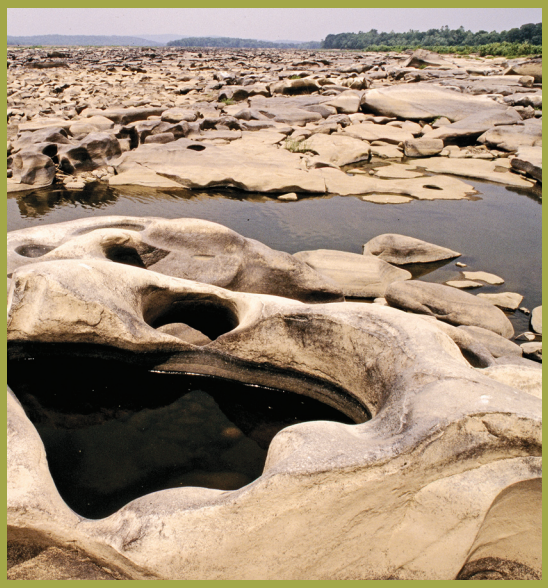
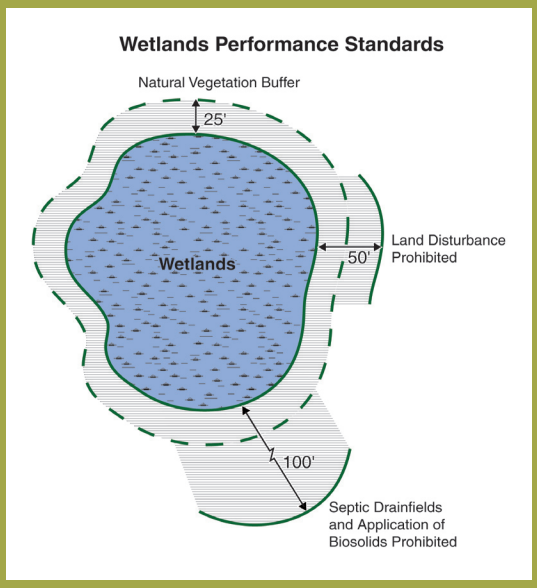
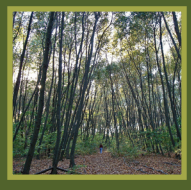
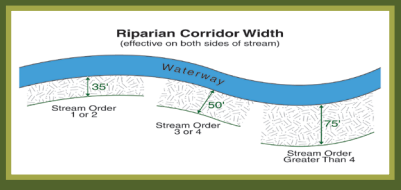
Model Conservation Zoning District and Natural Resource Protection Standards

Lancaster County, Pennsylvania









ENVISION LANCASTERCOUNTY

Lancaster County Planning Commission
June 2010

MODEL CONSERVATION ZONING DISTRICT and NATURAL RESOURCE PROTECTION STANDARDS

Introduction

The Lancaster County Planning Commission ("LCPC") has developed two zoning tools for municipalities to consider integrating into existing zoning ordinances: the first is a collection of Natural Resource Protection Standards that would be in the nature of an "overlay", applicable in all zoning districts of a municipality; and the second is a suggested set of regulations for a Model Conservation District. Both are focused on incorporating natural resource identification and protection into subdivision and development proposals through site specific performance standards. However, the administrative approach of the tools differs with respect to where and how they apply. These differences are discussed below.

Two of the Lancaster County Comprehensive Plan's functional elements have called for model zoning language that will strengthen natural resource conservation and enhancement throughout the county. The Growth Management Element, *Balance*, states a need for model ordinances to be drafted, in part to implement the goals and policies of its Rural Strategy. However, the greatest emphasis on natural resources comes from *Greenscapes*, the Green Infrastructure Element. It recommends both the Conservation District and the Natural Resource Protection Standards as regulatory tools necessary to address its green infrastructure goals:

- Natural Resource Protection Standards work "beyond existing zoning requirements to protect a specific natural resource type."

- Conservation Zoning "can be used like agricultural zoning to protect the integrity of landscapes characterized by a preponderance of valuable natural resources."

These models are connected by the resource types defined within them, as well as their identification criteria (which may be references to inventories adopted with *Greenscapes*) and performance standards geared towards how land disturbance should relate to and/or minimize disturbance to or alteration of the resources. The Natural Resource Protection Standards are intended to be effective as an overlay wherever the defined resources are present, and are designed to be located within a zoning ordinance's Specific Criteria, Supplementary Provisions, or other similar article. On the other hand, the Conservation District should act like a typical underlying zoning district with defined boundaries on the adopted municipal zoning map.

