

Appendix E

Virginia Electric and Power Company's Compliance Status and Consultation Correspondence

Appendix E

Virginia Electric and Power Company's Compliance Status and Consultation Correspondence

The list of licenses, permits, consultations, and other approvals obtained from Federal, State, regional, and local authorities for North Anna Power Station, Units 1 and 2, are shown in Table E-1.

Following Table E-1 are reproductions of correspondence prepared and sent during the evaluation process of the application for renewal of the operating licenses for North Anna Power Station, Units 1 and 2.

Source	Recipient	Date of Letter	
United States Nuclear Regulatory Commission (C. I. Grimes)	Virginia Department of Historic Resources	January 3, 2002	
United States Nuclear Regulatory Commission (C. I. Grimes)	U.S. Fish and Wildlife Service	January 24, 2002	
Commonwealth of Virginia Department of Environmental Quality (E. L. Irons)	Dominion Virginia Power Company	February 21, 2002	
United States Department of the Interior (K. L. Mayne)	United States Nuclear Regulatory Commission	May 22, 2002	

Table E-1. Federal, State, Local, and Regional Licenses, Permits, Consultations, and Other Approvals for North Anna Power Station, Units 1 and 2

Agency	Authority	Description	Number	Issue Date	Expiration Date	Remarks
NRC	10 CFR Part 50	Operating license, North Anna Unit 1	NPF-4	04/01/78	04/01/18	Authorizes operation of Unit 1
NRC	10 CFR Part 50	Operating license, North Anna Unit 2	NPF-7	08/21/80	08/21/20	Authorizes operation of Unit 2
FWS	Migratory Bird Treaty Act (16 USC 703-712)	Permit	MB705136-0	04/22/02	03/31/03	The permit authorizes removal of up to 15 osprey nests causing safety hazards.
FWS	Section 7 of the Endangered Species Act (16 USC 1536)	Consultation	NA	Letter from NRC to FWS 01/24/02	NA	Requires a Federal agency to consult with FWS regarding whether a proposed action will affect endangered or threatened species. FWS determined that the renewal of the North Anna OLs may affect the bald eagle.
DOT Research and Special Programs Administration	49 CFR Part 107, Subpart G	Registration	053000020241	06/05/00	06/30/02	Registration covers hazardous materials shipments
VDHR	Section 106 of the National Historic Preservation Act (16 USC 470f)	Consultation	NA	Letter from NRC to VDHR 01/03/02	NA	The National Historic Preservation Act requires Federal agencies to take into account the effect of any undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places.
VDEQ	Section 307(c)(3)(A) of the Coastal Zone Management Act [16 USC 1456(c)(3)(A)]	Consistency determination with the Virginia Coastal Management Program	NA	02/21/02	NA	Certification that North Anna complies with the Virginia Coastal Program
VDH	12 VAC 5-590-190	Permit	2109610	06/17/91; Revised 05/04/98	None	Permit authorizes operation of potable water potable water supply system

Table E-1. (contd)

Agency	Authority	Description	Number	Issue Date	Expiration Date	Remarks
VDEQ	Federal Clean Water Act, Section 402 (33 USC 1342); 9 VAC 25-31-50	National pollutant discharge elimination system (NPDES) permit	VA0052451	01/11/01	01/11/06	The NPDES permit covers plant and stormwater discharges
VDEQ	Federal Clean Water Act, Section 401 (33 USC 1341)	NPDES permit	VA0052451	01/11/01	01/11/06	Issuance of a NPDES permit constitutes Section 401 certification by the Commonwealth
VDEQ	Federal Clean Air Act, Title V (42 USC 7661, et seq.); 9 VAC 5-80-10	Air operating permit	None	01/06/99	None	General air emission source operation
VDEQ	9 VAC 5-20-160	Registration	40726	NA	Annual recertification	Annual recertification of air emission sources
VDEQ	9 VAC 5-80-10	Permit	None	10/20/93	None	New source review permit covering installation of the emergency blackout generator
VDEQ	9-VAC 5, Chapter 500	Exclusionary general permit	None	6/18/98	None	Covers operating emissions from auxiliary boilers, emergency diesel generators, and station blackout generator

CFR = Code of Federal Regulations

COV = Code of Virginia

DOT = U.S. Department of Transportation

EPA = U.S. Environmental Protection Agency

FWS = U.S. Fish and Wildlife Service

NRC = U.S. Nuclear Regulatory Commission

USC = United States Code

VAC = Virginia Administrative Code

VDEQ = Virginia Department of Environmental Quality

VDH = Virginia Department of Health

VDHR = Virginia Division of Historic Resources

VMRC = Virginia Marine Resources Commission

Appendix E

January 3, 2002

Ms. Cara H. Metz, Director
Division of Resource Services and Review
Virginia Department of Historic Resources
2801 Kensington Avenue
Richmond, VA 23221

Dear Ms. Metz:

This letter responds to issues raised in your letter dated February 13, 2001, to Mr. William Corbin of Virginia Electric and Power Company (VEPCo), regarding the license renewal Environmental Reports for the Surry and North Anna Power Stations. Our response has benefitted from productive discussions between representatives of my staff and Dr. Ethel Eaton of your staff, including a meeting held at the Virginia Department of Historic Resources on September 21, 2001, for Surry.

