

Urban Nonpoint Source Water Pollution Programs and Ordinances in Virginia

Legal Authority to Address Land Use and Water Quality From Code of Virginia:

Comprehensive Plans:

Section 15.2-2223. Comprehensive plan to be prepared and adopted; scope and purpose.

“...The plan, with the accompanying maps, plats, charts, and descriptive matter, shall show the locality’s long-range recommendations for the general development of the territory covered by the plan. It may include, but need not be limited to:

1. The designation of areas for various types of public and private development and use, such as different kinds of residential, business, industrial, agricultural, mineral resources, conservation, recreation, public service, floodplain and drainage, and other areas;
5. The designation of areas for the implementation of reasonable groundwater protection measures; ...”

Section 15.2-2224. Surveys and studies to be made in preparation of plan; implementation of plan.

“A. In the preparation of a comprehensive plan, the local planning commission shall survey and study such matters as the following:

1. Use of land, preservation of agricultural and forestal land, production of food and fiber, characteristics and conditions of existing development, trends of growth or changes, natural resources, historic areas, ground water, surface water, geologic factors, population factors, employment, environmental and economic factors, existing public facilities, drainage, flood control and flood damage prevention measures,”

“B. The comprehensive plan shall recommend methods of implementation... the methods of implementation may include but need not be limited to:...

4. A zoning ordinance and zoning district maps...”

Zoning:

Section 15.2-2283. Purpose of zoning ordinances.

“Zoning ordinances shall be for the general purpose of promoting the health, safety or general welfare of the public... To these ends, such ordinances shall be designed to give reasonable consideration to each of the following purposes, where applicable:...(viii) to provide for the preservation of agricultural and forestal lands and other lands of significance for the protection of the natural environment...Such ordinance may also include reasonable provisions, not inconsistent with applicable state water quality standards, to protect surface water and ground water...”

Erosion and Sediment Control

Virginia Erosion and Sediment Control Law
Section 10.1-560 et seq.

Stormwater Management

Virginia Stormwater Management Law
Section 10.1-603.1 et seq.

Section 10.1-603.4: Allows local governments to adopt local stormwater programs that comply with Virginia Board of Conservation and Recreation minimum regulations. A recent amendment includes language to: “Encourage low impact development designs, regional and watershed approaches, and nonstructural means for controlling stormwater.”

Section 10.1-603-7: Authorizes localities to adopt more stringent stormwater management regulations than those necessary to ensure compliance with the Board’s minimum regulations, with the exception of regulations related to plan approval, provided that the more stringent regulations are based upon the factual findings of local or regional comprehensive watershed management studies.

Example Local Water Resources / Water Quality / Watershed Management Programs

Clarke County: Clarke County has a Water Quality Protection Program that has prepared a Water Resources Plan, a Groundwater Resources Plan, and a Surface Water Resources Plan. The county has adopted a number of ordinances to implement the plans. For more information, see: www.co.clarke.va.us/environ.asp.

Shenandoah County: Shenandoah County’s Water Resources Advisory Committee is currently working on a number of water projects, including: proposed ordinance to monitor land application of biosolids, Smith Creek septic pump out education project, well and septic system disclosure statement to inform buyers of well and septic system maintenance responsibilities. For more information, see: www.co.shenandoah.va.us/supervisors/comm_agenda/water_resources/water_resources_committee.htm.

Albemarle County: Albemarle County has a Water Resources Team in the Department of Community Development that manages programs for stormwater master planning, groundwater, and water supply and watershed planning. See the following web site: www.albemarle.org/departments.asp?department=planning&relpage=5720.

