

Colonel Andrew M. Perkins, Jr.  
U.S. Army Corps of Engineers  
Norfolk District  
803 Front Street  
Norfolk, Virginia 23510-1096

Attn: Steve Martin  
Regulatory Branch

Re: Virginia Department of  
Conservation and Recreation, Permit Application 94-0853-18, Virginia Beach,  
Virginia

Dear Colonel Perkins:

This responds to your October 12, 1994 letter (received October 13, 1994) requesting formal consultation under Section 7(a)(2) of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), regarding impacts of the Department of the Army (DOA) permit application 94-0853-18 by the Virginia Department of Conservation and Recreation, Division of Natural Heritage (VDCR-DNH) on the Dismal Swamp southeastern shrew (Sorex longirostris fisheri), a Federally listed threatened species. It should be noted that the shrew has not been documented at the project site. However, the applicant has chosen to assume that the species is present. This letter constitutes the U.S. Fish and Wildlife Service's (Service) biological opinion on this permit application as required by Section 7(b) of the Endangered Species Act. This letter also provides the separate comments of the Service and the Department of the Interior pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), which are included following the Biological Opinion.

#### SCOPE OF THE BIOLOGICAL OPINION

In 1990, the Commonwealth dedicated 1,886 acres of wetlands along the North Landing River as a state Natural Area Preserve. The permit applicant, VDCR-DNH, has applied for a U.S. Army Corps of Engineer's (Corps) permit to construct public access facilities along Alton's Creek, a tributary to the North Landing River, in Virginia Beach, Virginia. The purpose of this project is to provide public access to VDCR-DNH and The Nature Conservancy lands and the North Landing River. Construction and development of this project will result in the fill of approximately 0.04 acres of forested wetlands located along Alton's Creek. The applicant proposes to construct a road, parking lot, boardwalk, and viewing deck/canoe launch on a 45-acre parcel, formerly known as the Kellam property, south of Carolina Road and east of Blackwater Road. This parcel includes agricultural land, mixed pine-hardwood forest, pine forest, swamp tupelo forest, and scrub-shrub wetlands.

Figure 1 indicates the proposed public access facilities. A total of 1.83 acres will be cleared and converted to create the road and parking area; approximately 0.05 acres of which is forested wetlands. Approximately 1.36 of the 1.83 acres will be permanently cleared, of this, 0.04 acres are wetlands. Approximately 0.47 of the 1.83 acres will be temporarily cleared, of this, 0.01 acres are wetlands. Both wetlands and uplands in this area contain appropriate habitat for the shrew, resulting in impacts to a total of 1.83 acres of shrew habitat. The proposed gravel road will be approximately 3,971 feet in length and will extend from Blackwater Road east to the parking area. The road will be 12 feet wide with a 10-foot right-of-way and drainage swale, for a total clearing width of 22 feet. The proposed road would enter the property from Blackwater Road and cross nearly 800 feet of agricultural land. Then the road would continue along a non-jurisdictional forested ditch berm adjoining agricultural fields for approximately 1,100 feet before bending southeast and following a non-jurisdictional ridge for 700 feet before reaching the first jurisdictional wetland area. The gravel parking area is approximately 7,374 square feet and would accommodate six to eight cars and two school buses. The road will cross two drainage ditches; a large one (approximately six feet deep) in an

agricultural field parallel to Blackwater Road, and a smaller one (approximately four feet deep) that drains nearby agricultural lands before emptying into the swamp tupelo-dominated wetland.

From the parking area, a five-foot wide footpath consisting of a combination of trails and boardwalks will lead to the viewing deck/canoe launch. Approximately 760 feet of boardwalk will be built to cross wetland areas. The boardwalk will be cleared and built by hand (T. Stuart, pers. comm. 1994). The trails will be cleared, graded, and leveled to make them accessible to the public. The trails, excluding the boardwalk, will be 1,500 feet in length and approximately three feet wide with no surface treatment (T. Stuart, pers. comm. 1994). The proposed viewing deck/canoe launch is in the shape of a blunt "V" with each leg measuring 17 feet long and 16 feet wide. The viewing deck/canoe launch will be elevated approximately one foot above ordinary high water. The site of the viewing deck/canoe launch is a forested wetland. This will result in 0.005 acres of wetland impacts.