In response to your original letter, VEPCo authorized cultural resource assessments of the Surry and North Anna sites. These assessments were conducted by the Louis Berger Group, Inc., and the completed reports were delivered to VEPCo in March 2001, with an addendum to the North Anna report delivered in October 2001. A copy of the Surry report was provided to the U.S. Nuclear Regulatory Commission (NRC) during our recent visit to the site in September 2001. Also during this September visit, Dr. Eaton and our consulting archaeologist, Dr. W. Bruce Masse of Los Alamos National Laboratory, had the opportunity to tour the grounds of the Surry Power Plant. Dr. Masse later reviewed the assessment report and pertinent archival records on file at the Virginia Department of Historic Resources. We received a copy of the North Anna report and its addendum following our visit to that site in October 2001.

The NRC is acutely aware of the richness of the history in and around Gravel Neck Peninsula, and the lower James River in general. We are also aware of the potential for significant intact historic and archaeological resources to be present in the undeveloped portions of the Surry and North Anna Power Stations. We have discussed this topic at considerable length with the station managers and with other appropriate representatives from VEPCo, and are confident they share our concern for these cultural resources. Station procedures provide for the protection of cultural resources during future site activities.

Dr. Eaton, our reviewers, and the cultural resources assessment reports are in agreement that there is little likelihood that intact cultural resources exist in the presently developed portions of the Surry and North Anna Power Stations.

Because there are current operating procedures that take into account the inadvertent discovery of historic and archaeological remains at both stations, and because the license renewal is not expected to result in major refurbishment nor the need to expand operations into the currently undeveloped portions of the stations, we believe that license renewal is unlikely to

C. Metz

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affect cultural resources. We therefore also consider it unnecessary at this time to enter into a programmatic agreement pursuant to the license renewal. However, should conditions specific to either of the stations change, or should the NRC license renewal process change in general, we would be prepared to reconsider this decision.

Please let us know if you have any other questions or concerns about the license renewal process. We will send you copies of the completed draft Supplemental Environmental Impact Statements for both the Surry and North Anna Power Stations as soon as they become available for review. Also, if you do not yet have a copy of the Berger Group cultural resource assessment reports for the two stations and wish to obtain copies for your files, we would be happy to provide you with copies.

Sincerely,

Original Signed By: CIGrimes

Christopher I. Grimes, Program Director
License Renewal and Environmental Impacts
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket Nos. 50-280, 50-281, 50-338, and 50-339

Enclosure: As stated

cc w/encl: see next page

DISTRIBUTION

Environmental r/f
DMatthews/FGillespie
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AKugler
RPrato
CGrimes
OGC
EHickey (PNNL)

Accession no.: **ML020070569**

*See previous concurrence

Document Name: G:\Rgeb\North Anna-Surry\Common Items\Historic Preservation\NRC ltr to VDHR.wpd

OFFICE	PM:RGEB	SC:RGEB	C:RGEB	PD:RLEP	OGC (NLO)
NAME	AKugler*	BZalcman*	CCarpenter*	CGrimes*	RWeisman*
DATE	12/13/01	12/13/01	12/14/01	01/04/02	01/03/02

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Appendix E

January 24, 2002

Ms. Karen Mayne, Supervisor
Virginia Field Office
U.S. Fish and Wildlife Service
6669 Short Lane
Gloucester, Virginia 23061

SUBJECT: REQUEST FOR LIST OF PROTECTED SPECIES WITHIN THE AREA UNDER
EVALUATION FOR THE SURRY AND NORTH ANNA POWER STATIONS
LICENSE RENEWAL

Dear Ms. Mayne:

The Nuclear Regulatory Commission (NRC) is evaluating an application submitted by Virginia Electric and Power Company for the renewal of the operating licenses for its Surry and North Anna Power Stations, Units 1 and 2. The NRC is preparing station-specific supplements to its "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (NUREG-1437) for this proposed license renewal, for which we are required to evaluate potential impacts to threatened and endangered species.

