ENVIRONMENT

Intent

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 co-existing 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.

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.

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.

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 must evolve towards a sustainability approach in its planning and development policies. Prince William County embraces the "green" movement, recognizing the environmental and economic benefits of our green infrastructure, considering emerging green technology, ensuring a multi-

COMMENTS/NOTES

faceted decision-making approach that balances green and gray infrastructure needs**,** while balancing environmental, economic, and social issues.

On rezoning and special use permit applications, ~~the County~~ the Zoning Ordinance requires ~~asks for~~ an Environmental Constraints Analysis to determine areas of a site that are suitable for development and those areas that are not. The Environmental Constraints Analysis determines the presence and extent of ~~certain~~ important environmental features as described in this Plan. It ~~and is then~~ 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 environmental protection practices included with those applications.

~~The standards and guidelines presented in this Plan are intended to supplement those reflected in the Chesapeake Bay Preservation Act and Chesapeake Bay Regulations. Prior to development of land, the property owner shall consult the Chesapeake Bay Preservation Overlay District Map, which identifies components of the Chesapeake Bay Act. These components include Resource Protection Areas, Resource Management Areas, and Intensely Developed Areas. A description of these components, and specific regulations regarding the Chesapeake Bay Act, are found in the County's Zoning Ordinance and Design and Construction Standards Manual.~~

~~Information contained in this Plan, and other environmental information available through the County, are provided as a public service by the operators/management of the Prince William County Internet Home Page, County cable television stations, radio stations, print media, and the Virginia Cooperative Extension Service.~~

The components of the Environment Plan include text and fold-out maps as follows:

- Intent, Goal, Policies, and Action Strategies.
- Highly Erodible Soils Map (Figure 1).
- Highly Permeable Soils Map (Figure 2).
- Chesapeake Bay Resource Protection Areas Map (RPAs) (Figure 3)

DEFINITIONS

Canopy: The leaf area of a tree.

Canopy Coverage: The area underneath the dripline of a tree, group of trees or forest.

Contiguous: Abutting, adjoining, or touching and having a boundary, or portion thereof, which is coterminous.

Critical Slope Area: An area with a greater than 15% change in elevation over the same horizontal distance (15% slope) or an erodibility factor K of greater than 0.4.

Forest: A community of woody and herbaceous plants dominated by trees.

Forest Resources: Refers to wildlife habitat values and ecosystem services provided by forests, including but not limited to water purification, reduced air pollution, carbon sequestration, soil stabilization, natural flood control, timber production, etc.

Forest Type: A category defining forests based on the natural groups of different tree species commonly occurring together over large areas, named for one or more dominating species (e.g., birch-beech-maple, oak-hickory).

Mature Hardwood Forest: A forest dominated by deciduous trees with a minimum diameter of 12 inches dbh (diameter at breast height or 4.5 feet from the ground).

Urban Forest: A regional term that incorporates tree resources. Urban forests may include rural, suburban and urban areas. For example, trees in parking lots, streetscapes, buffer areas, natural woodlands and major forested areas, such as Prince William Forest Park.

Green Infrastructure: An interconnected network of green space that conserves natural ecosystem values and functions and provides associated benefits to human populations.

Prime Farmland Soil: Land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops.

Staff may not agree with "critical slope area" as defined by the USDA and included here; Needs more discussion.

Legally Perennial Stream: All water bodies identified as perennial when using a scientifically valid system of in-field indicator. A stream that scores ≥ 25 points through the County's approved Perennial Flow Determination (PFD) process. **Perennial Stream**: A body of water flowing in a natural or man-made channel year-round, except during periods of drought. **Significant Stream**: Stream that show strong morphological conditions with a defined channel sorted substrate and/or groundwater input and/or supports aquatic life. A stream that scores ≥ 14 points through the County's approved Perennial Flow Determination (PFD) process. **Jurisdictional Wetland**: Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil (hydric) conditions. Three criteria must be verified to identify a jurisdictional wetland – hydrophytic vegetation, hydric soils and wetland hydrology. **Wetland**: Lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface.	
GOAL: 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.~~	
~~GENERAL~~ **ENVIRONMENTAL POLICIES AND ACTION STRATEGIES** **EN-POLICY 1:** Consider environmental concerns at all levels of ~~land use related~~ decision-making. **ACTION STRATEGIES:**	
1. Develop other critical maps to be included as part of the Environment Plan, which may include the following:	

• Existing Canopy Coverage map. • Impervious Area map • Vegetative Cover Types map • Wetlands map • Existing Conservation Easements map • Prime Farmland Soils map • Critical Stream Areas map	
2. Update the Zoning Ordinance environmental constraints analysis requirements to include the following: ~~show the following as three separate items:~~ a. Approximate delineation of all wetland areas b. Approximate location of all Chesapeake Bay Resource Protection Areas c. All intermittent streams d. Ponds, culverts, and ditches e. Contributing drainage areas f. Existing structures, roads, and the locations of known utilities and easements g. Sufficient information on adjoining parcels to provide a preliminary assessment of stormwater impacts from the site, such as 100-year floodplains, wetlands, stormwater infrastructure, streams, and other sensitive features h. Identification of the adequacy of receiving surface waters into which stormwater will be proposed for discharge i. Proposed limits of disturbance. j. An accurate existing vegetation map of the entire site k. An accurate location of all Specimen Trees l. Prime Farmland Soils m. Identification of environmental features proposed for preservation or conservation.	
~~3. All County offices 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.~~	Relocated to EN Policy 2 AS 6

3. Identify and pursue opportunities for open space preservation and for park network development connecting Quantico and Leesylvania State Park with Washington, D.C., using greenway corridors along the Potomac River and its tributaries, as identified in the Open Space and Corridors Map.	
4. ~~Ensure that the County is cognizant of the environmental issues and impacts of development projects of adjacent jurisdictions that might affect the health, safety, and welfare of the citizens of Prince William County.~~ 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.	
5. Encourage developers to incorporate into site planning various environmentally sensitive approaches to stormwater management, including low-impact development (LID) techniques ~~on appropriate sites for example, as outlined in the Center for Watershed Protection manuals,~~ and preservation and restoration of natural land forms, as discussed in this Plan and the Community Design Plan.	
~~**6.** Ensure that open space is maintained in the County and that a minimum of 39 percent of the total land area in the County will be retained as open space by build-out of the Comprehensive Plan, through appropriate amendments to the Zoning Ordinance or other appropriate documents, to increase open space requirements.~~	Now EN Policy 3
~~**7.** Amend the open space requirements in the Zoning Ordinance to ensure preservation/ provision of open space within all developments.~~	Relocated to EN Policy 3
EN-POLICY 2: Develop and implement a data collection, tracking, and analysis structure to monitor and establish the county's environmental baseline, resource status, and sustainability. **ACTION STRATEGIES:**	New Policy
1. Utilize the information gathered through the studies and assessments included in Policy 2, above, to establish criteria to establish and priorities for protecting ecologically important areas during land use decision-making processes.	