All denuded areas will be seeded in annual ryegrass and allowed to revert to native vegetation. Silt fencing will be installed to minimize erosion during and immediately after construction. Brush along the right-of-way and parking area that impedes traffic will be periodically cleared with a brush hog. All construction equipment and materials will be stored outside of the wooded area. The applicant will also plant native trees and shrubs along the agricultural portion of the road to create a visual screen or buffer and to partially compensate for impacts to forested areas. The work will take three months to complete.

#### CONSULTATION HISTORY

12-07-93 The Service received the Corps' request to review this project for impacts to the Dismal Swamp southeastern shrew.

12-16-93 The Service sent the Corps a letter recommending a survey for the Dismal Swamp southeastern shrew.

01-05-94 The Service visited the project site with the Corps and applicant.

01-06-94 The applicant indicated, via a telephone call to the Service, that they had chosen to assume that shrews are present at the project site.

10-13-94 The Service received the Corps' request to initiate formal consultation.

10-24-94 The Corps requested a draft Biological Opinion.

11-28-94 The Service sent the Corps a draft of the Biological Opinion.

12-08-94 The Service received comments on the draft Opinion from the VDCR-DNH.

01-09-95 The Service met with the Corps and DNH to discuss the draft Opinion.

Based on comments provided by VDCR-DNH, several changes were made before this Opinion was finalized.

#### BIOLOGY AND STATUS OF THE DISMAL SWAMP SOUTHEASTERN SHREW

The Dismal Swamp southeastern shrew is a small mammal that weighs less than 0.2 ounces and measures approximately four inches in length. Its distribution is considered to be coincidental with the boundaries of the historic Dismal Swamp, an extensive contiguous wetland complex that once occupied most of the low-lying

land between Norfolk, Virginia and the Albemarle Sound in North Carolina. Historically, this wetland complex was maintained in a variety of successional stages (such as marshes, canebrakes, pocosins, and forest) by natural fires. The original Dismal Swamp ecosystem has been greatly reduced in size as a result of urban development and the clearing and draining of land for agriculture. Most of the remaining wetlands are now forested. About 197,680 acres of these wetlands still remain, more than half of which are preserved by the Service as the Great Dismal Swamp National Wildlife Refuge, created in 1974. The Service is attempting to restore some of the vegetational and successional diversity to the portion of the Dismal Swamp ecosystem within the National Wildlife Refuge.

Within the historic Dismal Swamp boundaries, the shrew is likely to exist at highest densities in early successional wetland habitats, such as cane stands; shrub-dominated areas; and young, open forests which retain a fairly dense herbaceous understory. The shrew is also known to occur at high densities within cleared right-of-ways, such as those used for utility lines, as these areas often contain early successional wetland habitats such as scrub-shrub wetlands. Mature wetland forests also provide habitat diversity important to the integrity and dynamic structure of the shrew population as a whole. Rose (1983) found that the shrew was most abundant in mid-successional, 12 to 15 year-old regenerating forests having a dense understory, moist organic soils, and moderate leaf litter. The main reasons for the shrew's decline are habitat loss; habitat modification, primarily draining and drying of wetlands; and interbreeding with the common upland subspecies Sorex longirostris longirostris (Rose and Padgett 1991).

Recently, new evidence suggests that the Dismal Swamp southeastern shrew may occur throughout the coastal plain of North Carolina, at least as far south as Wilmington (U.S. Fish and Wildlife Service 1994). However, until this can be substantiated through additional distribution and taxonomy studies, the shrew will remain on the Service's list of endangered and threatened wildlife and plants. As such, the shrew, and its habitat, will continue to receive protection pursuant to the Endangered Species Act until it is removed from this list.

