

## **VI. Chesapeake Bay Preservation Act**

*NOTE: Material in this Chapter is subject to change pending regulations promulgated by the State Water Control Board, the interpretation of those regulations by the VA Department of Environmental Quality (DEQ), and recommended implementation guidelines from the DEQ and other state, regional and local agencies.*

The Town's local program is currently in compliance with the Chesapeake Bay Preservation Act and Regulations.

The Chesapeake Bay Preservation Area Designation and Management Regulations (9VAC25-830 et. seq) requires all jurisdictions in Tidewater, Virginia to develop criteria that will provide for the protection of water quality, and that will also accommodate economic development. This will require local governments to modify the necessary Comprehensive Plans, Zoning and Subdivision Ordinances to protect the quality of State waters in their jurisdictions. This includes site redevelopment and construction review with respect to maintaining and/or improving the quality of groundwater, storm water run-off, sewage treatment and wetlands and shoreline preservation.

This Act also provides guidelines for the siting and development of "Water-dependent Facilities", which includes ports, marinas and other boat docking structures, beaches and other water recreation facilities, fisheries and other marine resource facilities.

Virginia, Pennsylvania, Maryland, the District of Columbia, and the U.S. Environmental Protection Agency signed the Chesapeake Bay Agreement in 1983 and created the Chesapeake Bay Program to aid in the restoration of the bay its waterways. Virginia passed the Chesapeake Bay Preservation Act (Code of Virginia, §62.144.15:67 et seq) in order to comply with the Chesapeake Bay Agreement. The Town of Urbanna is one of 84 Virginia localities subject to the Act. The Act requires the Town to have a long-range plan to protect and restore the Town's creeks and the Rappahannock River from further degradation. The corresponding regulations (9VAC25-830 et. seq) require the Town to incorporate water quality protections into its local comprehensive plan. This includes establishing goals, policies, and action plans based on the Town's inventory and analysis of the existing environmental conditions, which can serve as a guide for continued development.

Land use within the Town of Urbanna greatly affects the quality of the water in the Town's watershed. Because of its location on the Rappahannock River, Perkins Creek, and Urbanna Creek, the Town's storm drains, culverts, and drainage ditches are connected to the Chesapeake Bay's watershed and ecosystem. Middlesex County has been experiencing moderate growth since the 1980s, which has resulted in increased development within the area. Pollution from increased development and impervious surfaces has caused several species of the Chesapeake Bay watershed to reach critically low numbers.

In addition, the shorelines of the Rappahannock River and Urbanna Creek are experiencing shoreline erosion and/or accretion. Much of the Shoreline of the Rappahannock River and

Urbanna Creek within the Town has been either bulk headed or rip-rapped to combat shoreline erosion.

There is limited fishing in both Perkins Creek and Urbanna Creek for small fish, as shown on Town map Exhibit I, however there are no game fish within the limits of the Town. While the Town has a small oyster bed near the Town marina in Jameson's Cove, which is maintained as an educational asset for local schools, it does not have an active aquaculture industry. Local watermen, who harvest oysters on the beds outside Town limits in-season, offload their harvest at the Town Upton Point marina and sometimes on Perkins Creek. The oysters are then transported, over land, to processing plants outside Town limits.

#### *Resource Protection Areas*

Resource Protection Areas (RPA) are the more sensitive areas of a Chesapeake Bay Preservation Area. These consist of sensitive lands located along the shoreline of the Chesapeake Bay and its tributaries. RPAs include tidal wetlands, tidal shores, nontidal wetlands that are connected to tidal wetlands or perennial streams, and a 100-foot-wide buffer located adjacent to these features and along both sides of any body of water with perennial flow.

The Town contains tidal wetlands and tidal shores that are associated with the Rappahannock River, Perkins Creek, and Urbanna Creek and connected nontidal wetlands that are adjacent to Perkins Creek. A 100-foot-wide buffer has been designated adjacent to the listed features and the shoreline of the Rappahannock River, Perkins Creek, and Urbanna Creek.

#### *Resource Management Areas*

Resource Management Areas (RMA) include land types that if improperly managed could result in significant water quality degradation or diminish the functional land value of the Resource Protection Area. RMAs are an important component of water quality protection because they protect RPAs from the adverse impacts of human activity. A Resource Management Area can also provide additional water quality protection with careful use and development of its land types.