2. Map all Environmental Resources to prioritize conservation planning, and make this information available on the County Mapper.	
3. Complete a Countywide Stream Assessment, post the report online and make this information available on the County Mapper.	
4. Inventory county-owned properties, to include Park Authority and Prince William Public School properties, to identify environmental resources, as identified in the Environmental Constraints Analysis. Provide inventory/mapping of forest areas in Prince William County and make this information available to the public.	
5. Utilize tree assessment tools ~~Develop a methodology~~ to account for the depreciation of renewable resources (such as forest, groundwater) and non-renewable resources (such as unique habitat) when evaluating the economic health of the County.	Previously EN Policy 1 AS 1 in existing text
6. All County offices, to include Park Authority and Prince William Public School properties, 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.	Previously EN Policy 1 AS 3 in existing text
7. Conduct a County-wide analysis of the economic value of our existing green infrastructure (native and urban forests) toward energy conservation, storm water control off-sets, property values, protecting and improving water quality, and reducing air pollution.	
8. Develop a baseline analysis of existing tree cover from available historic data from the year 2000 or earlier.	
9. Publish a report each year detailing the status of the County's environmental assets.	

EN-POLICY 3: ~~Ensure that a minimum of 39 percent of the total land area in the County will be retained as open space by build-out of the Comprehensive Plan.~~ To further support OS-Policy 5, a minimum of 39 percent of the total area in the County, (exclusive of acreage of Marine Corps Base Quantico for all calculation purposes), will be retained as protected open space, as defined in the Open Space Chapter.	Previously EN Policy 1 AS 6 in existing text
ACTION STRATEGIES:	
~~1. Amend the Zoning Ordinance to increase open space requirements.~~	
1. Encourage cluster development to protect contiguous natural open space, as defined by the Zoning Ordinance.	
~~2. Amend the open space requirements in the Zoning Ordinance to ensure preservation/ provision of open space within all developments.~~	
2. Amend the cluster ordinance to ensure that open space is permanently protected, as defined in the Open Space Chapter and managed as a natural area.	
3. Amend the Zoning Ordinance to ensure that homes and commercial structures are located at least 100 feet from conservation and preservation areas - that to avoid intrusion and prevent negative impacts.	**Staff does not agree; More discussion needed.**
4. Amend the Zoning Ordinance and DCSM to ensure that proffered conservation and preservation areas shall not be allowed on residential lots less than 1 acre.	
5. Develop and publish guidelines for homeowner associations that details how to manage conservation areas, while providing information on responsibilities and a checklist of standard management measures and benefits.	

6. 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.	
7. Encourage the use of open space/conservation easements 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.	
8. The county shall review and implement opportunities for a Purchase of Development Rights (PDR) Program.	
9. 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 Purchase of Development Rights (PDR) Program.	
10. Initiate and provide public information programs each year aimed at conserving lands in the watershed through civic engagement community stewardship, and agency partnerships.	
11. Investigate the benefits of ~~establishing~~ involving a private conservancy for the purpose of purchasing privately held lands for preservation purposes and seeking perpetual conservation easements to preserve open space.	Previously EN Policy 12 AS 4 in existing text
12. ~~Continue the progress towards~~ Support initiatives promoted by the County's Trails and Blueways Council to establish~~ing~~ a Countywide greenway and path system through the voluntary donation of land and conservation easements from interested property owners, as a means of environmental protection.	Previously EN Policy 11 AS 4 in existing text

CLIMATE & AIR QUALITY POLICIES ~~AND ACTION STRATEGIES~~ **EN-POLICY 4:** ~~Improve~~ Monitor air quality and collaborate with DEQ, MWCOG, and other regional entities to identify and implement strategies to improve air quality. ~~within Prince William County~~.	Previously EN Policy 3 in existing text
ACTION STRATEGIES: **1.** ~~Establish procedures to monitor air quality in the County.~~ Support and coordinate with the Council of Governments (COG) Metropolitan Washington Air Quality Committee's Air Quality Monitoring Program, the Climate, Energy and Environmental Policy Committee for the region and within the county.	
2. Analyze and suggest locations for air, water and energy monitoring sites to encourage COG and the Virginia Department of Environmental Quality (DEQ) ~~Encourage the Department of Environmental Quality (DEQ)~~ to establish additional air quality monitoring stations in the County~~.~~, as applicable.	
~~**3.** Seek input from the DEQ on rezoning or special use permit applications that include facilities that are likely to produce gaseous emissions or potentially harmful airborne particulates, in cooperation with the Air Quality Committee at the Metropolitan Washington Council of Governments (MWCOG).~~	
3. 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.	
4. Continue to maintain regional COG ~~Encourage and pursue the development of inter-jurisdictional~~ agreements and contingency plans to deal with stationary and mobile sources of pollution to protect residents, and especially sensitive residents (such as the young, the elderly, and sensitive populations).	
5. Develop a process to ~~D~~determine if adequate controls are in place to prevent metals, Polychlorinated Biphenyls (PCBs), and other carcinogenic materials from entering the trash stream. ~~of public and private incinerators. Thereafter, continue to monitor this issue and ensure adequate controls are in place to maintain the safety of the environment.~~	

6.	~~Conduct~~ Request MWCOG or 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.	
~~**7.**~~	~~Encourage the reduction of emitted gas pollutants from point sources.~~	
7.	~~Reduce pollution impacts from vehicles, by designating compact urban growth areas and by encouraging the development of mixed use projects as described in the Long-Range Land Use Plan~~. 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 contain the appropriate support facilities, such as bus shelters, dedicated bicycle lanes, bicycle parking facilities, trails, crosswalks, sidewalks, etc.	
8.	~~Encourage the Virginia Department of Transportation (VDOT) and~~ Ensure that development plans, Virginia Department of Transportation (VDOT) projects, and County projects ~~developers to~~ preserve and/or re-establish vegetative buffers along ~~arterial~~ roadways as a means of filtering and absorbing pollutants, and reducing noise pollution.	
9.	Reduce ~~pollution from~~ vehicle pollution by encouraging the use of ~~advanced technology and~~ alternative modes of transport – including van/carpooling, public transit, bicycles, light rail, and pedestrian paths. ~~Encourage the use of alternative fuels (such as natural gas and/or electric power) for public transit and school buses.~~	Last sentence covered in Energy section.
~~**10.**~~	~~Encourage Utility companies shall share easements where technically feasible to reduce the amount of disturbance along a roadway and provide enough areas for street trees.~~	Relocated to EN Policy 13 AS 12
10.	Locate public facilities, including schools, parks and libraries, to maximize pedestrian access and reduce air pollution.	
11.	At the time of rezoning, encourage site layouts that orient structures to maximize solar gain in the winter months and prevailing winds in the summer months.	

