



<b>Proposed</b>	<b>Comments</b>	<b>Type</b>	<b>New Location</b>
<b>ENVIRONMENT</b>			
<b>Intent</b>			
<p>The intent of the Environment Plan is to ensure that in developing the County, the natural beauty is preserved, water quality is protected, property values and quality of life are enhanced, and ecological diversity is preserved. With sound protection measures, such as those presented herein, Prince William County’s citizens, business community, and visitors enjoy a healthy environment coexisting with a vibrant economy. In this regard, this Plan is to be used to address environmental issues, evaluate development proposals in their earliest stages, and develop ordinances.</p>			
<p>Prince William County is one of a few jurisdictions on the Atlantic Seaboard that extends from sea level to mountain crest. The natural environment of the County is diverse. Streams, creeks, rivers, lakes, marshes, forests, meadows, and shores provide habitat for plants and animals, as well as contribute to the economic well-being and aesthetics of the County.</p>			
<p>One way to preserve the County’s natural environment is to see that applicants for development approval address environmental issues at the earliest planning phase. This Plan assists in this early planning process by defining those areas of a site that are environmentally sensitive and need to be preserved for the purpose of protecting water quality, maintaining the County’s natural beauty, enhancing property values and quality of life, and preserving ecological diversity.</p>			
<p>Sustaining our environmental position is critical to the County’s capacity to ensure a high quality of life, provide for continued economic growth, and actively conserve and protect natural resources, including public drinking water supplies. To this end, it is critical for the County to establish clear measurable goals and environmental benchmarks in order to gauge its progress and plan for the future. Prince William County utilizes a sustainability approach in its planning and development policies. Prince William County embraces the environmental and economic benefits of its green infrastructure, considering emerging green technology, ensuring a multi-faceted decision-making approach that balances infrastructure needs, while balancing environmental, economic, and social issues.</p>			
<p>On its rezoning and special use permit applications, the Zoning Ordinance requires an Environmental Constraints Analysis (ECA) to determine areas of a site that are suitable for development and those areas that are not. The ECA <del>determines</del> identifies the presence and extent of important environmental features as described in this Plan. It is used as a tool to outline, in a rezoning or special use permit application, the preservation or conservation areas that will be provided and also describes avoidance efforts and/or mitigation techniques to minimize the environmental impacts of those applications.</p>	Clarification (Watershed)		
<p><del>The components of the Environment Plan include text and fold-out maps as follows:</del></p>	Delete – Redundant Language (Planning)		
<ul style="list-style-type: none"> <li><del>• Intent, Goal, Policies, and Action Strategies.</del></li> </ul>			
<ul style="list-style-type: none"> <li><del>• Highly Erodible Soils Map (Figure 1).</del></li> </ul>			
<ul style="list-style-type: none"> <li><del>• Highly Permeable Soils Map (Figure 2).</del></li> </ul>			
<ul style="list-style-type: none"> <li><del>• Chesapeake Bay Resource Protection Areas Map (RPAs) (Figure 3).</del></li> </ul>			
<p><b>GOAL:</b> Preserve, protect, and enhance the significant environmental resources and features of the County including air quality, topography, soils, ground and surface water, biotic communities (stream corridors, forests, and wetlands), sensitive plant and animal species, and natural viewsheds.</p>			
<b>GENERAL ENVIRONMENTAL POLICIES AND ACTION STRATEGIES</b>			
<b>EN-POLICY 1:</b> Consider environmental concerns at all levels of land use related decision-making.			



From the Piedmont to the Potomac

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<b>ACTION STRATEGIES:</b>			
<b>EN1.1</b> Develop and maintain Geographic Information System (GIS) mapping layers and other critical maps to be included as part of the Environment Plan, which may include the following layers and/or maps:			
<b>EN1.1.a</b> Existing Canopy Coverage.	Map to be added (Planning)		
<b>EN1.1.b</b> Impervious Area.	Map to be added (Planning)		
<b>EN1.1.c</b> Vegetative Cover Types.	Map to be added (Planning)		
<b>EN1.1.d</b> Wetlands.	Map to be added (Planning)		
<b>EN1.1.e</b> Existing Conservation Easements.	Map to be added (Planning)		
<b>EN1.1.f</b> <u>Floodplain</u>	Map to be added (Planning)		
<b>EN1.2</b> Update the Zoning Ordinance Environmental Constraints Analysis (ECA) requirements to add the following:			
<b>EN1.2.a</b> Delineation of all jurisdictional wetlands and waters.			
<b>EN1.2.b</b> Location of all Chesapeake Bay Resource Protection Areas (Preservation Area Site Assessment (PASA) submittal required).			
<b>EN1.2.c</b> All significant non-RPA streams.			
<b>EN1.2.d</b> Ponds and culverts.			
<b>EN1.2.e</b> Contributing drainage areas.			
<b>EN1.2.f</b> Existing structures, roads, and the locations of known utilities and easements.			
<b>EN1.2.g</b> Publicly available information on adjoining parcels regarding the location of 100-year floodplains, wetlands, stormwater infrastructure, and streams.			
<b>EN1.2.h</b> Identification of the adequacy of receiving surface waters into which stormwater will be proposed for discharge.			
<b>EN1.2.i</b> Proposed limits of disturbance.			
<b>EN1.2.j</b> Existing vegetation map of the entire site.			
<b>EN1.2.k</b> Location of all specimen trees.			
<b>EN1.2.l</b> Unique habitats of special concern.			
<b>EN1.2.m</b> Identification of environmental features proposed for preservation or conservation.			
<b>EN1.2.n</b> Acreage of all Environmental Resources (ER) (i.e., per ER definition).			
<b>EN1.3</b> Identify and pursue opportunities for open space preservation that preserve unique habitats of special concern with an emphasis on connecting to existing natural resources conservation areas.			
<b>EN1.4</b> Seek and consider as part of the rezoning or special use process, input from adjacent jurisdictions to promote regional green infrastructure planning efforts as well as other environmental concerns that have multi-jurisdictional impacts.			
<b>EN1.5</b> Encourage developers to incorporate into site planning various environmentally sensitive approaches to stormwater management, including Low Impact Development (LID) techniques and preservation and restoration of natural land forms, as discussed in this Plan and the Community Design Plan.			
<b>EN1.6</b> Upon completion of the Northern Virginia Regional Commission’s conservation corridors project, review and update as needed, the Open Space and Corridors Map in the Parks, Open Space and Trails chapter.			