#### EFFECTS OF THE FEDERAL ACTION ON THE DISMAL SWAMP SOUTHEASTERN SHREW AND ITS HABITAT

In evaluating the effects of the Federal action under consideration in this consultation, 50 CFR 402.2 and 402.14(g)(3) require the Service to evaluate the direct effects of the action on the species. Direct impacts to the shrew associated with this project include the potential for killing shrews through the use of construction vehicles and heavy equipment while clearing vegetation and constructing the road and parking area. Typically, the Dismal Swamp southeastern shrew stays under the leaf litter and does not burrow underground, and thus may be crushed by vehicles, heavy equipment, and heavy materials. Additionally, the shrew will be directly affected by the permanent loss of 1.36 acres of habitat and the temporary loss of 0.47 acres of habitat during clearing and construction for the road and parking area. Because the boardwalks will be built over areas of standing water and the trails will be very narrow and involve little vegetation removal, it is not likely that they will adversely affect the shrew.

#### BIOLOGICAL OPINION

The Dismal Swamp southeastern shrew is threatened primarily due to habitat loss and alteration and the potential for interbreeding. Given the small amount of habitat (1.36 acres) that will be permanently lost, the fact that cleared areas (0.47 acres) adjacent to the road and parking area will be allowed to revegetate, and the small proportion of the total shrew population that will be affected by this project, it is the opinion of the Service that this project is not likely to jeopardize the continued existence of the Dismal Swamp southeastern shrew. No critical habitat has been designated for this species, therefore, none will be affected.

#### INCIDENTAL TAKE

Sections 4(d) and 9 of the Endangered Species Act, as amended, prohibit taking (harass, harm, pursue, hunt,

shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct) of listed species of fish or wildlife without a special exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns such as breeding, feeding, or sheltering. Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns, which include, but are not limited to, breeding, feeding, or sheltering. Under the terms of Section 7(b)(4) and Section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered a prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are nondiscretionary, and must be implemented by the Corps so that they become binding conditions of any permit issued to the applicant in order for the exemption in 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity that is covered by this incidental take statement. If the Corps fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit, the protective coverage of 7(o)(2) may lapse.

#### Amount and Extent of Take

Because the population density and total habitat of the Dismal Swamp southeastern shrew within the project area has not been determined and the actual number of shrews that will be killed during clearing of vegetation and project construction has not been determined, the amount of take shall be defined by the areal extent of the potential habitat affected. This incidental take statement authorizes the taking of Dismal Swamp southeastern shrews within the 1.83-acre project site at the location described in the Scope of the Biological Opinion section resulting from vegetation removal, clearing and construction activities, and temporary and permanent loss of habitat.

#### Reasonable and Prudent Measures

In order to be exempt from the prohibitions of Section 9 of the Endangered Species Act, the Corps and the applicants must comply with the following reasonable and prudent measures. These terms and conditions must be incorporated as binding conditions of any DOA permit issued by the Corps. These measures are mandatory.

1. The following measures will be taken during clearing, construction, and maintenance activities associated with the project:
  - a. No ground disturbance or vegetation clearing will occur outside the 1.83-acre area.
  - b. No use of vehicles or heavy equipment will occur in wooded areas or wetlands outside the 1.83-acre area.
  - c. No placement of fill material or stockpiling of materials will occur in wooded areas or wetlands outside the 1.83-acre project area.
  - d. To minimize disturbance of the litter layer and enhance tree resprouting, stumps/root wads will not be removed along the road right-of-way wherever practicable.
  - e. No use of broad scale or aerial herbicide or pesticide applications in wetlands, except as needed for Phragmites australis management.
  - f. Initial and maintenance clearing of wetlands will be done by hand where practicable.
2. To mitigate for the permanent loss of 1.36 acres of shrew habitat, shrew habitat must be replaced at

a 2:1 ratio. A total of 2.72 acres of shrew habitat must be preserved adjacent to the project area. Once an appropriate site is found, the Service must be notified to allow us to visit and approve the site. A copy of the U.S.G.S. topographical map showing the location of the site, and acreage figures and habitat types for existing vegetation must be sent to the Service.