The proposed action would include use and continued maintenance of existing facilities and transmission lines and would not result in new construction or disturbance. The Surry Power Station is located on the James River in Surry County, Virginia. The transmission line corridors for this station pass through portions of Surry, Isle of Wight, Prince George, and Charles City counties, and the corporate limits of the cities of Suffolk, Chesapeake, Newport News, and Hopewell, Virginia. In total, the corridors include about 5000 acres (170 miles in length).

The North Anna Power Station is located on the south side of Lake Anna in Louisa County, Virginia. The transmission line corridors for this station pass through portions of Louisa, Hanover, Goochland, Powhatan, Henrico, Chesterfield, Spotsylvania, Caroline, Orange, Culpeper, and Fauquier counties, Virginia. In total, the corridors include about 2900 acres (120 miles in length). In addition, Lake Anna, which is fed by the North Anna River and impounded by the North Anna Dam, is used as part of the cooling system for North Anna Power Station. Therefore, the lake and the Lower North Anna River are considered part of the aquatic environment of interest.

To support the environmental impact statement preparation process and to ensure compliance with Section 7 of the Endangered Species Act, the NRC requests a list of species and information on threatened, endangered, proposed, and candidate species and critical habitat that may be in the vicinity of the Surry and North Anna Power Stations and their associated transmission lines. We have enclosed figures showing the location of the stations and their associated transmission lines.

Also, we would like confirmation that the Chesapeake Bay Field Office will serve as the U.S. Fish and Wildlife Service's point of contact for Endangered Species Act compliance, including any Section 7 consultation that may be needed, for the Surry and North Anna Power Stations.

K. Mayne

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If you have any comments or questions, please contact Andrew J. Kugler, Senior Project Manager, at (301) 415-2828.

Sincerely,
CIGrimes
 Christopher I. Grimes, Program Director
 License Renewal and Environmental Impacts
 Division of Regulatory Improvement Programs
 Office of Nuclear Reactor Regulation

Docket Nos. 50-280, 50-281, 50-338 and 50-339

Enclosure: As stated

cc: John P. Wolflin, Supervisor
 Chesapeake Bay Field Office
 U.S. Fish and Wildlife Service
 177 Admiral Cochrane Drive
 Annapolis, Maryland 21401

cc: See next page

Accession nos.:

1. Cover letter: ML020250603
2. Enclosure: Figures Depicting the Location of the
 Surry and North Anna Power Stations and Their
 Associated Transmission Lines - ML020100388
3. Package: ML020250611

DISTRIBUTION:

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JTappert	RPrato
AKugler	Environmental R/F
EHickey (PNNL)	

*See previous concurrence

DOCUMENT NAME: G:\RGEB\North Anna-Surry\Surry\Consult\Ltr to FWS-E&T spec.wpd

OFFICE	PM:RLEP	SC:RLEP	RLEP:DRIP
NAME	AKugler*	JTappert*	CGrimes*
DATE	01/22/02	01/22/02	01/24/02

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P.07/11



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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W. Taylor Murphy, Jr.
Secretary of Natural Resources

Robert G. Burnley
Director

(804) 698-4000
1-800-592-5482

February 21, 2002

J. W. White, Ph.D.
Manager, Water and Waste Programs
Dominion Virginia Power Company
5000 Dominion Boulevard
Glen Allen, Virginia 23060

RE: North Anna Power Station License Renewal: Application by Dominion Virginia Power Company to U.S. Nuclear Regulatory Commission for Renewed Operating License
Federal Consistency Certification under the Coastal Zone Management Act
DEQ-01-187F

Dear Dr. White:

This letter responds to your September 27, 2001 letter (and subsequent information received on October 30, 2001) requesting the Department of Environmental Quality's concurrence with the federal consistency certification for renewal of the Dominion Virginia Power Company's operating license for the North Anna Power station. The Department of Environmental Quality is responsible for coordinating Virginia's review of federal consistency certifications and responding to applicants for federal approval on behalf of the Commonwealth. The following agencies took part in this review:

Department of Environmental Quality
Department of Conservation
Department of Health
Marine Resources Commission
Chesapeake Bay Local Assistance Department.

In addition, the Department of Game and Inland Fisheries, the Thomas Jefferson Planning District Commission, and Louisa County were invited to comment.

J. W. White, Ph.D.
February 21, 2002
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Project Description

Dominion Virginia Power submitted information for this review in the form of two documents. One, submitted with the initial letter, is called "Appendix E, Environmental Report" (cited hereinafter as "Appendix E"). The other is entitled "Federal Consistency Certification for North Anna Power Station License Renewal" and is dated October 26, 2001 (cited hereinafter as "Certification").