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<p><b>EN1.7</b> During the rezoning or special use permit process, review the Open Space and Corridors Map in the <del>Parks, Open Space Plan and Trails chapter</del> to identify and determine the value or ecological viability of certain corridors.</p>	Clarification (Planning)		
<p><b>EN-POLICY 2:</b> Develop and implement a data collection, tracking, and analysis structure to monitor and establish the County’s environmental baseline, resource status, and sustainability.</p>			
<p><b>ACTION STRATEGIES:</b></p>			
<p><b>EN2.1</b> Utilize the information gathered through studies and assessments to establish criteria for protecting ecologically important areas during land use decision-making processes.</p>			
<p><b>EN2.2</b> Using available data, map all environmental resources to prioritize conservation planning, and make this information available on the County Mapper.</p>			
<p><b>EN2.3</b> As part of a public facility review, request an analysis of environmental resources, as identified in the ECA.</p>			
<p><b>EN2.4</b> All County offices, to include <del>Prince William County Park Authority</del> and Prince William County Public Schools, involved in land use will coordinate with local, federal, state, and regional environmental organizations to facilitate the exchange of data and implementation of environmental protection measures.</p>	Clarification (Planning)		
<p><b>EN2.5</b> Develop a baseline analysis of tree cover from available historic data.</p>			
<p><b>EN-POLICY 3:</b> To further support OS-Policy 5, a minimum of 39 percent of the total area in the County <del>exclusive of</del> <del>excluding</del> acreage of Marine Corps Base Quantico <del>for all calculation purposes</del>, should be retained as protected open space, <del>as defined in the Open Space Plan.</del></p>			
<p><b>ACTION STRATEGIES:</b></p>			
<p><b>EN3.1</b> Encourage cluster development to protect contiguous natural open space, as defined by the Zoning Ordinance.</p>			
<p><b>EN3.2</b> Amend the cluster ordinance to ensure that open space is permanently protected.</p>			
<p><b>EN3.3</b> Amend the DCSM to ensure that there is a defined buffer standard for public parks.</p>			
<p><b>EN3.4</b> Amend the Zoning Ordinance and/or DCSM to prohibit the establishment of proffered conservation and preservation areas on residential lots.</p>			
<p><b>EN3.5</b> Develop and publish guidelines for homeowner associations that detail how to manage conservation areas while providing information on responsibilities and a checklist of standard management measures and benefits.</p>			
<p><b>EN3.6</b> Make information on conservation easements available to landowners, including distribution points at the Tax Assessment Department and other relevant County offices, to encourage the use of open space/conservation easements as tools to preserve environmental resources.</p>			





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<b>Proposed</b>	<b>Comments</b>	<b>Type</b>	<b>New Location</b>
<p><b>EN3.7</b> Encourage the use of open space/conservation easements or fee simple dedication to preserve open space in already developed areas in order to provide natural areas, protect environmentally sensitive resources, preserve wildlife habitat and ensure a scenic appearance over time. Consider development at the high end of the density range for those projects that preserve sensitive features, identified in the ECA, beyond the minimum preservation requirements such as buffers, RPA and floodplain.</p>			
<p><b>EN3.8</b> The County shall review and implement opportunities for a Purchase of Development Rights (PDR) program.</p>			
<p><b>EN3.9</b> Explore the use of available federal and state funding resources, including grants, foundations, and transportation related funds, to support green infrastructure planning initiatives and a PDR program.</p>			
<p><b>EN3.10</b> Establish and continue partnerships with local agencies and organizations to initiate and provide public information programs aimed at conserving lands in the watershed through civic engagement community stewardship.</p>			
<p><b>EN3.11</b> Investigate the benefits of involving a private conservancy for the purpose of purchasing privately held lands for preservation purposes and seeking perpetual conservation easements to preserve open space.</p>			
<p><b>EN3.12</b> Support initiatives promoted by the County’s Trails and Blueways Council to establish a Countywide trails and corridors system through the voluntary donation of land and conservation easements from interested property owners as a means of environmental protection.</p>			
<p><b>EN3.13</b> <del>To</del><b>p</b>Protect the biological diversity, processes, and functions of natural habitats, identify and prioritize a network of preservation corridors or large woodland areas to be incorporated into an overall habitat protection network.</p>	Follow up to PC Work Session on 4.19.17		
<b>CLIMATE &amp; AIR QUALITY POLICIES AND ACTION STRATEGIES</b>			
<p><b>EN-POLICY 4:</b> Monitor air quality and collaborate with <a href="#">the Virginia Department of Environmental Quality (DEQ)</a>, <a href="#">Metropolitan Washington Council of Governments (MWCOG)</a>, and other regional entities to identify and implement strategies to improve air quality.</p>			
<b>ACTION STRATEGIES:</b>			
<p><b>EN4.1</b> Support and coordinate with the Climate, Energy and Environmental Policy Committee (CEEPC) and the Council of Governments (COG) Metropolitan Washington Air Quality Committee’s (MWAQC) Air Quality Monitoring Program for the region and within the County.</p>			
<p><b>EN4.2</b> Analyze and suggest locations for air, water and energy monitoring sites to encourage COG and the Virginia Department of Environmental Quality (DEQ) to establish additional air quality monitoring stations in the County as applicable.</p>			
<p><b>EN4.3</b> Where applicable, review and consider air quality impacts for public and private industries and utilities in conjunction with the rezoning and/or special use permit application process.</p>			
<p><b>EN4.4</b> Maintain and extend regional COG agreements and contingency plans to deal with stationary and mobile sources of pollution to protect residents, especially sensitive residents (such as the young, the elderly, and sensitive populations).</p>			
<p><b>EN4.5</b> Develop a process to determine if adequate controls, including new technologies for disposing of compact fluorescent light bulbs, are in place to prevent metals, Polychlorinated Biphenyls (PCBs), and other carcinogenic materials from entering the trash stream.</p>			