3. The following measures will be taken to permanently protect the 2.72- acre area containing shrew habitat:

- a. The 2.72 acres must be put into perpetual legal protection.
- b. The following activities are prohibited within the protected area:
  1. Ditching; draining; diking; damming; filling; excavating; plowing; mining; drilling; removal of topsoil or any material, such as leaves, resting on the soil surface; construction of roads or structures; and any alteration of the topography of the land in any manner, except for habitat restoration or management for the Dismal Swamp southeastern shrew or other Federal or State listed or candidate species.
  2. Cutting, destruction, or removal of trees or other vegetation, dead or alive, except as necessary for habitat restoration or management for the Dismal Swamp southeastern shrew or other Federal or State listed or candidate species.
  3. Dumping ashes, trash, garbage, or other unsightly or offensive materials.
  4. Changing the topography of the property by placing soil or other substances or materials, such as landfill or dredged material, on the property.
- c. The protection document must also state that neither transfer of ownership or possession shall in any way compromise the preservation goal and the obligation to protect this area in accordance with the requirements of this document shall pass on to all future owners.
- d. The Service and Corps must receive and approve the language in the protection document within six months of the issuance of any Corps permits for this project. The Service and the Corps must be given at least 30 days to review the protection document language.
- e. Copies of the signed protection document must sent to the Service and the Corps within 14 days of signing.

#### Reporting and Monitoring Requirements

The applicant is required to notify the Service before initiation of construction and upon completion of the project at the address given below. All additional information to be sent to the Service should be sent to the following address:

Virginia Field Office  
U.S. Fish and Wildlife Service  
P.O. Box 480  
White Marsh, VA 23183  
(804) 693-6694

Upon locating a dead specimen, initial notification must be made to the following Service Law Enforcement office:

Division of Law Enforcement  
U.S. Fish and Wildlife Service  
P.O. Box 187

Yorktown, VA 23690  
(804) 890-0003

Care should be taken in handling dead specimens to preserve biological material in the best possible state. In conjunction with the preservation of biological materials for a dead animal, the finder has the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

#### REINITIATION OF FORMAL CONSULTATION

This concludes formal consultation on this Federal action. As required by 50 CFR 402.16, reinitiation of formal consultation by the Corps is required if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the action that may impact listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, all activities that are causing such take must cease pending reinitiation.

#### FISH AND WILDLIFE COORDINATION ACT REPORT

The following comments constitute the report of the Service and the Department of the Interior on this project and are submitted under provisions of the Fish and Wildlife Coordination Act.

Executive Order 11988 regarding Floodplain Management states that "Each agency...shall take action to...restore and preserve the natural and beneficial values served by floodplains." The Service recommends that the parking area be relocated northwest of its proposed location to avoid the 100-year floodplain.

The Service appreciates the opportunity to work with the Corps in fulfilling our mutual responsibilities under the Endangered Species Act and the Fish and Wildlife Coordination Act. Please contact Cindy Schulz of this office at (804) 693-6694 if you require additional information or wish to discuss our comments further.

Sincerely,

Karen L. Mayne  
Supervisor  
Virginia Field Office

#### Enclosure Literature Cited

Rose, R. K. 1983. A study of two rare mammals endemic to the Virginia/North Carolina Dismal Swamp. Prepared for U.S. Fish and Wildlife Service. Newton Corner, MA.

Rose, R. K. and T. M. Padgett. 1991. Southeastern shrew. In Terwilliger, K., ed. Virginia's endangered species. McDonald and Woodward Publishing Company. Blacksburg, VA.

Stuart, T. 1994. Personal communication. Virginia Department of Conservation and Recreation, Division of Natural Heritage. Richmond, VA.

U.S. Fish and Wildlife Service. 1994. Dismal Swamp southeastern shrew (Sorex longirostris fisheri) recovery plan. Hadley, Massachusetts. 49pp.

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bcc: DARD-ES(FO), Region 5  
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