CHAPTER SEVEN

ENVIRONMENTAL STEWARDSHIP

Goal

To provide for the harmonious use of land that meets the needs of Occoquan, while enhancing the area's environmental quality.

Overview and Vision

The Virginia Chesapeake Bay Preservation Act requires the Town to establish a long-range vision focused upon protecting and improving the quality of the Town's creeks, streams and the Occoquan River, as well as the natural habitats of the Chesapeake Bay and the Potomac River that are impacted by these tributaries. The Act also requires the Town to establish goals, policies, and action plans based on an inventory and analysis of the Town's natural environment to guide the Town as it continues to grow and develop as a community.

The Town of Occoquan is, therefore, committed to the following principles:

- 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.
- Enforcement of ordinances such as the Chesapeake Bay Preservation Ordinance.
- Protection of all perennial streams in accordance with the Chesapeake Bay Preservation Area designation.
- Creation and Enforcement of other Management Regulations.

Chesapeake Bay and the River Connection

All of the waterways within the Town of Occoquan, including its creeks, drainage ditches, and storm drains and culverts are part of a larger Chesapeake Bay ecosystem. Land use activities within the Town can greatly impact the health of not only local waterways but also the Chesapeake Bay. Tremendous growth in the Chesapeake Bay watershed has led to the significant decline of Bay water quality and habitat. Today, once-plentiful aquatic species, including sturgeon, striped bass, oyster, blue crab, and many species of waterfowl have reached critically low numbers. In addition, submerged aquatic vegetation (SAV), which serves as food and habitat for many aquatic species, declined sharply during the 1960s and 1970s as a result of increased pollution from development of the surrounding watershed.

Map No. 7 Town of Occoquan Streams

In 1983, Virginia, Pennsylvania, Maryland, the District of Columbia, and the U.S. Environmental Protection Agency signed the Chesapeake Bay Agreement and created the Chesapeake Bay Program to help find ways to restore the Bay. In Virginia, the most widely recognized result of this agreement is the Chesapeake Bay Preservation Act (Code of Virginia, §62.1-44.15:67 et seq.). The Town of Occoquan is one of 84 Virginia localities subject to the Act. The Town implemented the Act through its Chesapeake Bay Preservation Ordinance in June, 1991. Additionally, the Virginia Chesapeake Bay Preservation Act requires the Town to establish a long-range vision for how to protect and restore the Town's creeks and streams as well as the natural habitats of the Chesapeake Bay and the Potomac River. The corresponding regulations (9VAC25-830 et seq.) require the Town to incorporate water quality protection into its local comprehensive plan by establishing goals, policies, and action plans based on an inventory and analysis of the Town's environmental conditions which will serve as a guide as the Town grows and develops. Therefore, it is the intent of the Town to:

- restore impaired streams that are capable of supporting diverse aquatic habitats;
- protect streams which currently support aquatic life from the effects of improper development and other sources of pollution; and,
- provide residents with a wide-range of opportunities to interact with and become stewards of their natural environment.

Before establishing water quality goals, policies, and action plans, it is important to have a detailed understanding of the Town's natural environment along with the existing programs and policies designed to protect water quality. Gathering background information is important to ensure that adequate data is available for making environmentally sound decisions. The following sections have been pulled together to serve as an information base to understand the Town of Occoquan's natural environment which will be used to better inform land use decisions.

