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COMMONWEALTH of VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION

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Richmond, Virginia 23219
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November 18, 2014

Ms. Pamela Faggert
Vice President and Chief Environmental Officer
Dominion Resources Services, Inc.
500 Dominion Boulevard
Glen Allen, VA 23060

Dear Ms. Faggert:

The Department of Conservation and Recreation's Division of Natural Heritage's (DCR) mission is conserving Virginia's biodiversity through inventory, protection, and stewardship. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal, unique or exemplary natural communities, and significant geologic formations.

We are writing to Dominion in regards to the Atlantic Coast Pipeline and potential impacts to documented natural heritage resources. There are five DCR Natural Area Preserves intersecting the four mile planning pipeline corridor. The Virginia Natural Area Preserves System was established in 1989 to protect the most significant natural areas in the Commonwealth. A site becomes a component of the preserve system once it is dedicated as a natural area preserve by the Director of the Department of Conservation & Recreation. Natural area dedication works in much the same way as a conservation easement by placing legally binding restrictions on future activities on a property. The Natural Area Preserve System includes examples of some of the rarest natural communities and rare species habitats in Virginia. The natural area preserves within the four mile planning corridor are Naked Mountain, Cypress Bridge, Folly Mills Fen, Cowbane Prairie and South Quay Sandhills as indicated on the attached table. DCR requests the avoidance of these five natural area preserves and other significant managed lands including the United States Forest Service Maple Flats Sinkhole Ponds in the final preferred alternative for the proposed pipeline.

Our current analysis indicates within the four mile planning corridor there are 72 Natural Heritage Conservation Sites and Stream Conservation Units. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Stream Conservation Unit (SCU) identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach. Conservation sites and SCUs are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant.

Based on the October 2014 centerline alignment, the pipeline intersects eighteen conservation sites (see attached Table). These conservation sites provide habitat for federally and state listed rare plants, rare animals, significant communities and a significant cave. DCR requests the preferred alternative avoids impacts to these conservation sites and stream conservation units to conserve known occurrences of natural heritage resources.

The final two maps in the table show one property in Nelson County adjacent to the Naked Mountain Natural Area Preserve where DCR is working on an easement and deed of dedication, and two properties in Southampton County where DCR is planning to place open space easements. The Southampton One easement is scheduled for closing by the end of 2014. The Southampton Two project will move forward in 2015 with an open space easement if there is not a significant conflict between this easement and the pipeline alignment.

The 2-mile buffered centerline also intersects approximately 38,115 acres of known and predicted wetlands and streams, as per the 2014 Virginia Wetlands Catalog. The DCR developed this catalog as a tool for prioritizing and ranking the conservation and restoration values of known and predicted wetlands throughout Virginia. The wetlands basemap (non-prioritized) was intersected with the 2-mile buffered centerline to estimate total acres of known and predicted wetlands within the proposed project area. Known and predicted wetlands were identified based on several inputs, including but not limited to the National Wetlands Inventory, 110-year floodplains, hydric soils, impaired waters, streams, known agricultural wetlands and others.

The proposed pipeline planning corridor also will cause significant forest habitat fragmentation. The pipeline could potentially fragment C1 (Outstanding Ecological Integrity: 45,852 acres) and C2 (Very High Ecological Integrity: 133,229 acres) cores as identified in the Virginia ConservationVision. ConservationVision is a GIS analysis for identifying and prioritizing conservation lands in Virginia. The first major component of ConservationVision is the Natural Landscape Assessment (NLA), an analysis that addresses the critical issue of habitat fragmentation. Using land cover data derived from satellite imagery, the ConservationVision Natural Landscape Assessment identifies unfragmented natural habitats called cores. Cores are prioritized according to their ecological value, notably their value as habitat for interior-dependent species, though they provide habitat for a wide range of species. Seven key wetland areas containing large clusters of estuarine or marine wetland cores are highlighted as wetland core clusters. The NLA also identifies corridors that connect and support the highest priority cores (<http://www.dcr.virginia.gov/dnh/vclna.htm>). Fragmentation occurs when a large, contiguous ecosystem is transformed into one or more smaller patches surrounded by disturbed areas resulting from the conversion and development of the most accessible and/or more productive sites to cultivated land, residential development or other non-forest land use. Fragmentation alters solar radiation, nutrient, wind and water regimes for the isolated sites, with concomitant effects on species and natural communities. Habitat fragmentation also results in biogeographic changes that disrupt species interactions and ecosystem processes, reducing biodiversity and habitat quality due to limited recolonization, increased predation and egg parasitism, and increased invasion by weedy species. Minimizing forest fragmentation is a key mitigation for any landscape alteration, in order to preserve the natural patterns and connectivity of habitats that are key components of biodiversity.