Dominion Virginia Power owns and operates the North Anna Power Station, a nuclear electric generating station located on the southern shore of Lake Anna in Louisa County. As the Certification and the Environmental Report, Appendix E indicate, Louisa County is not included in Virginia's designated coastal management area. However, the proximity of the North Anna Power Station to Spotsylvania County, across the lake, and the presence of power lines in Spotsylvania and other counties within the coastal management area warrant consistency review because these facilities and their operation may have reasonably foreseeable effects upon coastal uses or resources (Certification, page 1; Appendix E, page E-2). See 15 CFR Part 930, subpart D, sections 930.50 and 930.54. The plant consists of two nuclear reactors and associated steam turbines that generate approximately 1,800 megawatts of electricity. The Unit 1 license is to expire on April 1, 2018, while the Unit 2 license will expire on August 21, 2020. Both licenses have terms of 20 years, and are to be renewed for new 20-year terms. (Appendix E, page E-3). The Company expects North Anna Power Station operations during the new license term to be a continuation of present operations (Appendix E, page E-2).

Federal Consistency Analysis

The Virginia Coastal Resources Management Program (VCP) is comprised of a network of programs administered by several agencies. In order to be consistent with the VCP, the applicant for federal licensing must obtain all the applicable permits and approvals listed under the Enforceable Programs of the VCP prior to commencing the project. Based on the commitments provided in the Consistency Certification that Dominion Virginia Power will obtain and comply with all approvals from agencies administering the applicable Enforceable Programs (Certification, page 1; Appendix E, page E-2) and the comments submitted by agencies administering the Enforceable Programs, the Department of Environmental Quality concurs with the finding that the license renewal and continued operation of the North Anna Power Station is consistent with Virginia's Coastal Resources Management Program.

J. W. White, Ph.D.
February 21, 2002
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This discussion analyzes the continued operation of the project under the license renewal in light of the Enforceable Programs of the Virginia Coastal Management Program.

1. Subaqueous Lands Management. According to the Certification, the applicant has no plans for any activity under the license renewal that would require a permit from the Commission (page 12, Table 2, item b). The Marine Resources Commission indicates that there are no activities, present or prospective, at the North Anna Power Station that would require a Marine Resources Commission permit.

2. Coastal Lands Management. According to the Chesapeake Bay Local Assistance Department, the proposed license renewal is not subject to any requirements under the Chesapeake Bay Preservation Act because Louisa County is outside the geographic region subject to the Chesapeake Bay Preservation Act (*Virginia Code* sections 10.1-2100 et seq.). The Certification indicates that there is no new development applied for under the license renewal. Transmission lines are conditionally exempt from the Act.

3. Wetlands Management. According to the Certification, Dominion Virginia Power does not now conduct, and does not intend to conduct, any alteration of wetlands in the vicinity of the North Anna Power Station (page 12, Table 2, items c.1 and c.2). DEQ's Virginia Water Protection Program indicates that the license renewal will not result in any impacts to wetlands.

4. Point Source Water Pollution Control. DEQ's Virginia Water Protection Program indicates that the license renewal will not result in any impacts to surface waters. The Power Station is subject to an existing Virginia Pollutant Discharge Elimination System permit (No. VA 0052451) (Certification, page 15, Table E-1). According to DEQ's Northern Virginia Regional Office, the Power Station is in compliance with that permit.

5. Non-point Source Water Pollution Control. As with wetlands (item 3 above), the current operation of the North Anna Power Station does not involve any land-disturbing activity, and will not involve it in the future, according to the Certification (page 13, Table 2, item e.1). Accordingly, Virginia's non-point source water pollution control program, the Erosion and Sediment Control Plan requirement, does not apply to this project.

6. Air Pollution Control. According to DEQ's Northern Virginia Regional Office, the North Anna Power Station is in full compliance with its air permits.

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J. W. White, Ph.D.
February 21, 2002
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Accordingly, the project is consistent with the Air Pollution Control Program of the Virginia Coastal Resources Management Program.

7. Other Enforceable Programs. As the Certification indicates, the remaining Enforceable Programs of the Virginia Coastal Resources Management Program do not apply to the renewal of the NRC license for the North Anna Power Station. Specifically, the Fisheries Management Program, including the State Tributyltin Regulatory Program, is not applicable to continued operation of the North Anna Power Station. Neither is the Dunes Management Program or the Shoreline Sanitation Program.

Environmental Impacts and Mitigation

1. Natural Heritage and Wildlife Resources. "Natural heritage resources" are defined as the habitat of rare, threatened, or endangered species of plants and animals, unique or exemplary natural communities, and significant geologic formations, according to the Department of Conservation and Recreation. That Department indicates that natural heritage resources have not been documented as present in the vicinity of the project. In addition, the Department of Conservation and Recreation represents the Department of Agriculture and Consumer Services in commenting on state-listed endangered plant and insect species that might be affected by a project. The continued operation of the North Anna Power Station will not affect protected plant or insect species.