Fairfax County: Fairfax County’s Department of Public Works and Environmental Services oversees a number of water programs, focusing particularly on the areas of stormwater management and watershed planning and management. Fairfax County’s

Ocoquan Basin Plan and Stream Protection Strategy Baseline Study are good examples of watershed management plans. See these web sites:

www.co.fairfax.va.us/dpwes/environmental/water.htm

www.fairfaxcounty-watersheds.net/default.aspx

Henrico County Watershed Management Program: Henrico County has developed and adopted a watershed management approach to improving water quality. The County's Watershed Management Program addresses water quality at the watershed level to improve degraded streams while complying with stormwater controls mandated and authorized by state and federal programs. For more information, access this web site: <http://ns1.co.henrico.va.us/works/newdpwweb/chapter2.htm>

Virginia Department of Conservation and Recreation: DCR's Virginia Watershed Advisory Committee has developed a handbook on *Local Watershed Management Planning in Virginia* that can be downloaded as a pdf file:

www.dcr.virginia/sw/docs/wshedguideb2b.pdf.

Example Features of Ordinances that could be used locally:

Stormwater Management:

Virginia Model Ordinance: DCR has developed a Virginia Stormwater Management Model Ordinance, which is available at www.dcr.virginia.gov/sw/stormwat.htm#pubs.

Stafford County Stormwater Management Ordinance: Example provisions to encourage low impact development are found in the Stafford County Code, Chapter 21.5,

“Section 21.5-2 (e) Low-impact development sites:

- (1) The use of low impact development site planning and integrated management practices shall be encouraged to control stormwater runoff at the sources and more closely approximate predevelopment runoff conditions.
- (2) Low-impact development stormwater management design plans developed consistent with the requirements of this subsection shall satisfy the water quality and quantity performance criteria of subsections (b), (c) and (d).
- (3) The design criteria, hydrologic analysis and computational procedures for low-impact development stormwater management design plans shall be those of the low-impact development design manuals.
- (4) Low-impact development stormwater management design plans shall not conflict with existing state or (Stafford) County laws, ordinances, regulations or policies.
- (5) Storm drainage easements shall be recorded to identify the locations of integrated management practices on lots or parcels. The property owner shall not remove or structurally alter integrated management practices without prior written approval from the program administrator.”

Northern Shenandoah Valley Regional Commission Low Impact Development Manual:

Contact the NSVRC for this recently released manual providing specifications for low

impact development techniques applicable to Shenandoah Valley geologic and soil conditions.

Stream Buffers / Riparian Buffers:

Clarke County Stream Protection Overlay District: Section 3-E-5 et seq. of the Zoning Ordinance establishes a stream buffer overlay district, which requires the maintenance/establishment of a vegetated buffer along perennial streams and/or nontidal wetlands adjacent to these streams. Most development is prohibited in the buffer, exceptions being specified utilities, road crossings, and water dependent and recreational uses. An exception is also made for parcels recorded before 1/1/00, if the buffer would result in the loss of a building site. If adequate vegetation is not present, it must be established according to specifications in Section 3-E-5-b-(3). Section 3-E-5-a establishes the buffer:

- 3-E-5-(a) Vegetated Stream Buffer
Except for those lands listed as exempt, land containing perennial streams, and/or nontidal wetlands adjacent to these streams shall provide for vegetated stream buffers of either 35 or 100 feet, as described below. The minimum stream buffer width shall be measured horizontally from the top edge of the stream bank or nontidal wetlands. The top edge of the stream bank, also known as bank-full width, is the width of the stream at normal high water events. This is determined by considering differences in vegetation (aquatic vs. typical terrestrial) and physical characteristics of the stream bank. The width of buffers for sloped stream banks shall be increased. For slopes between 15% and 25%, 35-foot buffers shall be increased to 45 feet. For slopes over 25%, 35-foot buffers shall be increased to 55 feet. For slopes between 15% and 25%, 100-foot buffers shall be increased to 125 feet. For slopes over 25%, 100-foot buffers shall be increased to 150 feet.
- 3-E-5-a-(1) All parcels shall retain a vegetated buffer a minimum of one hundred feet of each side of the stream or wetland.
- 3-E-5-a-(2) All parcels created or site plans approved before 1 January 2000 or parcels that were created after 1 January 200 that qualify for Land Preservation Special Assessment (land use taxation) should establish a vegetated buffer within the buffer area, if one does not exist as described in Section 3-E-5-b.
- 3-E-5-a-(3) Parcels that do not have sufficient acreage to qualify for the Land Preservation Special Assessment (land use taxation), that are shown on subdivision plat recorded or a site plan approved after January 1 2000 shall establish a vegetated buffer a minimum of thirty-five feet of each side of the stream or wetland (see section 3-E-5-b).