~~**TOPOGRAPHY & SOILS POLICIES AND ACTION STRATEGIES**~~

WATERSHED PLANNING AND SUSTAINABILITY POLICIES

~~**EN-POLICY 4:** Protect and manage the County's soils and natural vegetation.~~

EN-POLICY 5: Protect the natural landscape and its associated economic, aesthetic and ecosystem benefits.

ACTION STRATEGIES:

~~1. Preservation/conservation of certain natural land forms is important to the County in achieving water quality targets, good community design objectives, and ecological diversity. Accordingly, discourage development adjacent to a perennial stream in the following areas:~~

- ~~Wooded slopes of 25 percent and greater with highly erodible soils, permeable soils or marine clay soils.~~
- ~~Wooded slopes of 25 percent and greater having a continuous area of 10,000 square feet.~~
- ~~Wooded slopes of 15 percent and greater with highly erodible soils, permeable soils, or marine clay soils.~~
- ~~Wooded 100-year floodplain.~~
- ~~Non-wooded slopes of 25 percent and greater with highly erodible soils, permeable soils, or marine clay soils.~~
- ~~Non-wooded slopes of 25 percent and greater having a continuous area of 10,000 square feet~~
- ~~Non-wooded slopes of 15 percent and greater with highly erodible soils, permeable soils or marine clay soils.~~
- ~~Non-wooded 100-year floodplain.~~

1.	Development proposals shall identify and preserve critical slope areas, especially the following: • All areas of 25% or greater slopes contiguous to the 100-year floodplain. • If no 100-year floodplain is present, 25% or greater slopes that begin within 50 feet of the stream channel. For impacts to slopes between 15% and 24% contiguous to streams or 100-year floodplains, require mitigation to offset impacts.	
2.	Amend the DCSM to require identification and protection of all areas with shrink/swell soils, critical slope areas, and/or with underlying marine clays. Where impacts are unavoidable, require mitigation.	
3.	Seek commitments prior to the time of rezoning and special use permit approval that ~~many of~~ the landforms identified in the Environmental Constraints Analysis ~~action strategy 1~~ above will be set aside as a preservation/conservation area.	
4.	Use native plants that are adapted to local soil and weather conditions when re-vegetating disturbed areas~~.~~	
5.	~~Develop, in coordination with the Community Design Plan general~~ Amend the design evaluation guidelines, criteria, and techniques included in the Community Design Chapter to better ~~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.	Previously EN Policy 5 AS 6 in existing text
6.	Where toxic waste soil contamination is suspected, ~~request~~ 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.	
7.	Prohibit development at toxic waste sites to the extent provided by law. If environmental clean-up has been conducted to meet state and federal standards, development can be proposed.	

8. Monitor the effectiveness of the Prince William County Erosion and Sediment Control Ordinance and upgrade as appropriate.	
9. For properties that include streams, tidal or non-tidal wetlands, headwaters, 15% or greater slopes, headwaters, or other environmental features of significance, require enhanced erosion and sedimentation controls, including super silt fences, erosion control blankets, soil stabilization matting, temporary vegetative cover, and other controls, as required by the Erosion and Sediment Control Program Administrator.	
10. County development and transportation projects and any other projects constructed using taxpayer funds 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.	
11. For State development and transportation projects, the County shall coordinate with state agencies to ensure that all projects within the County demonstrate leadership standards by incorporating the highest environmental standards, meeting or exceeding the County's minimum standards.	
12. Request courtesy review of erosion control plans for all federal and state projects in Prince William County.	
13. Amend the Zoning Ordinance to establish minimum standards and thresholds that limit clearing and grading on developing properties.	
14. ~~Continue to identify the locations of critically eroding shorelines and stream banks. Development of such areas shall require the appropriate stabilization or restoration as identified in the County's Design and Construction Standards Manual (DCSM).~~ Promote the use of vegetative or "soft" stabilization techniques along shorelines to maintain a natural buffer.	
15. Address issues of sea level rise along shorelines in County. Utilize current data and information on sustainable shorelines to protect shorefronts and property and incorporate sea level rise into County policy.	

16. At the time of rezoning or special use permit, require development sites to be designed in a manner that limits clearing and grading to the minimum area needed to construct the proposed use.	
17. Update the DCSM to preclude the use of all invasive, non-native species.	
SURFACE & GROUNDWATER POLICIES ~~AND ACTION STRATEGIES~~ **EN-POLICY 6:** Maintain or enhance the integrity of surface bodies of water ~~(lakes, ponds, rivers, and streams)~~ and watersheds. **ACTION STRATEGIES:**	Previously EN Policy 5 in existing text
~~**1.** Encourage water quality improvement during the redevelopment of properties located within Intensely Developed Areas (as defined in the Zoning Ordinance), and other areas targeted for redevelopment, through correction of improperly maintained/functioning Best Management Practices, replacement of inefficient sanitary sewer lines or failing septic systems, use of low-impact development techniques – for example as outlined in the Center for Watershed Protection manuals – and re-vegetation along streams.~~ **1.** As appropriate, for new construction and redevelopment, phosphorous loading per acre per year are to be in accordance with final State stormwater regulations.	
~~2. Establish a program to monitor the effectiveness of the implementation of Chesapeake Bay Regulations.~~	
2. Locate away from the County's water bodies those nonresidential activities that use, store, or manufacture significant quantities of toxic substances.	
3. 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 storm water quality to prevent contamination.	
~~**6.** To the extent permissible under law, require industries and utilities to monitor for chemical leaks.~~	
~~a. 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.~~	Relocated to EN Policy 5 AS 5
~~**7.** 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 buffer areas along streams to keep out livestock, use of livestock water devices away from stream, and grazing rotation plans.~~	
~~**8.** Continue and promote a local, coordinated "Adopt-a-Stream" program.~~	
~~**9.** Encourage the preservation of a natural buffer of existing woodland or forestation area of at least 50 feet along each side of all waterways that are not otherwise protected under the Chesapeake Bay regulations or similar legislation.~~	Relocated to EN Policy 10 AS 6
~~**10.** Encourage cluster development in areas of the County that have steep slopes and highly erodible soils.~~	Relocated to EN Policy 8 AS 1
~~**11.** Continue to implement a watershed management program, as set forth by the County's Public Works Department, to provide on-site stormwater management and natural management/low impact development.~~	
4. Require adherence to the following guidelines for determination of density or intensity of development:	

