

Dated: October 8, 1998.

**W. Michael McCabe,**

*Regional Administrator, Region III.*

[FR Doc. 98-28113 Filed 10-20-98; 8:45 am]

BILLING CODE 6560-50-P

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 271

[FRL-6176-6]

#### Idaho: Final Authorization of State Hazardous Waste Management Program Revisions

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The EPA proposes to grant final authorization to the hazardous waste program revisions submitted by the State of Idaho. In the final rules section of this **Federal Register**, EPA is authorizing the State's program revisions as an immediate final rule because EPA views this action as noncontroversial and anticipates no adverse comments. A detailed rationale for the authorization is set forth in the immediate final rule. If no adverse written comment is received on this action, the immediate final rule will become effective and no further activity will occur in relation to this proposal. If EPA receives adverse written comment, EPA will withdraw the immediate final rule before its effective date by publishing a withdrawal in the **Federal Register**. EPA will then respond to public comments in a later final rule based on this proposal. EPA may not provide further opportunity for comment. Any parties interested in commenting on this action should do so at this time.

**DATES:** Written comments must be received on or before November 20, 1998.

**ADDRESSES:** Mail written comments to Jeff Hunt, U.S. EPA, Region 10, 1200 Sixth Avenue, Mail stop WCM-122, Seattle, WA 98101, phone, (206) 553-0256. Copies of the materials submitted by Idaho are available during normal business hours at the following locations: EPA Region 10 Library, 1200 Sixth Avenue, Seattle, WA, 98101, phone (206) 553-1289 and the Idaho Department of Health and Welfare, Division of Environmental Quality, Planning and Evaluation Division, 1410 N. Hilton, Boise, Idaho 83706, phone, (208) 373-0502 (Refer to Docket numbers: 0105-9401, 0105-9502, 0105-9601; contact is Pam Smolczynski).

**FOR FURTHER INFORMATION CONTACT:** Jeff Hunt, U.S. EPA, Region 10, 1200 Sixth Avenue, Mail Stop WCM-122, Seattle, WA, 98101, phone (206) 553-0256.

**SUPPLEMENTARY INFORMATION:** For additional information see the immediate final rule published in the rules section of this **Federal Register**.

Dated: October 6, 1998.

**Chuck Clarke,**

*Regional Administrator, Region 10.*

[FR Doc. 98-27703 Filed 10-20-98; 8:45 am]

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## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

RIN 1018-AF00

#### Endangered and Threatened Wildlife and Plants; Proposed Rule To Delist the Dismal Swamp Southeastern Shrew (*Sorex longirostris fisheri*)

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

**ACTION:** Proposed rule.

**SUMMARY:** The U.S. Fish and Wildlife Service (Service) proposes to remove the Dismal Swamp southeastern shrew (*Sorex longirostris fisheri* Merriam) from the List of Endangered and Threatened Wildlife. The Dismal Swamp southeastern shrew was listed as a threatened species in 1986 under the Endangered Species Act of 1973, as amended (Act). New data indicate that this species is more widely distributed than previously believed, is fairly abundant within its range, occurs in a wide variety of habitats, and is genetically secure. The Service concludes that the data supporting the original classification were incomplete and that the new data indicate removing the Dismal Swamp southeastern shrew from the List of Endangered and Threatened Wildlife is warranted.

**DATES:** Comments from all interested parties must be received by December 21, 1998. Public hearing requests must be received by December 7, 1998.

**ADDRESSES:** Comments and materials concerning this proposal should be sent to the Virginia Field Office, U.S. Fish and Wildlife Service, P.O. Box 99, 6669 Short Lane, Gloucester, Virginia 23061. The complete file for this rule is available for inspection by appointment, during normal business hours at the above address.

**FOR FURTHER INFORMATION CONTACT:** Cynthia A. Schulz, Fish and Wildlife

Biologist, at the above address (telephone 804/693-6694, extension 127; facsimile 804/693-9032).

**SUPPLEMENTARY INFORMATION:**

#### Background

The Dismal Swamp southeastern shrew is a small, long-tailed shrew with a brown back, slightly paler underparts, buffy feet, and a relatively short, broad nose (Handley 1979a). It weighs 3 to 5 grams and measures up to 10 centimeters in length. The species was first described as *Sorex fisheri* by C.H. Merriam (Merriam 1895). Merriam's description was based on four specimens trapped near Lake Drummond, Virginia by A.K. Fisher of the U.S. Department of Agriculture's Bureau of Biological Surveys. Rhoads and Young (1897) captured a specimen in Chapanoke, Perquimans County, North Carolina, that seemed intermediate between *S. fisheri* and the southeastern shrew (*Sorex longirostris* Bachman) (Handley 1979b). Jackson (1928) subsequently reduced *S. fisheri* to a subspecies of *S. longirostris*. Three subspecies of southeastern shrew are now recognized—*Sorex longirostris eionis*, which occurs in the northern two-thirds of peninsular Florida (Jones *et al.* 1991); *S. l. fisheri*, which occurs in southeastern Virginia and eastern North Carolina; and *S. l. longirostris*, which occurs in the rest of the range that extends through eastern Louisiana, eastern Oklahoma, and Missouri, then eastward through central Illinois and Indiana, southern Ohio, and Maryland. Jones *et al.* (1991) examined the taxonomic status of these three subspecies and verified substantial size differences among them. The authors found that *S. l. eionis* was significantly larger in four cranial measurements when compared with the other two subspecies; *S. l. fisheri* was significantly large in one cranial and one external measurement; and *S. l. longirostris* had a relatively short palate and rostrum, narrow skull, and short foot and tail. This study confirmed the subspecific status of *S. l. fisheri*.