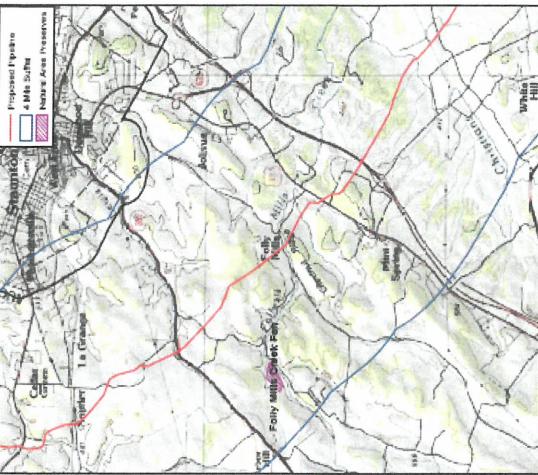
The Natural Resource Group on behalf of Dominion has an annual data sharing agreement with DCR which provides quarterly updates of the Natural Heritage Data including conservation lands for the pipeline. We would like to schedule a meeting with you to review the information we have provided and work with Dominion to avoid negative impacts to Natural Area Preserves and natural heritage resources.

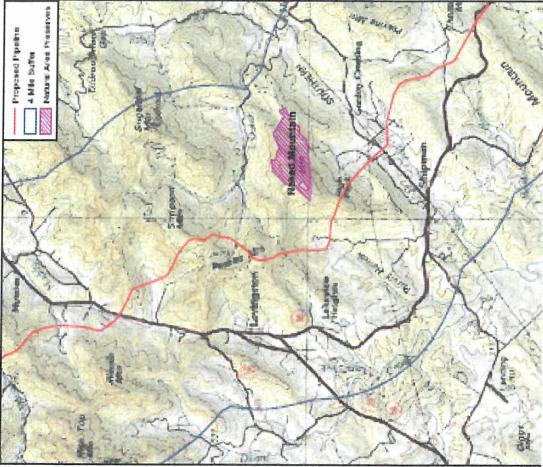
Sincerely,



Thomas L. Smith
Natural Heritage Director

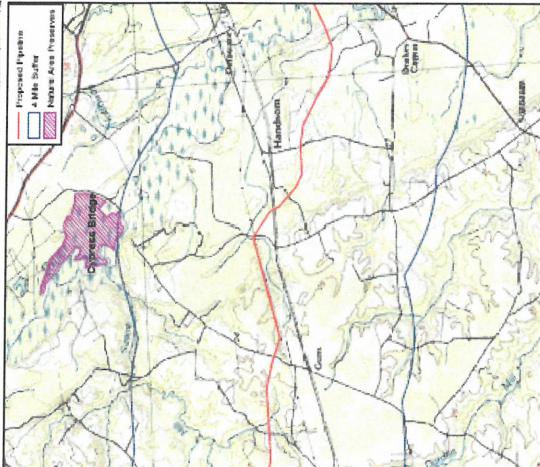
Enclosure:

Natural Heritage Natural Area Preserve		County or City/ 24K Quadrangle	Conservation Purpose and Need	Map
Folly Mills Fen Natural Area Preserve			An outstanding example of a Shenandoah Valley fen community where calcareous groundwater fosters the establishment of an interesting plant community with several rare and unusual plants including bog buckbean, queen-of-the-prairie and prairie sedge.	
Cowbane Prairie Natural Area Preserve	Augusta County/Greenville Quad			
			Outstanding examples of wet prairies, mesic prairies, and calcareous spring marshes supporting numerous rare plants in the Shenandoah Valley. A reach of the South River within the preserve provides habitat for two watchlisted freshwater mussel species	



