

that tribe, you are not entitled to an allotment.

§ 2532.4 How do I apply for an Indian allotment on public lands within a national forest?

To apply for an allotment on public lands within a National Forest, you must submit an application to the District Ranger or the Forest Supervisor of the particular forest where the lands are located. Your application must contain the information specified in § 2530.16. You must also remit a nonrefundable filing fee of \$100.

§ 2532.5 How will my application be processed?

(a) The responsible Forest Service official will process your application in accordance with the regulations at 36 CFR 254.50, unless the land is withdrawn or otherwise unavailable for filing. If the lands are not available for filing, the Forest Service will notify BLM that the lands are not available, and your application will be rejected.

(b) The Secretary of Agriculture will determine whether any of the lands you applied for are more valuable for agriculture or grazing than for the timber found on the land. He or she will send the application, this finding, and a report on the suitability of the land for disposal under the Act, to the Secretary of the Interior. The land suitability report will analyze such factors as physical characteristics of the land, potential uses and users of the land, land use planning, and environmental considerations.

(c) Upon receipt of a determination and suitability report from the Secretary of Agriculture, the Secretary of the Interior will, after consideration of all relevant information, decide if the land applied for is suitable for disposal under the Act. If the Secretary approves the application, BLM will issue a trust patent in accordance with subpart 2531 of this part.

§ 2532.6 What may I do if my application is rejected?

If the Secretary determines that the land covered by your application is not suitable for disposal under the Act, BLM will send you a decision to this effect. You may appeal a decision rejecting your application under the provisions contained in part 4, subpart E of this title.

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 227

[Docket No. 960917262-6262-01; I.D. 122294A]

Listing Endangered and Threatened Species; Shortnose Sturgeon in the Androscoggin and Kennebec Rivers, ME

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Denial of petition.

SUMMARY: NMFS finds that a petitioned action to remove shortnose sturgeon (*Acipenser brevirostrum*) occurring in the Androscoggin and Kennebec Rivers from the List of Endangered and Threatened Wildlife is not warranted at this time.

Shortnose sturgeon in the Androscoggin and Kennebec Rivers continue to face substantial threats to their habitat and/or range, and existing regulatory mechanisms other than the Endangered Species Act (ESA) are inadequate to ensure the detailed review and management of these threats. Moreover, the Petersen population estimate used by the petitioner is higher and less reliable than the best estimate accepted by NMFS. The Schnabel population estimate used by NMFS also has limitations, but is the best available information upon which a listing decision can be based. NMFS lacks critical, recent information on population dynamics (e.g., natality, natural mortality, age or size structure) that could be used to assess how well the Androscoggin River and Kennebec River breeding populations are replacing themselves over time.

ADDRESSES: A copy of the Status Review of Shortnose Sturgeon in the Androscoggin and Kennebec Rivers (NMFS, 1996) is available upon request to the National Marine Fisheries Service, Office of Protected Resources (F/PR), 1315 East-West Highway, Silver Spring, MD, 20910.

FOR FURTHER INFORMATION CONTACT: Marta Nammack, Endangered Species Division, NMFS, (301/713-1401).

SUPPLEMENTARY INFORMATION:

Petition Background

On September 19, 1994, NMFS received a petition from Edwards Manufacturing Company, Inc., to remove shortnose sturgeon in the Kennebec River system (the

Androscoggin and Kennebec Rivers) in Kennebec, Sagadahoc and Lincoln Counties, ME, from the List of Endangered and Threatened Wildlife (50 CFR 17.11). In support of its petition, petitioner cited research conducted on shortnose sturgeon in the Androscoggin and Kennebec Rivers over the last two decades and an initial population estimate averaging 11,000 adult shortnose sturgeon. Additionally, density data (shortnose sturgeon per hectare) reported from six river populations, including the Kennebec River, were used to infer that, at least, the Kennebec River system was supporting a shortnose sturgeon population near carrying capacity.

On January 6, 1995, NMFS issued a 90-day finding (60 FR 2070) that the petition presented substantial information indicating that the petitioned action may be warranted. NMFS initiated a status review of shortnose sturgeon occurring within the Androscoggin and Kennebec Rivers and, using the best scientific and commercial data available, assessed whether shortnose sturgeon inhabiting the Androscoggin and Kennebec Rivers could be delisted as requested by the petitioner.