Apart from a litter of five young found in a nest in the Dismal Swamp in 1905, little is known about reproduction or other life history features of *Sorex longirostris fisheri* (Handley 1979b). However, more is known about the life history of other *Sorex* species, and this information may apply to *S. l. fisheri*. *Sorex longirostris* reproduces from March through October, and it is likely that two litters are born each year, with one to six young produced per litter (Webster *et al.* 1985). Nests are shallow depressions lined with dried leaves and

grasses and are usually associated with rotting logs (Webster *et al.* 1985). Young shrews grow rapidly and are almost adult size when they leave the nest (Jackson 1928). *Sorex longirostris* forage on spiders, crickets, butterfly and moth larvae, slugs, snails, beetles, centipedes, and vegetation (Webster *et al.* 1985, Whitaker and Mumford 1972). Little information is available about the daily activity patterns of *S. longirostris*. They forage intermittently throughout the day and night in all seasons, seem to be most active after rains and during periods of high humidity, and do much of their foraging in the leaf litter or in tunnels in the upper layers of the soil (Jackson 1928).

The Dismal Swamp, the type locality for *Sorex longirostris fisheri*, is a forested wetland with a mosaic of habitat types located in southeastern Virginia and adjacent North Carolina. Within the Dismal Swamp, *S. l. fisheri* has been found in a variety of habitat types including recent clearcuts, regenerating forests, young pine plantations, grassy and brushy roadsides, young forests with shrubs and saplings, and mature pine and deciduous forests (Padgett 1991, Rose 1983). *Sorex longirostris fisheri* has also been collected in utility line rights-of-way. The highest densities of *S. l. fisheri* occur in early successional stage habitats and the lowest densities in mature forests (Everton 1985), although mature forests are likely to be important to the survival of the shrew during periods of drought or fire. Densities of southeastern shrews in early successional stages are 10 to 30 per hectare (Rose 1995). Rose (1995) stated that, based on his previous studies, mature forests yield only about 1/4 or less of the densities of *S. longirostris* compared with early successional stage habitats dominated by grasses and shrubs. Mature forests with closed canopies have densities of one to four shrews per hectare (Rose 1995). "Within two years of the cutting of a forest plot, and probably for 8–12 years afterwards on such cutover plots, the densities of southeastern shrews are likely to be five or more times greater than in nearby mature forests. (The number of years depends, in part, on whether the trees on the sites regenerate naturally or are planted.)" (Rose 1995).

Until recently, the distribution of *Sorex longirostris fisheri* was considered coincidental with the historical boundaries of the Dismal Swamp (Handley 1979a, Hall 1981, Rose 1983). After collection of the original type series, additional *S. l. fisheri* specimens were collected from similar habitats in the Dismal Swamp between 1895 and

1902. Prior to 1980, only 19 specimens of *S. l. fisheri* were known. "In addition to Young's (Rhoads and Young 1989) Chapanoke specimen in the Academy of Natural Sciences of Philadelphia, and one in the American Museum of Natural History that (W. J.) Daniel (Jr.) collected at Lake Drummond in 1905, the National Museum has 16 from Lake Drummond collected in 1895 and 1902 by Fisher, T. S. Palmer, (W. L.) Ralph, and Daniel, and one I collected near Wallaceon (at the eastern edge of the Dismal Swamp in Virginia) in 1953" (Handley 1979b). In 1980, 15 *S. longirostris* were collected in pitfall traps in Suffolk, Virginia from the northwest section of the Great Dismal Swamp National Wildlife Refuge (Refuge) (Rose 1981) that is located in North Carolina and Virginia. Based on their large size, the specimens were classified as *S. l. fisheri*.

From December 1980 through July 1982, 37 pitfall grids were established in Currituck and Gates counties, North Carolina and the Cities of Chesapeake, Suffolk, and Virginia Beach and Isle of Wight and Surry counties, Virginia (Rose 1983). The results of this trapping were 24 specimens from 10 populations classified as *Sorex longirostris fisheri*, 62 specimens from 9 populations classified as intergrades, and 30 specimens from 7 populations classified as *S. l. longirostris*. Three grids each contained one specimen classified as *S. l. longirostris*, while the remaining specimens were classified as *S. l. fisheri*. The author determined that *S. l. fisheri* was associated with the Dismal Swamp proper, except for a population north of the Refuge and a population east of the Refuge. A narrow zone of hybridization (these populations contained specimens that represent the parent stocks and individuals that may be hybrids) was found to border the Dismal Swamp running approximately north/south along its western edge and running northwest/southeast adjacent to the southeastern corner of the Refuge. *Sorex longirostris longirostris* was found to the east and west of the Dismal Swamp with distinctive populations of *S. l. longirostris* occurring within 20 miles of the Dismal Swamp border (Rose 1983). The results of this analysis indicated that the largest *Sorex* were located within the Refuge and the smallest *Sorex* were located at greater distances from the Refuge, with specimens of intermediate size on the margins of the Refuge. This suggested that interbreeding of the two subspecies might be occurring, particularly at the margins of the Refuge. Rose (1983) tentatively recommended that *S. l.*

*fisheri* be listed as threatened primarily because of the potential for contact and interbreeding with *S. l. longirostris*. "If widespread, this interbreeding can result in an alteration of the gene pools of both subspecies in the zone of contact, and the integrity of both subspecies may be lost in the extreme" (Rose 1983).

