulated that a river's natural erosion and deposition processes, which are responsible for creating, destroying, and maintaining nesting islands, no longer occur. The controls on the river have reduced the violent spring floods, which would scour vegetation from islands, and has limited the amount of alluvium for island formation. Consequently, on most of the remaining islands, forbs and annuals are followed by shrub and tree species, which ultimately form the permanent vegetation of the island, a condition unsuitable for nesting interior least terns.

Johnson (1971) reported that in North Dakota, a lack of new alluvial deposits is leading to a floodplain forest of advanced successional stage along the Missouri River below Garrison Dam. Plant succession is believed to be the cause of the loss of the interior least tern colony at DeSota Bend National Wildlife Refuge in Iowa. The braided nature of the Platte River in most of Nebraska has been largely eliminated. Its historic flow has been reduced 60 to 80 percent by irrigation withdrawals. As a result, the width of the river has been reduced, and most of the islands are heavily vegetated. Downing (1930) concluded that along the Missouri and Platte River, almost complete loss of tern populations may occur in a few years because of vegetation encroachment. Plant succession on islands and riverbanks is occurring on other midwest rivers. Even dredge islands develop late serial stages

of vegetation within a few years and have been subsequently avoided by terns. The vegetative character on natural and manmade islands in regulated rivers will continue to evolve to a point of unsuitability for nesting terns as observed by Wycoff (1960) during a period of 17 years on the Platte River. Along the still wild Niobrara River in Nebraska, vegetation encroachment is not presently a problem, and the tern is still common.

A series of locks and dams and channel maintenance activities on the Mississippi River has resulted in a river flow state which inundates islands, shrinks the river width, and restricts the amount of alluvium for island formation. Seventy years of construction, operation, and maintenance of navigation channels on the Mississippi River and lower Missouri River have led to losses of islands and other river habitat. By the end of this century, acreage in the natural river channel of the lower Missouri River, which consists of islands, channels, chutes, sand bars, and slack waters, will decrease from 300,000 to 112,000 acres (Ducey, 1981).

In summary, bare sand islands and other bare areas will continue to decline at a rapid rate and most of those islands that survive will undergo plant succession unfavorable to the interior least tern. Moreover, human use of river islands has been increasing. Vehicular and other recreational activities are widespread along the Platte, Missouri, and Mississippi Rivers and occur largely on the barren islands favored by terns. Terns nesting on Salt Plains National Wildlife Refuge and Edith Salt Plain in Oklahoma are threatened by chloride control projects, which will either flood their habitat or reduce their food resources and may fail to provide replacement habitat.

**B. Overutilization for commercial, recreational, scientific, or educational purposes.** Not applicable for the species.

**C. Disease or predation.** Disease has not been a problem known to occur in this species. Coyotes prey on interior least tern eggs, and evidence exists that such predation can have a serious impact on nest success. Dogs and other domestic animals accompanying human use of sand bars can disrupt tern nesting through disturbance or predation. Dogs and cats were blamed for disrupting some colonies of the endangered California least tern (U.S. Fish and Wildlife Service, 1980).

**D. The inadequacy of existing regulatory mechanisms.** The interior least tern is listed as threatened or endangered by the States of South Dakota, Nebraska, Iowa, Illinois,

Missouri, Kansas, New Mexico, and Texas. The Migratory Bird Treaty Act (16 U.S.C. 703 *et seq.*) protects the bird and its parts, nests, and egg from taking and trade. However, this protection currently does not protect against habitat loss, which is the main threat to the tern, and, by itself, will not be adequate to prevent the species' further decline. The Endangered Species Act would offer additional protection for the species, largely through the recovery and consultation processes.

