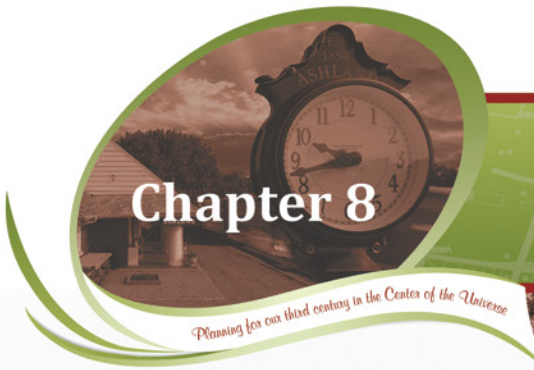
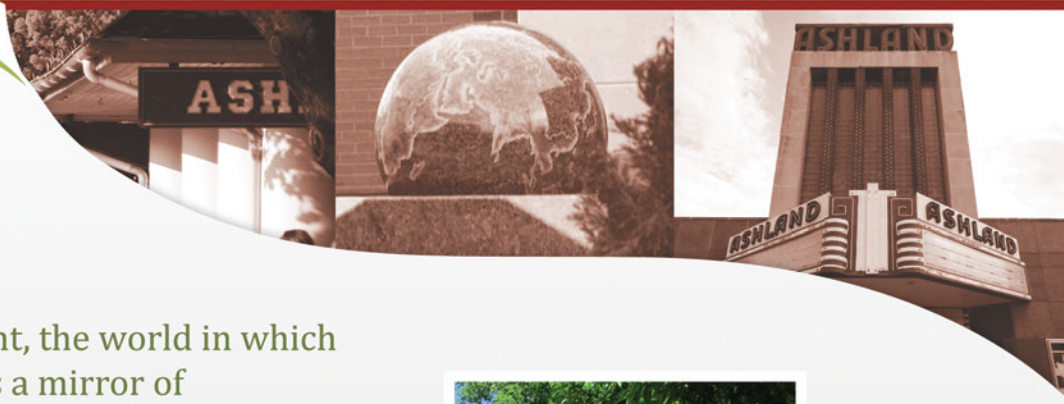
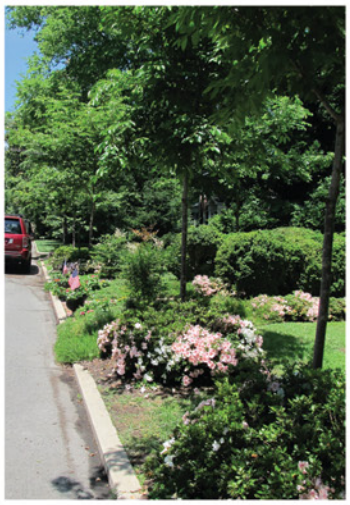


ENVIRONMENT



Our environment, the world in which
we live and work, is a mirror of
our attitudes and expectations.

Earl Nightingale



8.0 ENVIRONMENT

Abstract
Environmental stewardship plays an integral role in guiding how the Town accommodates growth and provides services. Recognizing the private sector as an equal partner in environmental stewardship, the Town can lead by its own behavior in delivering services, operating its facilities and managing its land in an environmentally sustainable manner.

With the Environment chapter, the Town seeks to ensure the protection, preservation, and improvement of the natural environment by:

- *Protecting and enhancing Ashland's tree canopy through installation, replacement, and maintenance of trees.*
- *Continuing the Town's high standard of environmental quality.*
- *Maintaining the compact, walkable form of Ashland to reduce vehicle trips, improve air quality and preserve open spaces.*

An important goal of the Comprehensive Plan is to protect the environment while enhancing Ashland's natural beauty. The Plan demonstrates that the Town recognizes that local government and the private sector are equal partners in environmental stewardship. The Town is committed to meeting and exceeding applicable environmental standards, and to the pursuit of innovative practices. The Town wishes to lead by example.

This chapter contains policies related to the protection, preservation, improvement, and treatment of the natural environment. The policies address the community's environmental values, regulatory framework and the public's role in advocating environmental stewardship. The chapter will designate responsibility for environmental stewardship through approaches that require minimum tree canopy and landscaping, water quality and stream protection (both locally and for the Chesapeake Bay Watershed), air quality, noise and light pollution, greenways, green building codes, and green infrastructure.

GUIDING PRINCIPLES

This chapter supports the Plan's Guiding Principles as follows:

1. **Preserve Ashland's Small Town Character**
   - The Maintain and enhance parks and green spaces throughout the Town.
   - Continue to develop and maintain facilities that enhance the walkability and bike-ability of the community.
   - Set standards for private landscapes that will improve the appearance and beauty of the public streets and places.
2. **Protect Ashland's Unique Features**
   - Continue the Town's status as a Tree City USA community by maintaining the Tree City USA standards.
3. **Manage and Enhance Our Green Town**
   - Add landscaping to all public areas of the Town including England Street and Route 1.
   - Seek partnerships with State, Federal, other local government, charitable, and private entities to protect environmentally sensitive areas, and improve areas that were degraded as a result of development that took place before better environmental practices were the standard.
   - Encourage responsible, reliable and sustainable innovative approaches to environmental protection and improvement. These may include, but not be limited to, low impact design (LID), and energy-efficient and "green" building construction.
4. **Encourage Continued Variety**
   - Plant a variety of plant and tree species to avoid canopy destruction through disease.
5. **Promote Continued Economic Development**
   - Consider environmental concerns and economic considerations with equal weight in decisions regarding land use and development.
6. **Provide a High Level of Government Services**
   - Lead by example by adhering to the best available environmental practices in its own building and development programs.
   - Actively apply and enforce relevant federal, state, and local environmental regulations.

8.1 Tree Canopy & Landscaping

As reflected in the Guiding Principles, the tree canopy and green quality of Ashland are very important to the Town residents. This importance is demonstrated in the Town of Ashland's designation as a Tree City USA community for the past two decades. The Tree City USA Program is sponsored by The Arbor Day Foundation in conjunction with the USDA Forest Service and the National Association of State Foresters. This program

provides direction, technical assistance, public attention, and national recognition for community forestry programs as well as a positive public image, and citizen pride. The Town meets or exceeds the requirements for Tree City USA recognition which ensure that qualifying communities have a viable tree management program and plan.

In addition to the aesthetic benefits for the Town, native trees and landscaping have positive effects on the air quality. Trees renew the air supply by absorbing carbon dioxide and producing oxygen. Ambient air temperatures can be reduced by the evaporation of water in tree leaves. Shading by trees can reduce energy usage in buildings. Low maintenance landscaping can be established through the use of drought tolerant and water-wise planting techniques in both public and private developments. The use of low maintenance vegetation not only reduces the amount of water necessary but can reduce mowing, thereby reducing emission and noise levels associated with maintenance.

Although the tree canopy is a valuable and admired Town resource, it is lacking in some areas. Through the continued use of a tree installation and maintenance program, portions of the Route 54, Route 1 and England Street corridors will be enhanced by an increased tree canopy appropriate for the specific land use designations.

