



ENVIRONMENT

GOAL, STRATEGIES & ACTIONS

Continue to maintain and improve the high level of environmental quality in James City County and protect and conserve sensitive lands and waterways for future generations.

1. Protect and improve the quality of water in County watersheds, wetlands, and waterways including water bodies that discharge into the Chesapeake Bay.
 - 1.1. Promote development and land use decisions that protect and improve the function of wetlands and the quality of water bodies.
 - 1.2. Promote the use of Better Site Design, Low Impact Development, and Best Management Practices (BMPs). Promote these techniques by:
 - a. Making technical assistance more readily available and performing demonstration projects; specifically provide stormwater facility maintenance guidelines and assistance directly to BMP owners through hands-on training sessions and other tools.
 - b. Promoting public awareness on the benefits of, and necessity for, BMPs, erosion and sedimentation control, watershed management and other land disturbance regulations;
 - c. Utilizing the assistance of the Virginia Cooperative Extension Service, the U.S. Soil Conservation Service, the Colonial Soil and Water Conservation District, and the Hampton Roads Planning District Commission;
 - d. Continuing to develop and enforce new and existing regulations that require soils identification and the consideration of the limitations of these soils for development and agricultural and forestal activities;
 - e. Promoting early submission of environmental inventories in order to protect trees, County wetlands and highly erodible soils, to most efficiently use permeable soils, and to address impervious cover.
 - f. Continuing to encourage the development of regional BMPs;
 - g. Continuing and expanding support for the Protecting Resources in Delicate Environments (PRIDE) program in order to provide information on BMP

maintenance to the public as well as to BMP owners.

- 1.3. Enforce Resource Protection Areas (RPAs) protecting all tidal wetlands, tidal shores, nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow, perennial streams and a 100-foot-wide buffer adjacent to and landward of other RPA components.
- 1.4. Utilize bathymetric and flushing rate data when locating and providing new public shoreline and water access opportunities.
- 1.5. Utilize properly designed methods of vegetative (living shoreline) or structural stabilization, bank regrading, beach nourishment, and/or relocation of activities to less sensitive areas.
- 1.6. Locate, design, and conduct water dependent activities such as marinas and docks in an environmentally sensitive manner and include adequate marine sanitation facilities.
- 1.7. Identify the specific existing and potential uses of County streams and rivers and identify standards necessary to support these uses. Protect the quality and quantity of these surface waters so they will continue to support these uses. Consideration should be given to existing and potential water resource uses when reviewing land development applications.
- 1.8. Continue to work with the Department of Environmental Quality (DEQ), Department of Conservation and Recreation (DCR), and Virginia Department of Health (VDH) to identify existing or potential sources of surface and ground water pollution and take action to prevent or control the effect of the sources. Continue to enforce all existing regulations to protect all water resources and adopt additional protective measures as necessary.
- 1.9. Implement identified management practices developed through the Total Maximum Daily Load (TMDL) program and seek continued funding to ensure the development of TMDL Implementation Plans for each County TMDL.
- 1.10. Protect water resources from on-site waste disposal system failure by:
 - a. Requiring Health Department approval for all subdivisions making use of on-site waste disposal systems;
 - b. Maintaining minimum lot sizes for any property containing an on-site waste disposal system;
 - c. Continuing to require primary and reserve drain fields for subdivisions with on-site waste disposal systems;
 - d. Requiring the pump out of on-site waste disposal tanks every five years;
 - e. Monitoring non-traditional on-site sewage disposal trends.

- 1.11. Maintain and improve the water quality to standards set by DEQ in all drinking water reservoirs within the County. (See Public Facilities Section.)
 - 1.12. Investigate actions needed to implement groundwater protection using suggestions from “Potential Groundwater Management Alternatives” section.
 - 1.13. Continue to improve the requirements, standards and specifications used to design, approve, and build ~~BMP-stormwater~~ facilities in James City County.
 - 1.14. Properly maintain stormwater facilities by:
 - a. Utilizing available resources, including enforcement of maintenance agreements and covenants, and
 - b. Develop additional mechanisms to ensure systematic identification of failing neighborhood stormwater and drainage facilities and implement repairs on a prioritized basis.
 - c. Develop means for funding BMP construction inspections and private stormwater facility assessments.
 - 1.15. Increase education and sound policies such as Watershed Planning, Agricultural BMPs, erosion control measures, stream bank buffers, and other nonpoint source controls in order to minimize negative effects of urban development and agricultural practices on water quality.
 - 1.16. Implement the watershed protection and restoration goals and priorities adopted by the Board of Supervisors from the Powhatan Creek Watershed Management Plan, Yarmouth Creek Watershed Management Plan and any other watershed management plans adopted by the Board of Supervisors.
 - 1.17. Continue to develop watershed management plans for the remaining County watersheds that identify environmentally sensitive areas and specific protection, restoration and retrofit recommendations.
 - 1.18. Continue to develop hydraulic studies for County waterways vulnerable to flooding and develop strategies to address identified problems.
 - 1.19. Utilizing approved watershed management plans and developed hydraulic studies, develop a County -wide stormwater master plan to establish measurable goals and comprehensively address both the water quality and quantity (flooding) issues resulting from stormwater.
 - 1.20. Develop a process utilizing watershed management plans, hydraulic studies and the resulting stormwater master plan to provide the foundation for a bond referendum to fund needed large scale water resource management projects including but not limited to flooding.
2. Improve public knowledge of and involvement in County environmental programs and initiatives.