Additional study of *Sorex* was conducted from October 1986 through June 1989, focusing within the Refuge but also including outlying areas of the historical Dismal Swamp (Padgett 1991). Particular emphasis was placed on determining whether the nominate subspecies might be expanding into the remaining Dismal Swamp proper and interbreeding with *Sorex longirostris fisheri*. The results of Padgett's (1991) study indicated that *S. l. fisheri* was restricted to the historic Dismal Swamp and that there was no strong evidence that *S. l. longirostris* was using roadways to enter the interior of the Refuge. Between 1989 and 1991, Erdle and Pagels (1991) collected shrews to further delineate the distributions of *S. l. fisheri* and *S. l. longirostris* in Virginia. Sampling was conducted in much of the historic Dismal Swamp east of the Refuge and north of the Virginia-North Carolina State line. Shrews referable to both taxa and intergrades were represented in the 26 *Sorex* trapped. These findings supported the hypothesis that *S. l. longirostris* might be moving into areas of the historical Dismal Swamp. During the 1990s, many additional areas were surveyed within the historical Dismal Swamp in Virginia; the specimens found were referable to *S. l. fisheri* or *S. l. longirostris* or were of intermediate size.

While a significant amount of study on the distribution of *Sorex longirostris fisheri* had taken place in Virginia, knowledge of the species in North Carolina was sparse. In the early 1980s, D. W. Webster from the University of North Carolina-Wilmington collected *Sorex longirostris* from southeastern North Carolina (D.W. Webster, University of North Carolina-Wilmington, pers. comm. 1997). Utilizing the existing range maps for *S. longirostris*, Webster determined that the specimens were *S. l. longirostris*. In the late 1980s, Webster collected *S. longirostris* from Beaufort County, North Carolina (located midway along the coast of North Carolina) and realized that those specimens looked just like those collected from southeastern North Carolina. Webster (pers. comm. 1997), still using the existing range maps, assumed these specimens were *S. l. longirostris*. Historical locations of *S. l. fisheri* in North Carolina were

summarized by Webster (1992), indicating collection of *S. l. fisheri* from Camden, Currituck, and Gates counties. Webster (1992) indicated that *S. l. fisheri* probably inhabits parts of Chowan, Pasquotank, and Perquimans counties. Webster continued to collect shrews from coastal North Carolina throughout the early 1990s (D.W. Webster, pers. comm. 1997).

In January 1994, Webster visited the National Museum of Natural History and compared specimens he had collected from southeastern North Carolina and Beaufort and Gates counties, North Carolina, to the specimens at the Smithsonian and realized that his specimens were of the same size as the voucher specimen for *Sorex longirostris fisheri* from Lake Drummond (the type locality). Charles O. Handley, curator of mammals for the museum, agreed with Webster that these shrews were referable to *S. l. fisheri* based on size. Based on that information, Webster hypothesized that the "dividing line" between *S. l. fisheri* and *S. l. longirostris* may be somewhere between Wilmington, North Carolina and Charleston, South Carolina.

In May 1994, Webster visited the North Carolina State Museum of Natural Sciences and found a series of relatively large *Sorex longirostris* (not identified to subspecies) from Croatan National Forest (Jones, Craven, and Carteret counties) in North Carolina (U.S. Fish and Wildlife Service 1995). He presumed that this series of shrews was *S. l. fisheri* based on his trip to the Smithsonian (D.W. Webster, pers. comm. 1997). The State museum also had specimens of southeastern shrews from Chowan, Bladen, and Brunswick counties that Webster assumed were *S. l. fisheri* (D.W. Webster, pers. comm. 1997). In May and June 1994, Webster collected *S. longirostris* near the town of Warsaw in Duplin County, midway between Wilmington and Raleigh, North Carolina. He determined that these specimens were referable to *S. l. fisheri* (D.W. Webster, pers. comm. 1997).

Webster *et al.* (1996a, 1996b) compared *Sorex longirostris* specimens from east-central and southeastern North Carolina to specimens from the Dismal Swamp. They also examined specimens from Charleston County, South Carolina (near the type locality for *S. l. longirostris*) and Citrus County, Florida (the type locality for *S. l. eionis*), and representative samples of *S. longirostris* from throughout the southeastern U.S. They concluded that *S. l. fisheri* "is much more widespread and ubiquitous than previously believed. From this, it was determined that morphometric characteristics