Policy E.1 Tree Canopy

As a benefit of the Tree City USA Program, the Town of Ashland has received a grant to have a tree canopy survey completed by the Virginia Department of Forestry (VDOF). A condition of this grant is the requirement that the Town commit to increasing the existing tree canopy. The Town shall increase the tree canopy by 5% within 20 years from study completion. The Town shall also continue to utilize the resources provided by VDOF and Virginia Cooperative Extension. The tree canopy is shown on Map E-1.

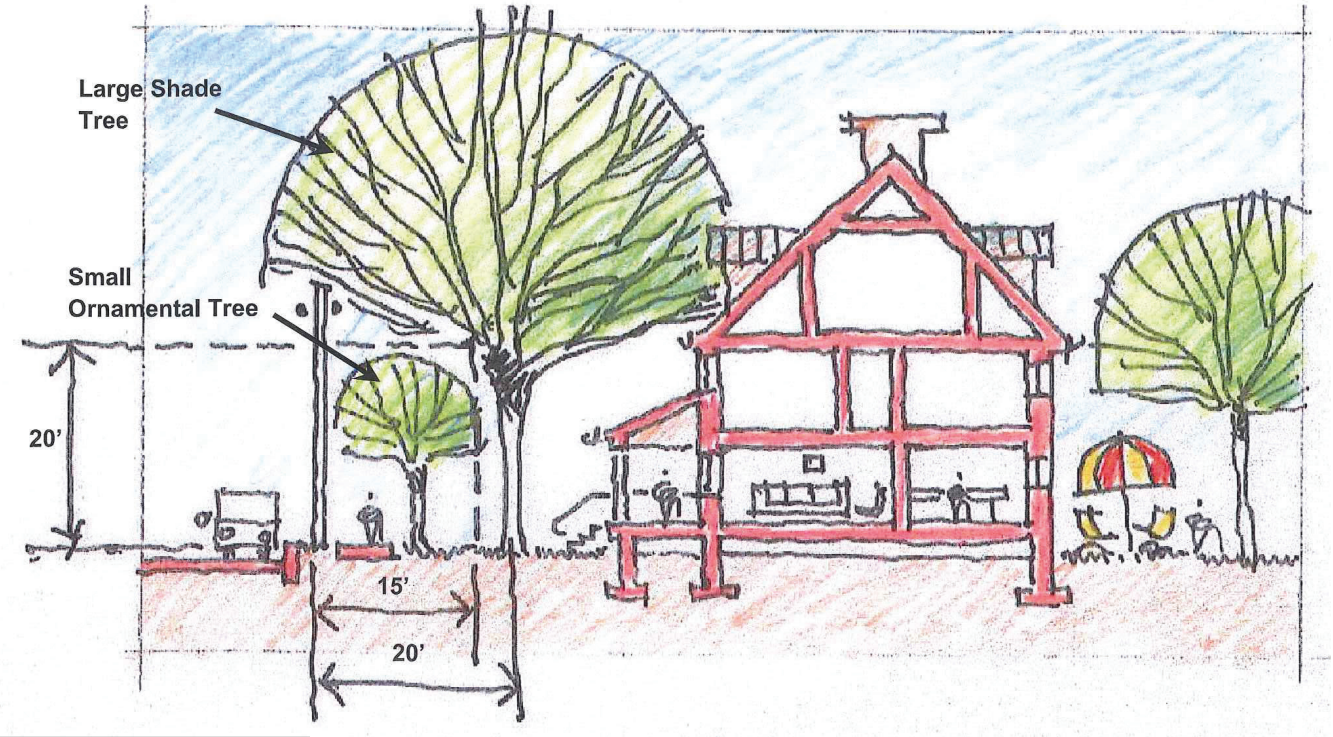
Policy E.2 Street Trees

The Town shall continue a program for the installation, replacement, and maintenance of trees in public right-of-ways. This program should focus on the planting of appropriate trees for a given location and the training of staff to provide the proper maintenance for the Town's trees. A certified arborist should be hired for pruning of trees and for training maintenance personnel.

The Town may find it useful to utilize the concepts as established by the Virginia Department of Forestry's Municipal Tree Restoration Program (MTRP). The mission of MTRP is to reduce tree/utility line conflicts through educating, influencing and encouraging people to recognize the conflict, remove potential hazards and plant appropriately in situations where utility lines are present. The Town has a landscaping matrix with

a priority list of possible street trees for planting within the public right-of-way. This list of trees is categorized by size (small, medium, large). This list-by-size should be used to determine appropriate locations for planting to limit interference with utility lines.

When maintaining street trees, it is important to consider the height of limbs that extend over travel lanes. The tree limbs should be trimmed high enough to allow trucks and equipment to drive under without hitting the lower branches. If left untrimmed, limbs may be torn from the tree by passing trucks causing irreparable damage. A suggested minimum height for limbs extending over streets is 13 feet 6 inches.



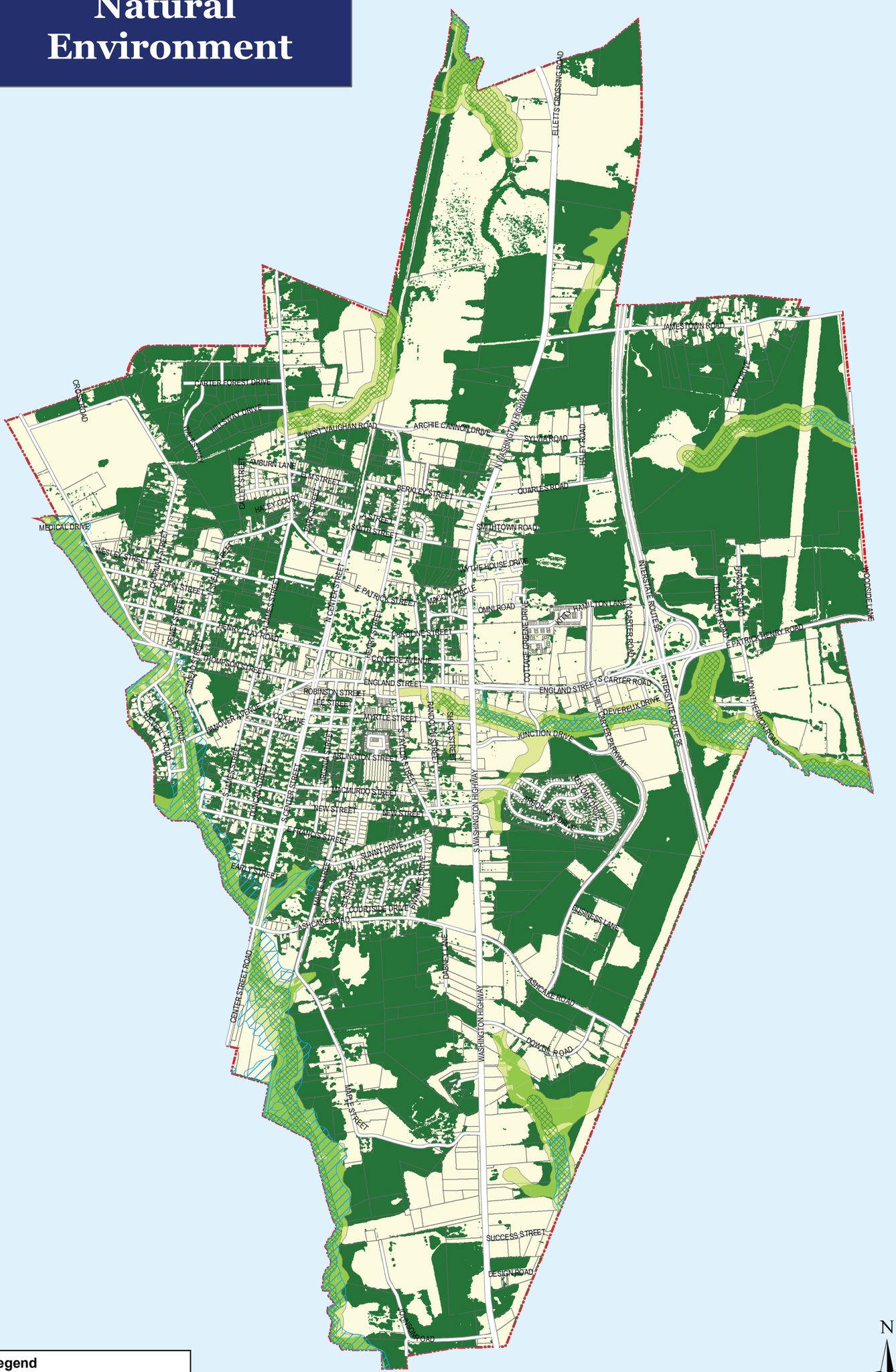
Desired Spacing for Street Trees. This sketch shows the desired distance for planting large trees in the presence of overhead wires. Although not necessarily in the public right-of-way, this location is desirable for creating the appearance of tree lined streets.