	RESIDENTIAL Preclude the development of ~~habitable~~ structures within 100-year floodplains. The allowable dwelling unit density for a property in the Urban and Suburban Area shall be calculated based on the area outside the Environmental Resource (ER) area, which includes the floodplain, the Chesapeake Bay RPAs, and areas shown in ~~an~~ the environmental constraints analysis submitted with a rezoning or special use permit application with wetlands; 25 percent or greater slopes; areas with 15 percent or greater slopes in conjunction with soils that have severe limitations; soils with a predominance of marine clays; public water supply sources; wetlands and critically erodible shorelines and stream banks. 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.	
	NON-RESIDENTIAL On non-residential-zoned property encumbered with areas of 100-year floodplain or ~~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.	
5.	Develop and distribute public service information to reduce nutrient loading in stormwater runoff from yards and farms.	
6.	Use the Virginia Marine Resources Commission (VMRC) criteria for the Siting of Marinas or Community Boat Moorings in evaluating future waterfront access sites to the County.	

7. Encourage innovative stormwater management techniques. Promote LID (Low-Impact Development) and on-site stormwater management (SWM).	
8. ~~Encourage that~~ Except where a crossing is unavoidable, ~~needed~~ public utilities ~~sewer force mains, petroleum lines, and hazardous substances lines~~ shall be located outside of the 100-foot Resource Protection Area buffer, wetlands, and other water bodies. Where impacts are unavoidable, require mitigation backed by financial assurances, such as bonds or escrows.	Previously EN Policy 9 AS 1 in existing text
EN-POLICY 7: Manage watersheds through a comprehensive watershed management planning-based approach.	New Policy
ACTION STRATEGIES:	
1. Develop watershed management plans. As appropriate, the following resources and/or components are to be considered: o Existing impervious surfaces o Determine estimated future impervious surfaces, based on established land use-impervious cover relationships, the most recent comprehensive plan, and zoning information o Stormwater management facilities o Water quality monitoring stations o Stormwater hotspots/flooding o Forest cover/tree cover o Topography o Soils and geologic features o Floodplains o Hazardous waste sites o Wells o Land ownership (public/private) o Subwatershed area o Land use, by zoning category	

o Downstream water resources • Include public input • Address the protection, conservation and restoration of stream corridors, riparian forest buffers and wetlands • Reflect the goals and objectives of improving habitat and water quality. • Determine the most vulnerable subwatersheds and evaluate restoration capabilities • Rank priority subwatersheds for implementation and identifies areas that merit prompt restoration actions • Identify solutions for protecting and restoring streams and other natural resources in the watershed • Identify implementation mechanisms • Include a mechanism to monitor progress.	
2. Present completed watershed management plans to the Board of County Supervisors for adoption and consider these in making land use decisions, including the CIP.	
3. Utilize watershed plans to define the condition of County streams and waterways and define areas that are prioritized for restoration or improvement – Critical Stream Areas (CSAs). Produce a CSA Overlay map-to include areas that require restoration or improvements due to impairment.	
4. At the time of Rezoning and Special Use Permit seek commitment to improve conditions within Critical Stream Areas in proximity to project application or provide restoration project.	
5. Explore the feasibility of developing a citizen-based Watershed Advisory Council to act as a sounding board and vehicle for discussion of watershed issues. Objective of the Council is to incorporate community ideas into watershed planning efforts and increase understanding of stormwater management and watershed issues.	

EN-POLICY 8: Protect waterways and downstream properties from stormwater runoff. **ACTION STRATEGIES:**	New Policy
1. Limit densities on unstable soils, including marine clays, highly erodible and other Category 3 soils. Encourage cluster development to ensure these soil areas remain undisturbed. ~~in areas of the County that have steep slopes and highly erodible soils.~~	Previously EN Policy 5 AS 10 in existing text
2. ~~Continue an enforcement/monitoring program to ensure that, during and after development, peak stormwater flows do not exceed pre-development peak flows, in terms of quantity, quality, and volume~~. Employ field observation as well as stormwater management plans to assess impact of proposed development on downstream properties for water quantity, quality, volume and velocity up to 300 feet downstream.	Previously EN Policy 6 AS 3 in existing text
3. Encourage higher standards for stormwater management ~~Seek and implement stormwater management~~ – including low-impact development standards – that require all development projects to establish systems – preferably natural – for filtering the "first flush" of urban runoff (delivery of disproportionately large amounts of pollutants that occurs during the early stages of a storm) near its source.	Previously EN Policy 7 AS 1 in existing text
4. At the time of rezonings or special use permits, require commitments to manage stormwater to meet one-year and 10-year, and 24-hour storms.	
5. Preclude construction of stormwater management impoundment structures or facilities within tidal or nontidal wetlands and significant streams.	
6. For plans with multiple sections and/or phases, encourage comprehensive stormwater management plans to be developed for the entire development, while being consistent with watershed management plans, prior to preliminary site plan approval.	
7. Encourage enhanced extended detention.	

