



## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

[Docket No. FWS–R4–ES–2018–0082; FF09E22000 FXES11130900000 201]

RIN 1018-BC11

### Endangered and Threatened Wildlife and Plants; Removal of the Interior Least

### Tern from the Federal List of Endangered and Threatened Wildlife

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

**ACTION:** Final rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), are removing the inland population of the least tern (Interior least tern) (*Sterna* (now *Sternula*) *antillarum*), from the Federal List of Endangered and Threatened Wildlife due to recovery. This determination is based on a thorough review of the best available scientific and commercial data, which indicates that the Interior least tern has recovered and the threats to the Interior least tern have been eliminated or reduced to the point that the species no longer meets the definition of an endangered species or threatened species under the Endangered Species Act of 1973, as amended (Act). Accordingly, the prohibitions and protections provided by the Act will no longer apply to the Interior least tern.

**DATES:** This rule is effective [**INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

**ADDRESSES:** The proposed and final rules, supporting documents, and the comments received on the proposed rule are available on the Internet at <http://www.regulations.gov> under Docket No. FWS–R4–ES–2018–0082, at <https://www.fws.gov/mississippiES/>, or at <https://ecos.fws.gov>.

**FOR FURTHER INFORMATION CONTACT:** Stephen Ricks, Field Supervisor,

U.S. Fish and Wildlife Service, Mississippi Ecological Services Field Office, 6578 Dogwood View Parkway, Jackson, MS 39213; telephone (601) 321-1122. Individuals who use a telecommunications device for the deaf (TDD), may call the Federal Relay Service at (800) 877-8339.

## **SUPPLEMENTARY INFORMATION:**

### **Executive Summary**

*Why we need to publish a rule.* Under the Act, a species may be removed from the Federal List of Endangered and Threatened Wildlife (List) if it is determined that the species has recovered and no longer meets the definition of an endangered or threatened species. Removing a species from the List can only be completed by issuing a rule.

*What this document does.* This rule removes the Interior least tern (*Sterna* (now *Sternula*) *antillarum*) from the List in title 50 of the Code of Federal Regulations (50 CFR 17.11(h)) based on its recovery.

*The basis for our action.* Under the Act, we determine that a species is an endangered species or a threatened species based on any of five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. We must consider the same factors when removing a species from the List (*i.e.*, “delisting” a species). We may delist a species if we find, after conducting a status review based on the best scientific and commercial data available, that: (1) The species is extinct; (2) the species does not meet the definition of an endangered species or a threatened species (*e.g.*, because it has recovered); or (3) the listed entity does not meet the statutory definition of a species (50 CFR 424.11(e)). We have determined that the Interior least tern is not in danger of extinction now nor likely to become so in the foreseeable future based on a

comprehensive review of its status and listing factors. Accordingly, we have determined that the species may be delisted based on recovery as a result of: (1) A range extension; (2) an increase in abundance and number of breeding sites; (3) resiliency to existing and potential threats; (4) the implementation of beneficial management practices; and (5) changes in existing regulatory mechanisms that are more protective of migratory bird habitats.

*Peer review and public comment.* We evaluated the species' needs, current conditions, and future conditions to prepare our October 24, 2019, proposed rule (84 FR 56977). We sought and evaluated comments from independent specialists to ensure that our determination is based on scientifically sound data, assumptions, and analyses. We also invited these peer reviewers to comment on the draft post-delisting monitoring (PDM) plan. We considered all comments and information we received during the public comment period on the proposed delisting rule and the draft PDM plan when developing this final rule.

### **Previous Federal Actions**

On October 24, 2019, we published a proposed rule to remove the Interior least tern from the Federal List of Endangered and Threatened Wildlife (84 FR 56977). Please refer to that proposed rule for a detailed description of previous Federal actions concerning this species. The proposed rule and supplemental documents are provided at <http://www.regulations.gov> under Docket No. FWS–R4–ES–2018–0082 or at <https://www.fws.gov/mississippiES/>.

### **Species Information**

#### *Taxonomy and Genetics*

Least terns within the Interior Basin of North America were described as *Sterna antillarum athalassos*, a subspecies of the eastern least tern (*S. antillarum antillarum*) (Burleigh and Lowery 1942, pp. 173–177). In 2006, the American Ornithologist's Union

recognized least terns under a previously published genus (*Sternula*) based on mitochondrial DNA phylogeny (Bridge *et al.* 2005, p. 461). Interior least tern was one of three subspecies of New World (North and South America) least terns previously recognized by the American Ornithologists' Union (1957, p. 239), including the eastern least tern and the California least tern (*S. antillarum browni*). However, due to taxonomic uncertainty surrounding least tern subspecies at the time of listing (50 FR 21784; May 28, 1985), we treated the Interior least tern as a population of eastern least tern.

Since that time, genetic analyses of North American populations of least tern found no evidence of differentiation warranting subspecies recognition (e.g., Whittier 2001, p. 10; Draheim *et al.* 2010, pp. 813–815; Draheim *et al.* 2012, p. 146). Genetic exchange between eastern least terns and Interior least terns is occurring at a rate greater than three migrants per generation between populations (Whittier *et al.* 2006, p. 179). After reviewing the best available scientific information regarding the taxonomy of the Interior least tern, we continue to conclude that it is a distinct population segment of the eastern least tern (*Sternula antillarum*).

#### *Species Description*

Least terns are the smallest members of the family Laridae, measuring 21 to 23 centimeters (cm) (8 to 9 inches (in)) long with a 56-cm (22-in) wingspan (Thompson *et al.* 1997, pp. 1–2). Sexes look alike, characterized in the breeding plumage 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. Least terns are distinguished from all other North American terns by their small size. Interior least terns can only be separated from eastern and California least terns by the geographic area used for nesting.

### *Life Span*

Interior least terns are potentially long-lived, with records of recapture more than 20 years following banding (Thompson *et al.* 1997, p. 15); however, the average life span is probably less.

### *Nesting Habitat and Behavior*

Least terns begin breeding and nesting in their second or third year and breed annually throughout their lives (Thompson *et al.* 1997, p. 15). Prior to nesting, young birds exhibit some level of prospecting behavior (exploratory dispersal) across the landscape (*e.g.*, Boyd and Thompson 1985, p. 405; Lott 2012, p. 12; Shigeta *in litt.* 2014, entire).

Interior least terns generally nest on the ground, in open areas, and near appropriate feeding habitat (Lott and Wiley 2012, pp. 9–11). Nests are simple scrapes in the sand, and nesting sites are characterized by coarser and larger substrate materials, more debris, and shorter and less vegetation compared to surrounding areas (Smith and Renken 1993, p. 501; Stucker 2012, p. 49). Typical least tern clutch size is reported as two to three eggs (Thompson *et al.* 1997, p. 15); however, clutch size may vary by location and year (*e.g.*, Szell and Woodrey 2003, p. 37; Jones 2012, p. 3).

Natural nesting habitat features are maintained and influenced by magnitude and timing of riverine flood events (Sidle *et al.* 1992, p. 134; Renken and Smith 1995, pp. 194–195; Pavelka *in litt.* 2012, p. 2). The Interior least tern prefers vegetation-free sand or gravel islands for nesting, although sand banks, point bars, salt flats or plains, and beaches may also be used. Interior least terns prefer areas remote from trees or other vegetation that may hide or support predators (Lott and Wiley 2012, pp. 9–11). Least terns also nest on anthropogenic sites (originating from human activity) (Jackson and Jackson 1985, p. 57; Lott 2006, p. 10) near water bodies that contain appropriate and abundant prey fishes. Anthropogenic sites used by the tern include industrial sites

(Ciuzio *et al.* 2005, p. 102; Mills 2012, p. 2), dredge spoil (Ciuzio *et al.* 2005, p. 102), sand pits (Smith 2008, p. 2), constructed habitats (Stucker 2012, pp. 59–66), and rooftops (Boland 2008, entire; Watterson 2009, entire).

Lott and Wiley (2012, pp. 9–11) described five physical and biological conditions that are necessary for Interior least tern nest initiation and successful reproduction:

- (1) Nest sites that are not inundated (flooded) during egg laying and incubation;
- (2) Nesting sites that are not inundated until chicks can fly;
- (3) Nesting sites with less than 30 percent ground vegetation;
- (4) Nesting sites that are more than 76 meters (m) (250 feet (ft)) from large trees;

and

- (5) Availability of prey fishes to support chick growth until fledging.

Interior least terns are colonial nesters. Colony size may vary from a few breeding birds to more than 1,200 (Jones 2012, p. 3). Populations in some river drainages may be limited by annual availability of nesting habitat (*e.g.*, Missouri River; Stucker 2012, p. 104), while potential nesting habitat is generally abundant and underused in other drainages (*e.g.*, Mississippi River; U.S. Army Corps of Engineers (USACE) 2008, pp. 10–13). Nesting site conditions (*e.g.*, habitat suitability, flood cycles, prey fish abundance, predation pressure) can vary significantly from year to year in all drainages, resulting in wide fluctuations in bird numbers (Jones 2012, p. 14) and/or nesting success (Smith and Renken 1993, p. 41; Lott and Wiley 2012, p. 15). However, Interior least terns may re-nest, or relocate and re-nest, if nests or chicks are destroyed early in the season (Massey and Fancher 1989, pp. 353–354; Thompson *et al.* 1997, p. 15). Interior least tern chicks leave their nests within a few days of hatching (semiprecocial), but remain near the nests and are fed by their parents until fledging (Thompson *et al.* 1997, pp. 14–15).

*Food and Foraging Habitat*

Interior least terns are primarily piscivores (fish-eaters), and feed opportunistically on small fish species or the young of larger fish species. Prey species include native species such as shad (*Dorosoma* spp.), carps and minnows (Cyprinidae), freshwater drum (*Aplodinotus grunniens*), largemouth bass (*Micropterus salmoides*), white bass (*Morone chrysops*), sunfishes (*Lepomis* spp.), and top minnows (*Fundulus* spp.), as well as invasive species such as silver and bighead carp (*Hypophthalmichthys* spp.) (USACE 2008, pp. 16, 26). On the Missouri River, prey species include emerald shiner (*Notropis atherinoides*), sand shiner (*Notropis stramineus*), spotfin shiner (*Cyprinella spiloptera*), and bigmouth buffalo (*Ictiobus cyprinellus*) (Stucker 2012, p. 6). Least terns will also occasionally feed on aquatic or marine invertebrates (Thompson *et al.* 1997, pp. 6–7). Riverine foraging habitats and fish abundance may be influenced by stochastic (random) hydrological conditions and events (i.e., flow, and flood timing and magnitude), and channel engineering (Schramm 2004, pp. 307, 321–323).

In the Missouri River drainage, Interior least terns forage for fish in shallow water habitats and within 12 kilometers (km) (7 miles (mi)) from colony sites (Stucker 2012, p. 24). In the Lower Mississippi River, foraging terns have been observed feeding in a variety of habitats within 3 km (2 mi) of colony sites (Jones 2012, pp. 5–6).

#### *Migration and Winter Habitat*

Interior least tern fall migrations generally follow major river basins to their confluence with the Mississippi River and then south to the Gulf of Mexico; however, late summer observations of least terns more than 150 km (93 mi) from major river drainages indicate that some birds migrate over land (Thompson *et al.* 1997, p. 16). Interior least terns gather in flocks in August prior to migration. Once they reach the Gulf Coast, they cannot be distinguished from other least tern populations en route to, or within, their winter habitats (i.e., Gulf of Mexico, Caribbean islands, Central and South America); therefore, the limited information on migration and winter habitat is inclusive

of other populations (*i.e.*, Caribbean, Gulf Coast, East Coast). Least terns appear to migrate in small, loose groups along or near shore, feeding in shallows and resting onshore (Thompson *et al.* 1997, pp. 4–6). Very little is known of least tern winter habitats, other than that the birds are primarily observed along marine coasts, in bays and estuaries, and at the mouths of rivers (Thompson *et al.* 1997, p. 6).

#### *Breeding/Natal Site Fidelity and Dispersal*

Breeding-site fidelity for least terns varies in different populations and breeding areas. Return rates of banded adults to the sites where they were banded was 36 to 86 percent in California colonies; 42 percent on the Mississippi River; 28 percent on the central Platte River, Nebraska; and 81 percent at Quivira National Wildlife Refuge in Kansas and on the Cimarron River in Oklahoma (Thompson *et al.* 1997, p. 16). Fidelity to natal site is also variable and difficult to estimate because re-sightings or recaptures of terns banded as chicks have been limited. Estimates of natal site fidelity have varied from 5 percent on the Mississippi River, to 82 percent in Kansas and Oklahoma (Thompson *et al.* 1997, p. 16).