Policy E.3 Clearing of Existing Trees

In all development, trees shall be selectively removed, and only when necessary. Clear-cutting or removal of all trees shall not be allowed. In accordance with the Town Zoning Ordinance, all development shall provide within their site plan for the preservation or replacement of trees on the development site such that the tree canopy percentage 20 years after development will meet a certain percentage as dictated by zoning and/or density. The Town should provide incentives to encourage builders to preserve exiting trees. The following minimum development standards should be met:

- Large developments shall be phased in order to maximize preservation of mature trees.
- Trees cut for removal should be chipped/mulched and reused on-site instead of hauled away or burned.

Town of Ashland Natural Environment



MAP E-1 NATURAL ENVIRONMENT SHOWING TREE CANOPY & CHESAPEAKE BAY PRESERVATION AREAS

- No trees shall be removed within Chesapeake Bay RPA's or within close proximity to public streets.

Policy E.4 Landscaping Requirements

The Town shall continue to implement its landscaping ordinance in coordination with the development of new residential and commercial sites. The Town shall amend its ordinance so that it takes full advantage of the legislative authority relative to tree planting and the minimum tree canopy coverage allowable.

8.2 Water Quality

The Town is subject to the Chesapeake Bay Preservation Act (CBPA) and the Virginia Stormwater Management Program (VSMP), and works with the Department of Conservation and Recreation (DCR) to ensure compliance with State regulations. Along with an annual review, DCR requires localities to adopt and enforce ordinances to ensure water quality. In addition, CBPA and VSMP also require that the Comprehensive Plan address strategies relating to policy and implementation of water quality control measures.

Wetlands

Wetlands are defined by the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency (EPA) for the regulatory purpose of the Clean Water Act as, "Those areas that are inundated or saturated by surface or ground water (hydrology) at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation (hydrophytes) typically adapted for life in saturated soil conditions (hydric soils). Wetlands generally include swamps, marshes, bogs, and similar areas." To constitute wetlands, the area must meet three criteria 1) hydrophytic vegetation; 2) hydric soils; and 3) a hydrology typical of a wetlands system. Hydrophytic vegetation is vegetation adapted to living in water saturated conditions. Hydric soils are soils with characteristics that are produced under water saturated conditions. A typical wetland hydrology is characterized by soil that is saturated by water at a frequency and duration that supports hydrophytic vegetation and produces hydric soils.

Wetlands are protected through federal regulations administered by the Corps of Engineers, the U.S. Fish and Wildlife Service, and the EPA. Wetlands have economical, ecological, and aesthetic value. Wetlands can perform valuable functions in flood control by intercepting and storing stormwater runoff, which decreases water velocity, and delays and reduces peak flows. Wetlands act as discharge points for groundwater. Wetlands also decrease bank erosion along streams due to the roots of wetland vegetation. Wetlands protect water quality by slowing flow

velocities and allowing suspended soils and pollutants to settle out of the water. Some of these pollutants are used by wetland plants while others are broken down into less harmful substances. Finally, wetlands are an important component of the food chain, and they act as fish and wildlife habitats with diversity that often exceeds surrounding areas.

Only nontidal wetlands exist within the Town. Wetlands mapped by the Town include nontidal wetlands that are elements of resource protection areas (RPAs), as defined in the Town's Chesapeake Bay Preservation Area ordinance. Map E-2, shows both the wetlands and the potential wetlands within the Chesapeake Preservation Area.

Policy E.5 Wetlands: General

Natural wetlands play a significant role in absorbing runoff and filtering contaminants. Wetlands should remain undisturbed, and should be incorporated into open space, passive recreation areas, buffers or other landscape amenities. Given the pervasiveness of wetlands in Ashland, however, the Town recognizes that disturbance and mitigation is sometimes necessary. The Town shall place an emphasis on wetland identification and preservation of wetlands during development review. Efforts should be taken to minimize wetlands mitigation, and to ensure that protected wetlands are not disturbed.