Water Quality, Drainage and Stormwater Management

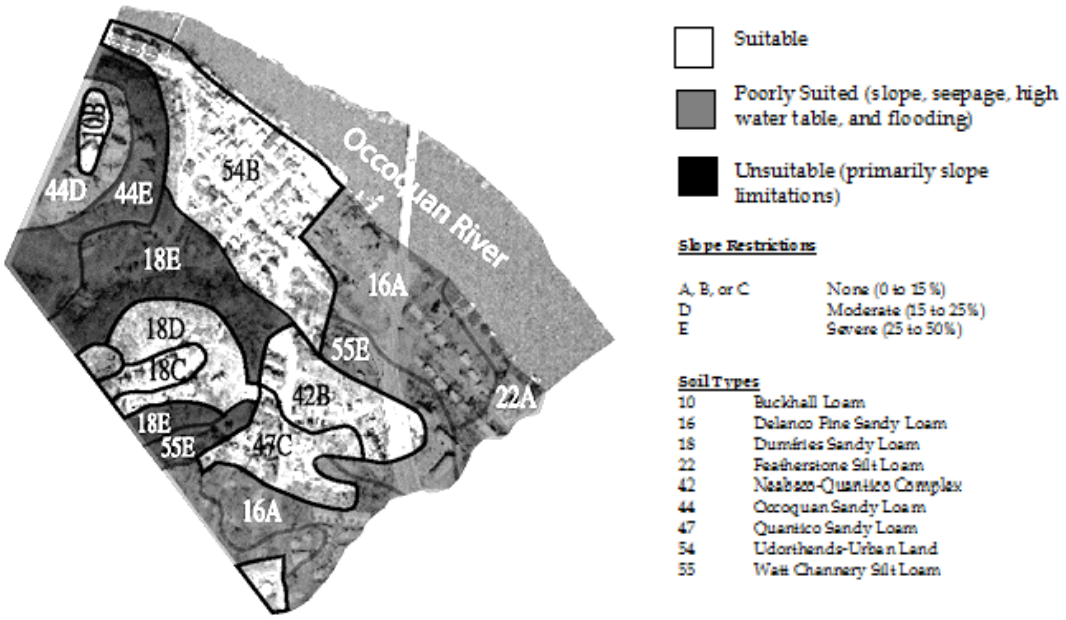
The purpose of incorporating water quality protection into local comprehensive plans is to acknowledge what is already being done to help protect water quality and to provide a framework for further reducing the impact of future land usage on water quality. The Town's efforts to improve local water quality also help improve the larger Chesapeake Bay.

Water pollution resulting from urban areas can generally be reduced through the application of four guiding principles. These include:

- minimizing the impervious surface area necessary to accommodate a desired land use;
- preserving existing vegetation in the landscape during development to the maximum extent practicable;
- challenging and changing the human behavior that results in pollution through public education; and,
- controlling pollution that cannot be reduced through change in human behavior by employing technology or by installing stormwater management pollution reduction facilities (also known as best management practices, or BMPs).

While much of Occoquan has been urbanized for some time, there are still many opportunities for the Town to actively reduce pollution. Through a combination of creating new development that accounts for water quality and natural habitats, retrofitting existing development with water quality controls when possible, and providing the tools for residents and businesses to become better stewards of the environment, the Town can make real contributions to the protection of local water resources and the Chesapeake Bay.

Sensitive Natural Resources and Constraints to Development



Map No. 8 Natural Constraints to Development

Much of the water quality degradation suffered in the Chesapeake Bay watershed is a direct result of development on, or the destruction of, sensitive land resources. Many environmentally sensitive areas, if improperly managed during development, can have significant negative impacts on water quality within and outside the Town. Additionally, many natural habitats such as mature vegetative cover, wetlands, and forested areas provide a natural filter for pollutants generated through natural and anthropogenic sources and need to be protected and preserved. In the Town of Occoquan, sensitive natural resources include soils with high potential for erosion, areas of steep slopes, floodplains, and forested habitat corridors. The Town strives to foster a community that will continue to grow, develop and

remain economically viable, however environmental constraints to development must be considered to prevent degradation of local waterways and the Chesapeake Bay.

Most of the Town's floodplain has been developed for many years – as it serves as the interface between the Town and the Occoquan River. Development within the floodplain has not been without its consequences. Significant rainfall has resulted in flooding and property damage along the Town's waterfront areas. The official floodplain, which is defined as the 100-year flood level, is designated on the federal Flood Insurance Rate Maps (FIRM). Development within the floodplain is controlled by the Town's Floodplain Management Ordinance.