8. At the time of rezoning or special use permit, encourage the use of constructed stormwater wetlands and the use of multiple controls placed in a series, as appropriate.	
9. At the time of rezoning or special use permit, seek commitments for environmentally-sensitive siting and construction of development to minimize the need for excessive grading. Avoid disturbance of steep slopes, particularly up-slope of natural resource areas, such as wetlands and streams.	
10. Encourage the use of level spreaders and vegetated buffers to minimize the use of piping and/or channels through stream buffers.	
11. Identify the location of all county-maintained stormwater facilities and county-inspected low impact development (LID) projects on the County Mapper.	
EN-POLICY 9: Limit the amount and extent of impervious surfaces to protect water quality. **ACTION STRATEGIES:**	Previously EN Policy 6 in existing text
1. ~~Encourage the minimization of the amount of impervious surfaces of development and utilize~~ Require acceptable retrofit techniques in redevelopment in order to minimize stormwater runoff. ~~through the use of appropriate low-impact development techniques, for example as outlined in the Center for Watershed Protection manuals~~.	
2. At the time of rezoning or special use permit, ~~E~~encourage the use of semi-pervious or pervious surfaces and other low-impact development techniques. ~~for example as outlined in the Center for Watershed Protection manuals.~~	Relocated to EN Policy 10 AS 4
~~**3.** Continue an enforcement/monitoring program to ensure that, during and after development, peak stormwater flows do not exceed pre-development peak flows, in terms of quantity, quality, and volume.~~	Relocated to EN Policy 8 AS 2 and revised

3. Amend the Zoning Ordinance to limit additional parking above the regulatory minimums.	**Needs more discussion and analysis; Staff may not agree; (James City County has this.)**
~~4. At the time of an application for a rezoning or special use permit, seek commitments to use low-impact design, where appropriate, to mitigate the impact of parking areas, for example as outlined in the Center for Watershed Protection Manuals, and encourage structured parking.~~	Relocated to EN Policy 10 AS 4
4. At the time of rezoning or special use permit, seek commitments to reserve 30% of parking areas for compact cars, and encourage shared parking opportunities and other low-impact design strategies in order to reduce impervious surfaces.	
5. At the time of rezoning or special use permit, require structured parking for high-density mixed use developments.	
EN-POLICY 10: ~~Promote~~ Ensure the preservation and use of natural ~~ground surface~~ site features which facilitate the effective management of stormwater runoff. **ACTION STRATEGIES:**	Previously EN Policy 7 in existing text
~~1. Seek and implement stormwater management – including low-impact development standards – that require all development projects to establish systems – preferably natural – for filtering the "first flush" of urban runoff (delivery of disproportionately large amounts of pollutants that occurs during the early stages of a storm) near its source.~~	Relocated to Policy 8 AS 3
1. At the time of rezoning or special use permit, emphasize preservation of wetlands over mitigation. Where impacts are unavoidable, require mitigation within the County backed by financial assurances, such as bonds or cash escrows.	
~~2. Maintain or establish areas of natural vegetation downstream of disturbed soils to help filter sediments and other pollutants.~~	

2. Amend the Zoning Ordinance to prohibit direct discharge of untreated stormwater into wetlands. Ensure discharge does not exceed non-erosive velocities.	
3. At the time of rezoning or special use permit, require commitments to ensure that wetlands proposed for preservation will retain their functionality.	
4. At the time of an application for a rezoning or special use permit, seek commitments to use low-impact design, ~~where appropriate~~, including bioretention and the conservation of natural site features, such as wetlands, slopes, Category 3 soils and forested areas. ~~of mitigate the impact of parking areas, for example as outlined in the Center for Watershed Protection Manuals, and encourage structured parking.~~	Previously EN Policy 6 AS 4 in existing text
5. Encourage the preservation of a natural buffer of existing woodland or forestation area of at least ~~50~~ 100 feet along each side of ~~all waterways~~ significant non-RPA streams and headwaters areas that are not otherwise protected under the Chesapeake Bay regulations or similar legislation. Require mitigation for impacts to waterways where buffers are not provided at the time of rezoning or special use permit, backed by financial assurances, such bonds or cash escrows.	Previously EN Policy 5 AS 9 in existing text; Relocated from EN-6 AS 9 **Staff does not agree; Needs more discussion.**
6. Align new roads to follow the natural contours of the land. Amend the DCSM to include road standards that will allow greater preservation of the natural terrain, water resources and woodland areas.	Relocated from Community Design Chapter.
EN-POLICY 11: Ensure the protection of the County's groundwater and aquifers. **ACTION STRATEGIES:**	Previously EN Policy 8 in existing text
1. ~~Coordinate with~~ Acquire GIS and other information from the Health Department and State Water Control Board and others ~~to identify~~ identifying Critical Groundwater Areas (CGAs) and make this information available to the public on the County Mapper.	

2.	Encourage conservation of natural features and limit impervious surfaces in Critical Groundwater Areas. Develop procedures to protect or improve, if necessary, the water quality of Critical Groundwater Areas.	
3.	Evaluate groundwater conditions for potential pollution, using available data from the Virginia Department of Environmental Quality (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.	
4.	Promote the use of secondary containment storage tanks for petroleum products and other hazardous materials, for all development and redevelopment.	
5.	Review and upgrade, as appropriate, the Best Management Practice and soil and erosion maintenance enforcement program for all types of development.	
~~**6.**~~	~~Conduct a study to predict the pollution content of proposed stormwater management ponds.~~	
6.	Develop an ordinance that requires new wells be tested for toxic and radiological substances at the same time that they are being tested for bacterial contaminants.	
~~**7.**~~	~~Publish a yearly report on the status of the pollution content of the sediment in existing stormwater management ponds.~~	
7.	Preserve prime farmland soils to the maximum extent possible to encourage the production and consumption of locally grown produce. ~~Develop guidelines for the preservation of saprolite (soft, earth, clay-rich, thoroughly decomposed rock formed in place by chemical weathering of igneous or metamorphic rock) in areas where land use includes agriculture and where septic systems are used.~~	
8.	~~Promote~~ 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.	
9.	~~Encourage~~ Amend the DCSM to require the use of appropriate native vegetation in the stormwater system. ~~that will remove nutrients from the storm flow.~~	