When originally listed, shortnose sturgeon were considered endangered throughout their range in the eastern United States, though not all extant populations were identified at the time of their original listing. Today, at least 17 populations of shortnose sturgeon are known within the species' wide latitudinal range. Recognizing that the knowledge concerning shortnose sturgeon increased during the years following the species' ESA listing, NMFS began a status review in the late 1980s to assess whether individual shortnose sturgeon populations should be considered "distinct" for ESA purposes.¹ Further, the status review was also used to investigate changes to the listing status of these individual populations in instances where changes appeared warranted. In the 1987 status review, NMFS stated that:

the differences reported in longevity, growth rates, and age at sexual maturity between shortnose sturgeon from the northern and southern extremes of its range are expected in any species with a wide latitudinal distribution. The best available information also indicates differences in life history and habitat preferences between the northern and southern river systems

¹ In the 1978 amendments to the ESA, the definition of "species" was changed to: "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature."

(Dadswell et al., 1984) although available genetic and morphometric data do not support any taxonomic splitting of the species. However, given the species' anadromous breeding habits, it is unlikely that populations in adjacent river systems interbreed with any regularity. Therefore, until interbreeding is confirmed, we will consider each population within a river system to be a distinct unit under the ESA definition of "species."

The 1987 status review also indicated that the listing status of the shortnose sturgeon population in the Kennebec River system (including the Androscoggin River) should be re-evaluated and that available information indicated that the "population" in the Kennebec and Androscoggin Rivers may no longer require protection under the ESA. This suggestion was met with disagreement in the scientific community in comments NMFS received on the status review. Therefore, a team of NMFS biologists and other scientists from state and private agencies was convened to critically review the 1987 status review and assess the merits of the listing recommendations contained within the status review. However, the team did not complete its task, and no changes to the listing status of shortnose sturgeon populations were proposed.

Section 4(a) of the ESA mandates that the Secretary of Commerce determine whether a species is an endangered or 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, or 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. NMFS, in determining whether to delist a species, must consider the same five factors.

Status as a "Species" Under the ESA

In response to this petition, NMFS conducted a peer-reviewed status review of shortnose sturgeon in the Androscoggin and Kennebec Rivers to determine if the populations inhabiting these rivers were separate DPSs under the ESA definition of "species." That report, "Status Review of Shortnose Sturgeon in the Androscoggin and Kennebec Rivers (NMFS, 1996)," is available upon request (see ADDRESSES). Significant findings described in the status review, as they pertain to this petition finding, are summarized below.

Shortnose sturgeon occur in the estuarine complex formed by the Androscoggin, Kennebec, and Sheepscot

Rivers. The Maine Department of Marine Resources (MDMR) began studying sturgeon in the Kennebec and Androscoggin Rivers in 1977 to determine the distribution and abundance of adults of the species. The MDMR conducted a pooled adult population estimate for the Androscoggin and Kennebec Rivers using the Petersen and Schnabel population size estimators (Krebs, 1989). These estimates involve marking and recapturing fish and incorporate similar assumptions about the population, though the calculations differ in slight but significant ways. The NMFS and the MDMR agree that the Schnabel estimate is more reliable than the Petersen estimate for a multiple census-based population estimate. Although the two estimates are point estimates derived from 15-year-old data, these data provide the best available information on the distribution and abundance of adult shortnose sturgeon occurring in the Kennebec and Androscoggin River systems.

Based on the joint NMFS/U.S. Fish and Wildlife Service (USFWS) policy regarding the recognition of DPSs under the ESA (61 FR 4722, February 7, 1996), the following criteria are considered in determining the status of a possible DPS under the ESA: (1) Discreteness of the population segment in relation to the remainder of the species to which it belongs; (2) the significance of the population segment in relation to the remainder of the species to which it belongs; and (3) the population's conservation status in relation to ESA standards for listing (i.e., is the population segment, when treated as if it were a species, endangered or threatened?). These three criteria are discussed briefly below and in more detail in the status review.

Discreteness

To be discrete, a sturgeon population must be markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors, or be delimited by international boundaries. Quantitative measures of genetic or morphological discontinuity may provide evidence for this separation. Waples (1991) and NMFS (56 FR 58612, November 20, 1991) provided guidance for determining the "discreteness" and evolutionary significance of Pacific salmon populations. This guidance was used to develop the current policy on DPSs that applies to all vertebrates. In making a determination of population distinctness under the ESA, Waples (1991) recommends, as a first step, considering whether a population is

substantially isolated reproductively from other conspecific populations.