would be used to better delineate the geographic distribution of *S. l. fisheri* in Virginia and North Carolina. The morphometric analysis used 626 *S. longirostris* from the southeastern U.S. (15 from Florida, 375 from North Carolina, 159 from Virginia, and the remaining 77 from Alabama, District of Columbia, Indiana, Kentucky, Maryland, Mississippi, Missouri, South Carolina, and Tennessee). The morphometric analysis included six cranial measurements, palatal length, and braincase length. If available from specimen tags, the total specimen length, tail length, hind foot length, and weight were also utilized. Head and body length or the difference between total length and tail length were determined where possible. There was significant geographic variation in all cranial measurements; samples from southeastern Virginia, eastern North Carolina, and southern Georgia and Florida had much larger cranial characteristics than samples from elsewhere in the range. The significant geographic variation in external measurements and weight typically followed the same pattern. A two-dimensional plot of the samples formed three clusters: (1) shrews from Georgia and Florida that have longer and overall much wider crania; (2) shrews from southeastern Virginia and eastern North Carolina that have longer crania with relatively narrower rostra; and (3) shrews from elsewhere in the range that were smaller in all cranial measurements. This plot explained 93.2 percent of the total morphometric variation exhibited in *S. longirostris* crania. Shrews from the piedmont and mountains of Virginia and North Carolina were more similar to specimens from the Mississippi and Ohio River basins than they were to those from the mid-Atlantic coast.

Webster *et al.* (1996a, 1996b) established 84 survey sites in a wide range of habitats throughout North Carolina and Virginia to ensure that both *Sorex longirostris longirostris* and *S. l. fisheri* would be captured. Of the 84 sites, 49 (58.3 percent) were located in abandoned fields and powerline rights-of-way that were dominated by herbaceous vegetation typical of early stages of succession. The other 35 sites (41.7 percent) were dominated by arborescent vegetation, including such forest types as longleaf pine/turkey oak, pocosin/bay, Atlantic white cedar, shortleaf pine, riparian hardwood, and cove hardwood. Eighteen species of small mammals were collected and *S. longirostris* was the most abundant and ubiquitous. When survey sites were

divided into two groups, those occurring in the newly delineated range of *S. l. fisheri* or in that of *S. l. longirostris*, the results were similar. Within its geographic distribution, *S. l. fisheri* was the most abundant small mammal, or shared that distinction with other species at 31 of the 84 sites sampled. *Sorex longirostris fisheri* was especially abundant in forested habitats in and adjacent to the Refuge, comprising 84 percent of the specimens taken. The only habitat sampled where *S. l. fisheri* was absent was xeric longleaf pine/turkey oak. Both taxa were found in a wide range of habitat types and moisture regimes, from early successional to mature second-growth forest and from well-drained uplands to seasonally-inundated wetlands. Webster (1996a, 1996b) concluded that " \* \* \* even the smallest specimens from relatively dry, upland sites in the Dismal Swamp region clearly are assignable to *S. l. fisheri*."

Gurshaw (1996) examined allozyme variability in specimens of the southeastern shrew from North Carolina and Virginia to identify characters that differentiate *Sorex longirostris fisheri* and *S. l. longirostris* and to determine if there are similarities between shrews from the Dismal Swamp region and the coastal plain of southeastern North Carolina. She found that shrews from the coastal plain of southeastern North Carolina grouped most closely with those from the Dismal Swamp. The author found an allele in the shrews from the coastal plain that represents a genetic distinction from *S. l. longirostris*. Distribution of this allele appeared to follow the Fall Line, the boundary between the piedmont plateau and upper coastal plain in the southeastern U.S.

Webster *et al.* (1996a, 1996b) concluded that *Sorex longirostris fisheri* " \* \* \* has a much broader geographic distribution than previously believed, extending from southeastern Virginia to southeastern North Carolina along the outer coastal plain. In Virginia, all specimens examined from Isle of Wight County, the City of Chesapeake, and the City of Virginia Beach are referable to *S. l. fisheri*, whereas those from Surry, Sussex, and Southampton counties are assignable to *S. l. longirostris*. In North Carolina, *S. l. fisheri* is distributed throughout the coastal counties as far south as New Hanover, Brunswick, and Columbus Counties." Since the conclusion of that study, *S. l. fisheri* has been documented in Hyde County, North Carolina (D.W. Webster, pers. comm. 1997). No trapping for *S. longirostris* has been conducted in Onslow, Martin, Pamlico, or Bertie

Counties, North Carolina (D.W. Webster, pers. comm. 1997). Webster (pers. comm. 1997) does not have any records of *S. l. fisheri* from Pasquotank County, although surveys were conducted there in 1995. At the time of listing, Pasquotank County was listed as a county of occurrence for *S. l. fisheri*, however, the literature cited does not support this.

At the time of listing, *Sorex longirostris fisheri* was believed to occur in only two cities in Virginia and four counties in North Carolina. *Sorex longirostris fisheri* is now known to occur in Beaufort, Bladen, Brunswick, Camden, Carteret, Chowan, Columbus, Craven, Currituck, Dare, Duplin, Gates, Greene, Hyde, Jones, Lenoir, New Hanover, Pender, Perquimans, Robeson, Scotland, Tyrrell, and Washington counties in North Carolina and Chesapeake, Suffolk, and Virginia Beach cities and Isle of Wight County in Virginia. Information gaps still exist in the distribution of *S. l. fisheri* in North Carolina and potentially South Carolina. Jones *et al.* (1991) noted a sample of *Sorex* specimens from coastal South Carolina that appeared to be similar to *S. l. fisheri*, but substantiation is needed regarding the taxonomy of these specimens.