The erosion potential of a soil, which is a factor of soil structure and slope, is the primary soil limitation in the Town. Approximately 41% of the Town has only slight erosion potential while another 10% of the Town has moderate erosion potential. Approximately 49% of the Town has severe erosion potential. Steep slopes, or slopes on which development is inappropriate, are considered to be those greater than 20%. Fully 27% of the Town's land area has slopes between 25-50% which are considered severe. Another 15% of the Town has moderate slopes between 15-25% and may require special engineering precautions. Approximately 58% of the Town has no slope restrictions (slopes ranging from 0 to 15%) and it is these areas where development is most appropriately concentrated.

Artificial stabilization in the form of bulkheads exist along the Town's shoreline. According to the Tidal Shoreline Erosion in Northern Virginia report (NVRC, 1992), some of the areas along the Occoquan River have experienced moderate (less than 3 feet/year) to severe (greater than 3 feet/year) erosion. The report also notes that shorelines of some of the low lying areas have changed as a result of shifts in marsh and beach shoreline. Additional investigations may be necessary to further evaluate susceptibility of shorelines and streambanks to erosion.

Table No. 7: Soil Characteristics

Soil	Slope	Flooding Frequency	Runoff Class	Depth to Water Table (inches)	Natural Drainage Class	Depth to restrictive feature
Buckhall Loam (10B)	2-7%	None	Medium	80+	Well drained	80+
Delanco Fine Sandy Loam (16A)	0-4%	None	Medium	12-30	Moderately well drained	80+
Dumfries Sandy Loam (18C)	7-15%	None	Low	80+	Well drained	80+
Dumfries Sandy Loam (18 D)	15-25%	None	Medium	80+	Well drained	80+
Dumfries Sandy (18 E)	25-50%	None	Medium	80+	Well drained	80+
Featherstone Silt Loam (22A)	0-1%	Frequent	Low	≤0	Very poorly drained	80+
Neabsco-Quantico Complex (42 B)	2-7%	None	Very high	12-30	Moderately well drained	14-30 to fragipan

Occoquan Sandy Loam (44D)	7-25%	None	Low	80+	Well drained	40-60 to paralithic bedrock
Occoquan Sandy Loam (44E)	25-50%	None	Medium	80+	Well drained	40-60 to paralithic bedrock
Quantico Sandy Loam (47C)	7-15%	None	Medium	80+	Well drained	80+
Udorthends- Urban Land (54B)	0-7%	unavailable	unavailable	unavailable	unavailable	unavailable
Watt Channery Silt Loam (55E)	25-50%	None	High	80+	Somewhat excessively drained	20-40 to paralithic bedrock

Source: Soil Survey, Natural Resources Conservation Service, United States Department of Agriculture. Available online at http://websoilsurvey.nrcs.usda.gov/.

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through either subsurface tiles or a perforated pipe. Septic tank absorption field ratings were collected from data on the United States Department of Agriculture's Web Soil Survey. Only soil depths between 24 to 60 inches are evaluated. Table 8 below shows both verbal and numerical ratings. "Not limited" indicates that the soil has features that are very favorable for septic tank use. "Somewhat limited" indicates that the soil has features that are moderately favorable and may have limitations that can be overcome or minimized through special planning, design, or installation. "Very limited" indicates that the soil has one or more features that are unfavorable and generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. The numerical ratings indicate the severity of the individual limitations with 1.00 indicating the greatest negative impact on the use and 0.00 indicating the soil feature is not a limitation. As noted in the table below, none of the land within the Town is rated as being favorable for septic tank use. Only one section of the Town is composed of soils that are moderately favorable for septic tank use (Buckhall Loam 10B). The majority of soils within the Town are rated as unfavorable for septic tank use. It would not be recommended to install septic tanks in the area of the Town composed of Udorthends-Urban Land (54B) which has not been rated.