Shortnose sturgeon populations show a high degree of reproductive isolation (Dadswell, 1976; Dadswell et al., 1984). Ocean captures of shortnose sturgeon are extremely rare, and straying rates between stocks, though unmeasured, appear to be very low, based on the lack of recaptures of tagged fish in adjacent rivers. Given this pattern, which seems to predominate more in the northern portion of the sturgeon's range, some authors have suggested that "amphidromy" (limiting migrations to natal estuaries) best describes the shortnose sturgeon's life history pattern (Bain, in press; Kynard, in press). Squiers et al. (1981) captured fish in spawning condition in the Androscoggin and Kennebec Rivers in May of 1980 and 1981. This information indicates that each river supports spawning populations of shortnose sturgeon, though it does not provide conclusive evidence for river-specific spawning stocks. However, there is ample evidence from other, well-studied sturgeon populations to support a trend of river-specific spawning (Buckley and Kynard, 1985; Dadswell et al., 1984; Dovel, 1981; O'Herron et al., 1992). Based on this information, and to be biologically conservative with respect to stock discreteness, NMFS considers shortnose sturgeon populations in the Androscoggin and Kennebec Rivers likely to be reproductively separate, and, therefore, discrete populations.

Significance

With such limited information on the biology and ecology of either population and the habitats occupied by shortnose sturgeon in both systems, NMFS is unable to assess the biological or ecological significance of either population segment independently. Although the populations in question may meet the first criterion of a DPS (discreteness), there are not enough biological data currently available to classify each population as a DPS. Therefore, NMFS' 1987 decision to combine the Androscoggin and Kennebec River populations as a single distinct unit, for ESA purposes, is consistent with the current DPS policy. NMFS refers to this DPS as the Androscoggin/Kennebec Rivers DPS comprised of the Androscoggin and Kennebec River breeding populations. Further studies may reveal significant differences and, if warranted at a future time, necessitate separate DPS listings for both the Androscoggin River and Kennebec River populations.

Conservation Status in Relation to ESA Standards for Listing

The most reliable population estimate for shortnose sturgeon in the Androscoggin and Kennebec Rivers DPS is the composite Schnabel estimate: An average of 7,222 with a 95 percent confidence interval of 5,046 to 10,765 (Squiers et al., 1981). This is considered to reflect a combined population of adult shortnose sturgeon that spawn throughout the Androscoggin/Kennebec Rivers DPS. Shortnose sturgeon are known to spawn in cycles, and estimates indicate that adults may spawn at intervals of 3 years (Dovel, 1981; Dadswell et al., 1984). Thus, of this group of potential spawners, only one third are expected to spawn each year (Dovel, 1981; Boreman, 1992). Using the adult population estimates obtained by the MDMR, the range of census adult population sizes is 1,682 to 3,588 fish, one-third of the total adult population size or the number of annually spawning fish. This range reflects a combined estimate for adult fish inhabiting both the Androscoggin and Kennebec Rivers (the breeding populations constituting the Androscoggin/Kennebec DPS). The estimate of the subpopulation in each river is unknown. Potentially, shortnose sturgeon in one of these rivers may be persisting at extremely low levels.

NMFS also examined indices of catch-per-unit effort, length/age frequencies, and other types of data to evaluate the breeding populations in the Androscoggin/Kennebec Rivers DPS. Catch-per-unit effort has increased in the Androscoggin River (Squiers et al., 1993), and may be viewed as a positive indication that this population was recruiting successfully in the early 1980s. A current population estimate, using similar capture methodology to that in the previous estimate, could be used to confirm this. NMFS does not have adequate length frequency data for either the Androscoggin or Kennebec Rivers to construct age or size-structured population models for each breeding population. This severely impedes NMFS' ability to assess the listing status of Androscoggin/Kennebec Rivers DPS. Section 4(b)(1) of the ESA requires that all decisions to list, change the status of, or delist a species be based on the best scientific and commercial data available.