#### Previous Federal Action

On December 30, 1982, during its review of Vertebrate Wildlife (47 FR 58454), the Service designated the Dismal Swamp southeastern shrew as a category 2 candidate species, meaning that a proposal to list the subspecies as threatened or endangered was possibly appropriate, but that substantial biological data were not available at that time to support such a proposal. Rose (1981, 1983) and Everton (1985) conducted pre-listing status surveys that documented large shrews within the Refuge, small shrews outside the Refuge, and intermediate-sized shrews near the Refuge boundaries.

On July 16, 1985, the Service published a proposed rule to list the Dismal Swamp southeastern shrew as a threatened species (50 FR 28821). The final rule to list the species was published in the **Federal Register** on September 26, 1986 (51 FR 34422), and became effective on October 27, 1986. The reasons for listing the Dismal Swamp southeastern shrew were habitat loss and alteration and possible loss of genetic integrity through interbreeding with *S. l. longirostris*.

In the early 1990's, a group of biologists from Virginia held meetings to discuss information and issues related to the recovery of the Dismal Swamp southeastern shrew. Initially,

most of the effort was focused in Virginia because of the development pressure occurring there. In 1992, biologists from North Carolina were included in the group. The Service then convened an official recovery team, and the first meeting was held in February 1993.

A draft recovery plan was completed in July 1994, and a notice of availability of the plan was published in the **Federal Register** (59 FR 37260). The recovery plan was finalized on September 9, 1994, and updated on June 13, 1995.

Based on questions raised by D.W. Webster, a member of the recovery team, about the shrew's distribution and taxonomy, in March 1995, studies were funded by the Virginia Department of Game and Inland Fisheries and the Service to determine if large shrews are distributed from the Dismal Swamp region southward throughout the coastal plain of North Carolina, and if the large shrews from coastal North Carolina are similar to *S. l. fisheri* from near the type locality. A combination of morphometric and genetic analyses was proposed to answer these questions. The results of the morphological and genetic analyses which followed are discussed in detail in the "Background" section of this rule.

In May 1996, reports on morphometric variation among the three *Sorex longirostris* subspecies (Webster *et al.* 1996a) and protein electrophoresis and allozymic variation between *S. l. fisheri* and *S. l. longirostris* (Gurshaw 1996) were received by the Service and sent to the recovery team members. The recovery team convened in June 1996 to discuss the two reports. The consensus of the team was that the results of both the morphological and genetic analyses conclusively show that *S. l. fisheri* is widely distributed along the coastal plain of southeastern Virginia and eastern North Carolina at least as far south as Wilmington, North Carolina; that *S. l. fisheri* uses a wide variety of habitat types; and that *S. l. fisheri* is not in danger of genetic swamping by *S. l. longirostris*. However, the team agreed that the reports should be sent out for independent peer review before further action was taken. The Service sent the reports to independent peer reviewers in June 1996. Reviewers that responded concurred with the conclusions of the authors and were supportive of delisting. Based on comments provided by recovery team members, the Service, and peer reviewers, the original manuscripts were revised (Moncrief 1996, Webster *et al.* 1996b).

Federal involvement with the Dismal Swamp southeastern shrew after listing has included surveys for new locations

and informal and formal section 7 consultations for activities (involving a Federal action) occurring in suitable habitat within the historical Dismal Swamp. No jeopardy biological opinions for this species have been issued.

Processing of this proposed rule conforms with the Service's Listing Priority Guidance for Fiscal Years 1998 and 1999, published on May 8, 1998 (63 FR 25502). The guidance clarifies the order in which the Service will process rulemakings giving highest priority (Tier 1) to processing emergency rules to add species to the Lists of Endangered and Threatened Wildlife and Plants (Lists); second priority (Tier 2) to processing final rules to add species to the Lists, processing proposed rules to add species to the Lists, processing administrative findings on petitions (to add species to the Lists, delist species, or reclassify listed species), and processing a limited number of proposed or final rules to delist or reclassify species; and third priority (Tier 3) to processing proposed or final rules to designate critical habitat. Processing of this proposed rule is a Tier 2 action.

#### Summary of Factors Affecting the Species

Procedures found at section 4(a)(1) of the Endangered Species Act and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act were followed. Regulations at 50 CFR 424.11 require that certain factors be considered before a species can be listed, reclassified, or delisted. These factors and their application to the Dismal Swamp southeastern shrew (*Sorex longirostris fisheri* Merriam) are as follows:

##### A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

Extensive habitat alteration has occurred within the area historically occupied by Dismal Swamp. At the beginning of the twentieth century, the Dismal Swamp occupied 2,000 to 2,200 square miles (sq mi) (5,200 to 5,700 square kilometers (sq km)). Currently, less than 320 sq mi (830 sq km) of the historical Dismal Swamp remain, 189 sq mi (490 sq km) of which are protected within the Refuge and the Great Dismal Swamp State Park in North Carolina. Remnants of the historical Dismal Swamp outside Refuge and State Park boundaries and land beyond the historical Dismal Swamp boundaries are disappearing due to development associated with the rapid growth of the Hampton Roads metropolitan area of

southeastern Virginia. Agricultural and silvicultural conversions (especially in North Carolina) also contribute significantly to habitat loss. Habitat loss was a primary reason for listing the Dismal Swamp southeastern shrew, considered at the time to be endemic to the historical Dismal Swamp. However, because the species is now known to occur across a much larger area and in a wider variety of habitats (see the "Background" section of this rule), the threat of habitat loss is not as significant as was believed at the time of listing.