- 2.1. Continue to educate the public about voluntary techniques to preserve and protect environmentally sensitive lands; wildlife habitats; water quality and watersheds, agricultural, forestal, and other open space lands through the PRIDE program.
 - 2.2. Utilize the Clean County Commission to coordinate citizen efforts in participating in the County recycling program, the Adopt-A-Highway program sponsored by the Virginia Department of Transportation, and shoreline clean-up days sponsored by a variety of organizations.
 - 2.3. Promote recycling by developing a post-consumer waste office paper purchasing policy for all County facilities, expanding County facility reduce/reuse/recycling programs, and by increasing private sector awareness of recycling opportunities.
 - 2.4. Expand the citizen monitoring program to include bacterial monitoring in TMDL watersheds and other watersheds with potential sources of impairment.
 - 2.5. Make available for decision making consistent waterway-specific water quality data for each County waterway through utilization of the citizen monitoring program
 - 2.6. Continue to offer training, certification and equipment to volunteer monitors.
 - 2.7. Coordinate cross-training and joint activities that allow land use planners; stormwater managers; and transportation, utility, and capital project planners to explore how various land use/stormwater processes can be better integrated.
 - 2.8. Promote the development of educational and passive recreational facilities which provide increased access to special environmental and historical areas for citizens and visitors.
 - 2.9. Promote residential and commercial water conservation, including the reuse of grey water where appropriate. (See the Public Facilities Section.)
3. Protect and conserve environmentally sensitive areas.
 - 3.1. Maintain biological and habitat diversity and promote habitat connectivity by protecting wildlife and riparian corridors between watersheds, subwatersheds, catchments, tidal and nontidal wetlands and implementing a green infrastructure plan.
 - 3.2. Develop specific recommendations for voluntary and regulatory means to protect resources identified in studies such as the Regional Natural Areas Inventory, and Watershed Management Plans for County Watersheds.

- 3.3. Operate adequately funded programs to achieve clear title to or conservation easements over environmentally sensitive lands throughout the County.
 - 3.4. Amend the Zoning and/or Subdivision Ordinances to include provisions for requiring and considering environmental site assessments based on the anticipated use of the property proposed for subdivision or development, as provided for in Virginia Code Section 15.2-2286.
 - 3.5. Continue to develop and enforce zoning regulations and other County ordinances that ensure the preservation to the maximum extent possible of rare, and threatened and endangered species, wetlands, flood plains, shorelines, wildlife habitats, natural areas, perennial streams, groundwater resources, and other environmentally sensitive areas.
 - 3.6. Continue to collaborate regionally to improve environmental quality, including but not limited to, working with Hampton Roads Planning District Commission (HRPDC) to develop a local level green infrastructure map which identifies critical natural and cultural networks and lands best suited for development, and develop a plan for implementation.
 - 3.7. Site development projects, including those initiated by the County, in such a way as to be consistent with the protection of environmentally sensitive areas, maintenance of the County's overall environmental quality.
4. Work with the private sector, other governmental entities such as HRPDC and the Commonwealth of Virginia, and nongovernmental public sector through both regulation and non-regulatory techniques to mitigate and adapt to the effects of climate change. Implement the Cool Counties Resolution, adopted by the Board of Supervisors, by utilizing the "Roadmap to Achieving Climate Stabilization" as a guide.
- 4.1. Conduct a baseline energy and greenhouse gas emissions inventory in order to establish target greenhouse gas emission levels based on Cool Counties Climate Stabilization Initiative goals and track emissions and energy savings annually.
 - 4.2. Create an Energy Savings Reinvestment Program to encourage and reward County departments who save money from budgeted energy usage amounts.
 - 4.3. Provide incentives and regulatory measures to improve air quality by promoting reduction of auto dependency and trip distances, the construction of energy efficient homes and businesses, and use of alternative modes of transportation.
 - 4.4. Create a Green Building Policy and a Cost Benefit Analysis Policy for County building capital projects and ensure that proposed County buildings meet the guidelines of that policy in advance of Capital Improvements Program construction expenditures.

- 4.5. Investigate amending County ordinances to allow or encourage appropriate energy production and conservation technologies in residential areas (i.e., rain barrels, residential-sized wind turbines, solar panels, etc.).
- 4.6. Make County facilities a climate stabilization leader throughout the County by:
 - a. Developing an action plan for the installation of energy management control systems and renewable energy technologies, and the maintenance of heating and cooling systems at County facilities;
 - b. Developing natural landscaping policies for County properties; and
 - c. Considering a “no net tree canopy loss” policy for the development of new County facilities.
- 4.7. Continue to manage the County fleet to improve energy efficiency and reduce emissions by replacing fuel inefficient vehicles, assessing new technologies, and developing an anti-idling policy.
- 4.8. Proactively work with private, local, regional, State and Federal organizations to implement air quality improvement programs that balance economic development and transportation needs.
- 4.9. Locate all new County facilities outside of areas expected to flood due to sea level rise.