Policy E.6 Wetlands in Residential Development

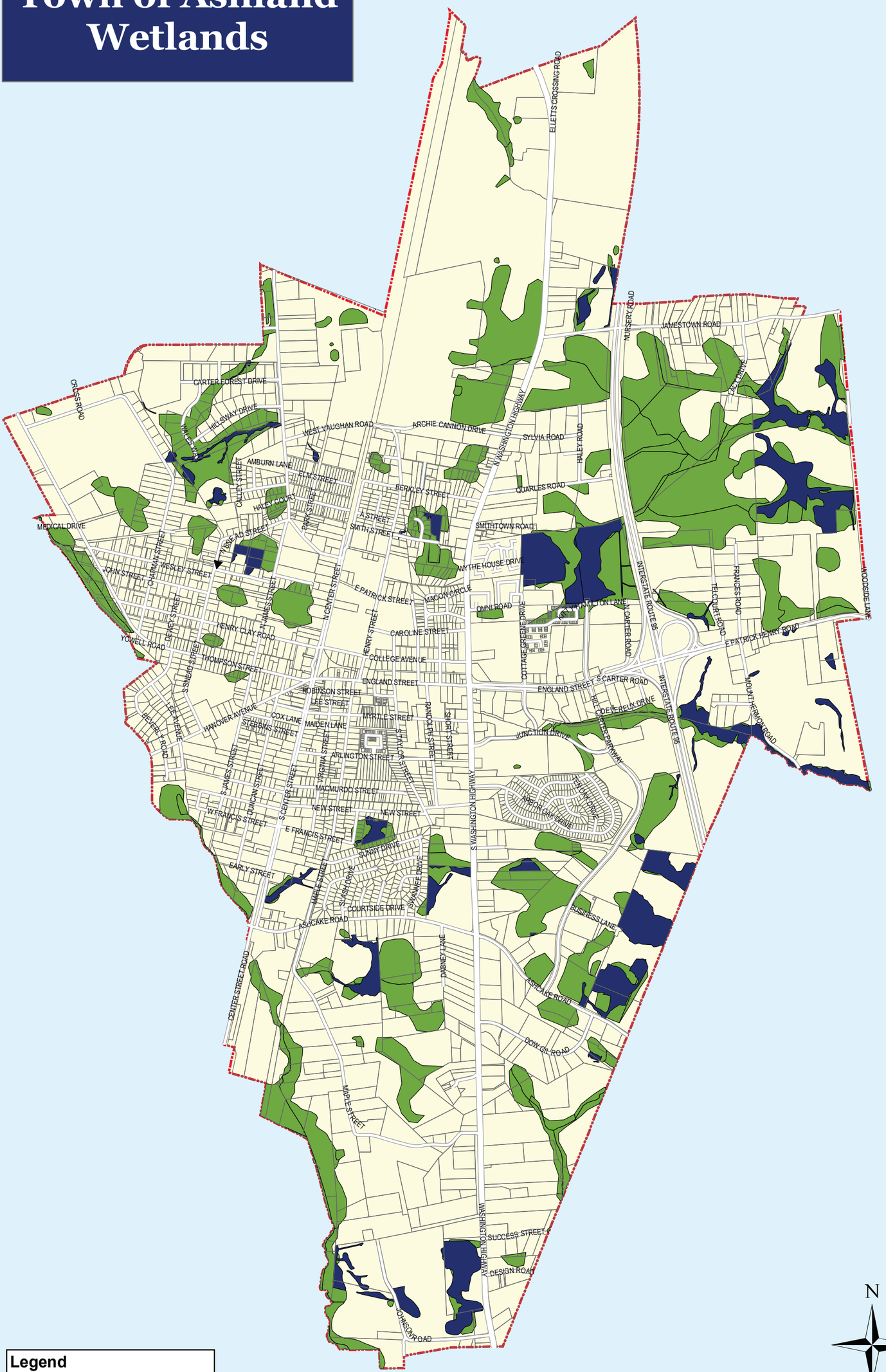
Residential developments should be planned so as to preserve wetlands in separate conservation areas. In general, wetlands should not be located on individual building lots. If wetlands are present on individual building lots, such wetlands should be appropriately mitigated, whether they are disturbed or not. Exceptions may be made where small pockets of wetlands exist outside of the principal building envelope. Steps must be taken to alert homeowners of the presence of wetlands on individual residential lots.

Chesapeake Bay Preservation Regulations

The Chesapeake Bay is America's largest estuary (i.e., a body of water where the fresh water from the rivers and streams mixes with the salt water from the ocean) and one of the world's most productive. The Bay drains an area of 64,000 square miles, which reflects the various land uses and activities of approximately 15 million people. Due to the importance of this natural resource both environmentally and economically, the Virginia General Assembly enacted the Chesapeake Bay Preservation Act in 1988.

The CBPA is designed to reduce nonpoint source pollution and improve water quality in the Bay watershed by minimizing the effects of human activity through the use of best management practices (BMPs). The CBPA

Town of Ashland Wetlands



charges local governments to identify and protect certain lands called Chesapeake Bay Preservation Areas. These areas incorporate two elements: the Resource Protection Area (RPA) and the Resource Management Area (RMA). Both RPAs and RMAs are shown on Map E-1 on page 8-5.

As defined by the Chesapeake Bay Local Assistance Division Regulations, an RPA "consists of sensitive lands at or near the shoreline that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts which may cause significant degradation to the quality of state waters." RPAs are the landward component of the Chesapeake Bay Preservation Area. The buffer formed is important as it filters out nonpoint source pollution, controls erosion, and retards runoff. RPAs are sensitive environmental corridors that should be preserved in a natural condition. The RPA includes:

- Tidal wetlands;
- Nontidal wetlands connected by a surface flow and contiguous to tidal wetlands or tributary streams; and
- A buffer area not less than 100 feet in width located adjacent to and landward of the components listed above, and along side of any perennial tributary system.

There are four nontidal wetland areas within the Town of Ashland that meet the conditions of an RPA as part of the CPBA.

The first RPA in the Town is along the Stony Run Creek, which forms part of the western boundary of Town. The second RPA is along Mechumps Creek, just south of Route 54. The third is along Slayden Creek in the northeastern section of Town, bounded by Route 54, Interstate 95, Jamestown Road, and the Town boundary. The fourth RPA is located at the very northern boundary of Town along Falling Creek. These are shown on Map E-1 on page 8-5.

Also included in the CBPA are RMAs. These include land types that if improperly used or developed, have a potential for causing significant water quality degradation or for diminishing the functional value of the RPA. RMAs include:

- Floodplains;
- Highly erodible soils, including steep slopes;
- Highly permeable soils;
- Nontidal wetlands not included in the RPA; and
- A 100' buffer either side of the RPA.

The Town has designated RMAs around the periphery of each of the RPAs as well as one RMA located in the southeast quadrant below Dow Gill Road along Licking Hole Creek.

In addition to the provisions of the CBPA, the Town of Ashland has also adopted a water quality protection ordinance incorporating all land within the Town outside the RPAs and RMAs. The purpose of the adopted ordinance, found within the Code of the Town of Ashland (Chapter 4.1, Environmental Protection), is multifaceted. The intent of the ordinance is to protect the existing high quality state waters and restore other state waters to higher quality to promote aquatic life. The ordinance intends to reduce existing pollution and minimize the potential for increase in pollution. The final intent of the ordinance is to promote water resource conservation in order to provide for the health, safety, and welfare of the present and future citizens of the Town. This water quality protection ordinance affects all development and redevelopment within the Town exceeding 2,500 square feet of land disturbance. Development and redevelopment that meet this threshold are subject to a certain performance standards. These standards include the limitations of land disturbance, the preservation of existing vegetation, the compliance with erosion and sediment control requirements, and appropriate stormwater management. The Water Quality ordinance is intended to meet and exceed CBPA requirements.

Policy E.7 Chesapeake Bay Preservation Act

The Town of Ashland is subject to the CPBA, which is intended to improve water quality by regulating runoff into creeks, streams and rivers that enter the Chesapeake Bay. The CPBA distinguishes between RPAs – the 100 foot buffer along perennial streams where land disturbance is prohibited – and RMAs – where development is limited and subject to certain regulations. The Town seeks to exceed the current standards for water quality set forth by the CPBA. The Town shall, therefore, continue to require water quality measures on a Town-wide basis, not limited to areas defined by the State as RPAs or RMAs.