Site fidelity in least terns may be affected by physical habitat variables or the extent and type of predation (Atwood and Massey 1988, p. 394). As noted above, least terns are strong fliers and can relocate if conditions on natal or previous-year nesting grounds become unfavorable. A study of eastern least terns found an average 22 percent turnover rate in nesting colony sites, primarily due to changes in habitat condition or disturbance (Burger 1984, p. 66).

Lott *et al.* (2013, pp. 3617–3618) found that 50 to 90 percent of reported recaptures occurred less than 26 km (16 mi) from the original banding sites, while more than 90 percent dispersed less than 96 km (59 mi), indicating a high degree of adult site fidelity and natal site philopatry (remaining near their point of origin). However, long distance dispersal (up to 1,000 km; 621 mi) has been documented (*e.g.*, Renken and

Smith 1995, pp. 196–198; Boyd and Sexson 2004, p. 88; Lott *et al.* 2013, pp. 3617–3618), and may not be uncommon (Boyd and Thompson 1985, p. 405). Least tern nesting has also been documented in Brazil (Rodrigues *et al.* 2010, entire) and Hawaii (Conant *et al.* 1991, entire; Pyle *et al.* 2001, entire). During 2014, an Interior least tern banded in the Missouri River drainage was captured in Japan, along with another unbanded tern (Shigeta *in litt.* 2014).

### *Predation*

Interior least tern eggs, chicks, and adults are prey for a variety of mammal and bird predators. Reported predators include birds (*e.g.*, crows, herons, owls, and hawks), mammals (*e.g.*, fox, coyote, racoon, and skunk), and catfish, as well as domesticated and feral dogs and cats (Thompson *et al.* 1997, pp. 10–11). The cryptic coloration of eggs and chicks, the secretive behavior of chicks, and the mobbing behavior (attack flights on potential predators) of adults, all serve to protect eggs and chicks from predators (Thompson *et al.* 1997, p. 11).

Location and size of nesting colonies also has a significant influence on degree of predation. Interior least tern reproductive success is higher on island colonies as compared to connected sandbar colonies, and when water levels maintain isolation of islands and nesting bars from mammalian predators (Smith and Renken 1993, p. 42; Szell and Woodrey 2003, p. 41). Additionally, significantly higher rates of predation were documented in larger colonies compared to smaller colonies (Burger 1984, p. 65).

### *Historical Distribution and Abundance*

The Service defined the historical breeding range of the Interior least tern to include the Colorado (in Texas), Red, Rio Grande, Arkansas, Missouri, Ohio, and Mississippi Rivers systems from Montana south to Texas, and from New Mexico east to Indiana (50 FR 21784; May 28, 1985). However, in order to avoid confusion with eastern least tern, the Service excluded the Mississippi River south of Baton Rouge,

Louisiana, the Texas Coast, and a 50-mile zone inland from the coast of Texas from the protected range of Interior least tern (50 FR 21784, May 28, 1985, p. 21789).

The historical distribution and abundance of the Interior least tern within this range is poorly documented. Hardy (1957, entire) provided the first information on least tern distribution on large interior rivers, documenting records of occurrence and nesting in the Mississippi, Ohio, Missouri, Arkansas, and Red River drainages. Downing (1980, entire) published results from a rapid aerial/ground survey of a subset of these rivers, identifying additional nesting populations within the range noted above, and estimated the Interior least tern population at approximately 1,250 adult birds. Ducey (1981, pp. 10–50) doubled the number of known nesting sites, including areas between the scattered observations reported in Hardy (1957, entire). Ducey also extended the northern distribution of the Interior least tern to include the Missouri River below Garrison Dam in North Dakota and Fort Peck Dam in Montana. These three publications (Hardy 1957, entire; Downing 1980, entire; Ducey 1981, entire) provide the primary historical sources of information about the Interior least tern's geographic range, and were used to reach the estimate of 1,400 to 1,800 adults rangewide in the listing rule (50 FR 21784; May 28, 1985).

#### *Current Distribution and Abundance*

The current east to west distribution of summer nesting Interior least terns encompasses more than 18 degrees of longitude, or 1,440 km (900 mi), from the Ohio River, Indiana and Kentucky, west to the Upper Missouri River, Montana. The north to south distribution encompasses over 21 degrees of latitude (more than 2,300 km (1,450 mi)) from Montana to southern Texas. Interior least terns currently nest along more than 4,600 km (2,858 mi) of river channels across the Great Plains and the Lower Mississippi Valley (Lott *et al.* 2013, p. 3623), with nesting colonies found in 18 States, including: Montana, North Dakota, South Dakota, Nebraska, Colorado, Iowa, Kansas, Missouri,

Illinois, Indiana, Kentucky, New Mexico, Oklahoma, Arkansas, Tennessee, Texas, Louisiana, and Mississippi. As noted above, this does not include least tern colonies nesting along the coasts of Texas, Louisiana, and Mississippi.

Rangewide surveys in 2005 estimated an approximate minimum adult population size of 17,500, with nesting occurring in more than 480 colonies spread across 18 States, which is likely an underestimate given imperfect detection of adults and survey coverage of potential habitat (Lott 2006, pp. 10–21, 50). Lott (2006, pp. 13–15) also provided counts for 21 populations or population segments that were unknown at the time of listing, which collectively support more than 2,000 terns.

### *Population Trends*

The Interior least tern has demonstrated a positive population trend, increasing by almost an order of magnitude (or 10 times what it was prior) since it was listed in 1985. After it was listed, researchers increased survey effort and the geographical extent of the area surveyed, producing sufficient Interior least tern count data to analyze population trends for several river reaches that support persistent breeding colonies. Kirsch and Sidle (1999, p. 473) reported a rangewide population increase to over 8,800 adults in 1995, and found that 29 of 31 Interior least tern locations with multi-year monitoring data were either increasing or stable. Lott (2006, p. 50) reported an increase to over 17,500 adult birds in 2005, forming 489 colonies in 68 distinct geographic sites. While some proportion of the rangewide increase in adult bird counts and number of nesting colonies are likely attributable to increased survey efforts and improved survey techniques, both Kirsch and Sidle (1999, p. 473), and Lott and Sheppard (2017a, pp. 50 – 52) documented multiple drainage population increases using multi-year counts.

Lott (2006, p. 92) conceptualized the Interior least tern functioning as a large metapopulation (a regional group of connected populations of a species), which might also include least terns on the Gulf Coast. Using available information on dispersal of

least terns, Lott *et al.* (2013, pp. 3616–3617) defined 16 discrete breeding populations of Interior least tern, with 4 major geographical breeding populations (population complexes) accounting for more than 95 percent of all adult birds and nesting sites throughout the range. Portions of these four population complexes have experienced multi-year monitoring to different degrees. While some local (colony, subpopulation) declines have been documented, the Interior least tern has experienced a dramatic increase in range and numbers since listing and development of the recovery plan (*e.g.*, Kirsch and Sidle 1999, p. 473; Lott 2006, pp. 10–49). There has been no reported extirpation of any population or subpopulation since the species was listed in 1985.

### **Recovery Criteria**

Section 4(f) of the Act directs us to develop and implement recovery plans for the conservation and survival of endangered and threatened species unless we determine that such a plan will not promote the conservation of the species. Recovery plans must, to the maximum extent practicable, include “objective, measurable criteria which, when met, would result in a determination, in accordance with the provisions [of section 4 of the Act], that the species be removed from the list.”

Recovery plans provide a roadmap for us and our partners on methods of enhancing conservation and minimizing threats to listed species, as well as measurable criteria against which to evaluate progress towards recovery and assess the species’ likely future condition. However, they are not regulatory documents and do not substitute for the determinations and promulgation of regulations required under section 4(a)(1) of the Act. A decision to revise the status of a species, or to delist a species is ultimately based on an analysis of the best scientific and commercial data available to determine whether a species is no longer an endangered species or a threatened species, regardless of whether that information differs from the recovery plan.

There are many paths to accomplishing recovery of a species, and recovery may

be achieved without all of the criteria in a recovery plan being fully met. For example, one or more criteria may be exceeded while other criteria may not yet be accomplished. In that instance, we may determine that the threats are minimized sufficiently and the species is robust enough that it no longer meets the definition of an endangered species or a threatened species. In other cases, we may discover new recovery opportunities after having finalized the recovery plan. Parties seeking to conserve the species may use these opportunities instead of methods identified in the recovery plan. Likewise, we may learn new information about the species after we finalize the recovery plan. The new information may change the extent to which existing criteria are appropriate for identifying recovery of the species. The recovery of a species is a dynamic process requiring adaptive management that may, or may not, follow all of the guidance provided in a recovery plan.

The Service approved the Interior Least Tern Recovery Plan on September 19, 1990 (Service 1990, entire). The objective of the recovery plan was to establish standards for recovery that may lead to delisting the Interior least tern. Recovery criteria are the values by which it is determined that a recovery plan objective has been reached. Recovery criteria identified in the recovery plan were designed to assure the protection of essential habitat by removal of threats at that time and habitat enhancement, establish agreed-upon management plans, and attain a rangewide population of 7,000 birds at the levels listed below (for five major river drainages throughout the Interior least tern's range):

(1) Adult birds in the Missouri River system will increase to 2,100, and remain stable for 10 years.

(2) Current numbers of adult birds (2,200–2,500) on the Lower Mississippi River will remain stable for 10 years.

(3) Adult birds in the Arkansas River system will increase to 1,600, and remain stable for 10 years.

(4) Adult birds in the Red River system will increase to 300, and remain stable for 10 years.

(5) Current numbers of adult birds (500) in the Rio Grande River system will remain stable for 10 years.

Primary recovery tasks conducted to achieve the recovery objective and drainage population targets included:

- (1) Determining the distribution and population trends of the Interior least tern;
- (2) Determining habitat requirements and status;
- (3) Protecting, enhancing, and increasing Interior least tern populations; and
- (4) Preserving and enhancing the tern's habitats.

These are briefly reviewed below.

#### *Rangewide Population Criterion to Delist*

The Interior least tern rangewide numerical recovery criterion (7,000 birds) has been met and has been exceeded since 1994 (see Service 2013, pp. 7–127). Using rangewide seasonal count data from 1984 (722 terns) through 1995 (8,859 terns), Kirsch and Sidle (1999, pp. 473–477) demonstrated achievement of the numerical recovery criterion and a positive population growth trend. They noted that most of the Interior least tern increase had occurred on the Lower Mississippi River, observed that population increases were not supported by fledgling success estimates available at that time, and hypothesized that Interior least tern increases were possibly due to immigration surges from a more abundant least tern population inhabiting the Gulf Coast (Kirsch and Sidle 1999, p. 478).

Lott (2006, entire) organized, compiled, and reported a synchronized rangewide count for Interior least tern in 2005, finding tern numbers had doubled since 1995 (17,591

birds rangewide; 62 percent occurring along the Lower Mississippi River), equaling or exceeding least tern population estimates along the U.S. Gulf Coast (Lott 2006, p. 50). Since 2006, the majority of Interior least terns continue to be reported from the Lower Mississippi River (Service 2013, p. 11). As did Kirsch and Sidle (1999, p. 478), Lott (2006, p. 52) also hypothesized a wider least tern metapopulation, which included Gulf Coast and interior subpopulations, and the possibility of a shift of birds from the Gulf Coast to inland habitats due to the presence of better nesting conditions, particularly on the Lower Mississippi River. However, there are few data directly supporting the Kirsch and Sidle (1999, pp. 473–477) or the Lott (2006, p. 52) immigration hypotheses as a factor in the 20-year increase in Interior least tern counts. There has not been a complete or organized rangewide count since 2005; however, some geographic segments continue to be annually monitored, including portions of the Missouri (USACE *in litt.* 2017, entire), Platte (Keldsen and Baasch 2016, entire), Red (Stinson *in litt.* 2017, entire), Arkansas (Cope *in litt.* 2017, entire; Nupp 2016, entire), and Wabash Rivers (Mills 2018, entire). These partial counts indicate that we continue to exceed the recovery goal of 7,000 birds (Service 2013, pp. 11–12).

#### *Numerical Population Targets*

In addition to the numerical population targets identified in the recovery plan for five major river drainages throughout the tern's range (see above), sub-drainage targets were also identified for the Missouri and Arkansas River drainages (Service 1990, pp. 28–29). Drainage and sub-drainage numerical targets were based upon the opinions of technical experts and State and Federal resource agencies of the potential for population increase at the time (Service 1990, p. 28). The drainage system population size targets have been exceeded in three of the five targeted drainages (Lower Mississippi (more than 25 years), Red (more than 15 years), and Arkansas Rivers (more than 10 years) (see Service 2013, pp. 22–26). As to the Rio Grande drainage, it is now recognized that the

subpopulations found within the drainage represent recent exploitation of anthropogenic habitats (*i.e.*, salt flats and reservoirs) and are not historical habitats; thus, these areas were inappropriately designated as “essential” segments of the tern’s ecosystem in the recovery plan (Service 2013, pp. 26–27). Therefore, numerical targets originally set for the Rio Grande drainage are no longer considered necessary for this species’ recovery.