The Town's Chesapeake Bay Preservation Area Overlay District states that a Resource Management Area includes the following:

- 100-year floodplain;
- Non-tidal wetlands not connected by surface flow and contiguous to tidal wetlands, water bodies with perennial flow or other tidal waters;
- Highly erodible and highly permeable soils; and
- Slopes in excess of fifteen (15) percent.

#### *Intensely Developed Areas*

In addition to the RPA and RMA, the Town has designated an Intensely Developed Area (IDA) as an overlay district along the southern shoreline of Urbanna Creek. This IDA includes marinas and boat service facilities as well as the industrial uses of the area. The IDA signifies that it has

few natural features remaining, is almost entirely paved, and is currently served by public sewer and water.

*Chesapeake Bay Preservation Area Overlay District*

The Town has a Chesapeake Bay Preservation Area Overlay District with regulations that protect and enhance water quality through environmentally responsible land use management and practices. The Chesapeake Bay Preservation Areas are shown in the figure below.

EXHIBIT I



### Potential and Existing Sources of Pollution

There are a variety of sources for pollution that can have environmental impacts such as groundwater contamination, poor air quality, and degradation of the aesthetics of the landscape. An important indicator of the health of a watershed is the quality of the water within the local streams and rivers. Although a certain level of pollution due to transportation and development is inevitable, steps must be taken to prevent environmental health hazards and protect the ecological balance of the aquatic ecosystem.

The Town's relatively small size makes the sources of pollution easier to identify. There are two main types of pollution: point source pollution and nonpoint source pollution. Point source pollution can be treated to a single source, such as a leaking underground storage tank, above ground storage tank, or illegal dumping of hazardous wastes. Underground storage tanks can be a major source of groundwater contamination. This is primarily because the tanks are not visible and a leak may easily go undetected until a substantial amount of pollutants have already seeped into the surrounding soil. The main concern for the Town regarding underground storage tanks is the possible corrosion of unprotected concrete tanks due to the acidity of local soils; nearly all land in Town is high risk for concrete. In addition, over 80 percent of the land area poses a moderate risk for corroding unprotected steel. The Town currently has two active underground storage tanks, as indicated on the Town map Exhibit I. One is at URBBY (formerly Bridges Marina) located at 15 Watling Street and the other at the Exxon Station at 20 Cross Street. The Department of Environmental Quality, Underground Storage Tank Program currently monitors both locations.

Nonpoint source pollution comes from a variety of sources, with stormwater runoff carrying a lot of these pollutants. Stormwater runoff carries pollutants that collect on impervious surfaces, such as roadways, sidewalks, and parking lots, into the local waterways. Impervious surfaces do not give the stormwater the chance to be absorbed by the soil. Urban development, including residential development, can produce high levels of nonpoint source pollution such as plant nutrients (nitrogen) and heavy metals. Residential and commercial activities, parking areas, and waterfront activities are the main sources of nonpoint source pollution within the Town.

Strategies to reduce nonpoint source pollution include: minimizing impervious areas of development sites, maintaining open space, preserving indigenous vegetation, and utilizing Best Management Practices (BMPs) that are designed to reduce stormwater runoff and aid in the filtration of harmful pollutants. Educating the public and local businesses about nonpoint source pollution can also be effective for eliminating these sources of pollution.

Eroding soils are also seen as pollution. The Town is located in a flat coastal plain with the only significant slopes along the shoreline of the Rappahannock River, Urbanna Creek and Perkins Creek. Elevations in the Town range from sea level to over 50 feet above sea level. Slopes of 15 percent or greater generally occur around the shorelines of waterways in and around the Town. The majority of slopes within the Town range from 0-2 percent and offer no problems for development activities.

The entire jurisdiction is designated as a Chesapeake Bay Preservation Area.

The Town sold its sewage treatment plant to the Hampton Roads Sanitary District (HRSD), and HRSD operates the treatment plant. After treatment, effluent is currently discharged into Urbanna Creek outside the Town limits. There are plans to discontinue operation of this treatment plant by 2027 and pump the Town's sewage to other HRSD treatment plants, which discharge into the James River. The Town requires all development within the Town to be connected to this system, per Town Code (§174.10.11.C, et seq). Therefore, there is no concern over failing septic systems producing pollution.