Using the Petersen population estimate of 10,000 fish in the Androscoggin and Kennebec Rivers, the petitioner cited calculations of average density (shortnose sturgeon per hectare) to infer that the Kennebec River shortnose sturgeon population is "at or

near carrying capacity regarding available food production." This conclusion is unfounded because the Petersen population estimate used by the petitioner to derive density estimates is questionable because it was not based on a statistically reliable sample size and it relied on a faulty methodology and inaccurate statistical assumptions (NMFS, 1996). NMFS considers the Schnabel estimate of 7,222 fish to be the best estimate of the adult segment of the populations comprising both the Androscoggin and Kennebec Rivers. Also, NMFS lacks critical information about current river-specific population sizes and shortnose sturgeon population dynamics in the Androscoggin and Kennebec Rivers to assess density-dependent and density-independent factors that might lead to an estimate of carrying capacity. Finally, the petitioner's estimate of hectares of bottom habitat is not a direct measure of prey density. Without knowledge that suitable habitat exists for shortnose sturgeon (i.e., that it is adequate for reproduction, foraging, and overwintering), an estimate of bottom surface area is not meaningful.

The petitioner also cited Dadswell et al. (1984) to support the assertion that sturgeon densities are high with respect to available bottom habitat. However, Dadswell et al. (1984) point out that making assumptions about total population sizes from discrete estimates of foraging population sizes is not sound:

Population size projections, for rivers with poorly known populations, that use densities calculated for feeding concentrations rather than average densities *** are inappropriate.

The Petersen estimate cited was derived from an average of nine mark-recapture estimates that were concentrated on the summer feeding grounds of adult shortnose sturgeon.

NMFS' "Status Review of Shortnose Sturgeon in the Androscoggin and Kennebec Rivers" (NMFS, 1996) analyzed the five listing factors from section 4(a) of the ESA and reached the following conclusions: (1) Shortnose sturgeon in the Androscoggin and Kennebec Rivers continue to face substantial threats to their habitat and/or range due to hydroelectric facilities, channel dredging, and the introduction of pollutants via sewage treatment plants, paper mills, and other industrial facilities; (2) overutilization of shortnose sturgeon for commercial, recreational, scientific, or commercial purposes is not currently a threat in the Androscoggin and Kennebec Rivers, but pressure for commercial utilization could increase if the species were removed from

protected status; (3) the influence of disease or predation on shortnose sturgeon in the Androscoggin and Kennebec Rivers has not been investigated; (4) existing regulatory mechanisms other than the ESA limit the direct harvest of shortnose sturgeon but are inadequate to ensure the detailed review of potentially damaging construction activities that are closely scrutinized through the ESA Section 7 consultation process; and (5) NMFS is not aware of any other natural or anthropogenic factors affecting shortnose sturgeon survival in the Androscoggin and Kennebec Rivers DPS.

Documented recovery criteria for shortnose sturgeon populations do not currently exist, although the NMFS Shortnose Sturgeon Recovery Team established in 1992 is presently drafting a Shortnose Sturgeon Recovery Plan that will include such criteria. In the absence of these criteria, and as a supplement to NMFS' analysis of the five ESA listing factors, NMFS used interim criteria from the conservation biology literature to evaluate the status of shortnose sturgeon populations in the Androscoggin and Kennebec Rivers. This additional information is discussed in the "Status Review of Shortnose Sturgeon in the Androscoggin and Kennebec Rivers (NMFS, 1996)."

Determination

NMFS finds that the petitioned action to delist shortnose sturgeon in the Androscoggin and Kennebec Rivers is not warranted at this time. Based on the factors specified in the ESA to guide listing decisions, NMFS concludes that shortnose sturgeon in the Androscoggin and Kennebec Rivers DPS continue to face substantial threats to their habitat and/or range and that existing regulatory mechanisms other than the ESA are inadequate to ensure the detailed review and management of these threats. The potential of habitat modification or direct takes of shortnose sturgeon to impede the recovery of the species in the Androscoggin and Kennebec Rivers warrants serious consideration before any changes are made in the species' listing status.

Moreover, the Petersen population estimate used by the petitioner is higher and less reliable than the best (Schnabel) estimate accepted by NMFS. Even if the Petersen population estimate was accepted, NMFS lacks critical, recent information on population dynamics (e.g., natality, natural mortality, age or size structure) needed to assess how well the Androscoggin River and Kennebec River breeding

populations are replacing themselves over time.

In consideration of the DPS definition for shortnose sturgeon, NMFS concludes that available data are insufficient to warrant designating the individual populations in the Androscoggin River and Kennebec River as DPSs (species) under the ESA. Therefore, as first determined in NMFS' 1987 status review, NMFS views shortnose sturgeon in the Androscoggin and Kennebec Rivers as a single DPS comprised of at least two local breeding populations. Future studies may reveal significant differences and, if warranted, necessitate separate DPS listings for the Androscoggin River and Kennebec River populations.

Dated: October 9, 1996.

Rolland A. Schmitten,
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