#### B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

At present, the only known method for studying or monitoring the Dismal Swamp southeastern shrew involves lethal collection with pitfall traps. Researchers have been permitted to take individuals of the species to gain an understanding of its taxonomy, ecology, and distribution. However, because the Dismal Swamp southeastern shrew has a high reproductive potential and a rapid maturation rate, limited collection of individuals is not considered detrimental to healthy populations. Utilization for commercial, recreational, or educational purposes is not known to occur.

#### C. Disease or Predation

Southeastern shrews are subject to some predation, most frequently by owls, snakes, opossums, and domestic cats and dogs (French 1980, Webster *et al.* 1985). The number of dead shrews found in woods and on roads suggests that many predators reject the shrew, probably because of the bad taste associated with their musk glands (French 1980). There is no evidence that predation or disease is a significant threat to the Dismal Swamp southeastern shrew.

#### D. The Inadequacy of Existing Regulatory Mechanisms

Wetland habitats for the Dismal Swamp southeastern shrew will continue to receive protection indirectly under Section 404 of the Clean Water Act which requires the Department of the Army, Corps of Engineers to regulate certain activities affecting "waters of the United States" including wetlands. However, delisting the Dismal Swamp southeastern shrew will remove Federal prohibitions against take and activities involving a Federal action which would jeopardize the continued existence of the species. However, because of its wide distribution and use of a wide variety of habitats, the removal of these protections afforded by the Act will not

pose a significant threat to the Dismal Swamp southeastern shrew.

The Dismal Swamp southeastern shrew is listed as threatened by the State of Virginia. Virginia's Endangered Species Act of 1972, as amended (Code of Virginia Section 29.1-564-568) prohibits the taking, transportation, processing, sale, or offer for sale of endangered and threatened species except as permitted. The Virginia Department of Game and Inland Fisheries provides general protection to wildlife through State law Section 29.1-521, which prohibits their possession and capture including the attempt to capture, take, kill, possess, offer for sale, sell, offer for purchase, purchase, deliver for transportation, transport, cause to be transported, receive, export, import in any manner or in any quantity except as specifically permitted.

The Dismal Swamp southeastern shrew is listed as threatened by the State of North Carolina. The species is protected by North Carolina general statute Article 25, section 113-337, which makes it unlawful to take, possess, transport, sell, barter, trade, exchange, export, or offer for sale, barter, trade, exchange, or export, or give away for any purpose including advertising or other promotional purpose any animal on a protected wild animal list, except as authorized according to the regulations of the North Carolina Wildlife Resources Commission.

All States will have the option of retaining the Dismal Swamp southeastern shrew on their various lists if it is removed from the Federal List of Endangered and Threatened Wildlife. Both the States of Virginia and North Carolina support the delisting. The State of North Carolina plans to delist Dismal Swamp southeastern shrew if it is delisted at the Federal level (H. LeGrand, North Carolina Natural Heritage Program, pers. comm. 1997). However, because of its wide distribution and use of a wide variety of habitats, the removal of State protection will not constitute a significant threat to the species.

#### E. Other Natural or Manmade Factors Affecting Its Continued Existence

One of the reasons for listing the Dismal Swamp southeastern shrew was concern regarding the possible loss of genetic integrity through interbreeding with the nominate subspecies. Gurshaw (1996) examined allozyme variability in specimens of the southeastern shrew from North Carolina and Virginia. She found an allele in the shrews from the coastal plain that represents a genetic distinction from *Sorex longirostris*

and that appeared to follow the Fall Line. The author stated, "A cline for this allele may be shifted in the direction of dispersal in proportion to the direction of gene flow through barriers such as the Fall Line and population size. If the populations containing \* \* \* (this) \* \* \* allele are small, they will not have as many individuals dispersing \* \* \* and gene flow may be restricted (Endler, 1977). In this study, however, the opposite appears to be happening. Populations with \* \* \* (this allele) \* \* \* are widespread in eastern North Carolina and southeastern Virginia, with gene flow carrying \* \* \* (this) \* \* \* allele above the Fall Line in central North Carolina." She concluded that genetic swamping within the Dismal Swamp region was not evident.

Webster *et al.* (1996a, 1996b) found that intergradation between *Sorex longirostris fisheri* and *S. l. longirostris* is evident in specimens from the inner coastal plain of Virginia and North Carolina. The zone of intergradation is relatively narrow in Virginia and relatively wide in North Carolina, commensurate with the relative size of the inner coastal plain. Shrews from samples immediately to the east and west of the present Dismal Swamp were slightly smaller than shrews from the Dismal Swamp in cranial and external measurements. This trend was noted by Padgett *et al.* (1987). However, when compared with specimens from throughout the range of the species, these shrews are referable to *S. l. fisheri*.