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<b>Proposed</b>	<b>Comments</b>	<b>Type</b>	<b>New Location</b>
<p><b>EN4.6</b> Request MWCOG or Virginia Department of Transportation (VDOT) to review air quality/transportation studies along major transportation corridors and at congested intersections in order to better define the impacts and trends of vehicle-generated pollution.</p>			
<p><b>EN4.7</b> Developments, including and not limited to transit-oriented and mixed use projects, shall optimize the use of transit and non-motorized trips in order to reduce pollution impacts from vehicles and shall contain the appropriate support facilities, such as bus shelters, dedicated bicycle lanes, bicycle parking facilities, trails, crosswalks, sidewalks, etc.</p>			
<p><b>EN4.8</b> Where appropriate, encourage VDOT, the County, and developers to preserve and/or re-establish vegetative buffers along arterial roadways as a means of filtering and absorbing pollutants.</p>			
<p><b>EN4.9</b> Reduce vehicle pollution by encouraging the use of alternative modes of transport including van/carpooling, public transit, bicycles, and pedestrian paths.</p>			
<p><b>EN4.10</b> Seek commitments during the rezoning and special use permit process to design and construct buildings and associated landscapes to conserve energy and water resources and to minimize short and long-term negative impacts on the environment and building occupants. Amend the DCSM to include building design guidelines for energy and water resource conservation.</p>			
<p><b>WATERSHED PLANNING &amp; SUSTAINABILITY POLICIES AND ACTION STRATEGIES</b></p>			
<p><b>EN-POLICY 5:</b> Protect and manage the County’s soils and natural landscape to retain and enhance their associated economic, aesthetic and ecosystem benefits.</p>			
<p><b>ACTION STRATEGIES:</b></p>			
<p><b>EN5.1</b> When designing a project, use the following priorities for protecting the natural landscape when compatible with the proposed land use:</p>			
<p><b>EN5.1.a</b> Development in the coastal plain in areas of 25% or greater slopes where shrink-swell soils exist should address slope stability through mitigation or avoidance.</p>			
<p><b>EN5.1.b</b> Along significant non-RPA streams, discourage development in all areas of 25% or greater slopes at least 50 feet away from each side of all significant non-RPA streams.</p>			
<p><b>EN5.1.c</b> Encourage the preservation of a natural buffer of existing woodland or forestation area of at least 50 feet along each side of all significant non-RPA streams.</p>			
<p><b>EN5.1.d</b> Encourage mitigation where impacts are unavoidable.</p>			
<p><b>EN5.1.e</b> Emphasize the preservation of jurisdictional wetlands over mitigation, including measures that ensure the sustainability of the wetlands.</p>			
<p><b>EN5.2</b> Amend the DCSM to require identification of all areas with shrink/swell soils, 15% slopes with an erodibility factor K of greater than 0.4, and/or with underlying marine clays. Where impacts are impracticable, require mitigation.</p>			
<p><b>EN5.3</b> Utilize the ECA to evaluate and prioritize those sensitive landforms to be set aside for preservation/conservation and any appropriate mitigation.</p>			
<p><b>EN5.4</b> Use native plants that are adapted to local soil and weather conditions when re-vegetating disturbed areas.</p>			