As to the Missouri River drainage, the Interior least tern population size has remained relatively stable (approximately 1,600 birds) over the 29 years since recovery criteria were identified (Service 2013, p. 11), and neither the drainage population target (2,100) nor many of the targets identified for Missouri River drainage segments have been consistently met (Service 2013, pp. 14–21). However, since the tern was listed, the Missouri River system has received a significant commitment of conservation attention and resources (USACE 2017a, pp. 1–17), particularly in comparison to other drainages that have experienced increases in tern populations. Based on the lack of increase in population, in light of the substantial commitment of resources, we conclude that the Missouri River drainage is likely at the carrying capacity of the available habitat (Service 2013, pp. 14–21), and the recovery goal of 2,100 birds is not achievable. Periodic downward trends observed in a few Missouri drainage subpopulations have been reversed by habitat improvement following major floods (Pavelka 2012, p. 2), or offset by upward trends in other subpopulations (Pavelka 2012, pp. 7–8; Lott and Sheppard 2017a, pp. 49–53), indicating that the Missouri River drainage Interior least tern population is sustainable and recovered.

In short, some drainage population targets identified in the 1990 recovery plan have not been fully met, as the Rio Grande was inappropriately considered “essential” (see above) and the Missouri River drainage appears to be at carrying capacity and incapable of reaching the 2,100 target identified in the recovery plan. However, the inability to meet these drainage and sub-drainage targets have been offset by large

increases in the Interior least tern populations within the Arkansas, Red, and Lower Mississippi Rivers, and by the discovery of numerous subpopulation segments throughout the Interior Basin that were either unrecognized or not occupied at the time of listing and recovery plan development, increasing the number of known breeding colonies from a few dozen at listing to more than 480 (Lott 2006, p. 10; also see Service 2013, pp. 31–33).

#### *Habitat Criteria*

Recovery plan delisting criteria required the protection, enhancement, and restoration of essential Interior least tern breeding habitats (Service 1990, pp. 28–29). Beyond the identification of specific river reaches as “essential,” habitat parameters were not defined, nor were specific objective and measurable criteria for their protection identified. The recovery plan outlined several tasks to protect and enhance Interior least tern habitats, including managing water flows, modifying construction activities, and protecting all areas identified as “essential” across the species’ range through acquisition, easements, or agreements (Service 1990, pp. 29–50).

Recovery tasks identified for managing water flows are primarily relevant to portions of the Missouri, Red, and Arkansas River drainages, which cumulatively encompass about 20 percent of the Interior least tern breeding population. The majority of the remainder of the species’ range occurs along unimpounded sections of the Mississippi River not subject to flow management. Over the past two decades, protective flow management actions have been identified and incorporated by USACE Northwest Division into their Missouri River Bank Stabilization and Navigation Project and operations of the Missouri River Reservoir System, including seasonal reservoir flow management to reduce nesting mortalities, and for sandbar augmentation and modification, vegetation management, predation control, human restriction measures, and water-level management for reservoir nesting areas (USACE 2017a, pp. 139–143). In the

Southern Plains, USACE Southwest Division civil works projects in the Arkansas, Canadian, and Red River systems within Arkansas, Oklahoma, and Texas use reservoir storage and operation to reduce flooding; minimize land bridging, predation, and human disturbance during Interior least tern nesting season; and enhance nesting habitats at other times of the year (USACE 2002, pp. 3–4; 2016, pp. 18–20). These water management practices have been adopted by the respective USACE Divisions and Districts as best management practices (BMPs) and with commitments to continue into the future regardless of the future status of the Interior least tern under the Act (USACE 2016, pp. 2, 24; 2018, pp. 4-13–4-17).

Recovery tasks for modifying construction activities within river channels have been successfully implemented across Interior least tern habitats that are managed under USACE programs in jurisdictional waters (categories of waters defined under the Clean Water Act (33 U.S.C. 1251 *et seq.*) that include navigable waters, interstate waters, tributaries, impoundments, etc.). Construction practices critical to maintaining and protecting nesting habitats have been incorporated into USACE river management programs as standard operating procedures (SOPs) or BMPs, including construction timing and work zone buffers to avoid disturbance of nesting colonies, dike modifications to protect and maintain habitat values, and dredge material disposal methods beneficial to maintaining nesting sand bars and islands (*e.g.*, USACE 2013, pp. 69–72; USACE 2016, p. 21). Other SOPs and BMPs incorporated into USACE programs promote ecosystem productivity important to tern foraging, including articulated concrete mat design, use of hardpoints in lieu of revetment, and strategic placement of woody debris within channels (*e.g.*, USACE 2013, p. 71). These existing management strategies and programs (USACE 2013, entire; 2016, entire; 2017a, entire) are protective of waters and habitats managed by USACE that support about 80 percent of the Interior least tern’s range and have been a major factor in the recovery of the species. All USACE programs currently

provide for adaptive management into the future, independent of the Federal listing status of the Interior least tern (USACE 2013, p. 71; 2016, pp. 2, 24; 2018, pp. 4-13-4-17).

New information developed over the past three decades relative to the ecology of Interior least tern and its habitats indicate that recovery tasks to protect “essential” habitats across the species’ range through acquisition or easements are neither cost-effective nor necessary. Riverine habitat for Interior least terns is not static, and clearly experiences dramatic local or regional annual (at times, daily) variation in location, quantity, and quality. Describing and quantifying habitat quality is difficult, given the wide variety of conditions the bird is known to exploit (*e.g.*, rivers, reservoirs, rooftops).

The Interior least tern adjusts to habitat variation and change over its range through metapopulation dynamics (Hanski and Gilpin 1991, entire; Lott *et al.* 2013, p. 3620; Lott and Sheppard 2017, entire). A metapopulation consists of a network of populations with similar dynamics that are buffered against extinction by abandoning areas as habitats degrade, and dispersing and exploiting suitable habitats as they become available. Therefore, the importance of specific habitat segments to the species is likely to change with time. Within large metapopulations of mobile species, small subpopulations (or colonies within subpopulations) may occur in habitats where recruitment is inconsistent or may not exceed mortality (*i.e.*, population sinks), but which are maintained by immigration from colonies where recruitment exceeds mortality (*i.e.*, population sources). While exploitation of anthropogenic habitats by Interior least terns may indicate a lack of suitable habitat in an area, it may also indicate an overall population or subpopulation expansion. Sink colonies also play important roles in large metapopulations by providing opportunities for range expansion, and/or redundancy from episodic stochastic impacts to preferred natural habitats. While some colony sites may be periodic or consistent population sinks, there is no evidence that they are detracting from the Interior least tern’s rangewide survival (*e.g.*, Lott and Sheppard 2017a, p. 51),

particularly in consideration of the substantial increase in the known number and size of tern colonies over the past two decades, and the expansion of the species' distribution outside of its historical range (*i.e.*, Illinois, New Mexico, central Texas, Colorado; see Service 2013, pp. 31–33).

Based upon this understanding of Interior least tern population dynamics and habitat use, the recovery task of protecting all areas identified in 1990 as “essential” across the species' range through acquisition or easements is not necessary for the conservation of the species. This conclusion is supported by the increase in the species' range and abundance over the past 30 years without protections achieved through such acquisition or easements. Although some Interior least tern nesting colonies occur on protected public lands such as National Wildlife Refuges, they represent only a small portion (less than 2 percent) of the rangewide population. Additionally, as noted above, existing management agreements, strategies, and programs within jurisdictional waters are protective of the habitats that support about 80 percent of the Interior least tern population (USACE 2013, entire; 2016, entire; 2017, entire).

While the majority (80 percent) of Interior least tern nesting colonies are known from jurisdictional waters with a strong Federal connection with navigation systems or reservoirs, the remaining nesting colonies occur along rivers with a more limited Federal nexus, or on mining and industrial sites adjacent to or near rivers and reservoirs. On about 10 percent of these, Federal, State, and/or private conservation partnerships have developed and implemented conservation agreements and management programs beneficial to Interior least tern as well as other at-risk or endangered species. These programs generally post or restrict access, control predators, and conduct monitoring during nesting season, as well as conduct vegetation control and public education as opportunities present.

In the Platte River drainage, the Tern and Plover Conservation Partnership was initiated in 1999, at the University of Nebraska, School of Natural Resources. This partnership consists of a group of State, industrial, Federal, and other cooperators having an interest in tern and plover conservation and management on and along the Platte, Loup, and Elkhorn Rivers, with emphasis on nesting areas associated with sand and gravel mines, lake shore housing developments, and dredging operations (University of Nebraska-Lincoln 2019, entire). Long-term management of Interior least tern habitats in the Platte River drainage is also assured by an adaptive management plan developed and implemented by a partnership of State and industrial water users in Nebraska, Colorado, and Wyoming under the Platte River Recovery Implementation Program (Platte River Recovery Implementation Program 2019, entire). This program, initiated in 1997, also targets management needs of the endangered pallid sturgeon (*Scaphirhynchus albus*) and whooping crane (*Grus americana*), and the threatened piping plover (*Charadrius melodus*). Since both programs target other listed species with similar habitat requirements, and the Interior least tern is State-listed as endangered, these conservation programs and efforts are expected to continue regardless of a change in the Federal status of this species.

Interior least tern management in the Wabash River drainage began with the 1986 discovery of a single nesting pair on Gibson Generating Station property, Gibson County, Indiana (Hayes and Pike 2011, entire; Mills 2018, pp. 2–5). This colonization led to site monitoring, predator control, and other protective measures, including vegetation control, water management, and habitat management and creation, resulting in increasing numbers of terns and expansion of nesting colonies to multiple sites on public and private properties in the vicinity (Hayes and Pike 2011, entire). In 1999, management was formalized by development of a habitat conservation plan, which was renewed and revised in 2004, 2011, and 2018, by Duke Energy Corporation (Hayes and Pike 2011,

entire). The Indiana Nongame and Endangered Wildlife Program continues to coordinate conservation and monitoring efforts on industrial and river sites along the Wabash River by Duke Energy, the Service, and other Indiana Department of Natural Resources personnel and contractors (Mills 2018, p. 14). Since the Interior least tern may continue to be protected by the State of Indiana, management and monitoring is expected to continue to some degree, regardless of a change in the Federal status of species.

To various degrees, a number of additional small, localized, and often temporary breeding colonies of Interior least tern and their habitats have been managed, protected, and monitored at industrial, municipal, and reservoir sites under the Act's conservation (sections 6, 7(a)(1), and 10) or consultation (section 7(a)(2)) requirements. Managed sites have included coal mines (*e.g.*, Tanner and Hart 1998, entire), rooftops (*e.g.*, Boylan 2008, entire), and small reservoirs (*e.g.*, Nelson 2010, entire). Such efforts may or may not continue when the tern is delisted; however, it is also likely that the tern will continue to exploit small areas of suitable habitats as they are available and encountered in its range. While such populations contribute some small benefit to the rangewide redundancy and representation of the tern (see discussion of **Population Trends**, above), they cumulatively represent less than 2 percent of the summer nesting population and their success or failure within individual sites has little impact on the rangewide conservation status of the Interior least tern.

In summary, the expansion of the numbers and distribution of the Interior least tern, and its adaptation to and exploitation of anthropogenic habitats over the past several decades, indicate that the species is no longer conservation-reliant. Potential threats identified at the time of listing have been removed or ameliorated by conservation actions of multiple conservation partners, most principally the USACE, for more than 20 years. These actions have assisted in recovery of the species as reflected in the large number of individuals rangewide, stable to increasing drainage populations since listing, and a high

number of self-sustaining colonies in 18 States. Furthermore, our partners in USACE Divisions and Districts within the range of the Interior least tern have cooperatively modified their programs to provide for the long-term management of nesting and foraging habitats for about 80 percent of the rangewide population of the species (USACE 2013, entire; 2016, entire; 2017, entire). Another 10 percent of the population is managed by State and private partnerships, which are expected to continue based upon State status and regulations. Regarding the remaining 10 percent of the population that nest in habitats with minimal or no management, while these areas contribute to redundancy and representation for the species, their success or failure within these sites is not essential to the continued existence of the Interior least tern.