The following summarizes available information regarding potential environmental contaminant threats to the Dismal Swamp southeastern shrew throughout its range. In 1987 and 1989, the Service conducted a preliminary study (Ryan *et al.* 1992) within the Refuge to determine if contaminants were impacting fish and small mammals. All water (metal-laden leachate and groundwater) draining the Suffolk City Landfill, at the time a federally designated Superfund site, enters the Refuge. This landfill received industrial and domestic wastes, including 30 tons of organophosphate pesticides in the 1970s. Numerous automobile junkyards border the Refuge to the north and drain into the Dismal Swamp and the Refuge. Oil, grease, metals, polycyclic aromatic hydrocarbons (PAHs) and alkanes (PAHs and alkanes are components of petroleum products) are common constituents of junkyard and roadway runoff. Agricultural fields to the north and west of the Refuge contribute surface runoff that may contain residual herbicides, insecticides, and fungicides.

The Service's study (Ryan *et al.* 1992) included analyses for contaminant residues in the short-tailed shrew (*Blarina brevicauda*). Short-tailed shrews trapped near the East Ditch displayed elevated levels of lead, mercury, and several organochlorine pesticides. The lead levels for short-tailed shrews exceeded normal ranges and fell within the range for lead toxicosis according to Ma (1996). Small mammal lead toxicosis symptoms may include neurological dysfunction, reproductive disorders (including stillbirths), liver and kidney failure, etc. Apart from overt symptoms, asymptomatic effects may occur at lower levels and have significant effects on animal behavior, yet be difficult to evaluate and/or document. Ryan *et al.* (1992) found that mercury levels for short-tailed shrews collected at East Ditch, Badger Ditch, Railroad Ditch, and Pocasin Swamp were elevated in comparison to levels for short-tailed shrews collected from the study reference location and other sites within the Refuge. The mercury levels reported for short-tailed shrews, although elevated when compared within study area sites, were below those levels reported in the literature as causing observed adverse effects.

Organochlorine pesticide levels of short-tailed shrews from the East Ditch were higher than those reported from all other study sites. However, the levels were below those documented in the literature for observed adverse effects. In summary, there may be a contaminant concern for the Dismal Swamp southeastern shrew near the East Ditch of the Refuge. However, no contaminant analysis has been conducted in Dismal Swamp southeastern shrews. Further monitoring has been recommended by the Service.

Small mammals tend to have limited ranges, and, therefore, elevated levels of contaminants found in shrews from one location cannot be interpreted as a condition for shrews throughout the Refuge or range. Land uses such as agriculture, transportation, and urbanization with increased impervious surfaces contribute measurable levels of contaminants to the environment, and many persistent contaminants are passed through the food web. However, the Service does not have any information indicating that contaminants pose a significant threat to the continued existence of the Dismal Swamp southeastern shrew.

In developing this proposed rule, the Service has assessed the best available scientific and commercial information regarding the past, present, and future threats to the Dismal Swamp

southeastern shrew, as well as information on its distribution, its habitat use, and the security of its genetic integrity. Based on this evaluation, the Dismal Swamp southeastern shrew no longer meets the definition of "threatened" under the Act, and the preferred action is to remove the species from the List of Endangered and Threatened Wildlife, thereby removing the protection afforded by the Act.

Regulations at 50 CFR 424.11(d) state that a species may be delisted if (1) it becomes extinct, (2) it recovers, or (3) the original data for classification were in error. The Service has determined that the original data for classification of the Dismal Swamp southeastern shrew as a threatened species were in error. However, it is important to note that the original data for classification constituted the best available scientific and commercial information available at the time and were in error only in the sense that they were incomplete. Because *Sorex longirostris* from the Dismal Swamp were originally classified as *S. l. fisheri* based on morphological measurements from a limited number of specimens, and because specimens from areas bordering the Dismal Swamp did not have similar morphological measurements, taxonomists logically concluded that only the largest specimens were *S. l. fisheri*. It has been assumed since the early 1900s that small-sized shrews were *S. l. longirostris*, resulting in erroneous classification of shrews found outside, and sometimes within, the historical Dismal Swamp boundaries. Therefore, the perception of a restricted range for *S. l. fisheri* was not a misinterpretation on the part of the Service, but a longstanding scientific assumption. At the time of listing, no other interpretation could be reasonably construed from the available data. The Service concludes that the data supporting the original classification were incomplete and that new data indicate removing *S. l. fisheri* from the List of Endangered and Threatened Wildlife is warranted.

The listing of the Dismal Swamp southeastern shrew as a threatened species was based on the best information available and was thus a valid decision at the time; the data leading to a better understanding of *S. longirostris* taxonomy were derived incrementally as a direct result of the recovery program; and no preceding shrew research anticipated the outcome of the final morphometric and genetic analyses. The dual effort to increase the base of available information while addressing the perceived threats to this

subspecies was thus both legally and scientifically justified up to the point when new information yielded a significant change in the knowledge of the Dismal Swamp southeastern shrew's status.

The Service, after conducting a review of the species' status, determines that the species is not in danger of extinction throughout all or a significant portion of its range, nor is it likely to become so within the foreseeable future. Based on the best scientific and commercial information available including information showing a wider distribution than previously believed, utilization of a wider variety of habitat types than previously believed, and genetic security, the Service concludes that the Dismal Swamp southeastern shrew does not warrant the protection of the Endangered Species Act of 1973, as amended. The information leading to this conclusion was derived through the recovery process, which included studies to verify the shrew's taxonomic status and to conclusively determine its distribution. In proposing delisting, the Service is conforming to the objectives stated in the recovery plan. Our ability to propose this subspecies for delisting is based on a very intentional strategy of conducting comprehensive studies that built on the incremental and cumulative insights of various experts. During this lengthy process, the dedication of recovery team members and other knowledgeable parties was invaluable in protecting the shrew when its status seemed much more precarious, and in furthering our knowledge of it.