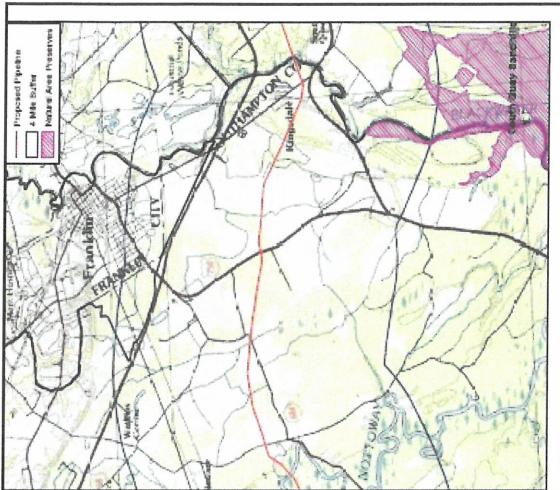
A complex of globally rare barrens and woodlands-low-elevation basic outcrop barrens and mountain/piedmont basic woodlands associated with outcrops of amphibolite bedrock on the dry, southeast-facing slope of the mountain providing habitat for rare plants and rare communities.

Naked Mountain Natural Area Preserve
Nelson County/ Lovingston and
Shipman Quads



The preserve is home to trees estimated to be more than 1000 years old including the largest swamp cottonwood in the nation. The bottomland hardwood forest along the Nottoway River also supports the state-rare shade mudflower.

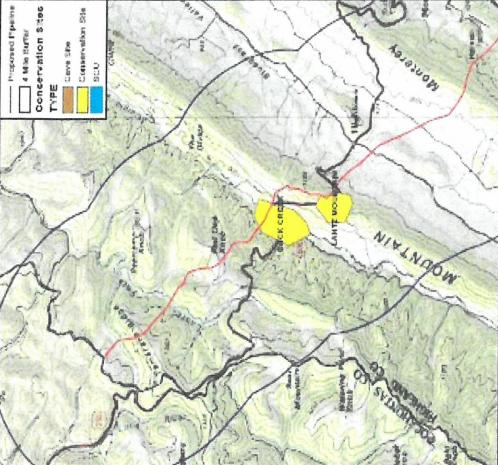
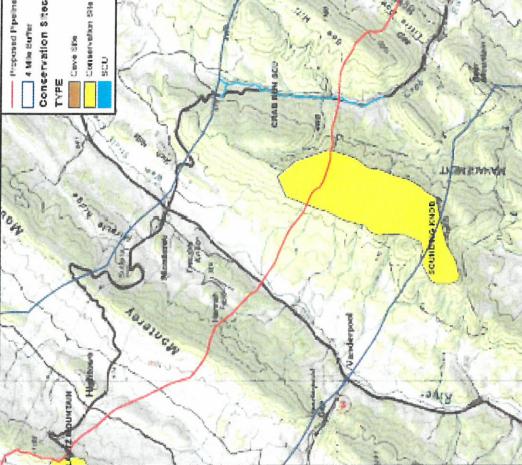
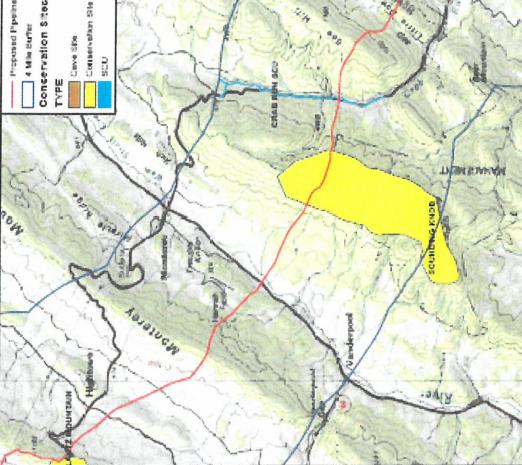
Cypress Bridge Natural Area Preserve
Southampton County/Courtland
Quad