### **Summary of Factors Affecting the Species**

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species is an “endangered species” or a “threatened species.” The Act defines an “endangered species” as a species that is in danger of extinction throughout all or a significant portion of its range, and a “threatened species” as a species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The Act requires that we determine whether any species is an “endangered species” or a “threatened species” because of any of the following factors:

- (A) The present or threatened destruction, modification, or curtailment of its habitat or range;
- (B) Overutilization for commercial, recreational, scientific, or educational purposes;
- (C) Disease or predation;
- (D) The inadequacy of existing regulatory mechanisms; or
- (E) Other natural or manmade factors affecting its continued existence.

These factors represent broad categories of natural or human-caused actions or conditions that could have an effect on a species' continued existence. In evaluating these actions and conditions, we look for those that may have a negative effect on individuals of the species, as well as other actions or conditions that may ameliorate any negative effects or may have positive effects.

We use the term “threat” to refer in general to actions or conditions that are known to or are reasonably likely to negatively affect individuals of a species. The term “threat” includes actions or conditions that have a direct impact on individuals (direct impacts), as well as those that affect individuals through alteration of their habitat or required resources (stressors). The term “threat” may encompass—either together or separately—the source of the action or condition or the action or condition itself.

However, the mere identification of any threat(s) does not necessarily mean that the species meets the statutory definition of an “endangered species” or a “threatened species.” In determining whether a species meets either definition, we must evaluate all identified threats by considering the expected response by the species, and the effects of the threats—in light of those actions and conditions that will ameliorate the threats—on an individual, population, and species level. We evaluate each threat and its expected effects on the species, then analyze the cumulative effect of all of the threats on the species as a whole. We also consider the cumulative effect of the threats in light of those actions and conditions that will have positive effects on the species—such as any existing regulatory mechanisms or conservation efforts. The Secretary of the Interior (Secretary) determines whether the species meets the definition of an “endangered species” or a “threatened species” only after conducting this cumulative analysis and describing the expected effect on the species now and in the foreseeable future.

We must consider these same five factors in delisting a species. We may delist a species according to 50 CFR 424.11(e) if the best available scientific and commercial

data indicate that: (1) The species is extinct; (2) the species does not meet the definition of an endangered species or a threatened species; or (3) the listed entity does not meet the statutory definition of a species.

A recovered species is one that no longer meets the Act's definition of endangered species or threatened species. Determining whether a species is recovered requires consideration of the same five categories of threats specified in section 4(a)(1) of the Act. For species that are already listed as endangered or threatened, this analysis of threats is an evaluation of both the threats currently facing the species and the threats that are reasonably likely to affect the species in the foreseeable future following delisting or downlisting (*i.e.*, reclassification from endangered to threatened) and the removal or reduction of the Act's protections.

The Act does not define the term "foreseeable future," which appears in the statutory definition of "threatened species." Our implementing regulations at 50 CFR 424.11(d) set forth a framework for evaluating the foreseeable future on a case-by-case basis. The term foreseeable future extends only so far into the future as we can reasonably determine that both the future threats and the species' responses to those threats are likely. In other words, the foreseeable future is the period of time in which we can make reliable predictions. "Reliable" does not mean "certain"; it means sufficient to provide a reasonable degree of confidence in the prediction. Thus, a prediction is reliable if it is reasonable to depend on it when making decisions.

It is not always possible or necessary to define foreseeable future as a particular number of years. Analysis of the foreseeable future uses the best scientific and commercial data available and should consider the timeframes applicable to the relevant threats and to the species' likely responses to those threats in view of its life-history characteristics. Data that are typically relevant to assessing the species' biological

response include species-specific factors such as lifespan, reproductive rates or productivity, certain behaviors, and other demographic factors.

In considering the foreseeable future as it relates to the status of the Interior least tern, we consider the factors affecting the species and historical abundance trends. Our period of record for monitoring the species and its associated habitat is over three decades, which, when combined with our knowledge of factors affecting the species, allows us to reasonably predict future conditions. We think it is reasonable to define the foreseeable future for the Interior least tern to be 30 years based on analysis of these factors and as presented in more detail under *Future Conditions and Species Viability*, below.

When the Interior least tern was listed as endangered in 1985, the identified threats (factors) influencing its status were the modification and loss of habitat and curtailment of range (Factor A), predation and disturbance of local colonies (Factor C), and the inadequacy of State or Federal mechanisms to protect its habitat at that time (Factor D). The following analysis, based on an assessment of the Interior least tern, evaluates these previously identified threats, any other threats currently facing the species, and those threats that are reasonably likely to affect the Interior least tern in the foreseeable future following the delisting and the removal of the Act's protections.

#### *Habitat Loss and Curtailment of Range*

The primary threats identified for the Interior least tern in the 1985 final listing rule were associated with the destruction and modification of habitat due to channel engineering practices on large rivers of the Interior Basin (*i.e.*, damming, channelization, and channel stabilization) (50 FR 21784, May 28, 1985, pp. 21789–21790; Service 1990, pp. 22–23). Reservoirs had inundated hundreds of miles of historical or potential tern riverine habitat in many Mississippi River Basin drainages, and reduced sediment input into channels below dams had caused channel degradation, constriction, and loss of

potential nesting habitats. Channelization, channel training structures (dikes), and bank stabilization in the Missouri, Mississippi, and Ohio Rivers prevented natural geomorphic response to loss of sediments, resulting in deepened and narrowed channels, and loss or terrestrialization (vegetation encroachment) of potential nesting sandbars and islands. Reservoir releases for hydropower, navigation, and flood control also were found to adversely affect Interior least tern populations surviving below these same dams (Service 1990, p. 22). These trends of habitat degradation were also expected to continue throughout most of the tern's fragmented range (Smith and Stuckey 1988, entire).

New information on the species' response to the threats identified at the time of listing indicate that anthropogenic changes in some river channels supporting the Interior least tern have also benefited the Interior least tern in ways that may have compensated for historical impacts to its habitat. For example, in the Lower Mississippi River (where tern numbers have increased by an order of magnitude, and which currently supports more than 60 percent of the Interior least tern nesting population), channel engineering, including the construction of channel training dikes, resulted in higher sandbars as well as earlier and shorter spring and summer high water events in this portion of the range (Schramm 2004, pp. 306, 322; USACE 2013, p. 60). Such changes have reduced egg and chick flood-related mortality events, extended the nesting season, and increased re-nesting opportunities, all of which may explain the Interior least tern population increase in the Lower Mississippi River over the past four decades.

Anthropogenic habitats are also now known to provide significant opportunities for Interior least tern nesting and recruitment. High flows in the Platte River have historically peaked after most nesting has been initiated within the river channel, flooding nests and hatchlings, and limiting re-nesting opportunities (Farnsworth *et al.* 2017, p. 3587). Models now suggest least tern nesting success would only have occurred during 32 percent of years, an inadequate success rate to have maintained the species within the

Platte River. It is now hypothesized that off-channel mining habitats were, and continue to be, critical to the success of the Interior least tern in the central and lower Platte River (Farnsworth *et al.* 2017, p. 3588). Similar observations have been proposed for some reaches of the Missouri River (*e.g.*, Jorgensen 2009, entire). In Texas and Colorado, foraging and nesting habitats created by dam construction have provided for Interior least tern colonization of arid regions historically unsuitable for the species (Service 2013, pp. 26–27).

Although river channel engineering, including reservoirs, channelization, channel training structures, and bank stabilization, continues to alter the Interior least tern's habitats, as outlined above, these habitat modifications have also created additional habitat opportunities for this species. The Interior least tern's known range has increased significantly; the reported numbers of nesting Interior least terns have expanded by almost an order of magnitude from fewer than 2,000 in 1985, to approximately 18,000 in 2005 (Lott 2006, p. 10), and currently more than 480 Interior least tern colonies are known to occur in four major drainages with 16 primary subpopulations (Lott *et al.* 2013, pp. 3616–3617). Most of these subpopulations have been stable or increasing over the past two decades (Lott *et al.* 2013, p. 3620; Lott and Sheppard 2017a, pp. 51–52). Thus, the negative impacts of river channel engineering on the tern appear to have been initially overestimated.

Loss of some historical Interior least tern summer nesting habitat likely occurred on a local or regional scale prior to listing; however, we have found no evidence that nesting habitat loss is currently limiting the Interior least tern on a rangewide scale. The Interior least tern continues to nest in all habitat types and drainages identified in 1985, and there is no evidence of significant regional decline or extirpation from any drainage since listing (Service 2013, p. 10). As previously noted, the Interior least tern uses a variety of anthropogenic habitats such as navigation systems, reservoirs, sand mines, and

so forth, allowing the Interior least tern to not only survive, but also to thrive in some drainages, and even expand its range into areas without historical records.

While future conditions within some portion of the Interior least tern's range may deteriorate due to natural or anthropogenic changes (for example, climate change may increase the likelihood of heavy rainfall events) or human demands (*e.g.*, water extraction or removal in the western plains), the wide range of the Interior least tern and its ability to relocate to areas with better conditions reduce the magnitude of any threat (see *Effects of Climate Change*, below). The Interior least tern is also well adapted to adjust to variability and changes in local habitat availability, quality, and quantity through metapopulation dynamics (see *Habitat Criteria*, above, for detail on metapopulation dynamics), enhanced by the species' longevity, dispersal capability, and ability to re-nest (*e.g.*, Lott *et al.* 2013, p. 3620; Lott and Sheppard 2017b, entire).

#### *Predation*

Interior least tern eggs, chicks, and adult individuals are susceptible to a wide variety of avian and terrestrial predators. During the 25-year monitoring period on the Missouri River, the greatest cause of egg loss has been predation (3 percent) (USACE 2017b, spreadsheet line 302). On the Mississippi River, predation was the second highest cause of Interior least tern egg, chick, and adult mortality (Smith and Renken 1993, pp. 41–42).

Interior least terns are adapted to avoid predation because: (1) Their eggs and chicks are cryptically colored to avoid detection; (2) chicks exhibit “freeze” behavior when threatened; and (3) adults cooperate in alarm calls and attack flights on potential predators to the colonies (Thompson *et al.* 1997, p. 11). Terns may also abandon and relocate colonies due to predation pressure (Atwood and Massey 1988, p. 394).

The level and effect of predation can be locally high and significant in some colonies and in some years; however, the Interior least tern's adaptation to high levels of

predation is demonstrated by the exponential growth of rangewide breeding numbers since listing in 1985. Interior least tern are long-lived, and current population trends indicate that sporadic local breeding failure due to predation or other causes is natural, and unlikely to be significant to the long-term stability of the rangewide population.

#### *Existing Regulatory Mechanisms*

The Interior least tern is covered by the Migratory Bird Treaty Act (MBTA; 16 U.S.C. 703 *et seq.*). The MBTA makes it unlawful, at any time and by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export, any migratory bird, any part, nest, or eggs of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or part, of any such bird or any part, nest, or egg thereof (16 U.S.C. 703(a)). 16 U.S.C. 704(a) states that the Secretary is authorized and directed to determine when, to what extent, if at all, and by what means, the take of migratory birds should be allowed, such as for educational, scientific, and recreational purposes, and to adopt suitable regulations permitting and governing the take. In adopting regulations, the Secretary is to consider such factors as distribution and abundance to ensure that any take is compatible with the protection of the species.

Since the publication of the proposed rule to delist the Interior least tern (84 FR 56977; October 24, 2019), the Service published a proposed rule to adopt a regulation that defines the scope of the MBTA as it applies to conduct resulting in the injury or death of migratory birds protected by the MBTA (85 FR 5915; February 3, 2020). This proposed regulation, if made final, will define the scope of the MBTA's prohibitions to reach only actions directed at migratory birds, their nests, or their eggs, and take that is

incidental to otherwise lawful activities would no longer be prohibited. Therefore, Federal agencies, industries, or private parties that have avoided or mitigated for incidental take to migratory birds due to MBTA prohibitions will no longer be required to do so. The MBTA will continue to protect migratory birds, their parts, nests, and eggs from intentional take and trade. We have reviewed this information and have evaluated the potential effects of these proposed changes on the Interior least tern. Incidental take is not currently a primary threat to the rangewide status of the Interior least tern, but there is the potential that with removal of the protections of the Act and the proposed regulation that defines the scope of the MBTA, incidental take may increase in some nesting areas. However, as noted herein under *Habitat Criteria*, above, USACE Divisions and Districts within the range of the Interior least tern have cooperatively modified their programs to minimize take of Interior least terns, and to provide for the long-term management of the nesting and foraging habitats across about 80 percent of the range of the species (USACE 2013, entire; 2016, entire; 2017, entire). USACE has also committed to continue consideration and management of the Interior least tern and its habitats following delisting, because maintaining viable populations of Interior least tern is in their interest, and that of all Federal agencies. More than 10 percent of the Interior least tern population consists of small to moderately sized colonies that are managed on Federal or State conservation lands, or under State and private partnerships, many of which are expected to continue management based upon environmental management objectives or State status and regulations. The Service, therefore, finds that should the proposed regulation that defines the scope of the MBTA be adopted, BMPs and SOPs to avoid incidental take of the tern will continue to be implemented across more than 90 percent of the species' range.