Policy E.8 Improve Water Quality

The Town of Ashland is comprised of several local watersheds, all of which drain to the Chesapeake Bay. The Town is required by law, and is obligated by its own principles of environmental stewardship, to protect and improve the quality of water in its various watersheds. The Town shall, therefore, maintain its robust ordinance and continue to require responsible development practices to protect and improve water quality.

Floodplains

A floodplain is the area of land adjacent to a river, stream, or body of water that may become submerged by floodwater. Floodplains are usually represented as 100-year floodplains. A 100-year flood is the flood having a one percent chance of being equaled or exceeded in any given year. This is the regulatory standard also referred to as the 1 percent

chance or base flood. The National Flood Insurance Program, coordinated through the Federal Emergency Management Agency (FEMA), is intended to limit development in these 100-year floodplains through a combination of education, zoning, and regulations.

The Town, in cooperation with the FEMA, has produced maps showing the inventory of known 100-year floodplains within the Town. An ordinance was created in 2008 to restrict development activity within the 100-year floodplains. In most cases, 100-year floodplains should be viewed as a constraint on development and should be used for recreational and/or conservation purposes. The floodplains within the Town's boundaries are shown on Map E-3, page 8-15.

Policy E.10 Septic Tanks

The installation of new septic tanks in the Town shall be prohibited, except for single-family construction on existing lots, when Hanover County does not require public sewer connection, and when appropriate soils exist. The Town shall continue to monitor septic tank systems and maintain a program to alert property owners of their obligations to periodically pump septic tanks located within areas regulated by the CBPA. Individuals will be encouraged to connect to public sewer where available. Developers of new projects will be required to extend public services to the site.

Policy E.11 Groundwater Resources

The installation of new well-water systems within the Town shall be prohibited, except for single-family construction on existing lots, when Hanover County does not require public water connection, or if used for irrigation. The Town, in cooperation with Hanover County, will adopt a Regional Water Supply Plan, as mandated by State authorities. The plan will address water supply and quantity concerns. Extension of public water service to existing developed sections of the Town that are not served by public water should be encouraged.

8.3 Soils

Soil is the top layer of the Earth's surface where rocks have broken down into small particles through biological, physical, and chemical processes. Soil information for the town has been mapped and classified by the United States Department of Agriculture Natural Resources Conservation Service (NRCS).

The NRCS has grouped the numerous types of soils into four different hydrologic soil groups.

- Group A – Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist of mainly deep, well drained to excessively drained sands or gravelly sands. These

soils have a high rate of water transmission.

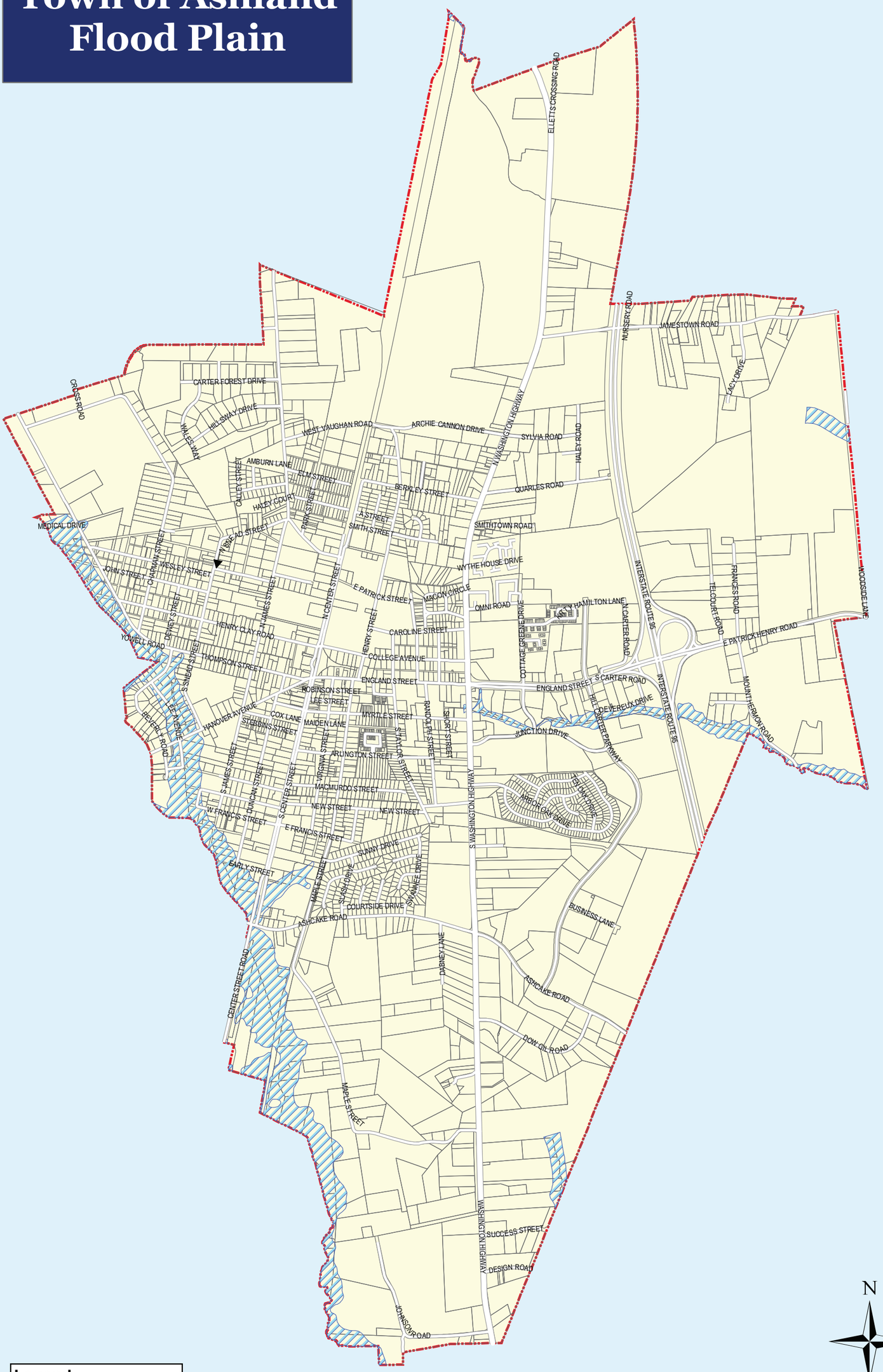
- Group B – Soils having a moderate infiltration rate when thoroughly wet. These consist of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately course texture. These soils have a moderate rate of water transmission.
- Group C – Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.
- Group D – Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These soils consist chiefly of clays that have a high shrink-swell potential, soils that have a permanent high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Most of the soil types in Town can be classified as group C and D hydrolic soils (Map E-4, page 8-17). The Town must maintain development standards for soils of this type, especially soils with a high shrink-swell potential. A shrink-swell soil is defined as a soil that shrinks when dry and swells when wet. This constant shrinking and swelling can damage roads, building foundations, and other structures as well as plant roots. At this time, the Town has not encountered any instances of problems with shrink-swell soils. During the construction process, the Hanover County Building Inspector's office reviews the footings and foundations of a building.