Table No. 8: Septic Tank Absorption Fields

Soil	Slope	Septic Tank Absorption Field Rating	Component Name (percent)	Rating Reasons (numeric values)
Buckhall Loam (10B)	2-7%	Somewhat Limited	Buckhall (80%)	Slow water movement (0.50)
Delanco Fine Sandy Loam (16A)	0-4%	Very Limited	Delanco (80%)	Depth to Saturated Zone (1.00)
				Slow Water Movement (1.00)
				Flooding (0.40)

Soil	Slope	Septic Tank Absorption Field Rating	Component Name (percent)	Rating Reasons (numeric values)
			Hatboro (5%)	Flooding (1.00)
				Depth to saturated zone (1.00)
				Seepage, bottom layer (1.00)
				Slow water movement (0.50)
Dumfries Sandy Loam (18C)	7-15%	Very Limited	Dumfries (75%)	Seepage, bottom layer (1.00)
				Slope (0.37)
Dumfries Sandy Loam (18 D)	15-25%	Very Limited	Dumfries (75%)	Slope (1.00)
				Seepage, bottom layer (1.00)
Dumfries Sandy (18 E)	25-50%	Very Limited	Dumfries (75%)	Slope (1.00)
				Seepage, bottom layer (1.00)
Featherstone Silt Loam (22A)	0-1%	Very Limited	Featherstone (80%)	Flooding (1.00)
				Ponding (1.00)
				Depth to saturated zone (1.00)
				Slow water movement (0.50)
Neabsco-Quantico Complex (42 B)	2-7%	Very Limited	Neabsco (45%)	Depth to cemented pan (1.00)
				Depth to saturated zone (1.00)
				Seepage, bottom layer (1.00)
			Quantico (35%)	Seepage, bottom layer (1.00)
				Slow water movement (0.50)
Occoquan Sandy Loam (44D)	7-25%	Very Limited	Occoquan (80%)	Slope (1.00)
				Seepage, bottom layer (1.00)
				Depth to bedrock (0.62)
Occoquan Sandy Loam (44E)	25-50%	Very Limited	Occoquan (80%)	Slope (1.00)
				Seepage, bottom layer (1.00)
				Depth to bedrock (0.62)
Quantico Sandy Loam (47C)	7-15%	Very Limited	Occoquan (75%)	Seepage, bottom layer (1.00)
				Slow water movement (0.50)
				Slope (0.37)
Udorthends- Urban Land (54B)	0-7%	Not Rated	Urban land (50%)	
			Udorthends (40%)	

Soil	Slope	Septic Tank Absorption Field Rating	Component Name (percent)	Rating Reasons (numeric values)
Watt Channery Silt Loam (55E)	25-50%	Very Limited	Watt (80%)	Slope (1.00)
				Depth to bedrock (1.00)
				Seepage, bottom layer (1.00)

Source: Soil Survey, Natural Resources Conservation Service, United States Department of Agriculture. Available online at http://websoilsurvey.nrcs.usda.gov/.

Within the Occoquan area, forested areas, stream buffers, and wildlife habitat corridors are quickly disappearing. Approximately one quarter (25%) of the Town's land area is still covered by woodlands. Much of the woodland area is located in the western portion of the Town in steep terrain areas that are unsuitable for development. The Ballywack Branch drainage area is located within the west of the Town and remains largely forested. Additionally, stream buffers still exist around Ballywack and Boundary Branch. These areas are essential for the protection of water quality and aquatic habitats. Land use decisions must consider the need to preserve them to prevent further degradation to water quality.