#### Effects of the Rule

This action, if enacted, will result in the removal of the Dismal Swamp southeastern shrew from the List of Endangered and Threatened Wildlife. Federal agencies would no longer be required to consult with the Secretary of the Interior to insure that any action they authorize, fund, or carry out will not likely jeopardize the continued existence of the species. There is no designated critical habitat for this species. Federal restrictions on taking would no longer apply. The 1988 amendments to the Act require that all species that have been delisted due to recovery be monitored for at least 5 years following delisting. Since the Dismal Swamp southeastern shrew is being proposed for delisting because of new information indicating it has an expanded distribution, is not under serious threat from habitat loss, and is genetically secure, and not because it has been recovered, the Service does not intend to monitor the species for 5 years following delisting. Within the Refuge

and the Great Dismal Swamp State Park in North Carolina, management will continue to focus on restoring the hydrological regime to as close to historical conditions as possible given the necessity for firebreaks and access roads. In addition, efforts are being made to restore or maintain the habitat mosaic through forestry practices. It is the opinion of the Service that sufficient habitat will remain over the long-term to allow for the continued viability of this subspecies.

#### Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial trade (legal and illegal), or other relevant data concerning any threat (or lack thereof) to the Dismal Swamp southeastern shrew;

(2) The location of any additional populations or occurrences of this species;

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

(4) Current or planned activities in the subject area and their possible impacts on this species; and

(5) The number, origin, location and legal deposition of individuals of this species in captivity and/or trade.

Promulgation of the final regulations on this species will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for one or more public hearings on this proposal, if requested. Requests must be received within 45 days of the date of publication of this proposal in the **Federal Register**. Such requests must be made in writing and addressed to the Field Supervisor (see **ADDRESSES** section).

Executive Order 12866 requires each agency to write regulations that are easy to understand. We invite your comments on how to make this rule easier to understand including answers to questions such as the following: (1) Are the requirements in the rule clearly stated? (2) Does the rule contain technical language or jargon that interferes with its clarity? (3) Does the

format of the rule (grouping and order of sections, use of headings, paragraphing, etc.) aid or reduce its clarity? (4) Would the rule be easier to understand if it were divided into more (but shorter) sections? (A "section" appears in bold type and is preceded by the symbol "\$" and a numbered heading; for example, § 17.11 Endangered and threatened wildlife.) (5) Is the description of the rule in the "Supplementary Information" section of the preamble helpful in understanding the rule? What else could we do to make the rule easier to understand?

#### National Environmental Policy Act

The Fish and Wildlife Service has determined that Environmental Assessments and Environmental Impact Statements, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to Section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

#### Required Determinations

This rule does not include any collections of information that require approval by the Office of Management and Budget under 44 U.S.C. 3501 *et seq.*

#### References Cited

A complete list of all references cited herein is available upon request from the U.S. Fish and Wildlife Service, Virginia Field Office (see **ADDRESSES** section).

#### Author

The primary author of this document is Cynthia A. Schulz (see **ADDRESSES** section).

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

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

#### Proposed Regulation Promulgation

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

#### PART 17—[AMENDED]

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

**Authority:** 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

#### § 17.11 [Amended]

2. Amend § 17.11(h) by removing the entry for "Shrew, Dismal Swamp southeastern, *Sorex longirostris fisheri*" under "Mammals" from the List of Endangered and Threatened Wildlife.

Dated: October 6, 1998.

**Jamie Rappaport Clark,**

*Director, U.S. Fish and Wildlife Service.*

[FR Doc. 98–28189 Filed 10–20–98; 8:45 am]

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#### DEPARTMENT OF THE INTERIOR

#### Fish and Wildlife Service

#### 50 CFR Part 17

RIN 1018–AE84

#### Endangered and Threatened Wildlife and Plants; Reopening of Public Comment Period on the Proposed Rule To List the Northern Idaho Ground Squirrel as Threatened

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

**ACTION:** Proposed rule, reopening of comment period.

**SUMMARY:** The Fish and Wildlife Service (Service) provides notice that the public comment period on the proposed rule to list the northern Idaho ground squirrel (*Spermophilus brunneus brunneus*) as a threatened species is being reopened to consider new scientific information received after the initial comment period. The initial comment period closed on May 22, 1998. All interested parties are invited to submit comments on this proposal.

**DATES:** The comment period for this proposal will be extended to November 20, 1998.

**ADDRESSES:** Written comments and materials concerning this proposal should be sent to the U.S. Fish and Wildlife Service, Snake River Basin Office, 1387 South Vinnell way, Room 368, Boise, Idaho 83709. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

**FOR FURTHER INFORMATION CONTACT:** Robert Ruesink, Supervisor, at the above address or at telephone (208) 378–5243.

**SUPPLEMENTARY INFORMATION:**

#### Background

On March 23, 1998 (63 FR 13825), the Service published in the **Federal Register** a proposed rule to list the northern Idaho ground squirrel as threatened throughout its range in western Idaho pursuant to the