The remaining portion of the Interior least tern population consists of numerous, small, scattered, often ephemeral colonies nesting in habitats with minimal or no

management. Such colonies without management commitments may be impacted by the proposed regulation that defines the scope of the MBTA. While these areas contribute in some small degree to redundancy and representation of the species, their success or failure within specific sites is not essential to the continued existence of the Interior least tern.

In summary, incidental take is not currently a primary threat to the rangewide status of the Interior least tern, but there is the potential that with removal of the protections of the Act and the proposed regulation that defines the scope of the MBTA, incidental take may increase on some nesting areas. Any adoption of proposed changes to reduce the scope of the take provisions of the MBTA is not likely to affect management commitments currently in place, which are expected to continue following delisting of the Interior least tern, as BMPs and SOPs to avoid incidental take of the tern will continue to be implemented across more than 90 percent of the species' range. We also believe that Federal and State agencies, as well as private industries and individuals, recognize that it is in the public interest to minimize the impacts of lawful activities to Interior least tern and other migratory birds, and the Service shall continue to work with them to do so.

When the Interior least tern was listed in 1985, the listing rule (50 FR 21784; May 28, 1985) noted that while the MBTA protected migratory birds from harm or harassment, it did not provide a mechanism to address habitat threats. It concluded, therefore, in the absence of protection under the Act, the MBTA and other existing regulatory mechanisms were inadequate to prevent deterioration to habitats of the Interior least tern due to channel engineering. As noted previously, however, the effects of channel engineering on the species may have been more beneficial than detrimental, at least in some portions of the range (see *Habitat Loss and Curtailment of Range*, above).

The protection, restoration, conservation, and management of ecological resources within the Interior least tern's range have been broadly enhanced through Executive Orders and Federal regulations since the species was listed. These include provisions emphasizing the protection and restoration of ecosystem function and quality in compliance with existing Federal environmental statutes and regulations (*e.g.*, under the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*), Clean Water Act (CWA), and MBTA) and endorsing Federal efforts to advance environmental goals. Water resources authorizations have also enhanced opportunities for USACE and other Federal agency involvement in studies and projects to specifically address objectives related to the restoration of ecological resources (*e.g.*, section 1135 of the Water Resources Development Act of 1986, as amended, 33 U.S.C. 2201 *et seq.*) since the Interior least tern was listed.

Executive Order (E.O.) 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds; 66 FR 3853, January 17, 2001) requires all Federal agencies to use their authorities and conduct their actions to promote the conservation of migratory bird populations. Actions authorized by E.O. 13186 include: (1) Avoiding and minimizing adverse impacts to migratory birds; (2) habitat restoration and enhancement, and preventing pollution or detrimental alteration of migratory bird environments; (3) designing habitat and population conservation principles, measures, and practices into agency plans and planning processes; (4) promoting research and information exchange, including inventorying and monitoring; and (5) ensuring full consideration under NEPA of migratory birds such as the Interior least tern. These concepts have been incorporated by the USACE into its Environmental Operating Principles (Bridges *et al.* 2018, entire; USACE 2019, entire), and are being implemented within the jurisdictional waters inhabited by the Interior least tern. In the absence of the Act's protections, E.O. 13186

and USACE operating principles and programs will continue to provide for protection and management of the Interior least tern and its habitats (see *Habitat Criteria*, above).

The Civil Works Ecosystem Restoration Policy of 1999 (CWERP) (USACE ER 1165-2-501) identifies ecosystem restoration as one of the primary missions of the USACE Civil Works program. This policy requires a comprehensive examination of the problems contributing to ecosystem degradation, and the development of alternative means for their solution, with the intent of partially or fully reestablishing the attributes of a naturalistic, functioning, and self-regulating system.

Implementation of actions authorized under E.O. 13186 and CWERP are discretionary, and contingent upon opportunity and annual appropriations and other budgetary constraints. However, many Federal action agencies now have an extensive history of managing and restoring Interior least tern habitats (some more than two decades) in compliance with non-discretionary requirements of section 7(a)(2) of the Act (in the Missouri, Red, Arkansas, and middle Mississippi Rivers), as well as discretionary components of section 7(a)(1) of the Act, E.O. 13186, and CWERP (in the Lower Mississippi River). As a result, many conservation measures have become standard operating practices (see **Recovery Criteria**, above).

Interior least terns are listed as endangered in 16 of the 18 States where they occur: Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Mississippi, Missouri, Montana, Nebraska, New Mexico, South Dakota, Tennessee, and Texas. Many of the States noted above actively manage Interior least terns, including seasonal posting to prevent disturbance of nesting areas (*e.g.*, Kentucky, Kansas); facilitating cooperative partnerships to protect and manage the bird (*e.g.*, Nebraska, Indiana); developing State management plans for the Interior least tern (*e.g.*, South Dakota; Aron 2005, entire); conducting site-specific research (*e.g.*, Mississippi); and

participating in multi-agency planning, management, and monitoring programs (*e.g.*, Missouri River Recovery Implementation Committee).

The removal of the species from Federal protection might prompt some States to remove the Interior least tern from their endangered species lists. Regardless of Federal status, most State laws protect native wildlife (including the Interior least tern) from take and require State permits, in addition to Federal permits, to collect, harm, or harass migratory bird species, such as the Interior least tern.

Activities that may adversely affect the Interior least tern and/or its habitats will also continue to be subject to numerous regulatory mechanisms, including the MBTA, CWA, Fish and Wildlife Coordination Act (FWCA; 16 U.S.C. 661 *et seq.*), and NEPA. Federal actions to conserve and enhance Interior least tern habitats are now authorized by Executive Orders and Federal regulations enacted since the Interior least tern was listed in 1985. Additionally, post-delisting habitat management commitments by USACE encompass about 80 percent of the Interior least tern population (see **Recovery Criteria**, above). Therefore, we conclude that the existing regulatory mechanisms are adequate to protect the Interior least tern and address stressors to this species absent protections under the Act.

#### *Effects of Climate Change*

The distributions of many terrestrial organisms, including birds, are shifting in latitude or elevation in response to climate warming (Chen *et al.* 2011, pp. 1024–1025). Although population declines, apparently in response to climate change effects, have been reported for long distance migrant bird species in both Europe and North America, the negative effects of climate change at one life or migratory stage may be compensated at another stage, *e.g.*, by increased survival or reproduction on winter or breeding grounds (Knudson *et al.* 2011, p. 9).

The ability of migratory birds to cope with rapid climate change effects depends upon the rate of their adaptive response to the changes (Knudson *et al.* 2011, p. 12). Phenotypic plasticity (*i.e.*, the ability to shift dates of migration, breeding, fledgling, etc.) may allow rapid adaptation to climate change effects in some species (Charmantier *et al.* 2008, entire). While there is little information available on Interior least tern phenology (life cycle events and how they are influenced by climate variation), their adaptations to habitats controlled by stochastic events, along with high mobility and use of anthropogenic habitats, indicate that they will be resilient to predicted effects of climate changes.

Most climate change models predict increased extreme weather events (*i.e.*, floods and droughts) throughout the Interior least tern's breeding range (Lubchenco and Karl 2012, pp. 33–36). In the absence of clear knowledge of Interior least tern wintering distributions, potential effects of climate change on the bird when it is away from its breeding range are unknown. The Interior least tern is well adapted to cope with extreme hydrologic changes, and its habitat and productivity are closely tied with stochastic weather events. For example, while extreme floods may result in annual recruitment loss, such events are also the primary factor in creating, scouring, and maintaining high-quality sandbars where Interior least terns nest (Sidle *et al.* 1992, p. 134). On the other hand, extreme drought events that connect nesting islands to the mainland and result in increased predation of some Interior least tern colonies may be offset by higher abundance of available nesting areas, increased dispersal of reproductive efforts, and higher local recruitment rates of some colonies during low flow periods. Rooftop nesting birds are susceptible to catastrophic recruitment failure due to high summer temperatures (see Watterson 2009, pp. 23–24; Nupp and Petrick 2010, pp. 5–7), and colonies on natural habitats may also become negatively affected by increasing summer temperatures. However, Interior least terns are dispersed along a wide latitudinal and longitudinal

gradient of climate conditions and are unlikely to experience rangewide catastrophic recruitment failure due to high summer temperatures. Therefore, while Interior least tern colonies may be locally or regionally affected by changes in frequency and duration of extreme flood events and droughts, or high temperatures, the dispersal of the Interior least tern over a wide geographical area encompassing a variety of latitudinal and longitudinal gradients, its long life, and its ability to move long distances indicate the tern's resilience to future patterns of predicted effects of climate change (Lott *et al.* 2013, p. 3623).

#### *Habitat Loss and Fragmentation and the Effects of Climate Change*

Habitat destruction and fragmentation may reduce the likelihood of species surviving the effects of climate change, in part because smaller habitat patches sustain smaller populations (Hof *et al.* 2011, p. 2990). Habitat fragmentation can also impede the dispersal ability of species (Hof *et al.* 2011, pp. 2989–2990). While the Interior least tern has possibly been affected by loss of significant reaches of riverine habitat such as the lower Missouri River and lower Red River, it has also increased its longitudinal range by exploiting anthropogenic habitats such as reservoirs in central Texas, Colorado, and the Rio Grande, industrial sites in the Wabash River, and coal mines in Texas. Additionally, known population size has also increased by an order of magnitude since the range became fragmented, and genetic studies have demonstrated connectivity via gene flow within Interior least tern populations and between other least tern populations (*i.e.*, California least tern and eastern least tern; Whittier *et al.* 2006, p. 179).

Invasive salt cedar and willow growth, decreases in annual rainfall, and overuse and depletion of aquifers, coupled with increased human water demands, are occurring in the Southern and Northern Plains rivers, possibly to the future detriment of Interior least tern habitat and forage availability in those drainages. However, increases in impervious surfaces (*e.g.*, artificial structures or compacted soils associated with human

developments) may offset the negative effects of climate change in some watersheds, while human demands such as urban or industrial use, and irrigation, could either offset or exacerbate climate change effects in others (Caldwell *et al.* 2012, p. 2854). Based on current data, the wide longitudinal and latitudinal distribution of the Interior least tern will likely offset any potential localized or regional reduction in habitat quantity or quality, at least in part, by new opportunities in other portions of its range.

#### *Decline of Fish Prey*

Starvation of California least tern chicks has been reported due to the detrimental effects of El Niño on fish abundance (Massey and Fancher 1989, p. 354; Massey *et al.* 1992, p. 980). Decreased fish prey availability has been locally linked to reduced Interior least tern egg weights, clutch size, and chick weights, and may have influenced chick survival and fledgling rates (Dugger 1997, pp. 94–95). Declines in fish prey have been noted on the Missouri River (Stucker 2012, p. 21) and in some years on the Mississippi River (Dugger 1997, pp. 113–114). Fish prey abundance has also been linked to cyclic river conditions (*e.g.*, river stage during nesting season; Dugger 1997, p. 26). However, Interior least terns are strong flyers and capable of exploiting a large variety of aquatic habitats and fish species, including exotic species that may invade rivers such as Asian carp. These characteristics, coupled with the bird's long life, its ability to re-nest, and its ability to relocate to more productive areas, enable it to cope with local periodic cycles of low fish prey abundance.

#### *Other Factors*

Thompson *et al.* (1997, pp. 15–17) and others have documented the mortality of least tern eggs, chicks, and adults due to a number of additional factors, including flooding of nesting areas during heavy summer rains and high water events, exposure to pesticides and other contaminants (of coastal least tern; Jackson and Jackson 1985, p. 58), burial of eggs by sand, hailstorms, heat, cold, sand spurs (a common grass in this habitat

with prickly burrs that stick to passing animals), fire ants, fireworks, airboats, off-road vehicles (ORVs), and human recreationists. Cattle trampling of Interior least tern eggs and chicks has been documented in the Red River (Hervey 2001, pp. 7–8). Nupp (2012, pp. 7–8) documented mortality of eggs and chicks from heat exposure in rooftop colonies.

Sampling for contaminants in Interior least terns has been concentrated in the Missouri River drainage, where sub-lethal amounts of arsenic, mercury, chlorinated hydrocarbon, selenium, and polychlorinated biphenyl (PCBs) have been documented in individuals (Fannin and Esmoil 1993, pp. 153–157; Ruelle 1993, pp. 162–170; Allen *et al.* 1998, pp. 358–364); however, no incidences of death or decreased fitness of Interior least terns due to contaminants have been reported to date.