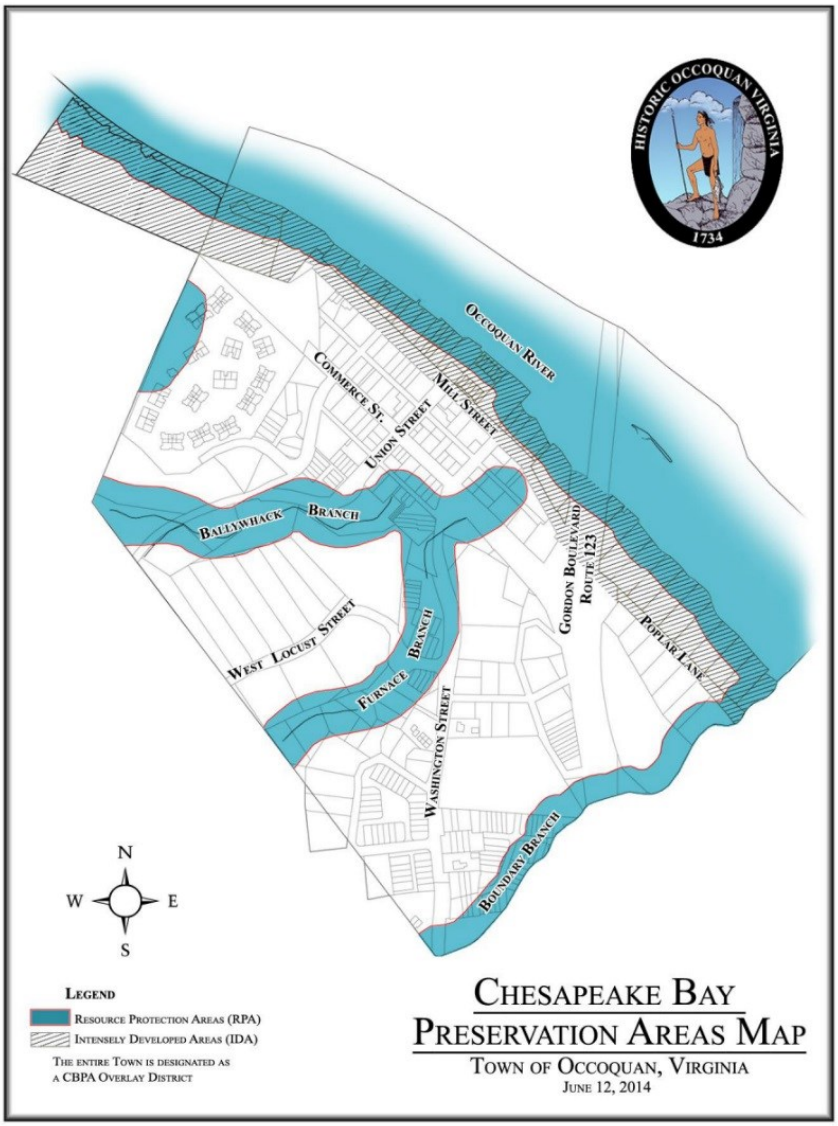
Existing and Potential Sources of Pollution

Pollution can come from a variety of sources and can have many different impacts such as surface and groundwater contamination, poor air quality, and aesthetic degradation of the landscape. The quality of water running in local streams and rivers is one of the most important indicators of the health of a watershed. Protecting the quality of surface water is a major challenge faced by many urbanized localities. While a certain level of pollution from development, transportation, and commercial and industrial activities is inevitable, pollution must be minimized to protect against environmental health hazards and preserve the ecological balance.

Due to the Town's relatively small size and absence of major industry, existing and potential sources of pollution are easier to identify. Much of these pollutants are characterized as nonpoint source pollutants which are generated from many diffuse sources. Nonpoint source pollution results from stormwater runoff which picks up and carries pollutants that collect on impervious surfaces such as roadways, sidewalks, and rooftops into waterways. These impervious surfaces prevent stormwater from soaking into the ground. Land development often increases the amount of impervious surface, resulting in increased stormwater runoff and often increased pollution to waterways.

Since the Town of Occoquan lies within the Occoquan Watershed which drains to the Potomac and eventually the Chesapeake Bay, minimizing nonpoint source pollution is an important initiative. Nonpoint source pollution within the Town most commonly results from residential activities, commercial activities and parking areas, waterfront activities, and atmospheric deposition. Nonpoint source pollution within Occoquan can be reduced by minimizing impervious areas of a development site, maintaining open space, preserving indigenous vegetation, and utilizing Best Management Practices (BMPs) designed to reduce stormwater runoff and filter out phosphorus, sediment and other harmful pollutants. Public education and

outreach initiatives can also be utilized to help inform residents and businesses about how their activities may impact nonpoint source pollution and surface water quality. Increasing public awareness can help citizens take actions to reduce their impacts. The Town's Chesapeake Bay Preservation Ordinance and Erosion and Sediment Ordinance set forth performance standards aimed at reducing nonpoint source pollution and protecting water quality and delineated preservation areas.