10. For new development and retrofits, study and consider increasing landscape requirements around County maintained stormwater facilities.	
11. Work with local regulations (DCSM), the PWC Service Authority, Virginia Cooperative Extension to promote low water use landscapes on new and existing development though conservation landscaping principles, including reducing lawn areas.	
~~**EN-POLICY 9:** Set sewer force mains, petroleum lines, and hazardous material lines, shall be located away from the edge of waterways.~~ ~~**ACTION STRATEGY:**~~ ~~1. Encourage that – Except where a crossing is unavoidable, needed – public utilities sewer force mains, petroleum lines, and hazardous substances lines shall be located outside of Resource Protection Areas and other water bodies.~~	Addressed in EN Policy 6
EN-POLICY 12: Ensure the high quality of public drinking water sources~~, such as Lake Manassas and the Occoquan Reservoir.~~ In addition to the policies and action strategies listed for surface and groundwater protection, the following action strategies will serve to implement this policy: **ACTION STRATEGIES:**	Previously EN Policy 10 in existing text
1. ~~Encourage~~ Require the minimum density/intensity of development, as reflected by the appropriate land use classification shown on the Long-Range Land Use Plan Map around the shorelines of water bodies and headwaters areas that drain to a public drinking water supply. ~~the reservoirs.~~	
~~2. Conduct a study to determine appropriate land use densities (dwelling units/acre) within the Occoquan Reservoir Watershed the County's primary public water supply and evaluate the option of creating an overlay district for the area.~~	

2. Develop and implement a Drinking Water Protection Overlay District for areas within the Occoquan Reservoir and Lake Manassas Watersheds to protect the quantity and quality of public drinking water supplies, to include the following: • Minimum standards for vegetated buffers along all streams and headwater areas • Minimum standards for vegetated buffers contiguous to wetlands that drain to a public drinking water supply • Minimum standards for setbacks from the 300' contour line around Lake Manassas and the Fairfax Water Authority easement boundary.	
~~3. Where not otherwise required as part of the Chesapeake Bay Preservation Act for designated RPAs, require a minimum 100-foot setback from shorelines of public water sources for development related ground disturbance activities.~~ **3.** At the time of rezoning or site plan approval, require development plans to meet the lowest densities for allowed land use classifications.	
4. At the time of rezoning or special use permit, prioritize preservation of wetlands, intermittent streams, and headwater areas. Where impacts are unavoidable, require mitigation, preferably on-site, backed by financial assurances, such as bonds or cash escrows.	
5. At the time of rezoning or special use permit, require commitments for enhanced erosion and sedimentation controls, as appropriate.	
6. Preclude the installation of septic fields, tanks or other on-site subsurface sewage disposal system within 500 feet of the shoreline of reservoirs.	**Intent is to protect reservoirs; Using distance factor may not accomplish the goal; Needs more discussion.**
7. Coordinate with the Fairfax Water Authority to address existing contamination from pharmaceuticals and prevent future associated impacts to the Occoquan Reservoir.	

8. Develop and publish information detailing the human health issues associated with the presence of pharmaceuticals in public drinking water supplies and list preventative measures that the public can employ to prevent additional problems.	
9. Encourage farmers to develop conservation plans for agricultural activities undertaken within the Lake Manassas and Occoquan Reservoir watersheds.	
10. Continue to support the Occoquan Monitoring Laboratory, 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.	
11. Promote open space uses and ~~where practical~~ 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).	
12. ~~Encourage Fairfax County to continue restricting by ordinance the use of internal combustion engines on the Occoquan Reservoir.~~ Actively support Fairfax Water Authority efforts to increase compliance and enforce regulations established by their Occoquan Shoreline Easement Policy.	
13. Request that the Occoquan Laboratory continue to identify ~~types of~~ point/non-point pollution sources upstream from the reservoirs and to suggest ways that the non-point source pollution can be eliminated or controlled.	
EN-POLICY 13: Preserve natural vegetation – especially existing and mature trees – and provide for the replacement and management of urban forest resources. ~~of trees.~~ **ACTION STRATEGIES:**	Previously EN Policy 11 in existing text
1. Initiate and support a community-based Urban Forestry Council to monitor tree preservation progress and make recommendations for improvements to County policies and standards.	

~~2. Support legislation that will enable local a tree preservation ordinance.~~ **2.** Develop, adopt, and implement a Tree Preservation Ordinance, incorporating standards for both Countywide and watershed goals. Amend the Zoning Ordinance, DCSM, Subdivision Ordinance, and other relevant policies to reflect the standards established by the Tree Preservation Ordinance.	
3. Amend the Zoning Ordinance and DCSM requirements for buffer areas, landscaping and tree cover requirements to prioritize tree preservation instead of tree replacement. ~~Maintain and update the County's buffer areas, landscaping, and tree cover requirements contained in the Zoning Ordinance and DCSM. Promote tree preservation instead of tree replacement.~~	Previously EN Policy 11 AS 1 in existing text
~~4. Continue the progress towards establishing a Countywide greenway and path system through the voluntary donation of land and conservation easements from interested property owners, as a means of environmental protection.~~ **4.** Require tree preservation plans for all new development, to include commitments for the preservation of specimen trees and commitments to ensure that trees designated for preservation will survive construction in a manner that substantially retains their pre-development level of biological function, health and structural condition.	Previously EN Policy 11 AS 1 Relocated to EN Policy 3 AS 12
5. Continue to support and implement the Agricultural and Forestal District program to preserve farmland and woodland areas in the County.	
~~6. Conduct a professional study to identify the County's mature hardwood forests (such as oak/hickory) and the location of those forests. deserving special protection.~~ **6.** Conduct a professional study ~~Coordinate with~~, including coordination with the Virginia Department of Forestry, ~~to implement an urban forestry program.~~ to identify the County's mature hardwood forests and the location of those forests. Maintain an inventory of Forest Cover in PWC and track change to contiguous forest as development occurs. Make this information available to the public on the County Mapper.	Previously EN Policy 11 AS 5 & 6 in existing text
7. Consider acquisition of select sites for public parks/forests and/or encourage the dedication of such sites by private property owners.	Previously EN Policy 11 AS 7 in existing text