The Department of Conservation and Recreation's Division of Natural Heritage (Christopher Ludwig, telephone 371-6206) should be contacted for an update if a significant amount of time passes before this information is used.

2. Recreation Resources. Continued operation of the North Anna Power Station will not adversely affect any existing or planned recreational facilities. Nor will it affect streams on the National Park Service Nationwide Inventory, Final List of Rivers or potential Virginia Scenic Rivers. The project will not affect any Virginia Byways.

3. Solid and Hazardous Waste Management. The DEQ's Waste Division, Office of Remedial Programs did a cursory review of its data files and found that the North Anna Power Station is listed as a small-quantity generator of hazardous waste, subject to the provisions of Title 40, Code of Federal Regulations, Part 262 (and related provisions in Parts 264, 265, and 268), which are adopted by reference in the Virginia Hazardous Waste Management Regulations. The most recent DEQ inspection of the North Anna Power Station took place in August 1999, according to the DEQ's Northern Virginia

J. W. White, Ph.D.
February 21, 2002
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Regional Office; the inspection revealed that the Station was in compliance with all the requirements applicable to small-quantity generators.

4. Radiological Health Considerations. According to the Department of Health's Radiological Health Program, the Department of Health provides independent verification of this facility's environmental monitoring program for radiological releases. The Department of Health implemented its environmental monitoring program during the pre-operational stage of the facility; the program continues to the present day. There is no indication, in the published annual reports of the monitoring program, of any releases of radiation affecting the environment in the history of the program.

In addition, the applicant has been supportive of the efforts of state and local governments in maintaining an effective State Emergency Response Plan in case of radiological emergencies at the power plant. The Nuclear Regulatory Commission license includes a condition requiring certification of the Plan by the Federal Emergency Management Agency (FEMA); FEMA has certified the Plan.

Thank you for the opportunity to comment on this federal consistency certification.

Sincerely,



Ellie L. Irons
Program Manager
Office of Environmental Impact Review

Enclosures

cc: Derral Jones, DCR
Leslie P. Foldesi, VDH
Thomas D. Modena, DEQ-DWPC-ORP
K. S. Narasimhan, DEQ-DAPC-ODA
Terry H. Darton, DEQ-NVRO
Jon D. Terry, DEQ-NVRO
Brenda K. Winn, DEQ-VWPP
R. B. Stagg, MRC
Catherine M. Harold, CBLAD
Nancy K. O'Brien, Thomas Jefferson PDC
C. Lee Linticum, Louisa County
Andy Kugler, U.S. NRC

TOTAL P.11



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
6669 Short Lane
Gloucester, VA 23061



May 22, 2002

Mr. Christopher Grimes
Nuclear Regulatory Commission
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation
Washington, D.C. 20555-0001

P.T. Kuo

Re: License Renewal for Surry
and North Anna Power
Stations, Surry and Louisa
Counties, Virginia

Mr. Grimes:

The U.S. Fish and Wildlife Service (Service) has received your request for a list of federally listed or proposed endangered and threatened species and designated critical habitat within the area under evaluation for the Surry and North Anna Power Stations license renewal. This letter is submitted in accordance with provisions of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). Attached are lists of species with federal status and species of concern that have been documented or may occur in the counties where your project is located. These lists were prepared by this office and are based on information obtained from previous surveys for rare and endangered species.

The Service would like to confirm that any further Section 7 consultation necessary for this project, pursuant to the ESA, will be conducted by personnel of the Chesapeake Bay Field Office in Annapolis, Maryland.

If you have any questions or need further assistance, please contact Mr. Eric Davis of this office at (804) 693-6694, extension 104.

Sincerely,

Eric Davis
for Karen L. Mayne
Supervisor
Virginia Field Office

Enclosures

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Appendix E

cc: USFWS, Chesapeake Bay Field Office, Annapolis, MD (David Sutherland)

SURRY COUNTY, VIRGINIA
Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
<i>Haliaeetus leucocephalus</i> ¹	Bald eagle	LT
<u>PLANTS</u>		
<i>Aeschynomene virginica</i>	Sensitive joint-vetch	LT

Species of Concern

<u>INVERTEBRATES</u>		
<i>Speyeria diana</i>	Diana fritillary	G3
<i>Stygobromus araeus</i>	Tidewater interstitial amphipod	G2
<u>VASCULAR PLANTS</u>		
<i>Carex decomposita</i>	Epiphytic sedge	G3
<i>Chamaecrista fasciculata</i> var. <i>macrosperma</i>	Marsh senna	G5T2
<i>Desmodium ochroleucum</i>	Creamflower tick-trefoil	G2G3
<i>Rudbeckia heliopsis</i> ²	Sun-facing coneflower	G2
<i>Trillium pusillum</i> var. <i>virginianum</i>	Virginia least trillium	G3T2

¹Nesting occurs in this county; concentrated shoreline use has been documented on the James River.