Shenandoah County Stream Buffer Ordinance: Section 165-85.1 of the Zoning Ordinance requires the preservation of a 100-foot buffer adjacent to perennial streams on all building lots. The buffer must be maintained in natural or established vegetation

“managed to protect streams from significant degradation due to land disturbances.” Other yard width requirements of the Zoning Ordinance can be reduced by as much as one half on one side of the lot to accommodate the stream buffer on the other side. Similar to Clarke County’s ordinance, this ordinance allows road and utility crossings, water dependent facilities, and recreation paths subject to certain standards. Exceptions are also made to allow building on lots platted prior to 11/26/96, if the buffer requirement would render the lot unbuildable.

Albemarle County Stream Buffer Requirement in Stormwater Management Ordinance: In Section 17-317, any development requiring a stormwater management/BMP plan shall provide for a minimum 100-foot wide buffer along perennial streams and/or contiguous nontidal wetlands. County lands are categorized as development/redevelopment areas, water supply protection areas and rural areas. In the latter two areas, the 100-year floodplain must also be protected in the stream buffer in addition to the minimum 100 feet. The ordinance also requires a minimum 25-foot stream/wetland buffer on agricultural lands used for cropland, wherever such lands are located in the county.

Loudoun County River and Stream Corridor Overlay District: Loudoun County adopted a very comprehensive stream buffer overlay district, which was struck down by the courts due to a ruling of inadequate notice to landowners when it was adopted. The legal merits of the ordinance were not addressed. Despite this situation, Loudoun’s ordinance is worth reviewing. It required a minimum 100-foot buffer along all streams or river segments draining 100 acres or more. This buffer was increased to 300 feet for major rivers (Potomac River, Bull Run, etc.) and water supply reservoirs. The 100-year floodplain was also included in the buffer, as well as adjacent steep slope areas (greater than 25%) up to an additional 100 feet in width.

Stream Corridor Protection Strategy for Local Governments: The Institute of Environmental Negotiation within the Department of Urban and Environmental Planning, University of Virginia School of Architecture, has published this comprehensive manual on strategies to create and manage stream buffers. It can be downloaded at: www.virginia.edu/ien/publications.htm.

Sinkhole, Spring and Water Supply Protection

Clarke County Sinkhole Ordinance: This ordinance, Section 180 in Article II of the County Code, authorizes the county to identify and prescribe corrective and protective measures for any sinkhole that presents a significant subsurface water pollution hazard. Such corrective and protective measures include, but are not limited to:

- (1) Buffer zones covered with grass or other appropriate vegetation.
- (2) Installation of diversion methods or structures.
- (3) Installation of concrete or plastic liners.
- (4) Termination of the activity which creates the pollution hazard.
- (5) Removal of substances and objects from the sinkhole.

Clarke County Spring Conservation Overlay District: This ordinance, Section 3-E-2 of the Zoning Ordinance, is designed to protect the groundwater recharge area of Prospect Hills Spring, which serves as the water supply source of the Clarke County Sanitary Authority's Boyce-Millwood-White Post Public Water System. The ordinance restricts certain land uses (e.g., mining, sanitary landfilling, application or disposal of any hazardous or toxic chemical or biological materials, underground chemical or petroleum storage, land application of biosolids, animal confinement operations). The ordinance also sets minimum (2 acres) and maximum (4 acres) lot sizes for residential lots. Limits in the installation of septic systems are also set out, including a prohibition of such systems within 1000 feet of the spring. No structures, except public utility structures are permitted within 400 feet of the spring. Erosion and sediment control plans are required.