Map No. 9 Chesapeake Bay Preservation Area

Fisheries

The Occoquan River is an important feature of the Town as it provides recreation, numerous environmental benefits, and enhances the aesthetic quality of the surrounding area. There are a few locations where citizens access the river to fish however the Town does not have any designated public or commercial fisheries.

Environmental Programs and Regulations

In response to State and Federal mandates the Town has adopted and implemented a number of ordinances designed to protect and preserve both the local natural environment, particularly the identified sensitive natural resources, and the larger Chesapeake Bay Watershed.

Chesapeake Bay Preservation Ordinance

The Occoquan River is an integral part of the Town providing natural habitat for aquatic life in addition to recreational and aesthetic opportunities. The impaired listing of the river for fecal coliform and estuarine bioassessments and the concern of further degradation if land use and development activities are not properly managed is a primary environmental challenge recognized by the Town. The Occoquan River flows into the Potomac River which ultimately drains to the Chesapeake Bay. The Commonwealth has required all localities within Tidewater Virginia to designate "Chesapeake Bay Preservation Areas" within which land uses are restricted or managed and water quality

measures are provided to protect the Chesapeake Bay, and other waters of Virginia, from degradation resulting from runoff pollution. In accordance with that requirement, Chesapeake Bay Preservation Areas have been mapped for the Town of Occoquan. The mapping of these areas includes Resource Protection Areas (RPAs) and Resource Management Areas (RMAs) based upon a natural resource inventory which included a review of U.S Geological Survey (USGS) topo-quadrangles, U.S. Fish and Wildlife Service National Wetlands Inventory Maps, U.S. Soil Conservation Service soil surveys and other technical resources. The Town's Chesapeake Bay Preservation Ordinance implements the Virginia Chesapeake Bay Act. The primary purpose of the ordinance is to prevent any increase in nonpoint source pollution from new development and to reduce at least 10% of nonpoint source pollution in redevelopment. The ordinance sets forth a program to protect the delineated RPA and RMAs. For example, the Ordinance requires that a 100-foot vegetated buffer area be preserved along all RPA features and tributary streams, and in some cases, reestablished if one does not presently exist or is in poor condition. These buffer requirements are relaxed in areas identified by the Town as Intensely Developed Areas (IDAs) out of recognition of the difficulty in reestablishing full buffers in these areas due to the nature of development. The IDAs in the Town include all areas to the north of Mill Street and Poplar Lane.

RPAs are lands at or near the shoreline that have intrinsic value due to the ecological and biological processes they perform which benefit water quality or are sensitive to impacts that may cause significant degradation to the quality of State waters. The RPA designation in the the Town includes tidal wetlands, nontidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary streams, tidal shores, and a 100-foot vegetated buffer area located adjacent to and landward of all previously listed components and along both sides of any water body with perennial flow, as ~~parts of~~ lands protected by the Chesapeake Bay Preservation Ordinance. In practical terms, the RPA includes a 100-foot wide strip of land landward of the Occoquan River shoreline. ~~However, recently revised Chesapeake Bay Act Regulations will require that the Town protect any stream with perennial flow. As a result, Ballywack Branch, Furnace Branch and Boundary Branch and possibly other streams, the recently named Phelps Creek and the tributary of Boundary Branch, which was designated Edgehill Creek, may be protected as RPAs.~~

RMAs include land types that, if improperly developed, have the potential for causing significant water quality degradation or for diminishing the functional value of the RPA. All lands in the Town not included in a RPA constitute the RMA. This is because all stormwater from development within the Town is flushed directly into natural or man-made channels and then directly to the Occoquan River. Development and redevelopment within the RMA must meet several performance criteria to minimize the impact on water quality. The performance criteria establish policy guidelines for the Town in decisions to grant, deny, or modify requests to rezone, subdivide, or use and develop land within the RMAs and RPAs. Performance criteria include preventing an increase in nonpoint source pollution as a result of new development based on a Town-wide average, decreasing nonpoint source pollution by 10% during redevelopment, minimizing land disturbance during development, maximizing the

preservation of indigenous vegetation, and minimizing impervious surface area for a desired land use.