E. *Other natural or manmade factors affecting its continued existence.* None are known.

#### Critical Habitat

Section 4(a)(3) of the Endangered Species Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary shall specify any habitat of a species which is considered to be critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent and determinable for this species. This decision was based on the ephemeral nature of the tern's nesting habitat and indications that this subspecies makes frequent changes in nesting colony locations. From year to year nesting islands appear, disappear, and reappear depending upon river conditions. As a result, it is not possible or feasible to single out any given area as an area which, if given protection, will be used for nesting or otherwise be necessary to the tern's conservation. In addition, the Service finds that no benefit would accrue to the subspecies by specifying critical habitat; the effect of a given action upon the tern will have to be assessed in terms of its effects on the tern at the time of the particular action in a given location. A current assessment of proposed actions to a given area which may or may not be suitable for the terns at any given time will be of little aid to conservation.

#### Available Conservation Measures

The Migratory Bird Treaty Act makes it illegal to take, possess, sell, deliver, carry, transport, or ship interior least terns, their parts, eggs, nests, and young. However, it currently affords no protection to their habitat. Subsection 7(a) of the Endangered Species Act, as amended, requires Federal agencies to evaluate their actions with respect to any species which is proposed or listed as endangered or threatened. Agencies are required under Section 7(a)(4) to confer with the Service on any action that is likely to jeopardize a proposed species. If finalized, this action would require Federal agencies to consult with

the Service concerning any action that may affect the species, to insure that activities they authorize, fund, or carry out, are not likely to jeopardize the continued existence of the interior least tern. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR 402, and are now under revision (see proposal at 48 FR 29989; June 29, 1983).

It is not possible now to state with certainty which particular ongoing or planned projects or area of activity would require consultation and possible modification. The following represent some activities which, based upon past tern requirements, may be found to be subject to the consultation requirement to the extent Federal licensing, activity, or funding is involved:

Desalinization or chloride control projects on the Arkansas River and the Red River Basin;

Channelization, stabilization, and flood control projects on the Missouri River;

Construction, maintenance, and operation of navigation channels on the Mississippi and lower Missouri Rivers, particularly those which prevent formation of sand bars;

Operation of locks, dams, and energy diversions in the Mississippi basin;

Construction and operation of the bypass channel for Edith Salt Plains;

Water release operations from the Gavins Point Dam and the Lewis and Clark Reservoir, particularly during tern nesting season when releases may inundate nests;

Development of access sites on the recreational river portion of the Missouri River;

Recreational and vehicular activities along the Platte and Missouri Rivers;

Swimming, canoeing, boating, or hiking in areas where nesting terns may be seriously disturbed; and

Measures which attract coyotes and other predators to, or hinder their removal from, areas occupied by the tern.

This does not indicate that all such actions will, in fact, be found to require consultation and still fewer would require the termination of any such project. Modification of actions rather than termination has been the experience of the Service. Certain projects may actually aid tern recovery [e.g., the present Arcadia Diversion, which has caused formation of sandbars and brought about renewed tern nesting]. Affirmative conservation plans may also be implemented to avoid causing jeopardy to the tern.

The proposed rule would also bring Sections 5 and 6 of the Endangered

Species Act into effect with respect to the interior least tern. Section 5 authorizes the acquisition of lands for the purpose of conserving endangered and threatened species. Pursuant to Section 6, the Service would be able to grant funds to affected states for management actions aiding the protection and required recovery actions for the interior least tern.

Listing the interior least tern as endangered would provide for development of a recovery plan for this bird. Such a plan would bring together State and Federal efforts for the conservation of the tern. The plan would establish an administrative framework, sanctioned by the Act, for agencies to coordinate activities and cooperate with each other in conservation efforts. The plan would set recovery priorities and estimate the cost of the various tasks necessary to accomplish them. It would designate appropriate functions to each agency and a time frame within which to complete them. If the recovery plan action has the desired effect, then the threats to the tern might become lessened such that the bird could be considered for threatened status or for removal from the List of Endangered and Threatened Wildlife.

The Service will review the interior least tern to determine whether it should be considered for placement upon the Annex of the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, and whether it should be considered for other appropriate international agreements.