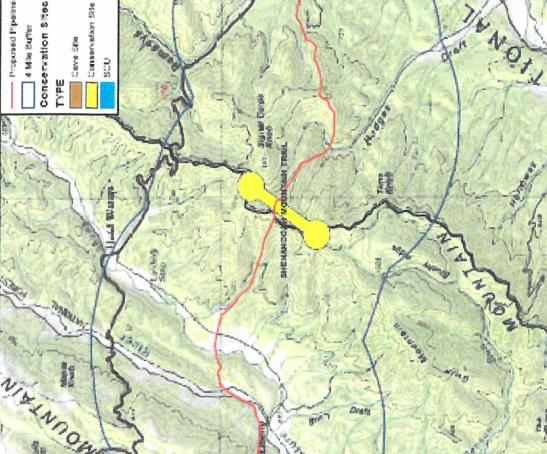
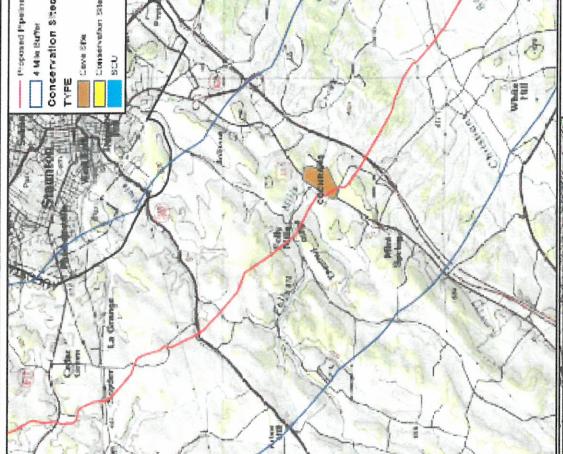


Bottomland forests and sandy uplands along the Blackwater River includes Virginia's last remaining natural stand of longleaf pine. Restoring longleaf pine is the primary management focus for this preserve.

Southampton County and City of
Suffolk/ Riverdale Quad

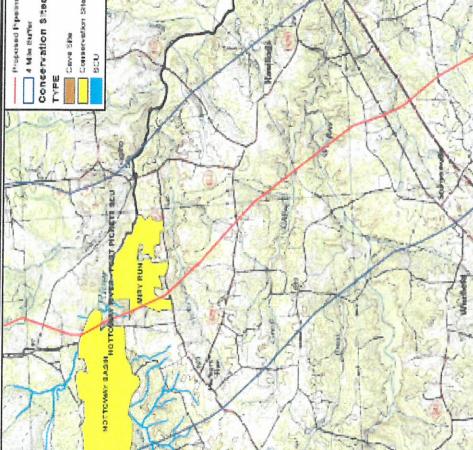
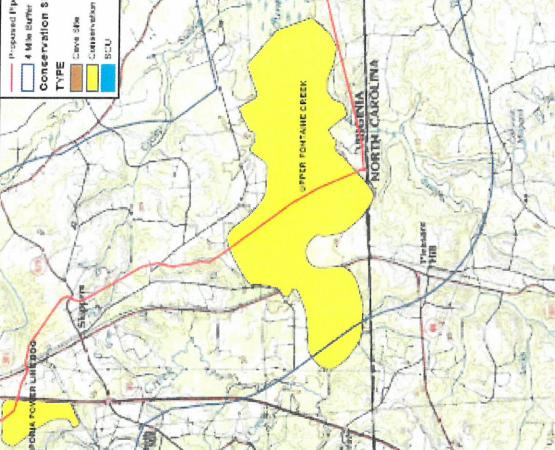
South Quay Sandhills Natural Area Preserve

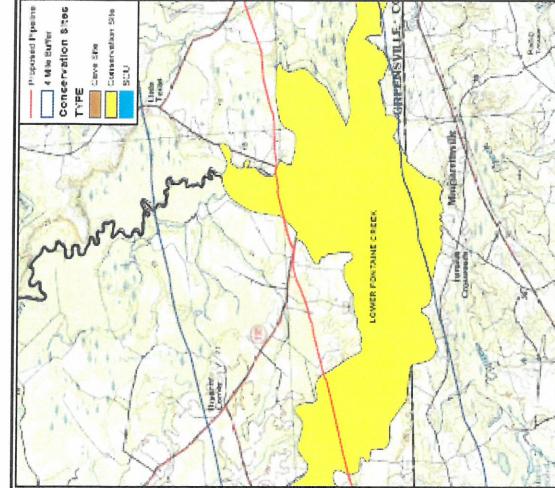
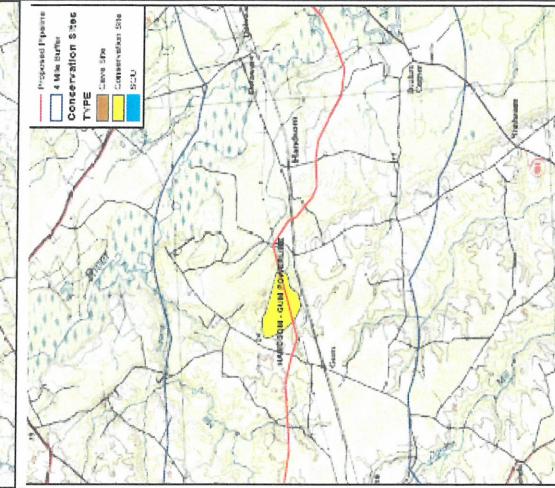
Natural Heritage Conservation Site	County or City/ 24K Quadrangle	Conservation Purpose and Need	Map
Back Creek Conservation Site	Highland County/Hightown Quad	This area of high-elevation pastures provide habitat for several rare plants and animals. Protection of some early-successional habitat is essential for the persistence of some of these rare species.	
Lantz Mountain Conservation Site	Highland County/Hightown Quad	The higher elevations of this mountain ridge provide habitat for a state rare reptile. Protection of the forests in this area will help protect this species.	
Sounding Knob Conservation Site	Highland County/Monterey SE Quad	This site encompasses the higher elevations around Sounding Knob with numerous significant natural communities and a few state rare plants and animals. Protection of intact natural communities will benefit these resources.	
Crab Run Stream Conservation Unit	Highland County/Monterey Quad	This site-rare aquatic heteropteran (true bug) protection of the stream's water quality and hydrology will help maintain the habitat of this aquatic animal.	