²Surveys needed within 5-miles of Prince George County species location.

March 22, 1999

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

Appendix E

ISLE OF WIGHT COUNTY, VIRGINIA Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
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BIRDS

<i>Haliaeetus leucocephalus</i>	Bald eagle	LT
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Species of Concern

INVERTEBRATES

<i>Caecidotea phreatica</i>	Phreatic isopod	G1
<i>Speyeria diana</i>	Diana fritillary	G3
<i>Stygobromus araeus</i>	Tidewater interstitial amphipod	G2
<i>Stygobromus indentatus</i>	Tidewater amphipod	G2G3

NON-VASCULAR PLANTS

<i>Sphagnum cyclophyllum</i>	Circular leaved peatmoss	G3
<i>Sphagnum macrophyllum</i> var <i>macrophyllum</i>	Large-leaf peatmoss	G3T3

VASCULAR PLANTS

<i>Carex decomposita</i>	Epiphytic sedge	G3
<i>Litsea aestivalis</i> ¹	Pondspice	G3
<i>Trillium pusillum</i> var. <i>virginianum</i> ²	Virginia least trillium	G3T2

¹Survey may be needed along the Blackwater River.

²This species has been documented in an adjacent county and may occur in this county.

May 29, 2001

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

PRINCE GEORGE COUNTY, VIRGINIA
Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
<i>Haliaeetus leucocephalus</i> ¹	Bald eagle	LT
<u>VASCULAR PLANTS</u>		
<i>Aeschynomene virginica</i>	Sensitive joint-vetch	LT

Species of Concern

<u>INVERTEBRATES</u>		
<i>Speyeria diana</i>	Diana fritillary	G3
<u>VASCULAR PLANTS</u>		
<i>Chamaecrista fasciculata</i> var. <i>macrosperma</i>	Marsh senna	G5T2
<i>Rudbeckia heliopsidis</i>	Sun-facing coneflower	G2
<i>Trillium pusillum</i> var. <i>virginianum</i> ²	Virginia least trillium	G3T2

¹Nesting occurs in this county; concentrated shoreline use has been documented on the James River.

²This species has been documented in an adjacent county and may occur in this county.

March 22, 1999
 Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

Appendix E

CHARLES CITY COUNTY, VIRGINIA Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
<i>Haliaeetus leucocephalus</i> ¹	Bald eagle	LT
<u>VASCULAR PLANTS</u>		
<i>Aeschynomene virginica</i>	Sensitive joint-vetch	LT
<i>Helonias bullata</i> ²	Swamp pink	LT
<i>Isotria medeoloides</i> ²	Small whorled pogonia	LT

Species of Concern

<u>INVERTEBRATES</u>		
<i>Speyeria diana</i>	Diana fritillary	G3
<u>VASCULAR PLANTS</u>		
<i>Chamaecrista fasciculata</i> var. <i>macrosperma</i>	Marsh senna	G5T2
<i>Eriocaulon parkeri</i>	Parker's pipewort	G3
<i>Juncus caesariensis</i>	New Jersey rush	G2
<i>Nuphar sagittifolia</i>	Narrow-leaved spatterdock	G5T2T3
<i>Trillium pusillum</i> var. <i>virginianum</i>	Virginia least trillium	G3T2

¹Nesting occurs in this county; concentrated shoreline use has been documented on the James River.

²This species has been documented in an adjacent county and may occur in this county.

May 29, 2001

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

CITY OF SUFFOLK, VIRGINIA
Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
<i>Haliaeetus leucocephalus</i>	Bald eagle	LT

Species of Concern

INVERTEBRATES

<i>Chlorochroa dismala</i>	Dismal Swamp green stink bug	G2
<i>Speyeria diana</i>	Diana fritillary	G3
<i>Stygobromus araeus</i>	Tidewater interstitial amphipod	G2
<i>Stygobromus indentatus</i>	Tidewater amphipod	G2G3

NON-VASCULAR PLANTS

<i>Sphagnum carolinianum</i>	Carolina peatmoss	G3
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VASCULAR PLANTS

<i>Eriocaulon parkeri</i>	Parker's pipewort	G3
<i>Gentiana autumnalis</i>	Pine-barren gentian	G3
<i>Litsea aestivalis</i> ¹	Pondspice	G3
<i>Rhynchospora pallida</i>	Pale beakrush	G3
<i>Trillium pusillum</i> var. <i>virginianum</i>	Virginia least trillium	G3T2

¹Survey may be needed along the Blackwater River.