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<b>Proposed</b>	<b>Comments</b>	<b>Type</b>	<b>New Location</b>
<p><b>EN5.5</b> Develop, in coordination with the Community Design Plan general design evaluation guidelines, criteria and techniques that promote the preservation of natural landscapes, especially those that tend to be drought resistant and apply them in the evaluation of rezoning and/or special use permit applications.</p>			
<p><b>EN5.6</b> Where hazardous waste soil contamination is suspected, require that a rezoning and/or special use permit applicant submit an Environmental Site Assessment Phase II – Contaminated Sites and Remediation Plan as part of the application.</p>			
<p><b>EN5.7</b> If environmental clean-up efforts have been conducted at hazardous waste sites to meet state and federal standards, development can be proposed. Actively support and encourage “brownfield” redevelopment, where appropriate.</p>			
<p><b>EN5.8</b> Monitor the effectiveness of the Prince William County Erosion and Sediment Control Ordinance and upgrade as appropriate.</p>			
<p><del><b>EN5.9</b> Amend the DCSM to require enhanced erosion and sedimentation controls for properties that include jurisdictional wetlands and waters, 15% or greater slopes, or unique habitats of special concern, including silt fences, erosion control blankets, soil stabilization matting, temporary vegetative cover, and other controls, as required by the Erosion and Sediment Control Program Administrator.</del></p>	<p>Completed. See DCSM Section 751.02 (Watershed)</p>		
<p><del><b>EN5.9</b> County development and transportation projects shall lead by example, incorporating the highest environmental leadership standards and requiring plan review and erosion and sediment control inspection frequencies that meet or exceed state standards.</del>  <u>Meet or exceed state standards for erosion and sediment control plan review and sediment control inspection frequencies for county development and transportation projects.</u></p>	<p>Follow up to PC Work Session on 4.19.17</p>		
<p><b>EN5.10</b> Request courtesy review of erosion control plans for all federal and state projects in Prince William County.</p>			
<p><b>EN5.11</b> Amend the Zoning Ordinance to establish minimum standards and thresholds that limit clearing and grading on cluster developments.</p>			
<p><b>EN5.12</b> Promote the use of vegetative or “soft” stabilization techniques along shorelines to maintain a natural buffer.</p>			
<p><b>EN5.13</b> Address issues of sea level rise along shorelines in the County. Utilize current data and information on sustainable shorelines to protect shorefronts and property and incorporate sea level rise into County policy.</p>			
<p><b>EN5.14</b> Utilize the ECA at the time of rezoning or special use permit to require development sites to be designed in a manner that limits clearing and grading to the minimum area needed to construct the proposed use.</p>			
<p><b>EN5.15</b> Update the DCSM to preclude the use of all invasive non-native species.</p>			
<p><b>EN5.16</b> Encourage identification, management, and protection of ecological communities and wildlife, especially critical habitats.</p>			
<p><b>EN5.17</b> Ensure the County considers the most recent information available on the status and locations(s) of unique habitats of special concern located on the DCR map.</p>			
<p><b>EN5.18</b> At the time of rezoning, special use permit, and all County projects, seek implementation of state and federal guidelines for the protection of rare, threatened, and endangered species and encourage preservation of habitats where these species could occur.</p>			
<p><b>SURFACE &amp; GROUNDWATER POLICIES AND ACTION STRATEGIES</b></p>			



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Proposed	Comments	Type	New Location
<b>EN-POLICY 6:</b> Maintain or enhance the integrity of surface bodies of water.			
<b>ACTION STRATEGIES:</b>			
<b>EN6.1</b> Locate away from the County’s water bodies those non-residential activities that use, store, or manufacture significant quantities of hazardous substances.			
<b>EN6.2</b> Study and recommend measures to improve contingency planning by parties who use, handle, or store hazardous substances in sufficient quantities so as to constitute a threat to surface and groundwater quality. The measures should address identification of trigger amounts of materials and procedures for prevention of leaks or spills and for containment of leaks, spills, and water runoff from fire fighting and include commitments for the pretreatment of stormwater to prevent contamination.			
<b>EN6.3</b> In conjunction with the Soil and Water Conservation District and the Agricultural Extension Service, encourage the County’s farmers to employ best management practices such as crop rotation, conservation tillage, strip cropping, nutrient management, fencing and buffering of areas along streams to keep out livestock, use of livestock water devices away from streams, and grazing rotation plans.			
<b>EN6.4</b> Continue and promote a local, coordinated “Adopt-a-Stream” program.			
<b>EN6.5</b> Require adherence to the following guidelines for determination of density or intensity of development:			
<b>RESIDENTIAL</b>			
Preclude the development of habitable structures within 100-year floodplains. The allowable dwelling unit density for a property in the Urban and Suburban Areas shall be calculated based on the area outside the floodplain and Chesapeake Bay RPAs, as shown in the ECA submitted with a rezoning or special use permit application. The allowable dwelling unit density areas of the property encumbered by such features shall be based upon the maximum density permitted by the existing zoning of the property at the time of adoption of the Comprehensive Plan. Other relevant Comprehensive Plan components, such as the capacity of the transportation network, environmental constraints, and zoning requirements must be addressed, as well, in determining the appropriate number of dwelling units on a property. Amend the land use classifications in the Long-Range Land Use Plan chapter to reflect these guidelines.			
<b>NON-RESIDENTIAL</b>			
On non-residential-zoned property encumbered with areas of 100-year floodplain and Chesapeake Bay RPAs the allowable intensity is determined based on the floor area ratio (FAR) specified by the existing or proposed zoning district and the total site area. Development within the 100-year floodplain and Chesapeake Bay RPAs is to be precluded. The intensity of development is to be evaluated on the basis of other relevant environmental resource action strategies, the compatibility of the proposed uses with surrounding existing uses and other applicable portions of the Plan.			
<b>EN6.6</b> Establish partnerships with local agencies and organizations to develop and distribute public service information about reducing nutrient loading in stormwater runoff from yards and farms.			
<b>EN6.7</b> Use the Virginia Marine Resources Commission (VMRC) criteria for the Siting of Marinas or Community Boat Moorings in evaluating future waterfront access sites in the County.			