	
<p>Shenandoah Mountain Trail Conservation Site</p> <p>The higher elevations of this mountain ridge provide habitat for a globally-rare amphibian. Protection of the forests in this area will help protect this species.</p>	<p>Cochrants Conservation Site</p> <p>A designated significant cave in Virginia under the Cave Protection Act of 1979. It has documented significance in terms of geology, hydrology, and aesthetics. The cave also has high potential from globally rare invertebrate, cave limited species, including but not limited to the Madison Cave isopod (<i>Antrolana lira</i>) and the Madison Cave amphipod (<i>Stygobromus stegerorum</i>).</p>

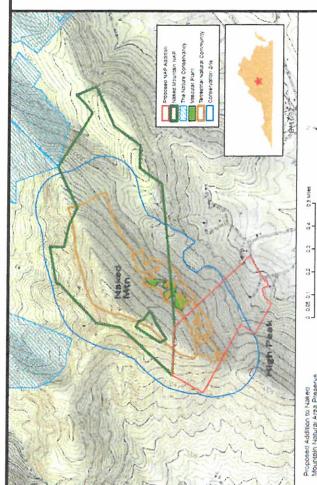
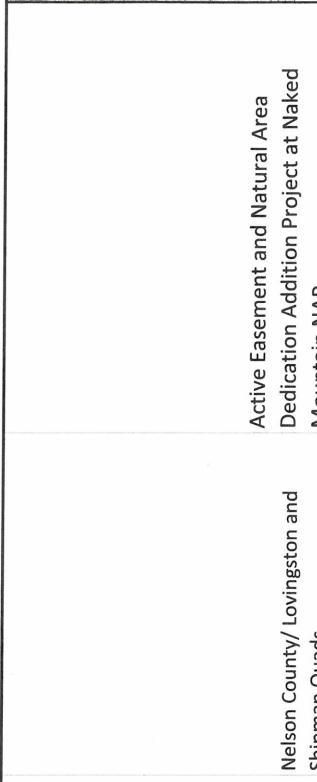
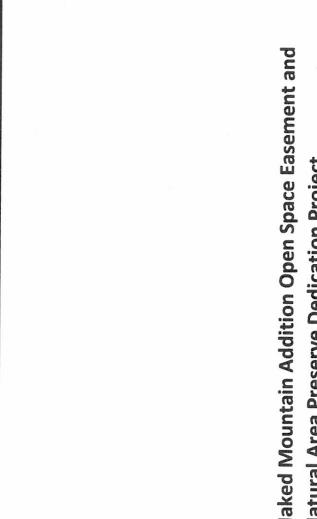
		<p>Lyndhurst Conservation Site</p> <p>This site contains multiple documented sinkhole ponds with significant natural communities and numerous rare plants including one that is Federally and State listed. Protection of groundwater hydrology is critical.</p> <p>North Fork Pickett Stream Conservation Site</p> <p>A small-river montane floodplain with considerable groundwater seepage influence, containing a state rare plant population.</p> <p>North Fork Floodplain Conservation Site</p> <p>This Stream Conservation Unit includes riparian reaches for State and Federally-listed mussels and fish. Protection of the water quality and hydrology will help maintain the habitat of these aquatic animals.</p> <p>Nelson County/Greenfield Quad</p> <p>Brunswick/Dinwiddie/Lunenburg/ Nottoway Counties Rutherford/Blackstone West/Blackstone East/Darville/Kenbridge East/ Danieltown/Warfield Quads</p> <p>Nottoway River-Fort Pickett Stream Conservation Unit</p>
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Map on Next Page