### *Physical Constraints to Development*

Development in Resource Protection Areas is limited to water-dependent uses, such as marinas, and piers, or the redevelopment of previously developed areas. Development may be allowed in the Resource Protection Area, with administrative approval from the Town, only if it meets the following requirements:

- It is water dependent;
- Constitutes redevelopment;
- Constitutes development or redevelopment within a designated Intensely Developed Area (IDA);
- Or if the application of the buffer area would result in loss of buildable area on a lot or parcel recorded prior to October 1, 1989.

While there are certain restrictions prohibiting development or land disturbance or vegetation removal within 100 RPA protected zone, there are exceptions for water dependent facilities, redevelopment and certain administratively permitted exceptions. There is no restriction on development in the Resource Management Areas provided the development meets the requirements of the zoning district. Development in the IDA may have the 100-foot buffer area requirements waived, provided that the Town considers the establishment of a buffer area if, in the future, the land uses within the IDA have changed.

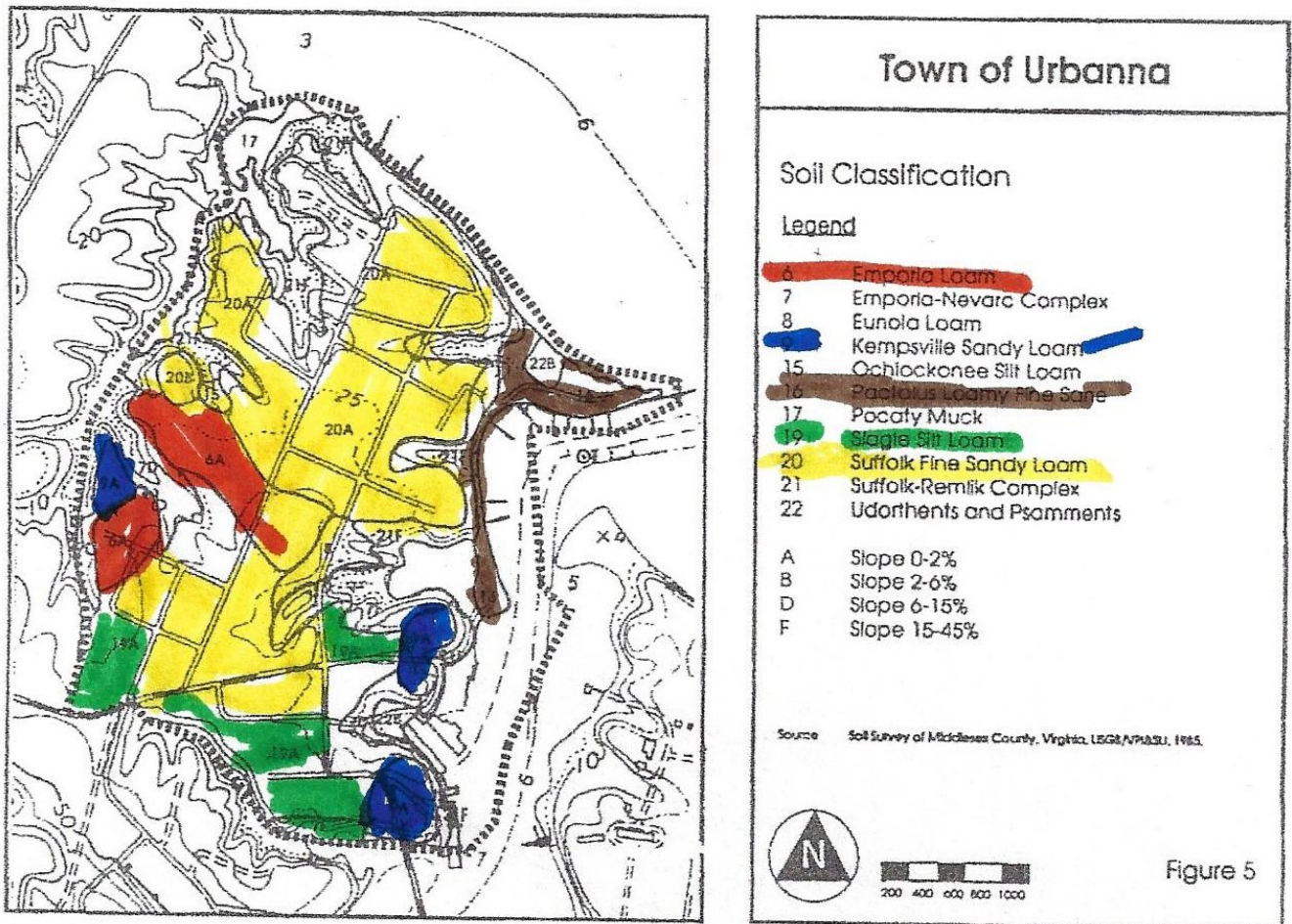
Development is restricted from the floodway and discouraged from the floodplain. Sensitive soils create a development constraint. The Town's Chesapeake Bay Preservation Area Overlay District included highly erodible and highly permeable soils as part of the Resource Management Area. The Virginia Tech Geographic Information System (VirGIS) laboratory mapped areas of Middlesex County that met the parameters for highly erodible and permeable soils as specified in the regulations.

