

A NOTE ABOUT THE MODEL REGULATIONS

The model regulations, designed as a section in a zoning ordinance, are for the purpose of providing guidance to Lehigh Valley municipalities interested in regulating riparian buffers in their communities. If municipalities want to require riparian buffers as part of land development applications, they can regulate riparian buffers through their Subdivision and Land Development Ordinance (SALDO). A riparian buffer can be included as a design standard or the municipality can amend the landscaping regulations to preserve existing vegetation and require the use of native vegetation on the site. Please note, however, while the SALDO could require a buffer on a property, it can not regulate uses in the riparian buffer. The regulations provide suggestions to local governments about actions they might take to implement that goal. They are provided here only for review, reference and example purposes. This is not a legal document or the provision of legal advice. For the model regulations to be valid and legally enforceable, they may need to be modified and, reviewed by the municipality.

MODEL REGULATIONS

A. PURPOSE

It is the purpose of this article to establish requirements for the establishment, maintenance and preservation of riparian buffers, as defined herein, to protect the watercourses and wetlands in (Municipality), and to limit the surface areas of buildings and structures within these areas.

B. AUTHORITY

This article is established in accordance with the Pennsylvania Constitution, Art. 1, Sec. 27 (the "Environmental Rights Amendment"), and Sections 301(a)(6), 503(2)(v), 603(c)(7), 605(2)(ii, iii, and vii), 606, 609.1c(3)(4), 916.1(c)(5)(iii and iv) of the PA Municipalities Planning Code, 53 P.S. § 10101 et seq.

C. APPLICABILITY

1. This article shall apply to all lands within (Municipality) that are adjacent to a watercourse or wetland.
2. This article shall apply to any zoning or building permit not included in Section C.3 after the effective date of this article.
3. This article shall not apply to any application after the article's effective date or to a development or land disturbance that:
 - a. Is covered by an approved plan in accordance with (Municipality) Subdivision and Land Development Ordinance; or
 - b. Is covered by a current, executed public works agreement; or
 - c. Is covered by a valid, unexpired (Municipality) Zoning Heard Board (ZHB) approval or building permit; or
 - d. Is a lot line adjustment plan; or
 - e. Zoning or building permits for projects that do not encroach upon the riparian buffer zone or riparian buffer setback.¹

¹ The intent of the regulations is to restrict development inside the riparian buffer zone and not the entirety of the site. Without specific exemptions, confusion can arise as to whether a property owner is required to have a riparian buffer on his property regardless of where development occurs on the property.

D. GENERAL DESIGN STANDARDS

1. For sites where a riparian buffer does not exist, it is acceptable to allow the buffer to succeed naturally.
2. The riparian buffer shall be:
 - a. Seventy-five feet from the top of the streambank of a watercourse,
 - b. Seventy-five feet from the outer edge of a wetland.
3. Principal structures and areas of impervious coverage, unless permitted in Section E of this article, shall be set back from the outer edge of the riparian buffer a minimum of twenty-five feet.
4. Lawns, lawn care service, accessory structures, roads, driveways, utilities and outdoor recreation and education facilities, are permitted within the setback area provided any structure associated with such uses is located outside the riparian buffer.
5. It shall be lawful, but not required, to supplement the riparian buffer with planting of native vegetation. Native plants can include ferns, shrubs and trees. Native vegetation (as defined in *The Plants of Pennsylvania: An Illustrated Manual*, (Ann Fowler Rhoads and Timothy A. Block, June 2000 or current version thereof) and *The Trees of Pennsylvania: A Complete Reference Guide* (Ann Fowler Rhoads and Timothy A. Block, May 2004 or current version thereof) must be used in such efforts. Any supplemental plantings shall be installed to allow for proper plant growth and maintenance.

E. PERMITTED USES/ACTIVITIES WITHIN THE RIPARIAN BUFFER

1. Roads, bridges, trails, storm drainage, stormwater management facilities and utilities are permitted within the buffer provided that an alternatives analysis has clearly demonstrated that no other feasible alternative exists and that minimal disturbance will take place.
2. Stream restoration projects and activities approved by (Municipality).
3. Horticulture practices used to maintain the health of vegetation in the riparian buffer.
4. Removal of non-native vegetation or trees in danger of falling, causing damage to dwellings or other structures, or the blockage of a watercourse.
5. Agricultural uses existing at the time of adoption of this article with best management practices.

F. PROHIBITED USES/ACTIVITIES WITHIN THE RIPARIAN BUFFER

1. All structures.
2. Impervious coverage unless permitted in Section E.
3. Creation of new lawn areas.²
4. Lawn care service.
5. Planting of non-native vegetation.
6. Removal, burning or mowing of native vegetation.³
7. Soil disturbance, inclusive of grading, stripping of topsoil, plowing, cultivating or other practices.

² Lawn grass is shallow-rooted and provides very little in the way of erosion protection. Without vegetation having a deeper, well defined root structure, lawn along the streambank cannot withstand runoff, and erosion will occur.