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<p><b>EN6.8</b> Encourage innovative stormwater management techniques. Promote <u>Low Impact Development (LID)</u> and on-site stormwater management (SWM).</p>	<p>Follow up to PC Work Session on 4.19.17</p>		
<p><b>EN6.9</b> Except where a crossing is unavoidable, all public utilities, excluding gravity sewer lines, shall be located outside of Resource Protection Areas and jurisdictional wetlands and waters. Sewer mains constructed parallel to perennial streams must be designed with prophylactic measures as determined by the Service Authority to protect the pipe in the case of future lateral stream migration.</p>			
<p><b>EN 6.10</b> Update the DCSM to include a protocol for defining Significant Non-RPA Streams during the Perennial Flow Determination (PFD) process and establish standards for protection of these streams, including but not limited to, buffers, steep slope avoidance, development setbacks, and necessary mitigation measures, when the proposed development affects these streams.</p>			
<p><b>EN-POLICY 7:</b> Manage watersheds through a comprehensive watershed management planning-based approach.</p>			
<p><b>ACTION STRATEGIES:</b></p>			
<p><b>EN7.1</b> Develop future watershed management plans. As appropriate, the following resources and/or components are to be considered:</p>			
<p><b>EN7.1.a</b> Existing impervious surfaces.</p>			
<p><b>EN7.1.b</b> Stormwater management facilities.</p>			
<p><b>EN7.1.c</b> Water quality monitoring stations.</p>			
<p><b>EN7.1.d</b> Stormwater hotspots/flooding.</p>			
<p><b>EN7.1.e</b> Forest cover/tree cover.</p>			
<p><b>EN7.1.f</b> Topography.</p>			
<p><b>EN7.1.g</b> Soils and geologic features.</p>			
<p><b>EN7.1.h</b> Floodplains.</p>			
<p><b>EN7.1.i</b> Hazardous waste sites.</p>			
<p><b>EN7.1.j</b> Wells.</p>			
<p><b>EN7.1.k</b> Land ownership (public/private).</p>			
<p><b>EN7.1.l</b> Subwatershed area.</p>			
<p><b>EN7.1.m</b> Land use, by zoning category.</p>			
<p><b>EN7.1.n</b> Downstream water resources.</p>			
<p><b>EN7.1.o</b> Include public input.</p>			
<p><b>EN7.1.p</b> Address the protection, conservation and restoration of RPA and significant non-RPA stream corridors, riparian forest buffers and jurisdictional wetlands and waters.</p>			
<p><b>EN7.1.q</b> Reflect the goals and objectives of improving habitat and water quality.</p>			
<p><b>EN7.1.r</b> Determine the most vulnerable subwatersheds and evaluate restoration capabilities.</p>			
<p><b>EN7.1.s</b> Rank priority subwatersheds for implementation and identify areas that merit prompt restoration actions.</p>			
<p><b>EN7.1.t</b> Identify solutions for protecting and restoring streams and other natural resources in the watershed.</p>			





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EN7.1.u Identify implementation mechanisms such as amendments to the Open Space and Corridors Map.			
EN7.1.v Include a mechanism to monitor progress.			
EN7.2 Present completed watershed management plans to the Board of County Supervisors and consider these in making land use and Capital Improvement Program (CIP) decisions.			
EN7.3 Utilize watershed plans to define the condition of County streams and waterways, and define streams in need of restoration. Produce a map to include streams in need of restoration.			
EN7.4 At the time of a rezoning and/or special use permit, seek commitments to improve the conditions of streams in need of restoration affected by the proposed project and other issues identified in the watershed plan.			
EN7.5 Expand public input opportunities during the watershed management planning process to ensure that community ideas are incorporated into watershed planning efforts and promote increased understanding of stormwater management and watershed issues.			
EN-POLICY 8: In preparation for new State stormwater regulations and Federal Chesapeake Bay Total Maximum Daily Load (TMDL) requirements, develop new standards for stormwater management.			
<b>ACTION STRATEGIES:</b>			
EN8.1 Employ field observation as well as stormwater management plans to assess the impact of proposed development on downstream properties.			
<del>EN8.2 Amend the DCSM to require the detention of the one-year storm in addition to the traditional control of the two- and 10-year storm events.</del>	Completed, but only required under certain circumstances specifically as it relates to downstream channel protection. See DCSM Section 701.03 and 721.07. (Watershed)		
<del>EN8.3 Amend the DCSM to require conceptual stormwater management details for the entire site prior to preliminary site plan approval of large development plans with multiple sections and phases.</del>	Completed, LID Concept Plan is required prior to submission of Site Plan. See DCSM Section 721.02 (Watershed)		
<del>EN8.4 Amend the DCSM to develop standards for acceptable retro-fit techniques for re-development and incentives to expand and encourage their use.</del>	Completed, see DCSM Section 721.03 (Watershed)		
EN8.2 Identify <b>Maintain</b> the location of all County-maintained stormwater facilities and County-inspected LID projects on the County Mapper.	Completed, but ongoing. New facilities are added to County GIS upon receipt of approved asbuilts. (Watershed)		
EN8.3 Amend the DCSM to encourage reductions in impervious surfaces, including the following:			
EN8.3.a Reassessment of parking requirements.			
EN8.3.b Compact car parking.			