High erodible soils are those in which have a high potential for eroding and causing sediments to enter waterways. The potential for eroding is due in part to the steepness and length of slope which act together to increase the speed of water running down slope. The faster the runoff down the slope, the more soil particles are washed off the slope. Soil structure, texture, percentage of organic material, the infiltration rate and the permeability of the soil are characteristics that help to define a soils erodibility. Eroding soils contributes to water pollution by increasing the amount of sediment in the water.

Highly permeable soils are those soil which are susceptible to pollutant leaching and therefore have a high potential for groundwater pollution. The ability of water to move down through the soil depends in large part on the water holding capacity of the soil. Capacity of a soil to hold water is determined by the structure, texture, percentage of organic matter and permeability of a soil. Soil permeability is particularly important in the design and construction of septic drain fields as the effluent from the septic system will move quickly through the soil into the groundwater system without proper filtration. However, other pollutants such as pesticides, heavy metals, organic wastes and road salts can also move quickly through highly permeable soils and contribute to the contamination of groundwater.

Within the Town, there are areas that are both high erodible and highly permeable and areas that are either highly permeable or highly erodible. Approximately 13 percent of the Town is characterized by soils that are both highly permeable and highly erodible. More than 49 percent of the Town is characterized by soils which are highly permeable, while over 6 percent of the soil are highly erodible. Overall, 68 percent of the Town is characterized by sensitive soils.

### EXHIBIT II



Shoreline erosion is another development constraint. The erosion of the shoreline can affect growth by removing land area from the Town. As the shorelines along Urbanna Creek and Perkins Creek continue to develop, the rate of erosion may increase if the proper steps are not taken to prevent the disturbance of the vegetation along the shoreline. Some hardening of the creek shoreline has occurred, but hardening techniques tend to exacerbate the erosion downstream. The implementation of the Town's Chesapeake Bay Preservation Area Overlay District should help to preserve the existing vegetation along the creek's shoreline. With erosion occurring, it will be particularly important for the full 100-foot buffer area to remain intact, not only to provide a filter for the water running off the property, but to protect the property from further erosion. In addition, development may be constrained by:

- Steep slopes
- Flat grades that don't drain well
- Mature forest vegetation

The Town of Urbanna is, therefore, committed to the following policies:

The Town will continue to identify physical constraints to development. It will continue to enforce its Chesapeake Bay Preservation Area Overlay District to protect sensitive natural features including, but not limited to, tidal wetlands, tidal shores, nontidal wetlands, highly erodible soils including steep slopes, highly permeable soils, and perennial streams.

The Town will protect the potable water supply by identifying and addressing threats to groundwater resources from existing and potential pollution sources and encouraging water conservation.

The Town will achieve this goal by the following actions:

- Continue to inspect and ensure the maintenance of BMP facilities within the Town, in accordance with §17-4.10.11(d) of the Town's Chesapeake Bay Preservation Area Overlay District.
- Participate with Middlesex County Health Department to identify any malfunctioning or abandoned septic systems and investigate remediation or removal options including removal of them during redevelopment.
- Work with the State Water Control board to identify and remedy any existing sources of pollution within the Town such as abandoned underground storage tanks and above ground storage tanks and to identify those underground storage tanks risk of corroding.
- Collaborate with applicable state agencies to remove any illegal dumping and pursue stringent enforcement of applicable federal and state laws as necessary.
- Participate with the Department of Health to identify operations not adhering to the regulations outlined in Code of Virginia §32.1-246 related to marina operations. The Town will work to recognize ways of addressing the appropriate density of docks and piers such as investigating the possibility of adopting Marine Resources Commission guidelines for marina and boat dock facilities.