Hydric soils are found extensively throughout the Town. Hydric soils are defined as a soil formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, July 13, 1994). In Ashland, three soil types have been identified as hydric soils: Coxville loam, Aquults, and Fluvaquents. Coxville loam is found extensively through the Town. Both the Aquults and Fluvaquents are found along the western border of Town. These soils are primarily found along Stony Run.

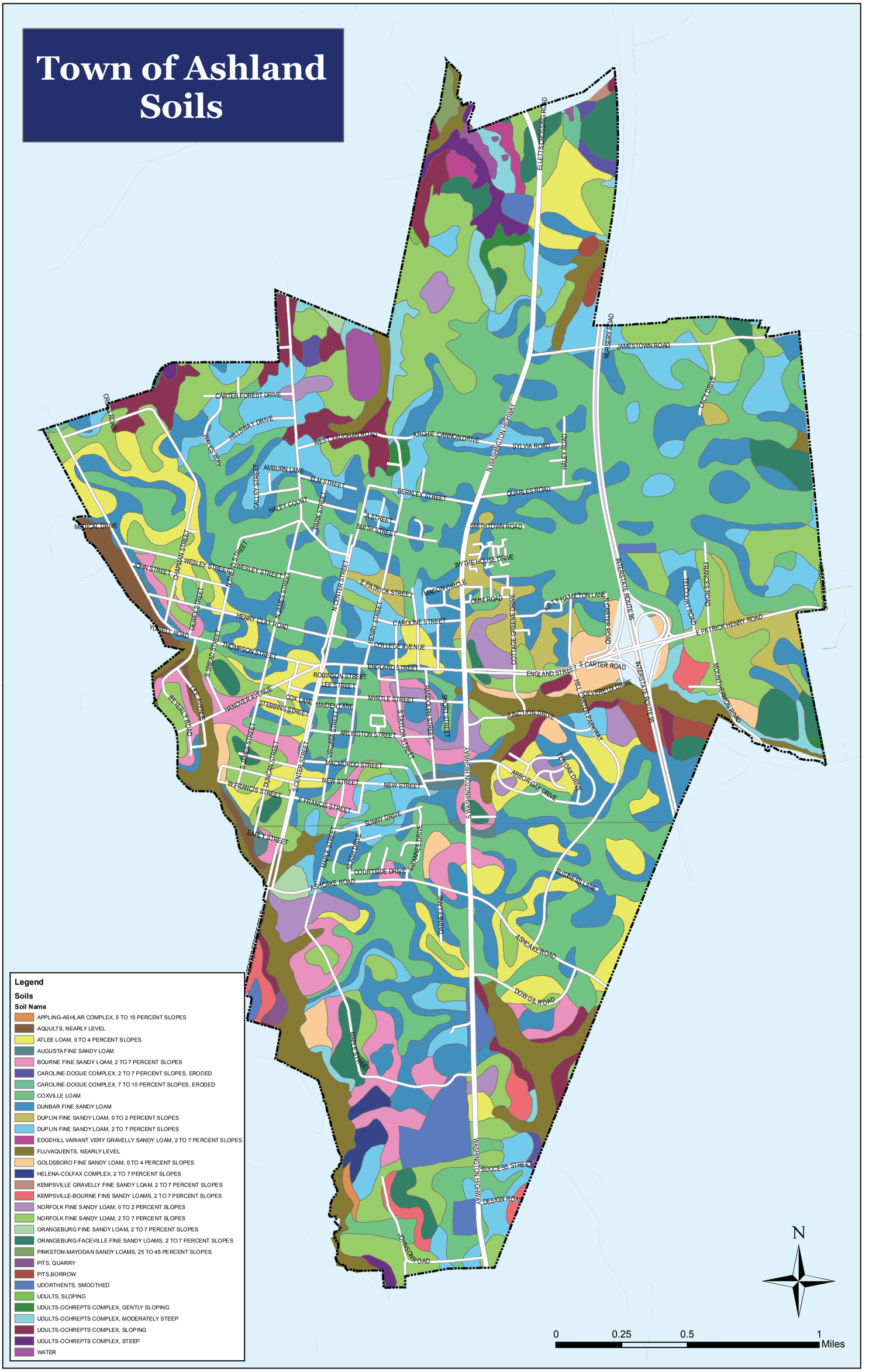
Hydric soils create severe limitations for the construction of dwellings, commercial buildings, septic tank absorption fields, roads and streets, playgrounds, and lawns and landscaping. Soil suitability for septic tank use is not a significant issue for the Town, but may pertain to areas on the fringe of the Town. The Town is served almost entirely by a central wastewater treatment system which is operated by the County of Hanover. Coxville soil has moderate shrink-swell potential, low strength, a seasonal high water table (usually spring), low natural fertility, and is strongly acid to very strongly acid. Coxville soil is suited to trees, particularly those

Town of Ashland Flood Plain



MAP E-3 FLOOD PLAIN

Town of Ashland Soils



Legend

Soils

Soil Name

- APPLING-ASHLAR COMPLEX, 5 TO 15 PERCENT SLOPES
- AQUULTS, NEARLY LEVEL
- ATLEE LOAM, 0 TO 4 PERCENT SLOPES
- AUGUSTA FINE SANDY LOAM
- BOURNE FINE SANDY LOAM, 2 TO 7 PERCENT SLOPES
- CAROLINE-DOGUE COMPLEX, 2 TO 7 PERCENT SLOPES, ERODED
- CAROLINE-DOGUE COMPLEX, 7 TO 15 PERCENT SLOPES, ERODED
- COXVILLE LOAM
- DUNBAR FINE SANDY LOAM
- DUPLIN FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES
- DUPLIN FINE SANDY LOAM, 2 TO 7 PERCENT SLOPES
- EDGEHILL VARIANT VERY GRAVELLY SANDY LOAM, 2 TO 7 PERCENT SLOPES
- FLUVAQUENTS, NEARLY LEVEL
- GOLDSBORO FINE SANDY LOAM, 0 TO 4 PERCENT SLOPES
- HELENA-COLFAX COMPLEX, 2 TO 7 PERCENT SLOPES
- KEMPSVILLE GRAVELLY FINE SANDY LOAM, 2 TO 7 PERCENT SLOPES
- KEMPSVILLE-BOURNE FINE SANDY LOAMS, 2 TO 7 PERCENT SLOPES
- NORFOLK FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES
- NORFOLK FINE SANDY LOAM, 2 TO 7 PERCENT SLOPES
- ORANGEBURG FINE SANDY LOAM, 2 TO 7 PERCENT SLOPES
- ORANGEBURG-FACEVILLE FINE SANDY LOAMS, 2 TO 7 PERCENT SLOPES
- PINKSTON-MAYODAN SANDY LOAMS, 25 TO 45 PERCENT SLOPES
- PITS, QUARRY
- PITS,BORROW
- UDORTHENTS, SMOOTHED
- UDULTS, SLOPING
- UDULTS-OCHREPTS COMPLEX, GENTLY SLOPING
- UDULTS-OCHREPTS COMPLEX, MODERATELY STEEP
- UDULTS-OCHREPTS COMPLEX, SLOPING
- UDULTS-OCHREPTS COMPLEX, STEEP
- WATER

MAP E-4 SOILS

suited to wet conditions, and wetland plants. Aquults are wet or waterlogged typically in the winter, spring, and during prolonged wet periods, have moderate shrink-swell potential, and are strongly acid to very strongly acid. Fluvaquents are wet or waterlogged for periods in winter, spring, and summer and have moderate shrink-swell potential. Like Coxville soil, Aquults and Fluvaquents are suited to trees. Highly erodible and highly permeable soils are not found to any significant extent in the Town.