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EN8.3.c Structured parking for high-density mixed use developments.			
EN8.3.d Shared parking.			
EN8.3.e Expanded use of semi-pervious and pervious surfaces.			
<del>EN8.7 Amend the DCSM to prohibit direct discharge of untreated stormwater from a developed site into jurisdictional wetlands and waters. Ensure discharge does not exceed non-erosive velocities.</del>	Completed, see DCSM Section 701.03 (Watershed)		
EN8.4 Amend the DCSM to require the use of appropriate native plant species in vegetated stormwater facilities and low impact development features to facilitate removal of nutrients from the stormwater flow.			
<b>EN-POLICY 9: Ensure the high quality of public drinking water sources.</b>			
In addition to the policies and action strategies listed for surface and groundwater protection, the following action strategies will serve to implement this policy:			
<b>ACTION STRATEGIES:</b>			
EN9.1 Amend the Zoning Ordinance to develop a Drinking Water Reservoir Protection Overlay District to protect the quantity and quality of public drinking water supplies, to include the following:			
EN9.1.a Minimum setbacks from reservoirs.			
EN9.1.b Minimum setbacks for the installation of septic fields, tanks, or other on-site subsurface sewage disposal systems from the shoreline of reservoirs.			
EN9.1.c Enhanced erosion and sediment control measures.			
EN9.2 Encourage farmers to develop conservation plans for agricultural activities undertaken within the Lake Manassas and Occoquan Reservoir watersheds.			
EN9.3 Continue to support the Occoquan Watershed Monitoring Laboratory (OWML), the Northern Virginia Regional Commission's technical studies, and the multi-jurisdictional Occoquan watershed program. Obtain annual reports for presentation to the Board of County Supervisors.			
EN9.4 Promote open space uses and acquire land along the Occoquan Reservoir for special use parks that are designed to promote an appreciation of the natural environment and facilitate passive recreation (such as fishing, hiking, and non-motorized boating).			
EN9.5 Actively support Fairfax County Water Authority efforts to increase compliance and enforce regulations established by its Occoquan Shoreline Easement Policy.	Clarification (Planning)		
EN9.6 Request that the Occoquan Watershed Monitoring Laboratory (OWML) continue to identify point/non-point pollution sources upstream from the reservoirs and to suggest ways that the non-point source pollution can be eliminated or controlled.			



From the Piedmont to the Potomac

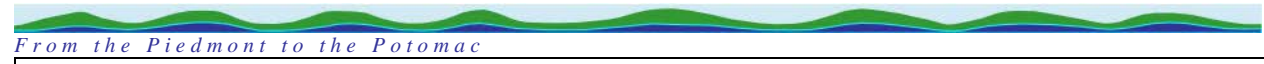
<b>Proposed</b>	<b>Comments</b>	<b>Type</b>	<b>New Location</b>
<b>EN9.7</b> Evaluate groundwater conditions for potential pollution using available data from DEQ (for leaking underground storage tanks) and the Prince William County Health Department (for failing septic systems) when reviewing rezoning and/or special use permit applications.			
<b>EN9.8</b> Promote the use of secondary containment storage tanks for petroleum products and other hazardous materials for all development and redevelopment.			
<b>EN9.9</b> Require the use of pre-treatment devices for stormwater runoff and/or small spills or leakages on sites where petroleum products or hazardous wastes are handled as is currently required for all fuel dispensing facilities.			
<b>EN9.10</b> Encourage conservation of natural features and limit impervious surfaces in areas where groundwater is the water supply. Develop procedures to protect or improve, if necessary, the quality of groundwater in areas where groundwater is the water supply.			
<b>EN9.11</b> Based on recommendations from the Northern Virginia Regional Water Supply Plan, implement policies, strategies, and regulations necessary to ensure adequate supplies of potable water in areas that rely on groundwater for their water supply.			
<b>EN-POLICY 10:</b> Preserve natural vegetation – especially existing and mature trees and provide for the replacement and management of urban forest resources.			
<b>ACTION STRATEGIES:</b>			
<b>EN10.1</b> Develop, adopt, and implement a Tree Preservation Ordinance incorporating standards for both Countywide and watershed goals. Solicit community input to help identify and define priorities for tree preservation and tree cover standards.			
<b>EN10.2</b> Amend the Zoning Ordinance and the DCSM to allow reductions in minimum lot areas, setbacks, street frontage, buffers, and other such requirements to encourage preservation of natural vegetation and other desirable features.			
<b>EN10.3</b> Amend the DCSM to require tree preservation plans when claiming credits for tree preservation or proffer compliance to ensure that trees designated for preservation will survive construction in a manner that substantially retains their predevelopment level of biological function, health, and structural condition.			
<b>EN10.4</b> Utilize existing data and analysis tools to identify the County’s mature hardwood forests and the location of those forests. Maintain and periodically update an inventory of forest cover in the County and make this information available to the public on County Mapper.			
<b>EN10.5</b> Maintain the County’s Registry of Historic and Champion Trees. Use this registry at the time of rezoning and special use permit application to determine the presence of such trees on the property.			
<b>EN10.6</b> Establish and adopt reforestation standards to address areas where unauthorized clearing has occurred. Amend relevant ordinances, as needed, including the Zoning Ordinance and DCSM, to support these standards.			
<b>EN10.7</b> Encourage utility companies to share easements where technically feasible to reduce the amount of disturbance along a roadway and provide enough areas for street trees.			
<b>EN-POLICY 11:</b> Increase the environmental awareness of County residents, organizations, businesses, and government agencies.			
<b>ACTION STRATEGIES:</b>			