ORV impacts have been documented in most drainages where Interior least terns nest (Red, Mississippi, Arkansas, Ohio, and Missouri River drainages). However, ORV access to nesting areas occurs only occasionally because it is usually limited to situations where low flow conditions allow such access. While other threats (*i.e.*, sandstorms, hail storms, heat, cold, sand spurs, fire ants, fireworks, airboats, etc.) may increase in frequency and severity in some portions of the Interior least tern's range, most are site-specific and sporadic, or otherwise limited in scope.

Interior least tern mortality occurs locally throughout the range due to a variety of natural or manmade factors. However, the wide distribution of the species, its current high numbers, its long life span, and its ability to relocate and re-nest make the Interior least tern resilient to occasional or periodic local sources of mortality, as well as potential effects of climate change. The increase in range and population size since 1985 indicates that sources of mortality to localized colonies are compensated by these traits of resiliency, as well as by the potential of high recruitment rates in other Interior least tern colonies or populations.

### *Cumulative Effects*

Our analysis has identified no rangewide threats or stressors with significant effects to all breeding colonies or subpopulations. Monitoring data show some breeding colonies or subpopulation segments may decline or relocate due to localized stressors (e.g., predation, disturbance), regional stressors (e.g., droughts, floods), or their cumulative effects. Variations in colony locations, size, or subpopulation densities, however, are a characteristic of metapopulation dynamics, and have not been shown to threaten the rangewide status of the Interior least tern over an extended area. Additionally, the increases documented in the abundance and distribution of the Interior least tern, since it was listed in 1985, do not support a conclusion that any of these stressors cumulatively pose a threat to the Interior least tern.

### *Future Conditions and Species Viability*

Species viability, or its ability to survive long term, is related to its ability to withstand catastrophic population and species-level events (redundancy), to adapt to changing environmental conditions (representation), and to withstand disturbances of varying magnitude and duration (resiliency). The viability of a species is also dependent on the likelihood of new stressors or continued threats now and in the future that act to reduce a species' viability.

Redundancy of populations is needed to provide a margin of safety for a species to withstand catastrophic events. Current information and observed trends since the species was listed in 1985 indicate that redundancy of the Interior least tern is currently ensured by the existence of hundreds of breeding colonies in multiple drainages across a wide latitudinal and longitudinal range (see *Current Distribution and Abundance*, above), and within a variety of natural and anthropogenic habitats (see *Nesting Habitat and Behavior*, above).

Representation is the ability of a species to adapt to both near-term and long-term changes in its physical (e.g., climate conditions, habitat conditions, and habitat structure) and biological (e.g., pathogens, competitors, and predators) environments. We can gauge representation by examining the breadth of genetic, phenotypic, and ecological diversity found within a species and its ability to disperse and colonize new areas. For the ILT, we evaluated representation across a breadth of historical ecological settings, and through preservation of the genetic diversity of the species. The Interior least tern was historically known from, and continues to occur in, two main natural habitat types: large river sandbars and salt plains. While the salt plains populations were and continue to be historically localized in small portions of the Southern Plains, the sandbar populations occurred across a large latitudinal and longitudinal gradient, encompassing multiple river and stream orders, and a wide variety of climatic conditions. Little evidence of genetic structure has been found within the Interior least tern population (Draheim *et al.* 2010, p. 813), indicating high genetic connectivity between drainage subpopulations. There also appears to be high genetic connectivity between California, Interior, and eastern least terns (Draheim *et al.* 2010, p. 816). For these reasons, the Interior least tern appears to have adequate genetic and ecological representation to allow for adaptability to environmental changes.

Resiliency allows a species to recover from periodic or occasional disturbance. Resilience of individual and mated terns is demonstrated by their ability to relocate and re-nest when habitat conditions deteriorate, or when disturbance by humans or predators becomes severe. Interior least tern metapopulation dynamics allow subpopulations and colonies to respond to changing habitat conditions, including their ability to exploit a variety of anthropogenic habitats that were not historically available (Lott *et al.* 2013, p. 3623). This resilience is augmented by the long life span and strong flight abilities of Interior least terns, and by the prospecting behavior (exploratory dispersal) of young

birds across the landscape (Boyd and Thompson 1985, p. 405; Lott 2012, p. 12; Shigeta *in litt.* 2014, entire).

In addition to this review of redundancy, representation, and resiliency, which indicates a high likelihood of future viability for the Interior least tern, the Service worked with multiple partners to develop a habitat-driven, rangewide population model for the tern in order to consider status and population dynamics with and without continued management at local, regional, and rangewide scales (Iglay *et al.* 2012, entire; Lott and Sheppard 2017a, b, entire). The model, known as TernPOP (Lott and Sheppard 2017a, b, entire), applied simulation analyses that were designed to explore stakeholder-defined scenarios of potential future habitat change or changes in management. Fifty-five discrete scenarios spanned the geographic range of the Interior least tern and covered the topics of (1) sandbar nesting habitat loss, (2) habitat degradation, (3) changes in predator management programs, and (4) deliberate efforts to create mid-channel nesting sandbars for the tern. All 55 scenarios were evaluated relative to a “No Action” scenario. Thirty replicates of the model were run for 30 years, and population growth (or decline) rates were calculated for each replicate (and then averaged across replicates) at the spatial scales of scenario area, subpopulation, drainage population, and the entire listed population of the Interior least tern. Nearly all scenarios of regional management or habitat loss, even some viewed as implausible in the foreseeable future (*e.g.*, loss of 50 percent of all sandbars on the Lower Mississippi River), had minimal effects on population growth rates calculated across the 30-year period at the spatial scales of subpopulation, population, and range (Lott and Sheppard 2017b, pp. 42–61). In most cases, severe habitat degradation in even relatively large areas was insufficient to change the baseline population increases observed during “No Action” scenarios to population declines, beyond very local areas. Therefore, quantitative evaluation of population model outputs are similar to and support prior qualitative observations that Interior least tern

populations are resilient to many potential changes in habitat conditions across their large river network (Lott *et al.* 2013, pp. 3622–3623; Lott and Sheppard 2017b, pp. 59–62).

Based upon the analysis presented above, the Interior least tern cannot be considered to be conservation-reliant, because it has shown to be able to adapt to and exploit substantial habitat changes throughout its range. Although some (10 percent) local colonies and peripheral population segments of the Interior least tern may require management for long-term persistence, their success or failure within individual sites is not essential to the continued existence of the Interior least tern. Viability of the Interior least tern is assured by its resilience, representation, and redundancy throughout the remainder of its range. The Interior least tern will continue to be conserved by habitat management programs in more than 80 percent of its range (see *Habitat Criteria* under **Recovery Criteria** section, above).

### **Summary of Comments and Recommendations**

In our proposed rule published on October 24, 2019 (84 FR 56977), we requested that all interested parties submit written comments on the proposal by December 23, 2019. We also requested public comments on the draft post-delisting monitoring (PDM) plan. We contacted appropriate Federal and State agencies, scientific experts and organizations, and other interested parties and invited them to comment on the proposal. A newspaper notice inviting general public comment across the range of the species was published in USA Today on October 28, 2019. We did not receive any requests for a public hearing.

During the comment period, we received 25 letters or statements addressing the proposed action. These included comments from 2 peer reviewers, 4 State agencies in three States, 1 Federal agency, 1 nongovernmental organization, and 17 individuals. All comments are posted at <http://www.regulations.gov> under Docket No. FWS–R4–ES–2018–0082.

In accordance with our policy, “Notice of Interagency Cooperative Policy for Peer Review in Endangered Species Act Activities,” which was published on July 1, 1994 (59 FR 34270) and our August 22, 2016, Director’s Memorandum “Peer Review Process,” we solicited expert opinions from seven knowledgeable individuals with scientific expertise that included familiarity with this species, the geographic region in which it occurs, and conservation biology principles. We received responses from two peer reviewers.

The peer reviewers expressed support for the proposed delisting and generally agreed with our analysis in the proposed rule. Both expressed concerns with our PDM plan, particularly the 5-year time period. Peer reviewer comments are addressed in the following summary and incorporated into the final rule as appropriate.

We reviewed all comments for substantive issues and new information regarding the Interior least tern. Substantive comments we received during the comment period are addressed below and, where appropriate, are incorporated directly into this final rule. The majority of comments were related to the draft PDM plan and not the decision to delist the Interior least tern.

#### *Peer Review Comments*

*(1) Comment:* Both peer reviewers and a nongovernmental organization commented that the Interior least tern population increase and the achievement of the recovery goal are partially attributable to improved and increased survey efforts. One of the peer reviewers suggested that the Interior least tern abundance data used at the time of listing were in error, and that should be considered as a reason for delisting.

*Our Response:* The reported increase in rangewide numbers since the Interior least tern was listed is partially attributable to increased survey efforts over a wider geographical range and, in some areas, improved survey techniques. This conclusion was stated in our 2013 5-year review of the Interior least tern (Service 2013) and in several

places in our October 24, 2019, proposed delisting rule (84 FR 56977; see *Population Trends* under **Species Information** (p. 84 FR 56981) and *Numerical Population Targets* under **Recovery** (p. 84 FR 56982)). In addition, we also acknowledged the hypothesis that some proportion of the increase in rangewide least tern counts within the Interior Basin may be attributable to immigration of least terns from the Gulf Coast. We have retained these statements in those discussions in this final rule, and we have added an additional clarifying statement under *Population Trends*.

When the Interior least tern was listed as endangered (50 FR 21784; May 28, 1985), we acknowledged the difficulty in assessing population size of a species with a widely scattered distribution and poorly known historical trends. At that time, the best available information, including multiple surveys conducted over the previous decade, indicated a significant decline in the range of the Interior least tern, low population numbers, low reproductive success, and significant threats to remnant breeding habitats. This conclusion was endorsed, and listing was supported by 13 State wildlife or conservation agencies within the range of the species. While the Interior least tern may have been more abundant and widespread than recognized at the time the species was listed, the best available scientific and commercial information supported our decision to list this species as endangered under the Act, and there is no evidence that the original data used at that time were in error.

(2) *Comment*: One peer reviewer and a nongovernmental organization commented that the Service used limited and flawed information (Jorgensen 2009, entire; Farnsworth *et al.* 2017, entire) to minimize the importance of the Missouri and Platte Rivers in the recovery of the Interior least tern. They stated that the Service overlooked that both studies were conceptually and analytically problematic, and that editorials identifying key shortcomings were subsequently peer-reviewed and published in the same journals (Caitlan *et al.* 2010, entire; Alexander *et al.* 2018, entire). They expressed

concern that the use of this information reverses the Service's decades-long position that naturally flowing and dynamic river systems are critically important to the Interior least tern, other listed species, and the ecosystems as a whole.

*Our Response:* In our proposed delisting rule (84 FR 56977; October 24, 2019) and this final rule, we have cited Jorgensen (2009, entire) and Farnsworth *et al.* (2017, entire), under *Habitat Loss and Curtailment of Range*, as examples that some anthropogenic activities are known to provide significant opportunities for Interior least tern nesting and recruitment, contributing to the population and range expansion of the species even within highly modified river systems. Neither of these commenters discounted the importance of anthropogenic habitats to tern recruitment in either the Platte or Missouri River.

Farnsworth *et al.* (2017, entire) used historical hydrological and channel geometry data from a specific reach of the Platte River to suggest that the timing of seasonal flooding of low sandbars was not conducive to Interior least tern and piping plover recruitment success. This study also noted that anthropogenic habitats created by sand and gravel mines adjacent to the Platte River have been important in maintaining stable populations of these two birds within this system. Jorgensen (2009, entire) conducted a similar analysis for a short reach of the Missouri River in Sioux City, Iowa, concluding that off-site recruitment was important to tern and plover presence within this reach of the river. Caitlan *et al.* (2010, entire) and Alexander *et al.* (2018, entire) stated that the Jorgensen and Farnsworth *et al.* studies, respectively, were flawed and diminished the importance of natural river habitats to the ecology of the birds.

When developing the proposed delisting rule, we were aware of the Caitlan *et al.* (2010, entire) and Alexander *et al.* (2018, entire) published editorials critiquing the Jorgensen and Farnsworth *et al.* studies. We were also aware that these critiques had been directly addressed by responses from the original authors clarifying semantic

misinterpretations and including additional supporting information (Jorgensen 2010, entire; Farnsworth *et al.* 2018, entire). Both responses were accepted as closure of the identified issues within the same journals that the original articles and editorials were published.

We have not used this information (Jorgensen 2009, entire; Farnsworth *et al.* 2017, entire) to discount or diminish the importance of natural riverine habitats to the tern or the ecosystem, but rather as supporting evidence of the resiliency of the Interior least tern relative to its ability to adapt to and exploit some anthropogenic changes to its habitats. Natural and anthropogenic habitats in both the Platte and Missouri Rivers continue to be important components of the greater Interior least tern metapopulation.