Policy E.13 Constrained Areas

The Town recognizes that land disturbance and development poses a significant threat to water quality. The Town therefore identifies the following as "constrained" areas:

- Wetlands, as delineated by the U.S. Army Corps of Engineers
- Resource Protection Areas, as regulated by the Chesapeake Bay Preservation Act
- Resource Management Areas, except as deemed necessary by the town manager or designee
- Floodplains, as identified by the Federal Emergency Management Agency

These areas are best left in their natural state. If such areas are incorporated into development, they are best used as open space or for passive recreation. Ordinances should be created to allow for clustering of development in order to preserve these sensitive areas.

8.4 Drainage and Stormwater Management

The Town of Ashland sits on primarily level terrain with soils having a slow to very slow infiltration rate. These two conditions create drainage challenges, and the Town continually works to improve the drainage conditions. Through stormwater management in new developments, restoration of natural drainage systems/streams, and improvement of drainage within existing developed areas, drainage conditions within the Town will continue to improve.

In addition to drainage issues, stormwater runoff is the primary source of nonpoint source pollution. State regulations require that stormwater runoff be treated prior to being released to natural streams and conveyances.

Management of stormwater quality and quantity in the Town is handled on individual sites, as opposed to regionally, with the cost borne by the private developer or landowner. This is done through the use of best management practices (BMPs), which are maintained by the individual landowner. These BMPs may include, but are not limited to, stormwater retention impoundments, infiltration practices, low impact development (LID), etc.

The Town continues to stay apprised of evolving stormwater laws, regulations and technology, and updates its ordinances and requirements in accordance with the latest requirements and standards.

Policy E.14 Drainage and Stormwater Management (Quantity)

The Town of Ashland is generally flat. It has poorly drained soils. In addition, much of Ashland was developed prior to current standards for stormwater management quantity control. As a result, areas of the Town experience drainage challenges. The Town shall continue to identify areas of existing development where drainage is of significant concern, and to implement a drainage improvement program where feasible. All privately developed sites, new streets and public facilities will be designed and constructed in accordance with current stormwater management standards. The Town requires that increased runoff from new development with increased impervious be mitigated on site to prevent off-site flooding. The Town will adopt ordinances to control stormwater runoff quantities that are consistent with the evolving State and Federal regulations.

Policy E.12 Impervious Surfaces

The Town seeks to reduce the amount of impervious surface area within its jurisdiction in order to allow increased infiltration of stormwater, thereby reducing runoff. In the redevelopment of existing improved areas, the reduction of impervious area is required by State law. The Town shall encourage additional reductions when possible; thereby further reducing nonpoint source pollution. The Town should encourage clustering of development and set maximum road pavement widths to preserve open space and reduce the amount of impervious surface required. The Town shall investigate alternative pervious pavement options as it applies to parking lot standards.

Policy E.15 Natural Water Courses and Stormwater Management (Quality)

Natural water courses, such as creeks and streams, should be documented and monitored to assure that they will be protected and allowed to function naturally. With the Town's adherence to State and Federal stormwater regulations and requirements, adverse affects of stormwater runoff related to quantity and quality will be mitigated, and hence natural water courses are expected to be protected, and perhaps improved. The Town is committed to its adherence to these regulations.

The Town will continue to promote the restoration of streams in the Town. This is evident by the Town's collaboration with Randolph-Macon College on the restoration of a portion of Mechumps Creek. This natural water course was degraded due to historic unmitigated stormwater runoff.

Policy E.16 Stormwater Management Facilities, Generally

Stormwater management facilities, often called best management practices or BMPs, are necessary to control the volume and rate of stormwater runoff, and remove contaminants. The Town encourages the use of innovative BMPs, known as low impact development (LID), that decrease runoff volumes, decrease impervious surfaces, and encourage use of vegetation to reduce flow velocity and filter water. LIDs must be reliable, sustainable and attractive. Responsibility for on-going maintenance and aesthetic quality should be a priority in selecting BMPs. The Town requires that the owner of a BMP execute a maintenance agreement to ensure long-term maintenance of the BMP. All BMPs shall be adequately landscaped and screened from public view unless incorporated into the overall development as an attractive water feature. A landscaped buffer not only screens the BMP from view but also protects the banks of the retention pond from erosion. There are other features that may be added to enhance the attractiveness of the BMP as the site allows, such as:

- "Providing pedestrian access to shallow pool areas enhanced with emergent wetland vegetation. This allows the pond to be more accessible without incurring safety risks.
- Providing side slopes that area sufficiently gentle to avoid the need for fencing (3:1 or flatter).
- Creating flat areas overlooking or adjoining the pond for seating that can be used by residents.
- Incorporating walking or jogging trails into the pond design.
- Including fountains or integrated waterfall features for privately maintained facilities.
- Providing visual enhancement with clusters of trees and shrubs that hinder or prevent access to the pond."

Policy E.17 Stormwater Management Facilities, Residential

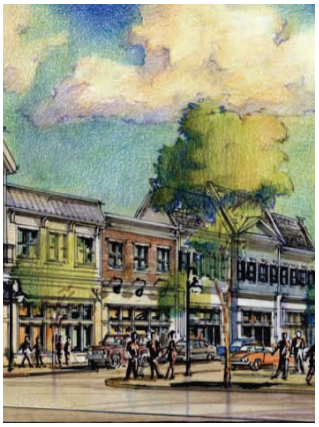
Where stormwater BMPs are required as part of new residential developments, such facilities should be designed in a manner that successfully enables on-going maintenance. Where possible, BMPs should be incorporated as prominent design features or landscape amenities, rather than located in marginal areas of the development with low visibility. Residential BMPs should be located on separate conservation lots, and should not be located on individual building lots. A developer must commit to forming a homeowners' association or establishing another entity that will maintain a BMP before the Town approves plans for a residential development if it includes a BMP.

Policy E.18 Erosion and Sediment Control

The Town shall continue to implement it erosion and sediment control program in accordance with state law.

8.5 Air Quality

Although Ashland does not have to contend with the significant amount of air pollutions associated with heavy industry, the development of land and dependence on the automobile have made this a concern for the Town. Air pollution can come from a number of different sources such as industry, vehicles and development choices as well as naturally occurring sources such as wind blown dirt. It is the Town's goal to continually improve the air quality by creating compact walkable development, offering alternative public transportation and maintaining walkable neighborhoods.



Policy E.20 Improve Air Quality

The Town plays an important role in preserving and improving air quality through its various land use regulations, economic development activities, and transportation projects. The Town shall pursue a compact land use pattern, preservation of open spaces, recruitment of clean industry, and implementation of transportation alternatives to reduce automobile emissions and other contaminants.