February 28, 2000

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

Appendix E

CITY OF CHESAPEAKE, VIRGINIA Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
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None listed

Species of Concern

INVERTEBRATES

Euphyes dukesi	Scarce swamp skipper	G3
Pseudopolydesmus paludicolous	A millipede	G1
Stygobromus araeus	Tidewater interstitial amphipod	G2

NON-VASCULAR PLANTS

Sphagnum macrophyllum var. macrophyllum	Large-leaf peatmoss	G3T3
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VASCULAR PLANTS

Trillium pusillum var. virginianum	Virginia least trillium	G3T2
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May 29, 2001

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

**CITY OF NEWPORT NEWS, VIRGINIA
Federally Listed, Proposed, and Candidate Species**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
Haliaeetus leucocephalus	Bald eagle	LT

Species of Concern

None documented

August 26, 1999
Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

Appendix E

LOUISA COUNTY, VIRGINIA Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>INVERTEBRATES</u>		
Alasmidonta heterodon	Dwarf wedgemussel	LE

Species of Concern

<u>INVERTEBRATES</u>		
Elliptio lanceolata	Yellow lance	G3
Lasmigona subviridis	Green floater	G3

February 8, 2001
Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

HANOVER COUNTY, VIRGINIA
Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
<i>Haliaeetus leucocephalus</i>	Bald eagle	LT
<u>INVERTEBRATES</u>		
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	LE
<u>VASCULAR PLANTS</u>		
<i>Aeschynomene virginica</i> ¹	Sensitive joint-vetch	LT
<i>Isotria medeoloides</i> ¹	Small whorled pogonia	LT

Species of Concern

<u>INVERTEBRATES</u>		
<i>Elliptio lanceolata</i>	Yellow lance	G3
<i>Lasmigona subviridis</i>	Green floater	G3
<i>Sigara depressa</i>	Virginia Piedmont water boatmen	G1G3
<u>VASCULAR PLANTS</u>		
<i>Chamaecrista fasciculata</i> var. <i>macrocarpa</i> ¹	Marsh senna	G5T2

¹This species has been documented in an adjacent county and may occur in this county.

May 29, 2001

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

Appendix E

POWHATAN COUNTY, VIRGINIA Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
Haliaeetus leucocephalus	Bald eagle	LT
<u>INVERTEBRATES</u>		
Pleurobema collina ¹	James spinymussel	LE

Species of Concern

<u>INVERTEBRATES</u>		
Lexingtonia subplana	Virginia pigtoe	G1Q
<u>VASCULAR PLANTS</u>		
Isoetes piedmontana	Piedmont quillwort	G3

¹This species has been documented in an adjacent county and may occur in this county.

February 8, 2001
Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

HENRICO COUNTY, VIRGINIA
Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
<i>Haliaeetus leucocephalus</i> ¹	Bald eagle	LT
<u>VASCULAR PLANTS</u>		
<i>Aeschynomene virginica</i> ²	Sensitive joint-vetch	LT
<i>Helonias bullata</i>	Swamp pink	LT
<i>Isotria medeoloides</i> ³	Small whorled pogonia	LT

Species of Concern

<u>INVERTEBRATES</u>		
<i>Fusconaia masoni</i>	Atlantic pigtoe	G2
<u>VASCULAR PLANTS</u>		
<i>Chamaecrista fasciculata</i> var. <i>macrosperma</i> ¹	Marsh senna	G5T2
<i>Juncus caesariensis</i>	New Jersey rush	G2
<i>Trillium pusillum</i> var. <i>virginianum</i>	Virginia least trillium	G3T2

¹Nesting occurs in this county; concentrated shoreline use has been documented on the James River.

²This species has been documented in an adjacent county and may occur in this county.

³This species has been documented in an adjacent county and may occur in this county east of I-295.

May 29, 2001

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

Appendix E

CHESTERFIELD COUNTY, VIRGINIA Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
<i>Haliaeetus leucocephalus</i> ¹	Bald eagle	LT
<u>INVERTEBRATES</u>		
<i>Alasmodonta heterodon</i> ²	Dwarf wedgemussel	LE
<u>VASCULAR PLANTS</u>		
<i>Aeschynomene virginica</i>	Sensitive joint-vetch	LT
<i>Rhus michauxii</i> ²	Michaux's sumac	LE

Species of Concern

<u>INVERTEBRATES</u>		
<i>Elliptio lanceolata</i>	Yellow lance	G3
<i>Speyeria diana</i>	Diana fritillary	G3
<u>VASCULAR PLANTS</u>		
<i>Chamaecrista fasciculata</i> var. <i>macrosperma</i>	Marsh senna	G5T2
<i>Desmodium ochroleucum</i>	Creamflower tick-trefoil	G2G3
<i>Trillium pusillum</i> var. <i>virginianum</i>	Virginia least trillium	G3T2

¹Nesting occurs in this county; concentrated shoreline use has been documented on the James River.