Stephens City Water Supply Protection Ordinance: This overlay district around the town's water supply source, a set of quarries, is designed to protect them from water pollution. Similar to Clarke County's ordinance, this ordinance also requires an approved erosion and sediment control plan for all land disturbing activities, except those related to household gardening and agriculture. Application and disposal of chemicals, including herbicides and pesticides, is regulated. Certain uses are prohibited, including bulk storage or disposal of hazardous wastes, disposal of solid wastes, underground petroleum storage, industrial uses not having a current VPDES permit, bulk storage or road salt, and mining. The residential lot size for lots served by an on-site septic system is a minimum of 1 acre, and no such system may be located within 1500 feet of the water supply quarries. The ordinance requires abandoned wells to be closed out in accordance with VDH standards. Sinkholes must be filled or fenced, and nothing may be disposed of within a sinkhole. The ordinance is found in Section 22-200 et seq. of the Town Code.

Stephens City Source Water Assessment Program Overlay District: Adopted after the Water Supply Protection Ordinance, Section 23-551 et. seq. of the Zoning Ordinance establishes an overlay district specifically to protect the Source Water Assessment Program (SWAP) Zone 1 for the Stephens City Quarry as defined by the Virginia Department of Health. This ordinance prohibits specific industrial uses as defined by North American Industrial Classification System (NAICS) code. The uses prohibited are those determined by the Department of Health to pose a medium to high contamination risk to either ground water or surface water. The quarries that the town uses for water supply are connected to both ground and surface water systems.

Conservation Design

Loudoun County Conservation Design Ordinance: This is found in Section 6-2000 of the Loudoun County Zoning Ordinance. It is applicable in the county's rural and low density residential areas. The ordinance requires developers to prepare a conservation and development areas map to guide the layout of development. Primary conservation areas are to include the River and Stream Corridor Overlay features described on page 5 above, all slopes exceeding 25%, specific areas designated in the County's Mountainside Development Overlay District, specific karst feature buffers, and areas required to be protected by applicable federal and state laws and regulations. These conservation areas

are to be included in the required open space for the development. Additional open space may be required to:

- Conform with adopted open space and trails plans
- Provide contiguity with other open space, agricultural lands and conservation areas both on and off-site
- Protect unique site features and resources
- Provide a minimum buffer width of 100 feet from adjacent public park land
- Provide a minimum buffer width of 100 feet from existing agricultural activities in agricultural districts
- Avoid fragmentation of primary conservation areas.

Areas for development are shown outside the open space and conservation areas. Roads, utilities and on-site sewage disposal systems must be designed and located to minimize impacts on primary conservation areas. Lot sizes may be reduced to achieve the maximum density allowable in the zoning district. Lot width and yard requirements may also be modified to achieve conservation design.

Chesapeake Bay Local Assistance Department Better Site Design Manual: This manual was prepared to help localities implement Virginia’s Chesapeake Bay Preservation Act, but its principles could be incorporated into a conservation design ordinance for Valley jurisdictions. See www.cblad.virginia.gov/publica.cfm#bsd.

Pooper-Scooper Laws

Charlottesville Dog Regulations: Under Section 4-42 of the City Code, dog owners / keepers must remove their dog’s wastes and dispose of it “in a sanitary manner” from the following areas:

- All city parks
- City golf course and trails
- Downtown pedestrian mall
- All public school property
- All county court and administrative properties
- All public rights-of-way, paved sidewalks, streets and bicycle paths

Persons with disabilities accompanied by a guide dog are exempted.

Loudoun County Dog Regulations: Dog owners must remove their dog’s wastes “from any property that is located in any residential subdivision or adjacent to such residential subdivision.” This regulation does not apply to the owner’s own property, but shall apply to common areas of a homeowner’s association, condominium or apartment complex.

Fairfax County Dog Regulations: Dog owners and custodians of any dog “shall be responsible for the removal of excreta deposited by such dog on the property of another, including public places.”