#### National Environmental Policy Act

In accordance with a recommendation from the Council on Environmental Quality (CEQ), the Service does not prepare Environmental Assessments for Section 4(a) actions. The recommendation from CEQ was based, in part, upon a decision in the sixth Circuit Court of Appeals, which held that the preparation of NEPA documentation was not required as a matter of law for Section 4(a) actions under the Endangered Species Act. *PLF v. Andrus* 657 F.2d 829 (6th Cir., 1981).

#### Public Comments Solicited

The Service intends that the rules finally adopted will be as accurate and effective as possible in the conservation of each endangered or threatened species. Therefore, any comments or 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, trade, or other relevant data concerning any threat (or lack thereof) to the interior least tern;
2. The location of any additional populations of the interior least tern and the reasons why any habitat of this species should or should not be determined to be critical habitat as provided by Section 4 of the Act;
3. Additional information concerning the range and distribution of the subspecies; and
4. Current or planned activities that may adversely modify the habitat of this bird.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date of this proposal. Such requests should be made in writing to the Regional Director, U.S. Fish and Wildlife Service (see ADDRESSES section).

Final promulgation of the regulations on *Sterna antillarum athalassos* will take into consideration the comments and any additional information received by the Service, and such communications may lead to the adoption of a final rule that differs from this proposal.

**References**

American Ornithologists' Union. 1957. Checklist of North American birds. Fifth edition. Baltimore. American Ornithol. Union. 691 pp.

Burleigh, T.D., and G.H. Lowery. 1942. An inland race of *Sterna albifrons*. Occ. Pap. Mus. Zool. No. 10. Louisiana State University.

Downing, R.L. 1980. Survey of interior least tern nesting populations. American Birds 34(2):209-211.

Ducey, J.E. 1981. Interior least tern (*Sterna albifrons athalassos*). U.S. Fish and Wildlife Service. Pierre, S.D. Unpubl. rep. 56 pp.

Faanes, C.A. (in press). Aspects of the nesting ecology of least terns and piping plovers in central Nebraska. Prairie Nat.

Hardy, J.W. 1957. The least tern in the Mississippi Valley. Publ. of Museum, Michigan State Univ., Biol. Ser. 1(1):1-60.

Johnson, W.C. 1971. The forest overstory vegetation on the Missouri River Floodplain in North Dakota. Ph.D. thesis, N.D. State Univ., Fargo.

Schulenberg, J.H., and M.B.Schulenberg. 1983. Status of the interior least tern in Kansas. Unpubl. ms. 70 pp.

Thompson, D.H., and M.C. Landin. 1978. An aerial survey of waterbird colonies along the upper Mississippi River and their relationship to dredged material deposits. U.S. Army Engineer Waterways Exp. Sta. Tech. Rpt. D-78-13.

U.S. Fish and Wildlife Service. 1980. California least tern recovery plan. 58 pp.

Wycoff, R.S. 1960. The least tern. Neb. Bird Rev. 38(3):39-42.

**Author**

The primary author of this proposed rule is Mr. John G. Sidle, Endangered Species Office (see ADDRESSES section).

**List of Subjects in 50 CFR Part 17**

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

**Proposed Regulation Promulgation**

**PART 17—[AMENDED]**

Accordingly, it is hereby proposed to amend Subpart B of Part 17 Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for Part 17 reads 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. It is proposed to amend § 17.11(h) by adding the following in alphabetical order to the List of Endangered and Threatened Wildlife, under "BIRDS:"

**§ 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						
BIRDS							
Tern, interior least	<i>Sterna antillarum athalassos</i>	U.S.A. (MT, ND, SD, NE, IA, CO, KS, MO, IL, IN, OK, AR, KY, TN, MS, LA, TX, NM, except Gulf Coastal Plain in TX, LA, MS), Winters Central or northern South America.	Entire	E		NA	NA

Dated: May 14, 1984.  
**G. Ray Arnett,**  
 Assistant Secretary for Fish and Wildlife and Parks.  
 [FR Doc. 84-14182 Filed 5-25-84; 8:45 am]  
 BILLING CODE 4310-55-M