*(3) Comment:* In their critique of the use of Farnsworth *et al.* (2017, entire) and Jorgensen (2009, entire), one peer reviewer and a nongovernmental organization stated that the Service did not consider the role of metapopulation dynamics in the use of anthropogenic habitats by Interior least terns in the Platte River. They noted that off-river anthropogenic habitats such as sand and gravel mines may not be sustainable and evolving mining practices may reduce the amount and quality of such habitats in the future.

*Our Response:* Under *Habitat Criteria* and elsewhere in the proposed delisting rule (84 FR 56977; October 24, 2019) and this final rule, the Service discusses the role and importance of metapopulation dynamics in the current and future distribution and resilience of the Interior least tern. We find the information presented in the referenced studies is important to understanding the role of past and future habitat conditions in the Platte and Missouri Rivers to the metapopulation dynamics of the Interior least tern.

Metapopulation dynamics allow species to exploit habitats that may change rapidly in abundance and/or quality and aid the re-establishment of extirpated populations. Both natural and anthropogenic least tern nesting habitats can be

transitional in availability or quality. Some breeding colonies or subpopulation segments have declined or relocated due to localized stressors (*e.g.*, predation, disturbance), regional stressors (*e.g.*, droughts, floods), habitat changes (*e.g.*, vegetation encroachment, reservoir management, mine closures), or their cumulative effects (Kirsch and Sidle 1999, p. 475; Service 2013, pp. 13–27). Resulting variations in tern colony locations, sizes, or subpopulation densities are a characteristic of metapopulation dynamics, and such declines have been offset by increases in other colonies or population segments (Lott and Sheppard 2017a, pp. 50–52). While future changes in mining practices within the Platte River drainage may affect their use by Interior least terns, metapopulation dynamics allow the birds to find and use other suitable habitats within or outside of the drainage for nesting.

*(4) Comment:* One peer reviewer and a nongovernmental organization commented that the Service failed to reference or acknowledge changes to the Migratory Bird Treaty Act (MBTA) directed by the M-Opinion and encouraged the Service to evaluate the consequences relative to the Interior least tern.

*Our Response:* After the publication of our October 24, 2019, proposed delisting rule, the Service published a proposed rule to adopt a regulation that defines the scope of the MBTA as it applies to conduct resulting in the injury or death of migratory birds protected by the MBTA (85 FR 5915; February 3, 2020). This proposed regulation, if made final, will define the scope of the MBTA's prohibitions to reach only actions directed at migratory birds, their nests, or their eggs, and take that is incidental to otherwise lawful activities would no longer be prohibited. This position is consistent with the Solicitor's Opinion M-37050, *The Migratory Bird Treaty Act Does Not Prohibit Incidental Take*, issued December 22, 2017. We have reviewed this information and have evaluated the potential effects of these proposed changes on the Interior least tern. Our analysis is presented above *under Existing Regulatory Mechanisms*. In summary,

incidental take is not currently a primary threat to the rangewide status of the Interior least tern, but there is the potential that with removal of the protections of the Act and these proposed regulatory changes defining the scope of the MBTA, incidental take may increase in some nesting areas. However, as described above, should the proposed changes be adopted, BMPs and SOPs to avoid incidental take of the tern will continue to be implemented across more than 90 percent of the species' range (*e.g.*, USACE 2013, entire; 2016, entire; 2017, entire; see *Habitat Criteria*, above). Therefore, the adoption of proposed regulatory changes to limit the scope of the take provisions of the MBTA are not likely to affect management commitments currently in place, which are expected to continue following delisting of the Interior least tern.

*(5) Comment:* Both peer reviewers, along with the States of Oklahoma and Colorado, a nongovernmental conservation agency, and several other public commenters stated that the duration of PDM plan is inadequate and recommended modifying the duration to include monitoring every third year for a period of 15 years. They noted that the Interior least tern may have a lifespan of 15 to 20 years; therefore, limiting PDM to 5 years may not be sufficient to track population fluctuations after delisting.

*Our Response:* Following delisting, the Act requires us to effectively implement a monitoring system for a minimum of 5 years in cooperation with the States that are within the range of the Interior least tern. To fulfill the PDM requirement, we developed a draft PDM plan for the Interior least tern and coordinated review of the plan with the State agencies, USACE Districts and Divisions, other Federal agencies, and various nongovernmental organizations. We acknowledge that sustaining PDM efforts can be challenging and subject to competing priorities for available resources. Nonetheless, we designed the draft PDM plan that was realistic given limited resources. However, given the comments we received on the duration of the draft PDM plan, we will continue to

work with our conservation partners to ensure development and implementation of an effective, final PDM plan, with an appropriate duration, for the Interior least tern.

While section 4(g)(1) of the Act requires us to implement a system in cooperation with the States to effectively monitor the status of any species that have been recovered and removed from the List(s), it does not require the development of a formal PDM plan prior to removing the species from the List, or at any point. The Service and States have wide latitude in implementation of this provision. In the absence of a final PDM plan, monitoring, with surveys continuing in 2021, is expected to continue for more than 80 percent of the Interior least tern population due to management commitments by the USACE and the States. However, we generally desire to follow a written planning document to provide for the effective implementation of section 4(g), and we intend to do so here. We will notify the public of the final PDM plan on our website, <https://www.fws.gov/mississippiES/>, after coordination with our partners and when it becomes available.

*(6) Comment:* One peer reviewer expressed concern that the potential of increased frequency and duration of flooding due to climate change was not addressed in the PDM plan. This peer reviewer also believes that there should be a mechanism in the plan for the Service to intervene if there are continued or recurrent flooding events.

*Our Response:* The purpose of PDM is to track the post-delisting status of the Interior least tern to ensure that it remains secure from risk of extinction following removal from the List. While the draft PDM plan does not identify a specific mechanism to intervene following flood events, it identifies actions that may be taken should monitoring indicate a substantial decline in the Interior least tern's population numbers or distribution. These actions include meeting with conservation partners, extending the monitoring period, modifying monitoring practices, initiating a rangewide status assessment, or relisting the Interior least tern, if warranted. As stated above under *Our*

*Response to (5) Comment*, we will continue to work with our conservation partners to develop and implement an effective, final PDM plan for the Interior least tern that includes an appropriate duration and purpose to detect trends.

*(7) Comment*: One peer reviewer asserted that in parts of the species' range some degree of human intervention will be needed for continued success and that an assessment of habitat management should be part of the PDM plan.

*Our Response*: The Interior least tern's adaptation to, and exploitation of, anthropogenic habitats over the past several decades indicate that the species is no longer considered conservation-reliant and is recovered. However, we assessed the adequacy of habitat management commitments relative to recovery of the tern in our proposed delisting rule (84 FR 56977; October 24, 2019) and this final rule, finding that conservation actions and management by multiple conservation partners, most principally the USACE (*e.g.*, USACE 2013, entire; 2016, entire; 2017, entire), will continue following delisting. Many conservation programs and commitments incorporate components of adaptive management, which provide for periodic assessment of habitat management actions relative to effects on the Interior least tern (*see Habitat Criteria*, above, under **Recovery Criteria**). As noted in the draft PDM and the proposed delisting rule, management commitments by USACE alone currently encompass about 80 percent of the Interior least tern breeding population, including large portions of the Mississippi, Red, Arkansas, and Missouri Rivers.

As stated above under *Our Response to (5) Comment*, we will continue to work with our conservation partners to develop and implement an effective, final PDM plan for the Interior least tern that includes an appropriate duration and purpose to detect trends.

*(8) Comment*: One peer reviewer expressed concerns that the inclusion of the Arkansas River as part of the Mississippi River subpopulation in the PDM plan dilutes

the importance of the Arkansas River. This reviewer suggested subdividing the four major subpopulations to ensure that recovery is truly rangewide.

*Our Response:* This comment refers to a map under “Methods” in the draft PDM plan showing the wide distribution of the tern, as well as the multiple habitats used as nesting areas. In the referenced map, Interior least tern subpopulations were defined by Lott *et al.* (2013, entire) based upon observed least tern dispersal movements relative to distance between nesting colonies. Based upon this analysis, the Lower Mississippi, Arkansas, Cimarron, and Canadian Rivers constitute one of four relatively continuous subpopulations. The identification of subpopulations does not reduce the importance of any geographical portion of a species’ range, particularly as movement and population numbers relate to metapopulation dynamics. Additionally, the USACE Southwestern Division (SWD) Districts, who monitors the Arkansas River along with portions of the Red and Canadian Rivers, has committed to continue this monitoring post-delisting as appropriations allow.

*(9) Comment:* One peer reviewer expressed concern that the PDM plan does not assess productivity of Interior least terns.

*Our Response:* Within the Interior least tern metapopulation, measurements of productivity within individual colonies may be masked by movements between colonies or even drainages, depending upon habitat conditions. Attempts have been made to assess tern productivity at various locations (*e.g.*, some Missouri River colony clusters, Platte River, Mississippi River sites, Wabash industrial sites); however, annual tern counts show little relation to previous year measurements of nest success, fledgling ratios, or annual recruitment. Therefore, we did not include assessment of Interior least tern productivity in the draft PDM plan.

As noted in the draft PDM plan, rangewide PDM of the Interior least tern relies upon continuation of existing monitoring programs throughout the birds’ extensive range.

Monitoring methods have been, and will continue to be, at the discretion of each program, provided that they meet the minimum survey requirements in the PDM plan to record the location of breeding colonies (two or more birds) and make counts of adults present at the time the colonies are surveyed. Any additional efforts are at the discretion of the local program.

*(10) Comment:* One peer reviewer characterized the PDM plan as providing a 10,000 bird “population target” and indicated such an approach appears to be arbitrary. The peer reviewer suggested that the Service might identify a percentage decline, as opposed to a specific number, to initiate further monitoring, or that the population model developed by the Service and the USACE (TernPOP) might be used to generate a target number based on chance of long-term persistence.

*Our Response:* The 10,000 birds referenced in the draft PDM plan is not meant to be a population target, but rather, a threshold to review significance, methods, and potential threats with States and other collaborators before numbers might fall below the recovery objective (7,000 birds). Tern counts are not static or consistent, and there has always been high variability (15 percent or more) between annual counts at local, regional, and rangewide population levels over the period of record (35 years). Even so, the rangewide counts, as well as some subpopulations and colonies, have shown a general increasing trend over this same period.

As we noted in the proposed delisting rule (84 FR 56977; October 24, 2019) under *Future Conditions and Species Viability*, we developed TernPOP as a habitat-driven, rangewide population model to consider scenarios of status and population dynamics at multiple scales, with and without management, and with different scenarios of habitat loss. TernPOP is not designed to generate any target number based on long-term persistence. Local and regional Interior least tern numbers and success are generally driven by habitat. Nearly all scenarios of regional management or habitat loss had

minimal effects on population growth rates calculated across a 30-year period at the spatial scales of subpopulation, population, and range.

*(11) Comment:* One peer reviewer expressed that the PDM plan should identify an action plan to quickly respond to any decline in numbers or productivity of the Interior least tern. The quick action plan should assess the causes of decline and direct resources for recovery.

*Our Response:* Because we have a 35-year record of increase for the tern, the objective of the draft PDM plan is to ensure that populations of the species do not decline once the Act's protections have been removed. As noted under *Our Response to (10) Comment*, above, we identified a conservative rangewide count number to initiate inquiry with Federal, State, and other collaborators into whether any observed decline in tern counts is real or an annual variation, and/or to investigate any potential causes of decline.

#### *State Comments*

Section 4(b)(5)(A)(ii) of the Act states that the Secretary must give actual notice of a proposed regulation under section 4(a) to the State agency in each State in which the species is believed to occur and invite the comments of such agency. Section 4(i) of the Act directs that the Secretary will submit to the State agency a written justification for his or her failure to adopt regulations consistent with the agency's comments or petition. We solicited comments from the 18 States within the summer breeding range of the Interior least tern. The States of Oklahoma, Colorado, and New Mexico responded with concurrence for the delisting action; however, the States of Oklahoma and Colorado expressed concern that the duration of PDM was inadequate to determine trends in this long-lived species (see *Our Response to Comment (5)*, above).

#### *Other Public Comments*

*(12) Comment:* One commenter observed that, while the Interior least tern may warrant delisting due to its population increase along the Mississippi River, its numbers have continued to decline in most other river systems within its range.

*Our Response:* Annual changes in relative abundance of colonies or subpopulations of a metapopulation may fluctuate widely on an annual basis. In the proposed delisting rule (84 FR 56977; October 24, 2019), we presented information that most Interior least tern subpopulations have been stable or increasing over the past two decades. While the Mississippi River has experienced the greatest increase in Interior least tern nesting population size, the analysis of 15 river system subpopulations with 20 or more years of monitoring data indicates that over that period of record, 10 experienced increases, 4 remained relatively stable, and only 1 (below Ft. Peck Dam) experienced a significant decline.