Urban water quality issues are complex and will require the Town to commit to a watershed management approach that utilizes both structural (urban BMPs) and nonstructural (establishment of stream buffers, public education, etc.) water quality management techniques to address a range of sources and types of pollution. The Town recognizes the importance of minimizing adverse impacts associated with land use and development on water quality, and thus in support of this chapter's goal, the Town has enumerated several policies for implementation which are detailed in Chapter 9.

Erosion and Sediment Control Ordinance

The Town's Erosion and Sediment Control Ordinance (E&S Ordinance) implements the Virginia Erosion and Sediment Control Law but also supports the Chesapeake Bay Preservation Act. The purpose of the ordinance is to conserve the land, water, and other natural resources of the Town through the establishment of requirements to prevent and control erosion and sedimentation that results from land disturbing activities. The E&S ordinance requires proposed land disturbing activities greater than 2,500 square feet within Chesapeake Bay Preservation Areas to submit an erosion and sediment control plan to the Town.

Floodplain Management Ordinance

The Town's Floodplain Management Ordinance designates floodplain districts and regulates uses, activities, and development within those areas. The Town's Floodplain Management Ordinance applies to all areas subject to inundation by waters of the one-hundred-year flood (floods that have a one percent likelihood of occurring each year, although the flood may occur in any one year). Floodplain management districts include the Floodway District (defined as that portion of the floodplain capable of carrying the waters of a 100-year flood without increasing the water surface elevation of the flood more than one foot at any point) and the Flood-Fringe District (defined as the area of the one-hundred-year floodplain not included in the Floodway District). The basis for the delineation of these districts is the Flood Insurance Study for the Town of Occoquan prepared by the Federal Emergency Management Agency, Federal Insurance Administration, dated January 5, 1995 or as revised.

The primary purpose of the Town's Floodplain Management Ordinance is to prevent the loss of life and property, the creation of health and safety hazards, the disruption of commerce and government services, the extraordinary and unnecessary expenditure of public funds for flood protection and relief, and the impairment of the tax base by:

- Regulating uses, activities, and development which, alone, or in combination with other existing or future uses, activities, and development, will cause unacceptable increases in flood heights, velocities, and frequencies;
- Restricting or prohibiting certain uses, activities, and development from locating within areas subject to flooding; and,

- Requiring all those uses, activities, and developments that do occur in flood-prone areas to be protected and/or flood proofed against flooding and flood damage.

Appropriate floodplain management can also have numerous beneficial environmental impacts. Uses, activities, and development may occur within a floodplain district only upon the issuance of a special permit as outlined in Chapter 14 of the Town Code. If the proposed development is within a Floodway District or a Flood-fringe, the applicant must have a detailed hydrologic and hydraulic analysis performed to ensure that other properties will not be placed at undue risk as a result of development in the floodplain. This condition helps to prevent significant alteration to the floodplain which might lead to water quality degradation or changes in the ecological balance of the floodplain. Other requirements for development within the floodplain will depend on whether the proposed development is within a Floodway District or a Flood-Fringe District. The Floodplain Management Ordinance also specifies design criteria for sanitary sewer, water, and drainage facilities, along with other utilities to ensure that the potential for water pollution or unsanitary conditions during flood events is minimized.

Site Plan Ordinance and Subdivision Ordinance

The Town's Site Plan Ordinance (Chapter 13 of the Town Code) and Subdivision Ordinance (Chapter 14 of the Town Code) contain several provisions aimed at protecting the environment and preventing inappropriate development on land with unsuitable characteristics for the proposed use. The Town's Subdivision Ordinance stipulates that public sewage facilities must be extended by a sub divider to all lots within a subdivision and that septic tanks are not permitted (§14-21D.)