- Consider possibilities of providing public information workshops for citizens to demonstrate the proper application of pesticides and fertilizers for home lawns and gardens. These workshops will help to reduce the over-application of the substances which are one element of nonpoint source pollution.
- Promote Water resource conservation

The Town will address the relationship of land use to commercial and recreational fisheries and other aquatic resources by:

- Enforcement of zoning ordinances such as the Chesapeake Bay Preservation Area Overlay District.
- Reduction of nonpoint sources of pollution from impervious surfaces adjacent to the River and Urbanna and Perkins Creeks.
- Institution of programs in public education, wildlife habitat preservation, and pollution prevention.
- Participate with the Department of Health to identify operations not adhering to the regulations outlined in Code of Virginia §32.1-246 related to marina operations. The Town will work to recognize ways of addressing the appropriate density of docks and piers such as investigating the possibility of adopting Marine Resources Commission guidelines for marina and boat dock facilities.

The Town will manage the process of siting docks and piers as a water-dependent use in the RPA and of IDAs. Since the Town is built out, it is anticipated the development of docks and piers would be undertaken as a redevelopment project. The Town will achieve this goal by the following actions:

- Enforcement of zoning ordinances such as the Chesapeake Bay Preservation Area Overlay District.
- Limit water-dependent uses to those with proven economic justification.
- Avoidance of development on sensitive natural features such as steep slopes.
- Reduction of nonpoint sources of pollution from impervious surfaces adjacent to the River and Urbanna and Perkins Creeks.
- Institution of programs in public education, wildlife habitat preservation, and pollution prevention.

The Town will maintain public and private access to waterfront areas and manage the effect on the water quality by:

- Enforcement of zoning ordinances such as the Chesapeake Bay Preservation Area Overlay District.
- Avoidance of development on sensitive natural features such as steep slopes.
- Reduction of nonpoint sources of pollution from impervious surfaces adjacent to the River.
- Institution of programs in public education, wildlife habitat preservation, and pollution prevention.



The Town will mitigate the impacts of land use and its associated pollution upon water quality by:

- Enforcement of zoning ordinances such as the Chesapeake Bay Preservation Area Overlay District.
- Amend CBPOD to reflect the calculated average land cover for the Town while making other programmatic changes as necessary.
- Minimizing impervious cover is an integral part of the Town's stormwater quality management program. The Town Planning Commission will investigate economically feasible and practical ways to reduce the impervious cover for development within the Town. Such as investigation may include the following options: establishment of maximum parking space size and number of parking spaces for zoning categories; requiring pervious paving in low traffic areas, reducing the amount of impervious cover allowed based on the zoning category; and requiring open space based on the zoning category.
- Avoidance of development on sensitive natural features such as steep slopes.
- Reduction of nonpoint sources of pollution from impervious surfaces adjacent to the River.
- Institution of programs in public education, wildlife habitat preservation, and pollution prevention.
- Continued enforcement of the Floodplain Ordinance in order to protect floodplains within the Town from improper development as well as to protect the health, welfare, economic and real estate interests of Town residents.
- Reducing nonpoint source pollution generated by development by preserving as much existing vegetation on site as possible while accommodating the desired land use.
- Investigate ways of addressing existing shoreline erosion problems along the Rappahannock River and Urbanna Creek and work with appropriate state agencies to determine appropriate policies regarding shoreline erosion control.

The Town will support water quality improvement through reduction of existing pollution sources and redevelopment on Intensely Developed Areas and other areas targeted for redevelopment by:

- Enforcement of zoning ordinances such as the Chesapeake Bay Preservation Area Overlay District.
- Avoidance of development on sensitive natural features such as steep slopes.
- Reduction of nonpoint sources of pollution from impervious surfaces adjacent to the River.
- Institution of programs in public education, wildlife habitat preservation, and pollution prevention.