	<p>This large Piedmont Bottomland provides habitat for a state-rare species and two significant natural communities and helps protect the water quality of the Nottoway River. Protection of intact forest will benefit these resources.</p>
	<p>This site contains a fair-sized population of a globally-rare, Federal Endangered plant amidst pine plantations. Monitoring of population and maintenance of early-successional habitat would be beneficial to the plant.</p>
<p>Brunswick County/Danieltown/Darvills/Warfield Quads</p> <p>Miry Run Conservation Site</p>	<p>This powerline right-of-way provides habitat for numerous state-rare plants that require open, boggy conditions. Protection of the early-successional habitat as well as the water quality and hydrology of the wetlands will protect these plants.</p>
<p>Burnswick County/ Warfield Quad</p> <p>Emporia Powerline Bog</p>	<p>This large Coastal Plain Bottomland contains significant natural communities as well as habitat for two state-rare species. Protection of intact forest as well as the Creek's hydrology and water quality will benefit these resources.</p>
<p>Upper Fontaine Creek Conservation Site</p>	<p>Greenville County/Skipper's Quad</p>

 <p>This map shows the Lower Fontaine Creek area in Gaffneyville, SC. A large yellow shaded area represents the Lower Fontaine Creek, which flows through the center of the map. Red lines indicate proposed powerline rights-of-way. A legend in the top left corner identifies symbols for proposed pipeline, 4 Mile Buffer, Conservation Site Type, Cave Site, Conservation Site, and Scale.</p>	 <p>This map shows the Handson-Gum area in Gaffneyville, SC. A yellow shaded area represents the Handson-Gum Creek, which flows through the center. Red lines indicate proposed powerline rights-of-way. A legend in the top left corner identifies symbols for proposed pipeline, 4 Mile Buffer, Conservation Site Type, Cave Site, Conservation Site, and Scale.</p>
<p>Lower Fontaine Creek Conservation Site</p> <p>Southampton County/ Margarettsville Quad</p> <p>This large Coastal Plain Bottomland provides habitat for numerous state-rare species and a significant natural community. Protection of both intact forest and early-successional habitat as well as the Creek's water quality and hydrology will benefit these resources.</p>	<p>Handson-Gum Powerline Conservation Site</p> <p>Southampton County/ Courtland Quad</p> <p>This powerline right-of-way provides habitat for numerous state-rare plants that require open, boggy conditions. Protection of the early-successional habitat as well as the water quality and hydrology of the wetlands will protect these plants.</p>

<p>Lummis Flatwoods Conservation Site</p> <p>This powerline right-of-way provides habitat for numerous state-rare plants and an amphibian that require open, boggy conditions. Protection of the early-successional habitat as well as the water quality and hydrology of the wetlands will protect these species.</p>	<p>City of Suffolk/Buckhorn Quad</p> <p>This large forested wetland is all that remains of the original Great Dismal Swamp (~1/4 of orig.). Protection from fragmentation and restoration of site hydrology will protect the numerous rare species and significant communities of the site.</p>
<p>Great-Dismal Swamp-Northwest Section Conservation Site</p> <p>This large forested wetland is all that remains of the original Great Dismal Swamp (~1/4 of orig.). Protection from fragmentation and restoration of site hydrology will protect the numerous rare species and significant communities of the site.</p>	<p>City of Chesapeake/ City of Suffolk Chuckatuck/Bowers Hill/Lake Drummond/Lake Drummond NW/Suffolk/Deep Creek/Corapeake Quads</p> <p>Great Dismal Swamp Conservation Site</p>

	<p>Active Easement and Natural Area Dedication Addition Project at Naked Mountain NAP</p> <p>Nelson County/ Lovingston and Shipman Quads</p> <p>Naked Mountain Addition Open Space Easement and Natural Area Preserve Dedication Project</p>
	<p>Southampton One and Southampton Two - Easement Projects</p> <p>Southampton County / Courtland and Franklin Quads</p> <p>Southampton One and Southampton Two Tracts on Nottoway River</p>
	<p>Active Easement Projects</p>