From the Piedmont to the Potomac

Proposed	Comments	Type	New Location
<p><b>EN11.1</b> Make the following additional GIS layers available to the public on the County Mapper:</p>			
<p><b>EN11.1.a</b> Wetlands.</p>			
<ul style="list-style-type: none"> <li>• <del>Canopy.</del></li> </ul>	Completed (Watershed)		
<ul style="list-style-type: none"> <li>• <del>Coverage.</del></li> </ul>	This is an error. Was part of item above “Canopy Coverage” (Watershed)		
<p><b>EN11.1.b</b> Protected open space.</p>			
<ul style="list-style-type: none"> <li>• <del>All stormwater infrastructure, including County-maintained stormwater facilities and County-inspected LID facilities.</del></li> </ul>	Completed, will be continually maintained (Watershed)		
<p><b>EN11.1.c</b> Update the Watershed layer to include the total number of acres and percentage breakdown of vegetative cover types and the percentage of impervious surfaces in sub watersheds.</p>			
<p><b>EN11.2</b> Conduct a series of workshops to educate, engage and increase communication among citizens, organizations, businesses, industries, government officials, and agencies about sustainable development, green infrastructure, and associated opportunities.</p>			
<p><b>EN11.3</b> Publish a webpage and associated e-notification component to provide information and updates on the County’s green development and green infrastructure initiatives.</p>			
<p><b>EN11.4</b> Publish a webpage and associated e-notification component to promote and provide current information on local Farmer Markets and other sources of locally produced food.</p>			
<p><b>EN11.5</b> Continue to expand or exceed the recycling rate mandated by the DEQ and publish on the webpage developed through EN11.3 above.</p>			
<p><b>EN11.6</b> Update current informational brochures explaining the importance of soils and the proper maintenance of private sewer/septic systems including the importance of such maintenance to the owner and to the environment. Make this information available to users of these systems.</p>			
<p><b>EN11.7</b> Provide brochures on sustainable practices for home gardening and lawn care. Work with local nurseries and retail facilities that sell fertilizers to ensure these brochures are distributed to the public.</p>			
<p><b>EN11.8</b> Explore partnership opportunities with the U.S. Army Corps of Engineers and DEQ regional offices responsible for implementing federal and state regulations over streams and wetlands to regulate wetlands and other jurisdictional waters, including perennial and intermittent streams. Resource protection measures will include avoidance, impact minimization and compensatory mitigation, such as buffer protection and enhancement, as well as stream and wetlands restoration or creation.</p>			
<p><b>EN11.9</b> Work with local regulations (DCSM), the Service Authority, and the Virginia Cooperative Extension to promote low water use landscapes on new and existing development through conservation landscaping principles, including reducing lawn areas.</p>			
<p><b>EN11.10</b> Increase public awareness about how to utilize tree preservation to protect community appearance and property values, and provide other economic and community benefits.</p>			
<p><b>EN11.11</b> Through public education and outreach, promote the use of phosphorous-free lawn fertilizer.</p>			



From the Piedmont to the Potomac

<b>Proposed</b>		<b>Comments</b>	<b>Type</b>	<b>New Location</b>
<b>ENERGY POLICIES AND ACTION STRATEGIES</b>				
<b>EN-POLICY 12: Develop a Community Energy Master Plan (CEMP).</b>				
<b>ACTION STRATEGIES:</b>				
<b>EN12.1</b>	Collect data and establish a baseline that best defines the energy, water, waste water and greenhouse gas data situation for County government operations and the community at large.			
<b>EN12.2</b>	Incorporate input from all major stakeholders, including public authorities, residents, businesses, community associations, elected officials, schools, universities and colleges.			
<b>EN12.3</b>	Establish a long-term vision with clear targets supported by short to medium term implementation strategies.			
<b>EN12.4</b>	Define targets, tracking measurements reporting, and accountability for overall energy vision and CEMP implementation.			
<b>EN-POLICY 13: Implement cost-effective energy-conservation measures at County facilities.</b>				
<b>ACTION STRATEGIES:</b>				
<b>EN13.1</b>	Remain active in the Environmental Protection Agency's (EPA) ENERGY STAR program and continue to use the EPA's Portfolio Manager to rate the energy performance of eligible County-owned buildings. Audit County facilities, including Fleet Management, for energy use and pursue projects with a payback period of less than 10 years.			
<b>EN13.2</b>	Consider giving priority to facilities that rate 75 or higher according to the ENERGY STAR Performance Rating when leasing new space for County use or when renewing existing leases.			
<b>EN13.3</b>	Consider designing and building any County facilities so they rate 75 or higher by using the ENERGY STAR performance rating system and measure performance annually using EPA's Portfolio Manager benchmarking tool.			
<b>EN13.4</b>	Consider designing and constructing County renovation projects consistent with energy performance standards at least as stringent as Leader in Energy and Environmental Design (LEED) Silver or Green Globes – 2 Globes ratings whenever those projects are valued at 50% of the assessed building value. When replacing or installing appliances and equipment in County facilities, select items that are ENERGY STAR compliant whenever available.			
<b>EN13.5</b>	Become a Green Partner with George Mason University (GMU), and encourage the use of transit to access the GMU-Prince William campus. Explore opportunities to partner with non-public schools and other transportation systems to reduce the energy used for public school transportation.			
<b>EN13.6</b>	Consider re-directing local consumer utility tax revenues to support new or enhance existing energy conservation-related funds, such as the existing state/federal weatherization assistance programs or developing a new low-interest revolving loan fund for energy efficiency investments made by low-income homeowners and small businesses in the County.			