8. Maintain the County's ~~informal r~~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.	Previously EN Policy 11 AS 8 in existing text
9. 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. ~~Study the practicality of adopting various reforestation strategies.~~	Previously EN Policy 11 AS 9 in existing text
10. On lots served by public sewer and water and where a tree canopy exists, the limits of clearing and grading, shall be configured to minimize the loss of woodlands.	
11. Encourage utility companies ~~shall~~ to share easements where technically feasible to reduce the amount of disturbance along a roadway and provide enough areas for street trees.	Previously EN Policy 3 AS 12 in existing text; Relocated from Policy 4 AS 10
12. Utilize tree preservation to protect community appearance, property values and provide other economic and community benefits.	
EN-POLICY 14: Increase the environmental awareness of County residents, organizations, businesses, and government agencies. **ACTION STRATEGIES:**	Previously EN Policy 2 in existing text
1. Make the following GIS layers available to the public on the County Mapper: a) Slopes b) Wetlands c) Environmental Resource Areas d) Canopy Coverage by Forest Type e) Stormwater infrastructure f) Protected open space, including name of easement holder and number of acres, if different from the total acreage of the parcel	

g) Critical Groundwater Areas h) County-maintained stormwater facilities and county-inspected low impact development (LID) facilities i) Update Watershed layer to include the total number of acres and % of impervious surfaces in small watershed.	
~~1. Continue to develop and conduct educational programs on important environmental issues for the business, agriculture, and residential communities.~~ **2.** Publish electronically (scalable PDF) and in print a map(s) showing the features listed in AS 1, above. Provide developers with information on County conservation requirements.	Previously EN Policy 2 AS 1 in existing text
~~2. The Board of County Supervisors should seek grant funding from the federal and state governments to print educational materials regarding environmental resources and conservation measures.~~ **3.** Conduct a series of workshops to educate, engage and increase communication between citizens, organizations, businesses, industry, government officials and agencies on sustainable development, green infrastructure, and associated opportunities.	Previously EN Policy 2 AS 2 in existing text
4. Publish a webpage and associated e-notification component to provide information and updates on the County's green development and green infrastructure initiatives.	
5. Publish a webpage and associated e-notification component to promote and provide current information on local Farmer's Markets and other sources of locally produced food.	
6. ~~Enhance the County's recycling program, including yard waste composting, that will meet or~~ Continue to expand or exceed the recycling rate mandated by the Virginia Department of Environmental Quality and publish on the webpage developed through AS-5, above. ~~through the following means:~~ • ~~Evaluate opportunities for increasing recycling in businesses, institutions, and multi-family dwellings.~~ • ~~Expand the types of recyclables collected in the County.~~ • ~~Conduct site-selection evaluations for an additional or larger yard waste composting site.~~	Previously EN Policy 2 AS 3 in existing text

~~• Continuously evaluate the locations for drop-off centers throughout the County.~~ ~~• Improve public outreach programs to better promote and identify recycling opportunities.~~	
~~**4.** Maintain current informational brochures for public distribution that explain the importance of protecting and managing the County's soils.~~	Previously EN Policy 2 AS 4 in existing text
7. ~~Prepare or acquire~~ 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.	Previously EN Policy 2 AS 5 in existing text
8. ~~Develop public service announcements that provide information about timing, selection, and application of appropriate chemical applications for yards and agriculture which also emphasize that inappropriate applications can damage the environment.~~ Provide brochures on sustainable practices for home gardening and lawn care. Work with local nurseries and retail facilities that sell fertilizers to ensure these are distributed to the public.	Previously EN Policy 2 AS 6 in existing text
~~**7.** Prepare or acquire information brochures and make public service announcements that explain the importance of water conservation and water quality protection.~~	
~~**8.** Prepare and distribute information on household hazardous waste.~~	
~~**9.** Enhance the litter control program.~~	
EN-POLICY 15: Identify, manage, and protect ~~all~~ ecological communities and wildlife – especially critical habitats – as well as endangered and threatened species, and species of special concern, as identified in official Federal and State lists.	Previously EN Policy 12 in existing text
~~**1.** Establish an identification and monitoring system for the County's animal or plant species, including critical habitats, that have been listed as Federal or State threatened or endangered species, or species of special concern, by the U.S. Fish and Wildlife Service or the Virginia Department of Conservation and Recreation.~~	

1. Ensure the County considers the most recent information available on the status and location(s) of rare, threatened and endangered species, rare plant communities and critical habitat areas.	
~~**2.** Develop and implement protection guidelines for endangered and threatened populations of plants and wildlife that occur in the County. These guidelines apply to County and privately-owned lands.~~ **2.** At the time of rezoning or special use permit and all County projects, require implementation of state & federal guidelines for the protection of rare, threatened, and endangered species and encourage preservation of habitats where these species could occur.	
3. To protect the biological diversity, processes, and functions of natural habitats, identify a network of preservation corridors or large woodland areas to be incorporated into an overall habitat protection network.	Previously EN Policy 12 AS 3 in existing text
~~**4.** Investigate the benefits of establishing a private conservancy fund for the purpose of purchasing privately held lands for preservation purposes and seeking perpetual conservation easements to preserve open space.~~	Relocated to EN Policy 2 AS 11
~~**5.** Identify areas suitable for wetlands restoration and develop procedures whereby a developer/landowner can contribute to such wetlands mitigation banks when no alternative to wetland preservation exists on site.~~	
ENERGY POLICIES	**NEW SECTION**
EN-POLICY 16: Develop a Community Energy Master Plan.	
1. Collect data and establish a baseline that best defines the energy, water, waste water and greenhouse gas data situation for County government operations and community at large.	
2. Incorporate input from all major stakeholders, including public authorities, residents, businesses, community associations, elected officials, schools, universities and colleges.	

3. Establish a long-term Vision with clear targets supported by short to medium term implementation strategies.	
4. Define targets, tracking measurements reporting and accountability for overall energy Vision and CEMP implementation.	
EN-POLICY 17: Implement cost-effective energy-conservation measures at County facilities. **ACTION STRATEGIES:**	
1. Remain active in EPA ENERGY STAR program and continue to use EPA's Portfolio Manager to rate the energy performance of eligible county-owned buildings. Audit County facilities energy use and pursue projects with a payback period of less than 10 years.	
2. Consider giving priority to facilities, that rate 75 or higher according to the U.S. EPA's ENERGY STAR Performance Rating when leasing new space for County use or when renewing existing leases.	
3. Consider designing and building all new County facilities so they rate 75 or higher by using the U.S. EPA's ENERGY STAR performance rating system, and measure performance annually using EPA's Portfolio Manager benchmarking tool.	
4. Consider designing and constructing County renovation projects consistent with energy performance standards at least as stringent as LEED Silver or Green Globes 2 Globes standards 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.	
5. Become a Green Partner with George Mason University (GMU), and encourage 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.	