Policy E.21 Compact, Walkable Development

New development should occur near existing amenities to reduce vehicle trips. Infill, mixed-use, and redevelopment projects are preferred over remote green-site development. Noncontiguous or "leap-frog" development is discouraged. Increased density housing, while subject to other factors, should be considered in areas of immediate proximity to work, shopping, or other amenities, and should provide strong pedestrian connectivity to reduce vehicle dependency.

Policy E.22 Alternative Public Transportation

The Town recognizes that automobile dependency and increased traffic congestion pose a significant threat to air quality. The Town shall therefore take an active role in providing public transportation, as well as facilities for pedestrian and bicycle travel, as alternatives to automobile travel.

Policy E.23 Commuting

The Town recognizes that commuting for work is a significant contributor of automobile emissions. The Town shall therefore seek ways to reduce commuting by encouraging an appropriate mix of jobs in Ashland, and by partnering with other agencies involved in transit, carpooling, and other ride-share programs.

Policy E.24 Transportation Priorities

In establishing priorities for new transportation projects, the Town shall consider the project's impact on automobile emissions and air quality. Projects that reduce vehicle trips, reduce congestion, provide alternate modes of transportation, or otherwise improve air quality should be given high priority.

8.6 Noise & Light Pollution

Noise pollution generally refers to unwanted sound generated by human activities. In the Town of Ashland, this unwanted sound can be caused by the train, Interstate 95 and general nonresidential uses. Light pollution is the illumination of the night sky by artificial sources affecting the visibility of stars and other natural phenomenon. The Town will continue to maintain policies that reduce or remove the affects of air, noise and light pollution.

Policy E.25 Railroad Noise

The Town shall work with the Federal Railroad Administration to ensure that the Town remains a quiet zone.

Policy E.26 Nonresidential Generated Noise

Noise created by nonresidential uses shall be buffered from residential uses. This can be accomplished through retention of wide natural buffers or structural barriers to block any noise generated.

Policy E.27 Interstate 95

Generally, sound barriers should be discouraged along Interstate 95; therefore, any residential development should be buffered from the highway so as to eliminate the desire of residents to request a sound wall.

Policy E.28 Dark Sky Ordinance

As mentioned in Chapter 3, Community Character and Design, in order to stop the adverse effects of light pollution, including energy waste, harm to nocturnal ecosystems and poor nighttime ambience, the International Dark-Sky Association (IDA) and the Illuminating Engineering Society (IES) have created a Model Lighting Ordinance (MLO) for public review. This ordinance is created in generic code language for easy adoption into the Town Code and is adaptable to any community situation. The Town should consider adoption of this MLO or a similar ordinance. Further, all Town-initiated projects, including street lighting, shall comply with these standards. Unnecessary glare from outdoor lighting, can cause unsafe driving conditions and affect quality of life.

8.7 Green Building Concepts

According to the Environmental Protection Agency, Green Building is the process of creating structures that are environmentally responsible and resource-efficient throughout a building's life cycle. The intention is to reduce the overall impact of the built environment on human health and the natural environment. There are two nationally accepted benchmarks for the design, construction, and operation of high performance, low impact commercial and institutional buildings: 1) the Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ and 2) the Earthcraft House Program. Through the use of Green Building techniques and LEED/Earthcraft Certification, the Town will encourage responsible building techniques wherever possible to affect positive impacts on the built environment such as the efficient use of energy, water, and other resources and the reduction of waste and pollution.

Policy E.29 Green Building Certification

The Town should seek LEED/Earthcraft certification for all new public buildings, to the extent that it is feasible. The Town shall also encourage private developers to seek LEED/Earthcraft certification for privately constructed or rehabilitated buildings.

Policy E.30 LEED Certification for Neighborhoods/ EarthCraft House Virginia

For new residential developments, the Town shall encourage the implementation of some of the standards contained in the LEED for Neighborhood Rating System or the EarthCraft House Virginia Program as applicable. Where the Comprehensive Plan opposes the criteria contained within these program standards, the Comprehensive Plan criteria shall bear greater weight.

8.8 Green Infrastructure

Green infrastructure is the strategically planned and managed interconnected network of green space, natural systems and ecological processes that provide clean water, air quality and wildlife habitat. Green infrastructure sustains a community's social, economic, and environmental health. The key is maintaining the connections between landscapes through both natural and restored habitats. A green infrastructure assessment is an inventory and mapping of natural resources and conditions within the landscape that will instruct a green infrastructure plan. This assessment will let the Town know what the assets and opportunities are. Without this knowledge, the assets cannot be protected and it may not be noticed when the assets disappear. The assessment highlights the importance of how land use planning decisions affect the natural environment and will guide decision makers in the future.

Policy E.31 Green Infrastructure Plan

The Town should consider a Green Infrastructure assessment to be completed in the near future in partnership with Hanover County. A completed Green Infrastructure assessment prepared by Richmond Regional Planning District Commission is designed to inform the current activities as well as future comprehensive plans and can provide tools that will aid in future development decisions. An assessment provides among other things: a map of assets and opportunities, better information for trail and park planning and site design and review, and information necessary to maintain the vitality and health of wetlands and the biodiversity of ecosystems. An assessment may introduce the possibilities for linking recreational trails with new developments and could proffer an easement for the trail connection into the greater trail network.

To Do List

1. Tree City USA standards--Confirm existence of
   - A Tree Board within the Planning Department
   - A Tree Care Ordinance
   - A Community forestry program with an annual budget of at least $2 per capita
   - An Arbor Day Observance and Proclamation

2. Complete tree canopy survey by US Forestry Department & increase tree canopy within specific time frame.

3. Continue program for the installation, replacement, and maintenance of trees in the public right of way.

4. Implement the Municipal Tree Restoration Program or demonstration project with signage with assistance from the VA Department of Forestry

5. Zoning Ordinance changes
   - Add canopy requirement for HE
   - Increase tree canopy requirements for all zones as allowable by state code §15.2-961.1.
   - Enhance tree ordinance to include appropriate species for residential, shopping, and 'parkway' streets, plus maximum size for tree removal and tree sizes and utility lines
   - Are wetlands addressed adequately?
   - Are water quality measures up to date?
   - Are septic tanks covered? Well-water systems?
   - Are there any BMP standards that must be met including attractiveness, maintenance and performance standards?
   - Address 'Dark Sky Ordinance.' -- all Town-initiated projects, including street lighting, shall comply with these standards
   - Create and Adopt a Pedestrian Lighting Ordinance

6. Programs
   - Prioritize and implement programs to improve water quality in watersheds and streams that have become degraded
   - Continue to implement a comprehensive, Town-wide drainage improvement program to identify areas of existing development where drainage is of significant concern, and to correct drainage problems where feasible
   - Continue to implement programs related to drainage, erosion, and sediment control, as required by state law
   - Take an active role in providing public transportation, as well as facilities for pedestrian and bicycle travel

- Seek ways to reduce commuting by encouraging an appropriate mix of jobs in Ashland, and by partnering with other agencies involved in transit, carpooling, and other ride-share programs

7. Complete Green Infrastructure Assessment in partnership with the County and the assistance of the RRPDC.