



ENVIRONMENT

GOAL, STRATEGIES & ACTIONS

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

~~Continue to protect and conserve the County's natural resources and environmentally sensitive lands for the use and enjoyment of future generations.~~

~~Promote the continuation of a viable agricultural and forestal industry and resource base.~~

1.1 Utilize existing techniques and develop new regulations and non-regulatory techniques to preserve the County's environmental quality.

1.1.1. Fully implement the watershed protection and restoration goals and priorities identified in the Powhatan Creek Watershed Management Plan, *Yarmouth Creek Watershed Management Plan* ~~adopted by the Board of Supervisors in 2002~~ and any other watershed management plans adopted by the Board of Supervisors.

1.1.2. 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.

1.1.3. Operate adequately funded programs to achieve clear title to or conservation easements over environmentally sensitive lands throughout the County.

1.1.4. Maintain biological and habitat diversity and promote habitat connectivity by protecting wildlife and riparian corridors between watersheds, subwatersheds, catchments, tidal and nontidal wetlands.

- 2. Promote development and land use decisions that protect and improve the water quality of the Chesapeake Bay and the bodies of water that discharge into the Bay.**

2.1. Assure that new development minimizes adverse impacts on the natural and built

environment.

2.1.1. 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.

2.1.2. Encourage the use of Better Site Design, Low Impact Development, and Best Management Practices (BMPs). *Promote these techniques* ~~to mitigate adverse environmental impacts~~ by:

- a. Making technical assistance more readily available and performing demonstration projects.
- b. Promoting public awareness on the benefits of, and necessity for, best management practices (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. Reducing disturbance of County Wetlands.
- f. Reducing disturbance of highly erodible soils.
- g. *Reducing disturbance of highly permeable soils.*
- h. Reducing the rate of increase of impervious cover.
- i. ~~Continuing~~ to encourage the development of regional best management practices (BMPs) wherever feasible.

2.1.3. Ensure that development projects, including those initiated by the County, are consistent with the protection of environmentally sensitive areas and the maintenance of the County's overall environmental quality.

2.1.4. ~~Ensure the proper~~ Enforcement of *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.

2.1.5. 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.

2.2. Protect natural ~~(unaltered)~~ shorelines *and streambanks* from *erosion and mitigate adverse impacts* of land use *on the shoreline and water quality* ~~activities and development.~~

~~Reduce shorelines and stream banks erosion and mitigate adverse impacts of waterfront~~

access on water quality.

2.2.1. Locate and provide new public shoreline and water access opportunities utilizing bathymetric and flushing rate data.

2.2.2. ~~Protect County shorelines from erosion through a coordinated, unified area approach that~~ Utilizes properly designed methods of vegetative (*living shoreline*) or structural stabilization, bank regrading, beach nourishment, and/or relocation of activities to less sensitive areas. ~~using the "Shoreline Stabilization Measures" for Various Erosion Rates as a guide.~~

2.2.3. Ensure that water dependent activities such as marinas and docks are located and conducted in an environmentally sensitive manner and include adequate marine sanitation facilities.

2.2.4. 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.

3. Protect the availability, quantity, and quality of all surface and ground water resources, as determined by the Virginia Department of Environmental Quality (DEQ).

3.1. Minimize the effects of development and land uses on the quality of water resources in the County.

3.1.1. 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 ensure the protection of all water resources and adopt additional protective measures as necessary.

3.1.2. Ensure protection of 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* ~~septic~~ systems.
- b. Maintaining minimum lot sizes for any property containing an *on-site waste disposal* ~~septic~~ system.
- c. Continuing to require primary and reserve drain fields for subdivisions with *on-site waste disposal* ~~septic~~ systems.
- d. Requiring the pump out of *on-site waste disposal* ~~septic~~ tanks every five years.
- e. Monitoring ~~ing~~ non-traditional on-site sewage disposal trends.

3.1.3. Encourage residential and commercial water conservation, including the reuse of grey water where appropriate. (*See the Public Facilities Section.*)

3.1.4. Maintain and improve the water quality *to, or exceeding, standards set by DEQ* in all drinking water reservoirs within the County. (*See Public Facilities Section.*)

3.1.5. Investigate actions needed to implement groundwater protection using suggestions from "Potential Groundwater Management Alternatives" section.

4. ~~Educate the~~ **Improve public knowledge of and involvement in** ~~on~~ County environmental programs and initiatives.

4.1. Expand environmental programs to increase citizen participation in County initiatives.

4.1.1. Educate the public about voluntary techniques to preserve and protect environmentally sensitive lands; wildlife habitats; watersheds, agricultural, forestal, and other open space lands.

4.1.2. 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.

4.1.3. 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.

5. **Make available for decision making consistent waterway-specific water quality data for each County waterway and increase public involvement and knowledge with respect to water quality, flooding and stormwater issues.**

~~Have an involved public, knowledgeable with respect to water quality, flooding, and stormwater issues~~

5.1. Continue to maintain and improve the volunteer water quality monitoring program in James City County.

5.1.1. Expand the citizen monitoring program to include bacterial monitoring in Total Maximum Daily Load (TMDL) watersheds and other watersheds with potential sources of impairment.

6.1.2. Continue to offer training, certification and equipment to volunteer monitors.

5.2. Continue existing educational opportunities and offer additional training for the public and County employees regarding water quality and stormwater.

5.2.1. 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.

5.2.1. Minimize negative effects of urban development and agricultural practices on water quality through increased education and sound policies such as Watershed Planning, Agricultural Best Management Practices (BMPs), erosion control measures, stream bank buffers, and other nonpoint source controls.

6. Ensure that all BMPs and stormwater conveyance systems in the County are properly built and are properly and systematically maintained.

6.1. Continue construction and post-construction inspections of stormwater facilities.

6.1.1. Continue to improve the requirements, standards and specifications used to design, approve, and build stormwater facilities in James City County.

6.2. Educate owners of BMPs and other stormwater facilities about how to adequately maintain their stormwater systems.

6.2.1. Continue and expand support for the Protecting Resources in Delicate Environments (PRIDE) program in order to provide needed information on BMP maintenance to the public as well as BMP owners.

7. Make James City County a more sustainable community through plans which seek to balance economic, environmental, and societal interests.

7.1. Continue to create a more sustainable community by implementing plans which link environmental, social, and economic goals.

7.1.1. Work with HRPDC and County staff to develop a local level green infrastructure map which identifies critical natural and cultural networks and increases the predictability of lands best suited for development, and develop a plan for implementation.

7.1.2. Encourage the development of educational and passive recreational facilities which provide increased access to special environmental and historical areas for citizens and visitors.

7.1.3. Proactively work with private, local, regional, State and Federal organizations to implement air quality improvement programs that balance economic development and transportation needs.

8. 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. Utilize the "Roadmap to Achieving Climate Stabilization" as a guide.

8.1. With the help of the County's Interdepartmental Advisory Team for Green Initiatives, develop planning, policy, and investment strategies to reduce greenhouse gas emissions.

8.1.1. 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.

8.1.2. Create an Energy Savings Reinvestment Program to encourage and reward County departments who save money from budgeted energy usage amounts.

8.1.3. Provide incentives and regulatory measures to improve air quality by promoting reduction of auto dependency and trip distances, the construction of energy ~~fuel~~-efficient homes and businesses, and use of alternative modes of transportation.

8.1.4. Create a Green Building 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.

8.1.5. Investigate amending County ordinances to allow or encourage appropriate energy production technologies in residential areas (i.e., rain barrels, residential-sized wind turbines, solar panels, etc.).

8.1.7. 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.

8.1.8. 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.