³ Root growth stops when the above-ground portion of a plant is repeatedly removed. The roots die back, reducing plant vigor. The plants become weak, smaller in size and are more susceptible to bank erosion. Repeated cutting eventually kills trees and shrubs. Trees and shrubs, unlike grass, build on existing growth, and are not able to continually come back from the roots. The growing points of trees and shrubs are located on the tips of the branches, unlike grasses that have roots as growing points.

7. The production, storage or use of a substance or material, underground or aboveground, that is buoyant, flammable, explosive, or injurious to property, water quality, or human, animal, plant, fish or aquatic life.
8. The production, storage or use of explosives.
9. The storage or disposal of materials used for snow and ice control including sand, salt and other deicing chemicals.
10. Sanitary landfills, dumps, junk and salvage yards, and outdoor storage of vehicles and/or materials.
11. The storage or disposal of any soil, loam, peat, sand, gravel, rock, or other mineral substance, refuse, trash, rubbish, debris, or dredged/excavated spoil.
12. Draining, excavating, or dredging, or removal or relocation of loam, peat, sand, gravel, soil, rock, or other mineral substance, except as accessory to work permitted as of right or by special permit.
13. Manure storage facilities and manure stockpiles.
14. The maintenance, housing or grazing of animals.

G. BOUNDARY DETERMINATION

The (Municipality) Zoning Officer or Engineer shall be responsible for determining the location of the riparian/wetland buffer and setback, as applicable to any specific permit or approval subject to review by the Municipality. An applicant shall provide all necessary plans, maps and other information as required by the Zoning Officer or Engineer to make such determination.⁴ The width shall be determined by delineating one endpoint (Endpoint A) per five feet, measured horizontally along the watercourse or wetland. Seventy-five feet shall be measured perpendicular from Endpoint A. This measure shall be Endpoint B. A line connecting endpoints B will be delineated and extend the horizontal length of the watercourse or wetland.

H. VARIANCES

Applications filed with the ZHB shall contain the basis for the appeal of the Zoning Officer or Engineer's decision and a description of the relief requested. Plans submitted shall be prepared by a licensed professional acceptable to the ZHB and shall include the following:

1. Location of streams, ponds or other water resources on the property to be developed;
2. Species, location and size of trees within the riparian buffer setback;
3. Location of any proposed building or structure; and
4. Any other information deemed relevant by the ZHB.

In addition to these standards and criteria, the following shall be considered by the ZHB in rendering affirmative decisions where applicable:

1. A showing of good and sufficient cause.
2. Whether strict application of this article would deny the applicant reasonable use of the property, or whether the article would have severe impact and would render the property unusable or unsuitable for development.

⁴ There are generally two approaches to regulating the width of riparian buffers. A fixed distance, usually measured from the streambank or high water mark, is a popular method for ease of implementation and administration. A buffer width that varies depending on natural or built features adjacent to watercourses can allow for steep slopes or unique features of a site. However, this approach requires site visits by surveyors or other qualified persons in order to measure slopes or identify sensitive natural features. The LVPC regulations designate a municipal official to determine the riparian buffer area on a property, using a fixed width of seventy-five feet from the defined edge of a watercourse or wetland, or from the extent of the 100-year floodplain.

3. Whether plan modifications or conditions of approval can achieve conservation objectives of this article.
4. That the relief granted is the minimum necessary and does not conflict with any municipal, state or federal regulations.

I. DEFINITIONS

Flood, One Hundred Year. A flood that has a 1% chance of being equaled or exceeded in any given year. Over a long period, it is a flood that is likely to occur, on average, once for every 100 years of record.

Floodplain Area. A relatively flat or low land area which is subject to partial or complete inundation from an adjoining or nearby stream, river or watercourse; and/or any area subject to the unusual and rapid accumulation of surface waters from any source.

Lawn. An area maintained with grass adjacent to a structure. The term does not include athletic fields, cemeteries, golf courses, fields, parks and public utility or highway right-of-ways.

Lawn Care Service. Providing services for lawn upkeep including fertilizing, mowing or performing other lawn treatment services.

Native Vegetation. Vegetation that has arrived and inhabited an area naturally, without deliberate assistance by man.

Non-native vegetation. Vegetation reproducing outside its native range and outside cultivation that disrupts naturally occurring native vegetation by altering structure, composition, natural processes or habitat quality.

Riparian Buffer. An area of trees and other vegetation adjacent to a watercourse or wetland that forms a transition area between the aquatic and terrestrial environment, and designed to intercept runoff for the purpose of mitigating the effects of nutrients, sediment, organic matter, pesticides, or other pollutants before entry into surface waters and to provide control of water temperature.

Streambank. The break in the slope between the waterline of a watercourse and the surrounding land area.

Watercourse. A watercourse is a channel or conveyance of surface water having defined bed and banks, whether natural or artificial, with perennial or intermittent flow. Manmade swales, constructed specifically for stormwater management purposes, are excluded from this definition.

Waterline. The highest water level of a watercourse which is common and usual.

Wetland. All lands regulated as wetlands by the Pennsylvania Department of Environmental Protection and/or the United States Army Corps of Engineers. Such areas are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs and similar areas.