*(13) Comment:* Several commenters noted that the Interior least tern and its habitats remain vulnerable to climate change; one commenter was concerned about sea level rise and another stated that the species should remain threatened due to flooding associated with climate change.

*Our Response:* Because the Interior least tern nests within the Interior Basin remote from coastal areas, inundation by sea level rise is not a concern to its breeding range. We considered other potential effects of climate change in the proposed delisting rule (84 FR 56977; October 24, 2019) and this final rule under *Effects of Climate Change*, including the potential of increased flooding frequency. We conclude that the wide range of the Interior least tern (16 degrees of longitude; 18 degrees of latitude), its metapopulation dynamics, and its ability to relocate and exploit a wide variety of habitats reduces the magnitude of such threats. The response of the Interior least tern to any specific flood event may not be readily observed, and while such events may suppress local or regional reproduction and recruitment in some years, or shift reproduction and

recruitment to other areas, major flood events also reset habitats and may result in increased numbers of terns in subsequent years. For example, Missouri River flood years are generally followed by improved nesting habitats supporting large increases in tern numbers and recruitment in subsequent years.

### **Summary of Changes from the Proposed Rule**

We considered all comments and information we received during the comment period for the proposed rule to delist the Interior least tern (84 FR 56977; October 24, 2019). We made minor editorial changes throughout the rule and added additional information to clarify our understanding of “foreseeable future,” which published in an August 27, 2019, final rule (84 FR 45020) (see 50 CFR 424.11(d)). These recent revisions did not significantly modify the Service’s interpretation of foreseeable future, but rather, we codified a framework that sets forth how we will determine what constitutes the foreseeable future based on our long-standing practice. We have added a statement under *Population Trends* regarding the role of increased survey effort and the geographical extent of the area surveyed in the observed population increase since listing. Lastly, we also added information about how we considered the potential consequences to the Interior least tern of the February 3, 2020 (85 FR 5915), proposed rule to define the scope of the MBTA under *Existing Regulatory Mechanisms*, above.

### **Determination of Interior Least Tern Status**

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species meets the definition of “endangered species” or “threatened species.” The Act defines endangered species as a species that is “in danger of extinction throughout all or a significant portion of its range,” and a threatened species as a species that is “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” For a more detailed discussion on the factors considered when determining whether a

species meets the definition of an endangered species or a threatened species and our analysis on how we determine the foreseeable future in making these decisions, please see **Summary of Factors Affecting the Species**.

*Status Throughout all of Its Range*

Since its 1985 listing under the Act, the Interior least tern has shown an ability to adapt to changing environmental conditions caused by both human and natural disturbances. The Interior least tern nesting population encompasses hundreds of colonies in 18 States throughout the Interior Basin, from Montana southward through North Dakota, South Dakota, Nebraska, Colorado, Iowa, Kansas, Missouri, Illinois, Indiana, and Kentucky to eastern New Mexico, Oklahoma, Arkansas, Tennessee, Texas, Louisiana, and Mississippi (see supplemental documents at <https://www.regulations.gov> under Docket No. FWS–R4–ES–2018–0082). Therefore, the Interior least tern is highly redundant and resistant to future catastrophic events. Its representation is ensured by its continued occurrence within all known historical habitats (*i.e.*, Salt Plains, multiple river and stream orders) across a large latitudinal and longitudinal gradient and a wide variety of climatic conditions. Interior least tern resilience is demonstrated by metapopulation dynamics, by its ability to adapt to multiple natural and anthropogenic conditions, and by evidence of high genetic connectivity between drainage subpopulations. Because the Interior least tern has been considered to be increasing and self-sustaining since listing (35 years), and consists of a relatively large number of individuals with demonstrated high redundancy, representation, and resilience, we expect it to remain viable into the future.

We have carefully assessed the best scientific and commercial information available regarding the threats faced by the Interior least tern. Our analysis found an increase in the abundance, number of breeding sites, and range of the Interior least tern; resiliency to existing and potential threats; active habitat management and the

implementation of beneficial management practices; and changes in existing regulatory mechanisms that are protective of migratory bird habitats. Known threats at the time of listing—habitat loss and curtailment of range, and predation—have been reduced or adequately managed, and we have analyzed possible new threats related to climate change and determined that they are not significant threats to the Interior least tern now or within the foreseeable future. Existing State and Federal regulatory mechanisms are adequate to protect the tern. The net effect of current and predictable future stressors to the species, after considering applicable conservation measures and the existing regulatory mechanisms, are not sufficient to cause the Interior least tern to be in danger of extinction now or likely to become so within the foreseeable future throughout its range. We find that the Interior least tern has recovered so that it no longer meets the definition of an endangered species or a threatened species under the Act throughout its range.

*Status Throughout a Significant Portion of Its Range*

Under the Act and our implementing regulations, a species may warrant listing if it is in danger of extinction or likely to become so in the foreseeable future throughout all or a significant portion of its range. Having determined that the Interior least tern is not in danger of extinction or likely to become so in the foreseeable future throughout all of its range, we now consider whether it may be in danger of extinction or likely to become so in the foreseeable future in a significant portion of its range—that is, whether there is any portion of the species’ range for which it is true that both (1) the portion is significant; and (2) the species is in danger of extinction now or likely to become so in the foreseeable future in that portion. Depending on the case, it might be more efficient for us to address the “significance” question or the “status” question first. We can choose to address either question first. Regardless of which question we address first, if we reach a negative answer with respect to the first question that we address, we do not need to evaluate the other question for that portion of the species’ range.

In undertaking this analysis for the Interior least tern, we chose to address the status question first—we considered information pertaining to the geographic distribution of both the species and the threats that the species faces to identify any portions of the range where the species is endangered or threatened. We considered whether any of the threats acting on the Interior least tern are geographically concentrated in any portion of the species' range at a biologically meaningful scale.

We examined the following threats: habitat loss, curtailment of range, predation, and inadequacy of regulatory mechanisms, including cumulative effects. We found that while some colonies may be locally affected by future threats, these threats are not geographically concentrated. This finding is supported by a habitat driven, rangewide population model (TernPOP; Lott and Sheppard 2017a, b, entire), which considered 55 discrete scenarios of potential future habitat change (threats) or changes in management at local, regional, and rangewide scales, and covered the topics of (1) sandbar nesting habitat loss, (2) habitat degradation, (3) changes in predator management programs, and (4) deliberate efforts to create mid-channel nesting sandbars for the tern (see *Future Conditions and Species Viability*, above). We found no concentration of threats in any portion of the Interior least tern's range at a biologically meaningful scale. Thus, there are no portions of the species' range where the species has a different status from its rangewide status. Therefore, no portions of the species' range provides a basis for determining that the species is in danger of extinction or likely to become an endangered species in the foreseeable future throughout a significant portion of its range. This approach is consistent with the courts' holdings in *Desert Survivors v. Department of the Interior*, No. 16-cv-01165-JCS, 2018 WL 4053447 (N.D. Cal. Aug. 24, 2018), and *Center for Biological Diversity v. Jewell*, 248 F. Supp. 3d, 946, 959 (D. Ariz. 2017).

*Conclusion and Determination of Status*

Our review of the best available scientific and commercial information indicates that the Interior least tern is not in danger of extinction nor likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Therefore, we find that the Interior least tern does not meet the definition of an endangered species or a threatened species under the Act.

### **Effects of This Rule**

This rule revises 50 CFR 17.11(h) by removing the Interior least tern from the Federal List of Endangered and Threatened Wildlife. On the effective date of this rule (see **DATES**, above), the protections provided by the Act, particularly through sections 7 and 9, no longer apply to the Interior least tern. Federal agencies are no longer required to consult with the Service under section 7 of the Act in the event that activities they authorize, fund, or carry out may affect the Interior least tern. There is no critical habitat designated for the Interior least tern; therefore, this rule does not affect 50 CFR 17.95. Removal of the Interior least tern from the List of Endangered and Threatened Wildlife does not affect the protection given to all migratory bird species under the MBTA.

### **Post-delisting Monitoring**

Section 4(g)(1) of the Act requires us to monitor for not less than 5 years, the status of all species that are delisted due to recovery. Post-delisting monitoring (PDM) refers to activities undertaken to verify that a species delisted due to recovery remains secure from the risk of extinction after the protections of the Act no longer apply. The primary goal of PDM is to monitor the species to ensure that its status does not deteriorate, and if a decline is detected, to take measures to halt the decline so that proposing it as endangered or threatened is not again needed. If at any time during the monitoring period, data indicate that protective status under the Act should be reinstated, we can initiate listing procedures, including, if appropriate, emergency listing under section 4(b)(7) of the Act. Section 4(g) of the Act explicitly requires us to cooperate with

the States in development and implementation of PDM programs, but we remain responsible for compliance with section 4(g) of the Act and, therefore, must remain actively engaged in all phases of PDM. We also seek active participation of other entities that are expected to assume responsibilities for the species' conservation post-delisting. At the conclusion of the monitoring period, we will review all available information to determine if relisting, the continuation of monitoring, or the termination of monitoring is appropriate.

#### *Draft Post-Delisting Monitoring Plan Overview*

While section 4(g)(1) of the Act requires us to implement a system in cooperation with the States to effectively monitor the status of any species that have been recovered and removed from the List(s), it does not require the development of a formal PDM plan prior to removing the species from the List, or at any point. The Service and States have wide latitude in implementation of this provision. However, we generally desire to follow a written planning document to provide for the effective implementation of section 4(g), and we intend to do so here. To fulfill the requirement to monitor for not less than 5 years, we developed a draft PDM plan for the Interior least tern and coordinated review of the plan with the State agencies, USACE Districts and Divisions, other Federal agencies, and various nongovernmental organizations. We published a notice of availability of a draft PDM plan with the proposed delisting rule (84 FR 56977; October 24, 2019). However, given the comments we received on the duration of the draft PDM plan, we will continue to work with our conservation partners to develop and implement an effective, final PDM plan, with an appropriate duration, for Interior least tern. Existing monitoring programs over more than 80 percent of the species' range (e.g., USACE 2013, 2016, 2018) are committed to continue monitoring following delisting as we coordinate planning, and in the absence of a final PDM plan, periodic monitoring, with surveys in 2021, is expected to continue into the indefinite future due to

management commitments by the USACE and the States, regardless of the term's status under the Act. However, we generally desire to follow a written planning document to provide for the effective implementation of section 4(g), and we intend to do so here. We will notify the public of the final PDM plan on our website,

<https://www.fws.gov/mississippiES/>, after coordination with our partners and when it becomes available. The current draft PDM plan is available at <https://www.fws.gov/mississippiES/>.

## **Required Determinations**

### *National Environmental Policy Act*

We have determined that environmental assessments and environmental impact statements, as defined under the authority of the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*), need not be prepared in connection with determining and implementing a species' listing status under the Endangered Species Act. We published a notice outlining our reasons for this determination in the *Federal Register* on October 25, 1983 (48 FR 49244).

### *Government-to-Government Relationship with Tribes*

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that Tribal

lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes.

We do not believe that any Tribes will be affected by this rule. However, we contacted each of the Tribes within the range of the Interior least tern and requested their input on the proposed delisting rule and draft PDM. We did not receive any comments from them.

### **References Cited**

A complete list of references cited is available on <http://www.regulations.gov> under Docket Number FWS–R4–ES–2018–0082, or upon request from the Field Supervisor, Mississippi Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

### **Author**

The primary author of this rule is Paul Hartfield, Mississippi Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

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

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

### **Regulation Promulgation**

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

#### **PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS**

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

**Authority:** 16 U.S.C. 1361–1407; 1531–1544; 4201–4245, unless otherwise noted.

#### **§ 17.11—[Amended]**

2. Amend § 17.11(h) by removing the entry for “Tern, least [Interior DPS]”

under “BIRDS” from the List of Endangered and Threatened Wildlife.

**Signing Authority**

The Director, U.S. Fish and Wildlife Service, approved this document and authorized the undersigned to sign and submit the document to the Office of the Federal Register for publication electronically as an official document of the U.S. Fish and Wildlife Service. Aurelia Skipwith, Director, U.S. Fish and Wildlife Service, approved this document on November 19, 2020, for publication.

**Dated:** November 19, 2020.

**Madonna Baucum,**  
*Regulations and Policy Chief,*  
*Division of Policy, Economics, Risk Management, and Analytics,*  
*Joint Administrative Operations,*  
*U.S. Fish and Wildlife Service.*

[FR Doc. 2020-28192 Filed: 1/12/2021 8:45 am; Publication Date: 1/13/2021]