Public Education Programs

While the Town does not directly run any environmentally-related education programs, the Prince William Cooperative Extension (PWCE) and the Prince William Soil and Water Conservation District (PWSWCD) have developed a number of programs and publications to support environmental stewardship. These services are available to Town residents as citizens of the County.

The PWCE provides educational opportunities through field days and seminars, demonstration lawns, and one-on-one visits from trained "Master Gardener" volunteers. For the past several years, the PWCE has conducted a water quality program aimed at reducing the excessive use of lawn fertilizers and pesticides through proper lawn care techniques. Utilizing the PWCE's water quality program to reach Town residents may help to reduce nonpoint source pollution generated from yard care. The PWSWCD provides a number of services, including public education and ecology workshops, and works with local residents on reforestation and conservation projects.

Trees and Landscaping

Remaining forested areas, stream buffers, and wildlife habitat corridors are quickly disappearing in the Occoquan area. Preserving these areas is essential for the protection of

water quality and aquatic habitats. Moreover, the area is a designated Bird Sanctuary requiring particular attention to preserving shoreline wooded areas. Fully a quarter (25%) of the Town's land area is still covered by woodland, and most yards and streets have individual trees. Most of the wooded area of the Town is in its western portions in steep terrain areas which are not favorable for development. Significantly, the Ballywack Branch watershed area to the west of the Town is still largely forested. Significant stream buffers still exist around Ballywack Branch and Boundary Branch. Preserving these areas is important not just for the ecological benefits but also for the aesthetic value they can provide.

Solid Waste Disposal and Recycling

The Town provides weekly refuse removal and collection of recyclable materials. Both residents and businesses receive collection services from the town on Wednesday of each week. In addition, special picks ups and yard debris is also collected on a weekly basis.

Occoquan's waste reduction efforts are centered on a residential and business curbside recycling program. The Town's recycling program is single-stream, meaning that all recyclable materials including glass, plastics, newspapers, cardboard, magazines, and cans, and other recyclable materials, can be comingled and collected by our refuse contractor. The Town contributes to Prince William County's recycling rate, which during calendar year 2015, was 33.7 percent, exceeding Virginia's minimum requirement of 25 percent[3].

The Town of Occoquan should continue to expand its recycling efforts and promote increased recycling with both its residents and businesses, as well as the Town's government. Beginning in FY 2017, the Town will begin a three-year phase to replace its public refuse containers. During that process, the Town should incorporate public recycling containers in an effort to further promote recycling in our public spaces and encourage good environmental stewardship to our residents, businesses and visitors. The Town should also seek to implement recycling standards for its businesses and government, such as participating in VML's Green Government Challenge, DEQ's Virginia Green program, or establishing its own Green Business Recognition Program that recognizes businesses who have received a Green Certification from a third party.

Green Building, Noise and Lighting

Today, many opportunities exist for constructing buildings with minimal impact on the environment. Insulation technology is much improved and it is possible to power buildings, both domestic and commercial, with substantially reduced reliance on fossil fuels. The efficiency of solar panels to generate electricity is improving rapidly. While the historic architecture of the Town should be preserved, newer more efficient construction designs should be encouraged.

[3] In 1989, the Virginia General Assembly adopted legislation that established a 25% recycling rate target for communities.

Currently, the Town enjoys a relatively quiet and calming atmosphere, except during rush hours when cut-through commuter traffic continues to be a problem. The Town's Law Enforcement Division should exercise vigilance over excessive noise during their routine law enforcement activities, particularly during rush hour and around the times restaurants and bars are closing. Noise abatement ordinances must be enforced.

The lighting throughout the Town is one of the key features contributing to its charm and is widely recognized throughout the area. Indeed, the original lamps in Town were powered by acetylene gas before town gas became available. While authentic gas lighting is expensive to maintain, efforts should be made to retain it, except at key intersections where adequate lighting (usually by electric lamps) should be the priority. The charm of traditional gas lamps notwithstanding, the possibility of replacing them with electric, architecturally tasteful replicas should be explored.