²This species has been documented in an adjacent county and may occur in this county.

May 29, 2001

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

SPOTSYLVANIA COUNTY, VIRGINIA
Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>INVERTEBRATES</u>		
Alasmidonta heterodon	Dwarf wedge mussel	LE
<u>VASCULAR PLANTS</u>		
Isotria medeoloides	Small whorled pogonia	LT

Species of Concern

<u>INVERTEBRATES</u>		
Elliptio lanceolata	Yellow lance	G3
Lasmigona subviridis	Green floater	G3
Sigara depressa	Virginia Piedmont water boatmen	G1G3
Speyeria idalia	Regal fritillary	G3
<u>NON-VASCULAR PLANTS</u>		
Sphagnum carolinianum	Carolina peatmoss	G3

April 5, 2001

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

Appendix E

CAROLINE COUNTY, VIRGINIA Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
<i>Haliaeetus leucocephalus</i> ¹	Bald eagle	LT
<u>VASCULAR PLANTS</u>		
<i>Aeschynomene virginica</i> ²	Sensitive joint-vetch	LT
<i>Helonias bullata</i>	Swamp pink	LT
<i>Isotria medeoloides</i>	Small whorled pogonia	LT

Species of Concern

<u>BIRDS</u>		
<i>Aimophila aestivalis</i>	Bachman's sparrow	G3
<u>INVERTEBRATES</u>		
<i>Sigara depressa</i>	Virginia piedmont water boatman	G1G3
<i>Stygobromus indentatus</i>	Tidewater amphipod	G2G3
<u>VASCULAR PLANTS</u>		
<i>Chamaecrista fasciculata</i> var. <i>macrosperma</i> ²	Marsh senna	G5T2
<i>Desmodium ochroleucum</i>	Creamflower tick-trefoil	G2G3
<i>Eriocaulon parkeri</i>	Parker's pipewort	G3
<i>Juncus caesariensis</i>	New Jersey rush	G2
<i>Sabatia kennedyana</i>	Plymouth gentian	G3

¹Nesting occurs in this county; concentrated shoreline use has been documented on the Rappahannock River.

²This species has been documented in an adjacent county and may occur in this county.

May 29, 2001

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

ORANGE COUNTY, VIRGINIA
Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
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None documented		
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Species of Concern

INVERTEBRATES

Elliptio lanceolata	Yellow lance	G3
Lasmigona subviridis	Green Floater	G3
Speyeria idalia	Regal fritillary	G3

March 22, 1999

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

Appendix E

CULPEPER COUNTY, VIRGINIA Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
<i>Haliaeetus leucocephalus</i>	Bald eagle	LT
<u>INVERTEBRATES</u>		
<i>Alasmidonta heterodon</i> ¹	Dwarf wedgemussel	LE

Species of Concern

<u>INVERTEBRATES</u>		
<i>Elliptio lanceolata</i>	Yellow lance	G3
<i>Lasmigona subviridis</i>	Green floater	G3
<u>VASCULAR PLANTS</u>		
<i>Agalinis auriculata</i> ¹	Earleaf foxglove	G3

¹This species has been documented in an adjacent county and may occur in this county.

May 29, 2001

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

FAUQUIER COUNTY, VIRGINIA
Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
<i>Haliaeetus leucocephalus</i>	Bald eagle	LT
<u>INVERTEBRATES</u>		
<i>Alasmodonta heterodon</i>	Dwarf wedgemussel	LE

Species of Concern

<u>INVERTEBRATES</u>		
<i>Elliptio lanceolata</i>	Yellow lance	G3
<i>Lasmigona subviridis</i>	Green floater	G3
<i>Speyeria idalia</i>	Regal fritillary	G3
<i>Stygobromus spinosus</i>	Blue Ridge Mountain amphipod	G2G3
<u>VASCULAR PLANTS</u>		
<i>Agalinis auriculata</i> ¹	Earleaf foxglove	G3
<i>Carex polymorpha</i> ¹	Variable sedge	G2G3
<i>Carex schweinitzii</i> ¹	Schweinitz's sedge	G3
<i>Poa paludigena</i>	Bog bluegrass	G3
<i>Pycnanthemum torrei</i>	Torrey's mountain-mint	G2

¹This species has been documented in an adjacent county and may occur in this county.

May 29, 2001

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

Appendix E

CITY OF HOPEWELL, VIRGINIA Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
Haliaeetus leucocephalus	Bald eagle	LT

May 21, 2002
Prepared by U.S. Fish and Wildlife Service, Virginia Field Office