6. 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.	
7. 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.	
EN-POLICY 18: Provide recognition and incentives for energy conservation at non-government facilities and residences. **ACTION STRATEGIES:**	
1. Consider establishing a separate, lesser rate of tax for energy efficient buildings as defined in Code of Virginia § 58.1-3221.2.	
2. Consider additional incentives (financial, tax, expedited permits, density bonuses, etc.) for development that builds to LEED or Green Globes standards and ENERGY STAR.	
3. Recognize and publicize those in the community whose facilities achieve LEED, Green Globes and ENERGY STAR certifications.	
EN-POLICY 19: Provide recognition and incentives for renewable energy application at non-government facilities and residences. **ACTION STRATEGIES:**	
1. Evaluate current policies and ordinances to remove obstacles to renewable energy (wind, solar, biomass, landfill gas, geothermal, etc.) application.	

2. Evaluate and recommend incentives for projects that create on-site renewable energy application.	
3. Recognize and publicize for those projects that use on-site renewable energy.	
EN-POLICY 20: Provide leadership by example and education in the areas of energy efficiency, demand response and renewable energy application. **ACTION STRATEGIES:**	
1. 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, COG Climate Registry Report to determine a reduction goal that is challenging yet achievable.	
2. 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.	
3. 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.	
4. Consider reducing the rate of the growth of county government's energy use by 40%.	
5. Consider reducing electricity use in County facilities by 10% of 2006 level by 2022.	
6. Consider reducing natural gas use in County facilities by 7.5% over next ten years.	
7. Consider reducing total diesel/gasoline use by all (County) vehicles by 10% over next five years.	
8. Consider reducing total diesel/gasoline used for County government landscaping operations by 20%	

over next five years.	
9. Consider purchasing the equivalent of 12% of the County's 2009 level electricity needs from renewable sources either through Dominion and NOVEC rate offerings, renewable energy credits, or through on-site generation.	
10. Publicize energy conservation efforts at county facilities. 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 impact of energy conservation efforts. Encourage Prince William County Public Schools to do the same.	
11. Continue actively participating County Government facilities in demand response programs.	
12. Consider utilizing life-cycle cost analysis when constructing new facilities.	
13. Continue increasing landfill gas utilization at the County landfill with the goal of completely eliminating flaring.	
14. Continue exploring waste reduction and re-use technologies in lieu of landfilling.	

(**Note: Viewsheds & Community Design components - all to be relocated to Community Design chapter.)**

GOAL: Preserve, manage, and where necessary, integrate viewsheds that are character-defining features of Prince William County into development.	New goal, to be moved into front of Community Design chapter
DES-POLICY 9: Preserve and enhance the unique architectural and landscape (agricultural, cultural, natural) qualities of the County's rural area. **ACTION STRATEGIES:**	Existing text and proposed edits to Community Design chapter
1. Encourage commercial development in the Rural Area to provide design compatibility between new and existing development. When there is more than one building on a site, design new commercial structures as a cluster of small-scale buildings to minimize their mass and to blend them in with existing buildings.	
2. Use appropriate indigenous plant materials and traditional planting patterns in areas visible from public thoroughfares so that new buildings blend into their landscape surroundings.	
3. ~~Provide~~ Prepare a viewshed preservation plan that incorporates site plans and building designs that protect the existing visual quality and natural resource values that make these areas distinctive.	
4. Encourage any new development in the Rural Area to preserve the visual character of the rural landscape by providing appropriate building setbacks, with landscaped/preserved open space occupying the setback area; and preserving important scenic resources - hedgerows, mature trees, farm buildings, walls and fences, and open fields.	
5. Conduct a survey of the Rural Area to identify viewsheds, their type, and their potential boundaries.	

DES-POLICY 10: Encourage site plans and building designs for new development that enhance the settings of the County Registered Historic Sites, as identified in the Cultural Resources Plan. **ACTION STRATEGIES:**	Existing text and proposed edits to Community Design chapter
1. Design projects to mitigate the adverse effects of development on the architectural and landscape features of archaeological and historic sites and structures when developing properties or adjacent properties.	
2. Encourage the preservation of views to and from historic properties through the protection of farm fields, meadows, and woodlands, and where possible combine with viewshed types.	
3. Incorporate adaptive reuse of historic structures into new developments, rather than demolition, and provide sufficient land around archaeological and historic sites and structures to preserve the integrity of the site in the historic context.	
DES-POLICY-12: ~~Fit~~ Integrate new development into the natural landforms, particularly the existing woodland areas of the County.	Existing text and proposed edits to Community Design chapter.
DES-POLICY 13: Encourage the preparation of plans for the preservation and restoration of viewshed ~~landscape~~ resources.	Existing text and proposed edits to Community Design chapter.

NATURAL VIEWSHEDS POLICIES AND ACTION STRATEGIES ~~EN-POLICY 13:~~ **DES POLICY 14:** Identify significant natural viewsheds in Prince William County. **ACTION STRATEGIES:**	Existing section in Environment chapter Previously EN Policy 13 in existing text; Proposed to be relocated as new policy to Community Design Chapter.
1. Seek funding from federal, state, local, and private organizations in order to secure professional services needed to conduct a Countywide or area-specific viewshed inventory or study. Ensure public participation in viewshed study projects and complete funded viewshed studies on a timely basis.	Previously EN Policy 13 AS 1 in existing text
~~**2.** Develop an incentive system for the preservation of viewsheds.~~	Previously EN Policy 13 AS 2 in existing text
2. Amend the Zoning Ordinance, DCSM and other relevant ordinances to reflect the goals and standards included in viewshed studies that are endorsed by the BOCS.	
~~**3.** Determine whether it is desirable to establish viewshed overlay districts in the County.~~	Previously EN Policy 13 AS 3 in existing text
3. Conduct a County-wide survey and identify viewsheds, their type and potential boundaries, and list on a map as an Appendix to this Chapter. The survey should include land within the County's Rural Area, as well as along the Potomac River.	
4. Prepare viewshed preservation plans for viewsheds identified in this Chapter.	
5. Identify viewshed preservation and management tools.	
6. As a condition of submittal for Comprehensive Plan Amendments and Rezoning applications, require preparation of a viewshed preservation plan for viewsheds identified in this Chapter.	

Viewshed: A viewshed is an area that can include one or more of the following: ~~of~~ land, water, cultural resources, and other environmental elements. A viewshed can have both interior and exterior views and one or more vantage points ~~that is visible from a fixed vantage point~~. The term is used widely in such areas as urban planning, archaeology, and military science. In urban planning, for example, viewsheds tend to be areas of particular scenic, natural, or historic value that are deemed worthy of preservation against development or other change. The preservation of viewsheds is a goal in the designation of open space areas, green belts, and community separators, as well as natural and cultural resources preservation.	Revise viewshed definition in Glossary: