

## CHAPTER 2 ISSUES, GOALS AND STRATEGIES <sup>1</sup>

Community planning uses such terms as issues, goals, strategies, plans, and policies. Each of these has a specific meaning within the framework of the Comprehensive Plan. An **issue** is defined as a matter of community concern to the community. It may be based on a community need that is not being met, a specific problem that needs to be addressed, or a new opportunity for improving the community. A **goal** is a statement that expresses the community's intent to deal with an issue. A goal is a broad statement indicating the general direction the community would like to move in order to deal with a specific issue. Goals become informal policy of the local government once they are adopted. A **strategy** deals with how the community plans to proceed in pursuing each goal.

This Comprehensive Plan for Northumberland County contains a Land Use Plan, a Public Facilities and Services Plan and a Water Quality Protection Plan. The Virginia Statutes establish the broad requirements of a comprehensive plan, that it: (1) be general in nature; (2) relate to physical development or potential for such development; and (3) address the broad (comprehensive) needs of the community.

This section focuses on defining issues upon which the Comprehensive Plan for Northumberland County is to be based. The issues in the 1996 Plan came from a combination of several areas of analysis, including:

1. Issues related to the economics and demographics of the County which were derived from the economic and demographic analysis presented in a report on Economy and Demographics which appeared in the Comprehensive Plan as Appendix A.
2. Physical and environmental issues came from the report titled Physical and Environmental Conditions which will appear in the Comprehensive Plan as Chapter 1.
3. Issues raised during public workshops with county citizens and through interviews with individual Planning Commission members and other public citizens.
4. Previous (unpublished) work by the county staff on Goals & Objectives for the Comprehensive Plan.

The Issues contained in this January 5 2005 update of Section 2 are based on the original Comprehensive Plan issues updated by the County Planning Staff.

The next revision of this Section will include consideration of public comments and comments by individual members of the Board of Supervisors and the Planning Commission received by February 1, 2005.

This version will then be reviewed by the County Planning Commission.

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<sup>1</sup>Filename is Chapter\_2 Ver1Jan5

**Please note: As of this date – Jan 5, 2005 – the references to Chapter 1 contained in the Issues section of the following pages still refer to the 1996 edition. They will be updated as soon as possible after Chapter 1 is available for release. It is currently in process of final review.**

PHYSICAL AND ENVIRONMENTAL ISSUES		
1. Use and Development of Land		
ISSUES	GOALS	STRATEGIES
<p>Existing development, the locations of roads and development along shorelines establish the general land use patterns of Northumberland County.</p> <ul style="list-style-type: none"> <li>● Residential development appears along both primary and secondary roads.</li> <li>● Commercial development is focused mostly along primary highways but also clustered around several villages. These hubs are defining the future business centers of the County.</li> <li>● Newer upscale residential development is located near and on the shorelines while more modest residential developments, including mobile and manufactured units, are found throughout the other rural areas of the County.</li> <li>● Industrial, mostly marine and seafood-related, are located along the waterfront.</li> </ul> <p>Future development will likely continue to follow these same patterns as growth simply extends itself from patterns already established. This presents an opportunity to focus planning strategy on managing development to achieve a balanced community while preserving the rural and environmentally sensitive qualities of the County.</p>	<p>A. To provide a framework for managing future development of the County in a way that promotes opportunity for its citizens while directing growth to areas best able to accommodate growth.</p>	<ol style="list-style-type: none"> <li>1. Establish a "Village Concept" in the land use plan to encourage clustering of higher intensity land uses, including small businesses and industries, in order to provide public and services and utilities more efficiently, to retain the rural nature of the County and better meet the needs of the citizens of the County.</li> <li>2. Establish development guidelines designed to direct growth to areas with few or no physical constraints while promoting the preservation of croplands, forests and sensitive environmental areas.</li> <li>3. Establish guidelines designed to limit commercial sprawl on highways between villages and thereby retain the rural character of the County.</li> <li>4. Establish architectural design guidelines for structures in villages and on the highways between villages to generally reflect the traditional forms found in the Northern Neck and also shall complement surrounding structures on adjacent parcels</li> </ol>
<p>Many forests and croplands located near shorelines are being converted to subdivision development as market demand for more waterfront lots forces prices of land upward. Some farmland has been preserved by using areas immediately next to the shoreline for dwellings while leaving cropland in service. This technique is a creative method of continuing the use of productive croplands and forests while making use of the shorelines for residences.</p>	<p>B. To preserve the agricultural and rural characteristics of the County.</p> <p>C. To reduce the adverse impact of development on shorelines and sensitive environmental areas.</p>	<ol style="list-style-type: none"> <li>1. Establish guidelines that promote land use and development practices designed to preserve the rural character and qualities of the County.</li> <li>2. Establish site planning guidelines for subdivisions along shorelines including how they interface with agricultural and forestry lands.</li> </ol>

PHYSICAL AND ENVIRONMENTAL ISSUES		
2. Topographic Conditions that Limit Development		
ISSUES	GOALS	STRATEGIES
<p>Topography becomes a planning issue when steep slopes and unstable soils occur together. Steep slopes in and of themselves impact on development costs and for that reason developers are likely to avoid them where possible. Because water runs off steep slopes more rapidly than it does on level land, excessive slopes can increase the erosion rate. In combination with unstable soils, steep slopes cause serious soil erosion. If not mitigated, an increase in sediment and other pollutants may enter public waters. Steep slopes in Northumberland County occur mostly along stream banks where the impact of erosion is of greatest concern.</p>	<p>A. To reduce soil erosion on steep slopes particularly along creek and stream banks.</p>	<ol style="list-style-type: none"> <li>1. Adopt land use policies with incentives that encourage developers to avoid building sites located on steep slopes. Through techniques such as cluster development, protective easements or other arrangements, the policies should provide incentives for preserving forests, agricultural activities, dunes and other environmental features.</li> <li>2. Where development on slopes cannot be avoided, policies may require that mitigating engineering solutions be installed to reduce disturbance of the slopes. The Erosion and Sediment Control Ordinance and Chesapeake Bay Preservation Regulations are major tools in implementing this strategy.</li> </ol>

PHYSICAL AND ENVIRONMENTAL ISSUES		
3. Soil Suitability for Septic Tanks		
ISSUES	GOALS	STRATEGIES
<p>The suitability of the soil for septic tank drainfields is essential to development in most of Northumberland County. There is a public sewerage system serving the Reedville and Fleeton areas and a system is being installed in Callao. Several other high-impact uses (schools, for example) have on-site wastewater disposal systems. But the ability to development residential and other less intensive land uses depends upon the ability of the soil to percolate satisfactorily.</p> <p>There is a high concentration of soils of poor quality for septic tanks located in the low-lying area seaward of the Suffolk Scarp (see Figures 1.3 and 1.4). Some poor soils are found in the upland regions of the County but these are mostly along stream beds and banks. Such areas are generally restricted from development by RPA regulations.</p> <p>The County contains a combination of large low-lying areas that have soils unsuited for septic tank fields, and as much, or more, area with acceptable soils for that purpose.</p> <p>While potential future growth should be the primary target for development strategies, much of the existing development in Northumberland County occurred before the Chesapeake Bay Regulations took effect. Because of this, lots that existed prior to those regulations may not have adequate space for an alternate septic tank field.</p>	<p>A. To guide development so that it avoids the problems of building on soils unsuitable for septic tank drainfields.</p>	<p>1. Within areas not served by public sewers, use innovative land planning techniques as incentives to encourage preservation of areas that are otherwise unsuited for development.</p>
	<p>B. To avoid building beyond the capacity of good soils to the detriment of the underground water supply.</p>	<p>1. Establish through zoning appropriate density regulations and other planning requirements to ensure that development does not exceed the capacity of the land.</p> <p>2. To prevent contamination of the aquifers and the ground water, continue to require (subdivision regulations) that each lot be tested for percolation as well as require adequate separation between the disposal field and the water table.</p>
	<p>C. To expand opportunities for sewage disposal for owners of residences and small commercial places in cases where inadequate back-up drain fields are unavailable.</p>	<p>1. Work with the Health Department to develop alternate acceptable strategies and technologies for sewage disposal systems</p> <p>2. Continue the policy of providing/expanding public sanitary sewers services to the villages with higher concentrations of residential and business uses where economically viable.</p>

PHYSICAL AND ENVIRONMENTAL ISSUES		
4. Structural Qualities of Soils		
ISSUES	GOALS	STRATEGIES
<p>Shrink-swell defines a soil's potential for volume change when subjected to a loss or gain in moisture. Volume changes occur mainly because of the interaction of clay minerals with water. The amount of change varies with the amount and type of clay minerals in the soil. The size of the load and the amount of change in soil moisture content may affect the amount of swelling of soils in place.</p> <p>Overall, most of the County's soils have shrink-swell qualities that are acceptable for most building purposes that are likely to be constructed in the County. A few areas have moderate to high shrink-swell characteristics that may require special engineering attention.</p> <p>In the uplands there should be few limitations to building because of shrink-swell although marginal conditions are likely to be present in the drainage valleys and near creek beds.</p>	<ul style="list-style-type: none"> <li>A. To inform the community of the potential problems that may result from building on certain soils.</li> <li>B. Limit development in areas subject to shrink-swell conditions</li> </ul>	<ul style="list-style-type: none"> <li>1. Advise builders and developers of the need to examine shrink-swell qualities of soils before committing to buildings or roads on a specific site. Make information that is available to the County, such as soil surveys, available to individuals and developers.</li> <li>2. Include requirements for evaluating shrink-swell soil qualities; water table; soil permeability and other factors in the plan review process.</li> <li>3. Because most of the areas with shrink-swell problems are in the same area as soils with poor septic tank qualities, additional restrictions should be considered when locating buildings within the sensitive area seaward of the Suffolk Scarp.</li> </ul>

PHYSICAL AND ENVIRONMENTAL ISSUES 5.Flood-Prone Areas		
ISSUES	GOALS	STRATEGIES
<p>Floodplains are low-lying land areas adjacent to rivers, streams, creeks, and other water bodies that are subject to periodic flooding. The County has experienced major storms and flooding since early settlement of the area. The most recent major storm occurred in November, 1985, when tides five feet above normal destroyed bulkheads, boathouses, and other waterfront structures. Through the National Flood Insurance Program, property owners may purchase federally-backed flood insurance. Flood Insurance Rate maps define areas subject to inundation at 100-year and 500-year intervals.</p> <p>Northumberland County has considerable development located within the 100-year floodplain (Figure 1.6). It includes dwellings, full time and seasonal dwellings, as well as businesses and industries. Most of this development within the floodplain occurred before the floodzone maps were first prepared. An owner still has the option of building within a floodplain although most owners who finance or refinance must purchase flood insurance. The County's present regulations require that any building constructed within the floodplain have a finished floor elevation no lower than the 100-year flood interval.</p> <p>Pressure for future development in the County's floodplains is expected to continue as long as undeveloped areas along the shorelines exist. The planning issue that arises is how far should the County try to go in regulating development in these vulnerable areas?</p>	<p>A. To promote maximum safety and to protect life and property from potential storm and flood damages.</p> <p>B. To meet the requirements as well as the intent of the Chesapeake Bay act to prevent contamination of the Bay</p>	<ol style="list-style-type: none"> <li>1. Provide awareness and instructions to citizens advising of the potential dangers of establishing new buildings within flood-prone areas.</li> <li>2. In cases where the use of flood-prone areas is acceptable, establish performance guidelines for new development within identified floodplains that limit the types of land uses that may be established in floodplains.</li> <li>3. Continue to administer the County's Floodplain Management Ordinance and review it from time to time to ensure that it is in conformity with the latest FEMA guidelines and the Chesapeake Bay Act.</li> <li>4. Continue to administer the County's Subdivision Ordinance and Soil and Erosion Control Ordinance to provide, where needed, flood control devices and other improvements necessary to protect property from flooding.</li> <li>5. Restrict establishing wastewater disposal systems and utilities in or adjacent to areas subject to frequent flooding.</li> <li>6. Raise the minimum level of the first floor of any building intended for human occupancy from zero (0) inches to no less than eight (8) inches above the 100-year floodplain.</li> </ol>

PHYSICAL AND ENVIRONMENTAL ISSUES		
6. Wetlands and Natural Habitat Areas		
ISSUES	GOALS	STRATEGIES
<p>Wetlands are transitional areas between dry uplands and bodies of water. They serve as: (1) a natural water filter for wastes and sediments; (2) a barrier and absorber of floodwaters; (3) a buffer and stabilizer of shoreline from coastal erosion; (4) a recharge area for groundwater; and (5) a breeding and nesting ground for many species of fish, birds and plants.</p> <p>Wetlands may be either tidal or nontidal. Tidal wetlands consist of vegetated marshes, nonvegetated beaches, sandflats, mudflats and the like that are regularly flooded with tidal waters. Nontidal wetlands may be adjacent to, or located beyond, tidal influences. They are classified as "wetlands" because they are saturated with freshwater continually or seasonally.</p> <p>There are 1,560 acres of tidal wetlands in Northumberland County located primarily at the heads of streams (Figure 1.7). They occupy about 88 miles of shoreline. In addition, there are about 400 miles of streams above the tidal flow that have contiguous wetlands. Wetlands of both types are protected by federal, state and local laws.</p> <p>Natural Habitat Sites are habitat areas for rare, threatened or endangered species inventoried as part of a natural heritage program. Eighteen sites have been identified most of which are also in marsh or wetland areas. These areas are also protected by federal laws.</p> <p>The planning issue related to both wetlands and habitat areas concerns identification of the areas and coordination of projects to avoid development within them. Site-specific planning should provide data on any protected areas and during reviews the County should determine that approvals of other agencies having jurisdiction are obtained before development plan approvals.</p>	<p>A. To protect official wetlands, natural habitat areas and other sensitive environmental areas and natural resources from loss or degradation by development.</p> <p>B. To meet the requirements as well as the intent of the Chesapeake Bay act to prevent contamination of the Bay</p>	<ol style="list-style-type: none"> <li>1. Maintain a current inventory of all Natural Heritage Sites for Zoning Department review when processing development plans. As part of the process, require developers to obtain assurances from other agencies having jurisdiction to the effect that habitat sites will not be disturbed.</li> <li>2. Continue to administer the Chesapeake Bay Act regulations. Require developers to delineate and protect wetlands and natural habitat areas as part of the submission requirements of development or subdivision plans.</li> <li>3. Establish incentives to encourage individuals to participate in the preservation of natural habitat areas, the scenic values of the County's shoreline and other environmentally-sensitive areas.</li> <li>4. Continue to administer the wetlands regulations through the local wetlands board.</li> </ol>

PHYSICAL AND ENVIRONMENTAL ISSUES		
7. Historic and Archeological Resources		
ISSUES	GOALS	STRATEGIES
<p>With its history dating back to the 17th century, Northumberland County has many buildings and sites that are historically significant. Seventeen sites are on the National Register of Historic Places (Figure 1.8). The Virginia Dept. of Historic Resources (VDHR) has identified about 120 other sites that have some historic significance according to their criteria. No comprehensive survey to identify all of the historic resources has been performed by VDHR. For this reason sites carried in their current inventory are incomplete. A complete survey of the County would likely include all buildings more than 50 years old. Also, there would be several hundred additional sites added to the inventory.</p> <p>Two historic districts have been established: at Reedville and at Heathsville. With two historic districts in place and 18 places on the National Register, Northumberland County is well on its way to establishing an impressive program of historic preservation.</p> <p>To take this program further the County could authorize a county-wide survey in order to establish a complete inventory of historic resources. Next, it could develop a component of the Comprehensive Plan detailing an Historic Preservation Plan for the County. Language (with map references) should be included in the County's zoning ordinance establishing and protecting historic resources.</p>	<p>A. To acknowledge the importance of preserving places of known historical and archeological significance by establishing county policies designed to protect designated places from loss or degradation by development.</p> <p>B. To develop an Historic Resources Management Plan as a future element of the Comprehensive Plan.</p> <p>C. To be able to emphasize Historical Resources as a tourist and resident attraction.</p>	<p>1. Continue the process of establishing historic districts to recognize sites that are on the National Register of Historic Places.</p> <p>2. Identify additional sites that may be eligible for the Federal and State Registers and prepare documentation for nominating them to the registers.</p> <p>1. Consider performing a county-wide inventory of historic and archeological sites. A resource for both technical and financial assistance is administered by the Virginia Department of Historic Resources.</p> <p>2. Identify an appropriate organization as responsible for County-wide historical preservation and planning.</p>

PHYSICAL AND ENVIRONMENTAL ISSUES		
8. Chesapeake Bay Protected Areas		
ISSUES	GOALS	STRATEGIES
<p>Northumberland County was among the first counties to adopt the model Chesapeake Bay Preservation Ordinance provided by CBLAD. That ordinance established a Resource Protection Area (RPA) to include: tidal wetlands; nontidal wetlands connected by surface flow and contiguous to tidal wetlands; tidal shores; and a 100-foot vegetated buffer.</p> <p>The ordinance also established a Resource Management Area (RMA) covering all remaining territory within the County's jurisdiction. Development is allowed in the RMA after meeting performance standards set out in the ordinance.</p> <p>The ordinance was recently updated to reflect recent changes to the Chesapeake Bay Act.</p>	<p>A. To protect the natural resources of the Chesapeake Bay and its tributary streams by managing development and use of the watersheds and shorelines to reduce the quantity of pollutants entering state waters.</p> <p>B. To meet the requirements as well as the intent of the Chesapeake Bay act to prevent contamination of the Bay</p>	<ol style="list-style-type: none"> <li>1. Continue to administer the performance standards and regulations of the zoning ordinance in the RPA and RMA.</li> <li>2. Continue to coordinate the efforts of the County with those of CBLAD and other State agencies concerned with water quality protection.</li> <li>3. Continue to monitor and enforce the requirements of the County ordinance related to the Bay Act.</li> </ol>

PHYSICAL AND ENVIRONMENTAL ISSUES		
9. Groundwater Supply		
ISSUES	GOALS	STRATEGIES
<p>Groundwater is available from three aquifers. The "water table aquifer" can provide from five to 20 gallons per minute (7,200 - 28,800 gallons per 24-hour day) from shallow wells. It is a satisfactory source of water for residential and most small business uses. Heavy water users can obtain a good-quality water from deep wells extended into the "upper artesian aquifer" located 225 to 375 feet below the surface. Even larger quantities may be secured from the "principal artesian aquifer," although in the eastern area of the County, near seawater, this aquifer has a high sodium content.</p> <p>The increased amount of sodium in the water can also result from the pressure drop caused by very large water withdrawals at a single point. Reduced pressure in the aquifers permit the mixing of sea water with that in the aquifers. Large water users outside the County significantly affect the long term (50 – 70 year) water supply available and should also be monitored.</p> <p>A study was performed in 1969 for the Northern Neck Planning District Commission to determine feasibility of and location of reservoir sites. Current pressures on the fresh water supply make it incumbent to revisit the conclusions and recommendations of that study.</p>	<p>A. To protect the water supply in the water table aquifer from pollution originating in surface uses of the property.</p> <p>B. To assure a sustainable long term fresh water supply for the County.</p>	<ol style="list-style-type: none"> <li>1. Monitor septic tanks with emphasis on replacement or repair of failing systems.</li> <li>2. <i>Require sufficient separation between a septic tank field and the water table to protect against aquifer contamination.</i></li> <li>3. Cooperate with the Virginia Department of Environmental Quality to locate defective underground storage tanks, replacing them with tanks of approved materials.</li> <li>4. Establish an Interstate program of conservation, education and regulation to protect the artesian aquifers</li> <li>5. Develop and implement a long term program to provide reservoirs and other sources of fresh water to reduce dependency upon the existing aquifers</li> </ol>
<p>Several County water systems have been developed using the deeper aquifers, the largest of which is at Reedville. Public water systems that serve 25 or more persons and have 15 connections for 60 or more days per year are regulated by the Virginia Department of Health. In 1994, there were 51 public water systems in Northumberland County.</p>	<p>A. To discourage extremely large withdrawals from the lower aquifers in such amounts as to cause a pressure drop thus allowing sea water to infiltrate into the aquifer.</p> <p>B. To prevent pollution of public water supply sources through a program of wellhead protection.</p>	<ol style="list-style-type: none"> <li>1. Establish water preservation guidelines and restrictions to cover very large withdrawals from the deep aquifers, particularly those close to the shore.</li> <li>2. Delineate wellhead protection areas for active public water supply wells. Establish limitations on the types of land uses allowed within the protected area and develop a contingency plan for dealing with accidents.</li> </ol>

PHYSICAL AND ENVIRONMENTAL ISSUES		
10. Water Pollution Sources		
ISSUES	GOALS	STRATEGIES
<p>Potential sources of pollution include the following: underground storage tanks, landfills, lagoons and holding ponds, sludge application, septic systems, pesticides and fertilizers and hazardous wastes.</p> <p>The Virginia Department of Environmental Quality monitors point and nonpoint pollution sources through two programs. "Pollution Discharge Elimination System (VPDES) Permits" are required for any "point source" of pollution discharging into state waters. "Point sources" are sources that can be traced to a single point such as an industrial waste or sewage discharge pipe. In 1995, DEQ reported 19 active industrial SPDES permits and three public permits.</p> <p>In addition, other land uses that do not discharge directly into state waters can contaminate both surface and ground water and are monitored through the "pollution abatement permit program." This program is focused on large operations such as commercial livestock raising, sewage treatment plants, sludge disposal sites, lagoons and the like. Five (5) pollution abatement permits were active at the beginning of 1994.</p> <p>Mining is another source of potential pollution. In April 1994, there were 14 active mining permits for sand and/or gravel in Northumberland County. Mining has the potential to lower the water table, and thereby disrupt aquifers.</p> <p>Methods and requirements for reclamation of a site upon completion of a mining operation are issues.</p>	<p>A. To protect the underground water, surface water, and runoff from pollution resulting from all sources of pollution.</p> <p>B. To protect surface and underground water from pollution by large commercial or institutional operations.</p>	<ol style="list-style-type: none"> <li>1. Monitor the application of pesticides and agricultural chemicals through a "nutrient management plan"<sup>2</sup> and Best Management Practices.</li> <li>2. Establish a County process for handling, storage, transporting and siting of hazardous materials and wastes. This process should also provide for disposal of mattresses, refrigerators and other bulk wastes.</li> <li>3. Establish County policies governing the location, installation and operation of large commercial activities including: animal raising, sludge disposal, lagoons, landfills, and similar activities through zoning permits and other local regulations.</li> <li>4. Coordinate and cooperate with the Department of Environmental Quality in the administration of pollution abatement permits.</li> <li>5. Establish policies and guidelines concerning the use and reclamation of land for mining.</li> </ol>
<p>Non-point sources of pollution or those that cannot be traced to a single source or point are always threats to both ground and surface water. Non-point pollution may come from a variety of sources such as: agriculture, forestry, and developed areas.</p>	<p>A. See watershed goals</p>	<ol style="list-style-type: none"> <li>1. See watershed policies</li> </ol>

<sup>2</sup>Oversight by the U. S. Soil Conservation Service.

PHYSICAL AND ENVIRONMENTAL ISSUES		
11. Watersheds		
ISSUES	GOALS	STRATEGIES
<p>Watersheds determine how stormwater (any precipitation) moves on the surface, at what rate it is absorbed into the ground, where the runoff enters major rivers and, eventually, the Chesapeake Bay. Along with surface water, pollutants may be infiltrated into the groundwater supply while excess runoff carries them to the rivers and Bay. While many specific points of pollution can be identified and regulated (previous topic), there are numerous sources of pollution which cannot be identified by specific sites. It comes from roads, croplands, construction sites, overflowing septic tanks and, in short, any locations used by people. These "non-point" sources are of major concern in the protection of both ground water and the Chesapeake Bay. Consequently, the management of watersheds is an important element in the protection of the water supply and also the Bay.</p> <p>In Chapter 1, ten major watersheds were identified which range in area from three to 58 square miles. All but two (which drain directly into the Chesapeake Bay) define the drainage area of major rivers or creeks. Within each watershed numerous smaller watersheds may be defined.</p> <p>The planning issues related to watersheds concern the level of pollutants that could enter the water supply or the Bay with surface water as their carrier. The focus of issues and the strategy for dealing with them must therefore address methods of reducing not only the amount of runoff but its quality as well.</p> <p>Because all of Northumberland County's territory has been included in either the Chesapeake Bay RPA or RMA, the approach to managing the watersheds can be linked to the same performance standards used in the Resource Management Area.</p> <p>Timber cutting, particularly clear cutting, and reforestation has an impact on erosion because of the large amount of land that is disturbed during cutting and removal. Silvicultural activities are exempt from the Chesapeake Bay Preservation regulations and Best Management Practices have been carried out only as a voluntary program.</p>	<p>A. Achieve a 20% reduction by 2015 in the amount of impurities reaching the County's underground water supply from surface water.</p> <p>B. Achieve a reduction in the amount of runoff from stormwater and a 20% reduction by 2015 in the impurities that the stormwater carries to state waters.</p> <p>C. To eliminate soil erosion and incremental runoff resulting from silvicultural activities.</p>	<ol style="list-style-type: none"> <li>1. Apply performance standards of the RMA and strengthen them for individual watersheds if necessary to deal with special conditions in more intensely-developed areas.</li> <li>2. Establish a current baseline and methods of measuring impurities</li> <li>2. Make use of the Best Management Practices as established by the Department of Environmental Quality</li> <li>3. Establish review standards and requirements for all major developments, including activities which require state-issued Pollution Abatement Permits, for eliminating the impact of such uses on the water quality.</li> <li>4. Coordinate County policies with the Department of Agriculture's Nutrient Management Program to encourage NMPs to be established on all farms.</li> <li>5. Establish and coordinate with the State contingency plans, including transportation routes, for dealing with an emergency resulting from the use or transportation of hazardous materials (see also Strategies under "Water Pollution Sources - previous page).</li> <li>6. Require the use of <u>Forestry Best Management Practices for Water Quality in Virginia</u> (Va. Dept of Forestry, 1989) in connection with timber harvesting and removal from forest stands within the County.</li> </ol>

PHYSICAL AND ENVIRONMENTAL ISSUES		
12. Soil Conditions		
ISSUES	GOALS	STRATEGIES
<p>The water table in the areas of the County lying seaward of the "Suffolk Scarp" is quite close to the surface (Figures 1.4 and 1.10). In these areas the water table is less than 24 inches from the surface. In the remainder of the County, the water table should not present a limitation to development because the areas affected are mostly along stream beds and banks. A high water table exposes the water table aquifer to potential pollution from surface seepage, failing septic tanks and other pollutants that enter the soil. When combined with soils that have a high permeability there is a particular problem with undigested sewage entering the underground water system even when septic tanks are working normally.</p> <p>Soils with high erodibility also contribute to river and bay pollution when soil particles containing impurities are carried by stormwater runoff into public waters. Construction sites are the source of potential soil erosion but any activity that disturbs the natural surface vegetation, including farming, is a potential source of soil erosion.</p> <p>Erosion is particularly a problem when slopes are steep where the soil is unstable. A simple break in the natural vegetation or dune may initiate erosion that continues indefinitely.</p> <p>The planning issues regarding soils cover a wide range of space, but generally the issues are focused on the need to avoid extensive ground disturbance and certain types of building in areas where soils are extremely sensitive to erosion. And when such soils are disturbed, there is a great need to protect the site with erosion and sedimentation devices.</p>	<ul style="list-style-type: none"> <li>A. To protect the underground water quality through the management of development.</li> <li>B. To protect state waters from pollution resulting from avoidable soil erosion.</li> <li>C. To reduce the amount of development on highly erodible soils, particularly where slopes are excessive.</li> </ul>	<ul style="list-style-type: none"> <li>1. Manage development so as to minimize the use of land with high water tables and poor soils for septic tanks use.</li> <li>2. Establish development policies that limit development on slopes greater than 15 percent and prevent development where slopes are 20 percent or greater.</li> <li>3. Establish zoning and subdivision policies to provide incentives that encourage the use of innovative land planning techniques. The incentives should be designed to discourage development of areas with poor soils, high water tables, steep slopes or areas with other environmental constraints.</li> <li>4. Require erosion and sedimentation prevention devices where river or bay pollution from development are likely</li> </ul>

PHYSICAL AND ENVIRONMENTAL ISSUES		
13. Shoreline Conditions		
ISSUES	GOALS	STRATEGIES
<p>The shoreline conditions report (Northumberland County, VIMS, 2002) identified 556 miles of shoreline<sup>3</sup> in Northumberland County which were distributed as follows:</p> <ul style="list-style-type: none"> <li>• Agriculture 37 miles</li> <li>• Bare 2 miles</li> <li>• Commercial 12 miles</li> <li>• Forest 249 miles</li> <li>• Grass 7 miles</li> <li>• Industrial &lt; 1 mile</li> <li>• Paved 1 mile</li> <li>• Residential 187 miles</li> <li>• Scrub-shrub 60 miles</li> <li>• Timbered &lt; 1 mile</li> </ul> <p>These numbers indicate that most of the shoreline is still in its natural state with considerable opportunity to take advantage of conservation measures. Boat houses and piers are the dominant feature of those portions of the shoreline that are used for residences, averaging five- boat facilities per mile overall (6 per mile in Great Wicomico River).</p> <p>Shoreline erosion is evident along the entire (exposed) portion of the shoreline (Figure 1.12) where VIMS reported erosion was occurring at rates of two feet per year or more. Erosion is unquestionably greater in the shorelines exposed directly to northeaster storms. See the Appendix for additional data on erosion.</p> <p>The major issue raised by shoreline erosion and alterations of shorelines is that these actions increase the amount of sediment being deposited into the Chesapeake Bay. Little can be done to change the natural storm patterns and to a large extent the community must live with this natural change in its boundaries over time. Conservation measures, however, may help delay the damage from natural causes and County intervention should prevent damage from non-natural causes. A major defense of the shoreline against erosion can be gained from marshlands and actions that protect existing marshes and promote their extension will work to slow the rate of shoreline erosion.</p>	<p>A. To reduce the causes of shoreline erosion.</p> <p>B. To promote the growth of marshes and other natural barriers to erosion.</p> <p>C. To protect the shorelines which are vulnerable to extensive erosion from future buildings and construction.</p>	<ol style="list-style-type: none"> <li>1. Preparation of guidelines or restrictions for developing subdivisions involving shorelines can be incorporated into the Subdivision Ordinance. The guidelines would provide techniques for shoreline development and use which improve the shorelines resistance to erosion.</li> <li>2. Promote through incentives greater erosion protection along shorelines where the known rate of erosion is excessive. Such protection might be structural (i.e., bulkheads) or regulatory (i.e., additional zoning setbacks).</li> <li>3. Establish standards for construction which modify the shoreline, such as: bulkheads, piers and boat houses.</li> <li>4. <i>Promote the use of vegetation as an alternate to construction for the control of shoreline erosion.</i></li> <li>5. Continue to administer and improve enforcement of requirements of the Chesapeake Bay Resource Protection Area regulations to preserve marshlands, wetlands and other sensitive environmental features from erosion or destruction.</li> </ol>

<sup>3</sup>This figure comes from summing individual page totals of the Shoreline Inventory report.

PHYSICAL AND ENVIRONMENTAL ISSUES		
14. Access to Public Waters		
ISSUES	GOALS	STRATEGIES
<p>Access to the Chesapeake Bay and to the numerous rivers and creeks that form the 451-mile shoreline of Northumberland County is one of the County's major resources for both residents and visitors. Existing access is provided from the major rivers (see Figure 1.13) and include: bank and pier fishing, boat launching ramps, commercial marinas, private community marinas and public beaches.</p> <p>The need to improve public access to state waters is one of the major goals of the Chesapeake Bay Program. That program emphasizes the desire to improve access for boat-related activities, swimming, fishing and for natural wildlife areas.</p> <p>The Public Access Plan (Chesapeake Bay Program) emphasizes a need to increase public access and to upgrade public boat ramps. Marshes and wetlands are resources to extend opportunities for the public to enjoy the shorelines and waterfront areas.</p> <p>There is an ongoing desire for improved access to the waterfront for local citizens as well as for extended facilities to support tourism.</p>	<p>A. Improve existing public boat ramps and increase the number of access points for general public and visitor use.</p> <p>B. Increase the use of shorelines to promote the growth of compatible economic development and tourism.</p>	<ol style="list-style-type: none"> <li>1. Continue the County program to develop additional public boat ramps and more fishing piers. Existing facilities should also be upgraded with better boat-handling facilities, piers and ample boat trailer parking.</li> <li>2. Identify areas and appropriate zoning where the shoreline could be developed with facilities for economic use and tourism, including resort motels/boatels and similar enterprises. (See Strategy No. 6 below under 1. Demographics, Economics and Housing)</li> <li>3. Identify places where visitors may access public waters for swimming, fishing and boating.</li> </ol>

COMMUNITY DEVELOPMENT ISSUES 1. Demographics, Economics and Housing		
ISSUES	GOALS	STRATEGIES
<p>The year-round population of Northumberland County increased slowly between 1990 and 2000 with the dominant increase in the 65 plus group. The County's young population is leaving the County while the older, retired population is growing. During the summer months, the population peaks as seasonal residents and week-end visitors come to the County. This adds to the economy as well as increases the services required of local government.</p> <p>Among the issues that relate to the demographic trends are the types of jobs available to residents. Seasonal jobs dominate the local economy with the result that employment peaks during the summer and fall and slacks off during winter and spring. Many workers commute to surrounding counties. The economy could be improved by the addition of more year-round jobs. There is an apparent market for more retail establishments, since the County is lagging other counties significantly in retail sales. The demand is even greater during the peak tourist days and months.</p> <p>Some small growth is being experienced in and near the villages, particularly at Callao, Heathsville and Burgess. But there are limitations to the type of business or industry that can be accommodated in Heathsville or Burgess because neither of these villages has sewer. There is ample sewer capacity at Reedville, but there is little indication that new businesses are attracted to that area and but the Callao sewer project should be completed in 2006</p> <p>The major growth has been in waterfront property. The attractiveness of the County's shoreline property has resulted in a surge of shoreline subdivision development since 1995 and in new homes along the waterways of the County. Because of this development, higher property values may influence the conversion of farms and forests to waterfront subdivisions. This is likely to increase the cost of housing county wide as demand for construction services increases.</p> <p>In other matters related to housing, there are very few rental housing units for full-time residents. Some housing units still lack complete plumbing and other basic equipment.</p> <p>Approximately a third of the housing units in the County are over 40 years old.</p>	<p>A. Provide necessary services for the older population and seasonal population.</p> <p>B. To increase efforts to increase economic development compatible with the changing demographics of the County</p> <p>C. For statement on villages, see Issue No. 1 under Physical and Environmental Issues.</p> <p>D. To ensure that older housing units and mobile units comply with modern health and safety standards.</p>	<ol style="list-style-type: none"> <li>1. Promote provision of transportation, education, recreation, and medical services by both public and private sources. Continue expansion of the Public Library services.</li> <li>2. Recognize that the primary population growth and source of income to the County is from the retired community and emphasize growth compatible with this demographic component.</li> <li>3. Identify several potential sites for new business or industry. Focus on Callao with the new sewer system. This should be accompanied with promotional and marketing material about the assets of Northumberland County.</li> <li>4. Promote and attract jobs in occupations that are active during the winter and spring to increase year-round employment and retain the workforce in the County.</li> <li>5. Prepare a target business/industry study to identify businesses that would be compatible with the County's goals and demographics.</li> <li>6. Investigate feasibility of establishing a "waterfront development district" where the focus will be on developing commercial recreational enterprises in selected areas compatible with the environment.</li> <li>7. Continue the enforcement of building and safety codes.</li> <li>8. Pursue programs to provide plumbing for housing units without this service.</li> <li>9. Investigate programs to aid in providing multi-family housing.</li> </ol>

COMMUNITY DEVELOPMENT ISSUES 2. Transportation and Recreation		
ISSUES	GOALS	STRATEGIES
<p><b>HIGHWAYS:</b> Except for a few roads that are in private ownership, highways in Virginia counties are owned and maintained by the State. The amount of traffic on any given road determines the priority give by VDOT for improving the road, whether primary or secondary. Primary roads are planned and funded through one division while secondary roads (those numbered 600 or higher) are handled by another division.</p> <p>Primaries serving the County include U. S. 360, and state routes 200, 201 and 202. Of these Route 360 provides circulation through a central corridor running the entire distance of the County. Route 200 extends this corridor south from Burgess to Kilmarnock and Route 202 extends it to the northwest from Callao.</p> <p>Transportation issues focus on: a need to continue the improvement of 360 to four-lane status for its entire distance through the County; maintain the quality of Routes 200, 201 and 202; and to establish a network of feeder roads sufficient to provide good circulations throughout all parts of the County.</p> <p>The NNPDC in 2003 sponsored the development of a Transportation Corridor Protection Plan to address issues of public health, safety and welfare along the major roadway corridors. This Plan recommended certain corridor protection policies and provided a model Highway Corridor Overlay District.</p>	<p>A. Maintain a network of public roads consisting of corridor routes which carry most of the traffic; feeder (secondary) roads which move traffic from the corridors to different parts of the County and; and service (secondary) roads to provide access to subdivisions and individual properties.</p> <p>B. Incorporate the elements of the model Highway Corridor Overlay District into the County Ordinances</p>	<ol style="list-style-type: none"> <li>1. Designate U. S. 360; and VA Route 200 as the primary corridor routes.</li> <li>2. Improve 360 to four lanes from Heathsville to Burgess and from Lilian to Reedville.</li> <li>3. Designate a system of roads that are in strategic locations as feeder roads to assure service to each area of the County.</li> <li>4. Establish policies concerning the conditions under which new roads will be brought into the state system using the planning guidelines published by VDOT.</li> <li>5. Consider traffic flow and impacts in the review of new subdivision requests.</li> <li>6. Include the Highway Corridor Overlay District in the rework and upgrading of the County zoning ordinances.</li> </ol>
<p><b>RECREATIONAL AREAS AND FACILITIES</b> Recreation in Northumberland County comes from a combination of natural, public and private sources. Water, as was noted in Chapter 1, offers a primary source of recreation. Along more structured lines, a mixture of recreational opportunities is offered through county and private resources. Major facilities include recreational sites at all of the public schools, water-related activities including marinas, boat launching areas, swimming and fishing areas charter boat operators and ferry operators to islands in the Bay. There are three major conservation areas owned by the State which have potential for development for limited recreational use (see Figure 4.3 and associated discussion).</p> <p>There is a need for more public access to the recreational opportunities offered by the Chesapeake Bay and its tributary rivers and streams. This observation comes from studies of the Chesapeake Bay access resources and from comments of community leaders and citizens. Access for fishing - both for boat launching and pier/bank fishing - and beaches for swimming are cited as major needs.</p>	<p>A. Expand the opportunities for active and passive recreation throughout the County.</p> <p>B. Expand public access to the Chesapeake Bay, to tidal waters and to non-tidal waters.</p>	<ol style="list-style-type: none"> <li>1. Develop and implement a plan for the identification, acquisition, and implementation of existing and potential recreational areas and facilities.</li> <li>2. Provide additional boat ramps including upgrading of some existing ramps to improve access the Chesapeake Bay for fishing and other water sports.</li> <li>3. Expand fresh and tidal water fishing opportunities.</li> <li>4. Encourage and support charter boat operators, ferries and other users of the Bay in the attraction of visitors to the County</li> </ol>

COMMUNITY DEVELOPMENT ISSUES		
3. Public Facilities		
ISSUES	GOALS	STRATEGIES
<p><b>COUNTY OFFICES AND FACILITIES</b>                      After completing the new courthouse and new library in 1996, the County was in a good position to meet most of its public building needs. The existing courthouse was reconfigured to meet the needs of county offices. The Library, constructed by private effort near the courthouse, complements the complex of public facilities in Heathsville.</p> <p>Population growth and demand for services are currently straining these facilities.</p>	<p>A. To maintain Heathsville as the governmental center of the County.</p> <p>B. To utilize the existing courthouse for the most effective purposes.</p> <p>C. To support the Library in its mission to serve the community</p>	<p>1. Improve the capability of the existing courthouse to serve as an emergency center to coordinate responses to hurricanes and other disasters.</p> <p>2. Encourage community support of the Library in its plans for expansion.</p>
<p><b>SCHOOLS</b>                      The centrally-located Elementary School opened in 1996. It was designed for 750 students and currently approximately 650 are enrolled. Based on population projections this school will meet the needs for educational facilities in this age group for the foreseeable future.</p> <p>A study was performed in 2004 to investigate the facility needs of the Middle School and the High School.</p> <p>The Middle School does not meet the current needs for technology and special programs and the internal environment and classrooms are inadequate for quality education. Modernization and increases in size are required.</p> <p>The High School was renovated in the late 1980s. Currently, the temporary, mobile classrooms need to be replaced with modern permanent classrooms. Population projections show the current enrollment to remain approximately constant or very slow growth. However, the required educational programs have been changing and more classroom space is required to meet these changing needs.</p>	<p>A. Provide adequate and modern facilities to facilitate learning in the County schools.</p> <p>B. Maintain facilities to keep pace with technology and other special educational needs</p>	<p>1. Evaluate the proposed options of renovation or replacement the Middle School and proceed with the selected option.</p> <p>2. Develop and implement plans to replace the mobile classrooms and to add additional classrooms to meet the changing requirements.</p>
<p><b>WATER AND SEWER</b>                      The potable water supply for the County is provided by wells, both the shallow and deep aquifers, and there does not appear to be any shortages projected for the next decade or two, although a problem exists in later decades. (see information on "groundwater" in both chapters 1 and 2). Areas where development activity is expected to be concentrated should generally be considered for a community water system. This applies particularly to large-scale residential developments and major business or industrial uses.</p> <p>The public sewerage system located in Reedville was recently expanded to include Fleeton. A new system is being installed in Callao which was limited for future development because the soils are very poor for septic tanks. New development during recent years has clustered either near the</p>	<p>A. To assure an adequate water supply for all County users including large-scale developments, sites for economic development, and existing villages.</p> <p>B. To safeguard against over use of water supply in the aquifers by any one user.</p> <p>C. To provide sewer facilities to areas where the economically feasible.</p>	<p>1. Establish policies in the development ordinances requiring developers to provide adequate water supply and sewer facilities for any large-scale development.</p> <p>2. Avoid the establishment of industries that use such large quantities of water that the loss of pressure in the aquifer threatens salt infiltration or other contaminants.</p> <p>3. Continue to evaluate the feasibility of providing sewer to villages with greatest</p>

COMMUNITY DEVELOPMENT ISSUES		
3. Public Facilities		
ISSUES	GOALS	STRATEGIES
villages or along the shorelines. If sewers could be shown to be financially feasible, commercial development of Heathsville and other villages would be greatly assisted by their addition. .		growth potential. Continue to monitor availability of grants from state and/or federal sources for projects that meet their criteria.
<p><b>OTHER SERVICES</b>                      Emergency services are provided by volunteer agencies and refuse disposal is provided under contract. The present level of resources may be inadequate to support desired services as the County population continues to increase.</p>	<p>A. Assure the present level and quality of services is maintained as the County grows and the demographics change</p>	<p>1. Evaluate the ability of the volunteer organizations to maintain their current level of service over the next 5-10 years.</p> <p>2. Improve the Emergency Response capability of the County as recommended in the study performed after Hurricane Isabel.</p>