From the Piedmont to the Potomac

Proposed	Comments	Type	New Location
<p><b>EN13.7</b> Require new residential development seeking rezoning and site plan approval to maximize opportunities for transit and to consider potential for solar/wind energy production in the development. Encourage construction that qualifies for ENERGY STAR Qualified Homes designation.</p>			
<p><b>EN-POLICY 14:</b> Provide recognition and incentives for energy conservation at non-government facilities and residences.</p>			
<p><b>ACTION STRATEGIES:</b></p>			
<p><b>EN14.1</b> Consider establishing a separate, lesser rate of tax for energy efficient buildings as defined in Code of Virginia § 58.1-3221.2.</p>			
<p><b>EN14.2</b> Consider additional incentives (financial, tax, expedited permits, density bonuses, etc.) for development that builds to LEED, Green Globes, and/or ENERGY STAR standards.</p>			
<p><b>EN14.3</b> Recognize and publicize those in the community whose facilities achieve LEED, Green Globes, and/or ENERGY STAR certifications.</p>			
<p><b>EN-POLICY 15:</b> Provide recognition and incentives for renewable energy application at non-government facilities and residences.</p>			
<p><b>ACTION STRATEGIES:</b></p>			
<p><b>EN15.1</b> Evaluate current policies and ordinances to remove obstacles to renewable energy (wind, solar, biomass, landfill gas, geothermal, etc.) application.</p>			
<p><b>EN15.2</b> Evaluate and recommend incentives for projects that create on-site renewable energy application.</p>			
<p><b>EN15.3</b> Recognize and publicize those projects that use on-site renewable energy.</p>			
<p><b>EN-POLICY 16:</b> Provide leadership by example and education in the areas of energy efficiency, demand response and renewable energy application.</p>			
<p><b>ACTION STRATEGIES:</b></p>			
<p><b>EN16.1</b> Consider inventorying greenhouse gas (GHG) emissions from County facilities to create a baseline and using it to develop and implement short, medium and long-term plans to reduce or eliminate them by 2050. Also consider the feasibility of creating a short, medium, and long-term community level GHG baseline and reduction plan. In setting these goals, evaluate reduction goals in other programs, plans and reports such as the Virginia Energy Plan, Cool Counties, and COG Climate Registry Report to determine a reduction goal that is challenging yet achievable.</p>			
<p><b>EN16.2</b> Consider re-investing utility budget savings and cost-avoidance from completed energy projects in future energy efficiency and renewable energy projects as well as the creation of a Sustainability Office or Group.</p>			
<p><b>EN16.3</b> Consider providing active citizen education and awareness about energy efficiency, renewable energy, and “demand response” (i.e. shifting power usage away from periods when usage is peaking such as hot weekday summer afternoons) best practices.</p>			



From the Piedmont to the Potomac

<b>Proposed</b>		<b>Comments</b>	<b>Type</b>	<b>New Location</b>
<b>EN16.4</b>	Consider reducing the rate of growth of the County government’s energy use by 40%.			
<b>EN16.5</b>	Consider reducing electricity use in County facilities by 10% of the 2006 level by 2022.			
<b>EN16.6</b>	Consider reducing natural gas use in County facilities by 7.5% over the next 10 years.			
<b>EN16.7</b>	Consider reducing total diesel/gasoline use by all County vehicles by 10% over the next five years.			
<b>EN16.8</b>	Consider reducing total diesel/gasoline used for County government landscaping operations by 20% over the next five years.			
<b>EN16.9</b>	Consider purchasing the equivalent of 12% of the County’s 2009 level electricity needs from renewable sources either through Dominion Virginia Power and Northern Virginia Electric Cooperative (NOVEC) rate offerings, renewable energy credits, or through on-site generation.			
<b>EN16.10</b>	Publicize energy conservation efforts at County facilities. <del>Prominently display the ENERGY STAR label on County-owned buildings that qualify. Post building energy “report cards” for County-owned buildings on the County’s website to highlight the impact of energy conservation efforts.</del> Encourage Prince William County Public Schools to do the same.	Currently we do not participate in the energy “report card” program sponsored by ENERGY STAR. (Planning)		
<b>EN16.11</b>	Continue active participation by County government facilities in demand response programs.			
<b>EN16.12</b>	Consider utilizing life-cycle cost analysis when constructing new facilities.			
<b>EN16.13</b>	Continue increasing landfill gas utilization at the County landfill with the goal of completely eliminating flaring.			
<b>EN16.14</b>	Continue exploring waste reduction and re-use technologies in lieu of landfilling.			



Proposed	Comments	Type	New Location
<p><b>DRAFT</b> Draft Date: 4/19/2017</p> <p><b>Figure 1: Permeable and Erodible Soils</b></p> <ul style="list-style-type: none"> <li>Permeable Soils</li> <li>Erodible Soils</li> </ul> <p>Rural Area Boundary                  Manassas National Battlefield Park                  Marine Corps Base Quantico                  National Wildlife Refuge                  Prince William Forest Park                  Quantico National Cemetery</p> <p>This map cannot be interpreted separately from the Comprehensive Plan.                  For more information go to [web page address].</p> <p>5 Miles</p>			



Proposed	Comments	Type	New Location