Functionally, the Natural Resource Protection Standards contain a broad list of resource types discussed in *Greenscapes*, including identifying criteria and performance standards:

- Forest Blocks and Interior Forests
- Karst Topography
- Natural Heritage Areas
- Riparian Corridors
- Steep Slopes and Highly Erodible Soils
- Unique Geologic Features
- Wetlands

The Conservation Zoning District model references all of this without verbatim repetition. This arrangement is envisioned for a municipality that will adopt both in some fashion. If a municipality were to adopt only the Conservation Zoning District, the resource identification criteria and performance standards would need to be inserted within the base zone to ensure that the critical features are being addressed.

Conserving Pieces to Protect the Whole

A municipality can use the model Natural Resource Protection Standards to help the community conserve specific resource types throughout its boundaries. These features are often part of larger green infrastructure elements like Important Bird and Mammal Areas and the Lancaster County Conservancy's "Natural Gems". *Greenscapes* documents how these highest-quality natural areas rely upon the healthy functioning of resources like those listed above. For example, the Conservancy's Natural Gems are sites identified as priorities for the organization's preservation efforts. This designation is a result of a sophisticated GIS analysis based on seven important environmental attributes that include water bodies, wetlands, woodlands, and geological features; all of which are focuses of the Natural Resource Protection Standards.

Ideally, a municipality's use of both the underlying Conservation Zoning District and the Natural Resource Protection Standards will result in both broad and targeted conservation

benefits, respectively. The Conservation District model is useful for implementing planning goals in distinct areas, providing linkages to the Preservation and supporting Conservation lands identified in *Greenscapes*[1], as well as the Designated Natural Areas of *Balance*. LCPC recommends that municipalities work through the Designated Rural Areas planning process to precisely identify the locations of high-quality natural resources and delineate areas for long-term conservation. These Rural Areas are logical bases for where an effective Conservation District would best be located.

In essence, protecting Lancaster County's individual natural resources in addition to entire landscapes is a holistic approach to conservation. The larger, contiguous districts of natural importance require restrictive use-based zoning that balances landowners' use of the land with the encompassing community benefits of preservation.[2] However, many resources are woven throughout urban, suburban, and rural areas alike, necessitating standards that apply wherever natural features exist. The Lancaster County Planning Commission provides this technical assistance via model zoning regulations for anyone considering effective natural resource conservation.

Forest Blocks and Interior Forests, Natural Heritage Areas, and Unique Geologic Features are highly specialized resources due to the specificity of their defining criteria. However, a municipality should still graphically depict the locations of such resources on an overlay zoning map to produce official boundaries. Resource mapping may be accomplished in a number of other ways, including the Official Map process as defined in Article IV of the Municipalities Planning Code. The vast majority of these features have been identified and mapped for all of Lancaster County as part of creating the *Greenscapes* plan element, and can be used to assist municipalities upon request.

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[1] See Figures 26 (Preservation Areas), 27 (Conservation Areas), 28 (Restoration Areas), 29 Recreation Areas) and 30 (a compilation of Green Infrastructure Concepts) following page 70 of *Greenscapes* for maps of these sensitive natural features.

[2] For example, "Interior Forest" areas—the core forests with approximately 100 meters of surrounding forest areas as a buffer or transition—are rare and environmentally important resources meriting special protections. In its Environmental Management Handbook (Article I-Natural Features Conservation), the Brandywine Conservancy summarized the attributes of Interior Forests as follows:

> "The Forest Interior Community
>
> Larger forested tracts provide unique habitats for many forest plants and forest interior birds which cannot survive in smaller woodlots, farm fields, or residential areas. The relatively cool, moist forest-interior conditions occur at least 300 feet from the forest edge; they support many indigenous woodland wildflowers and warblers and thrushes which breed each summer. These native species cannot survive in small, narrow woodlots of 20 acres or less, as these habitats are dominated by edge conditions such as sunlight, wind, predators, human intrusion, and outside seed sources. Forest-nesting birds are vulnerable to nest predators such as blue jays, crows, raccoons, and domestic cats, all of which frequent forest edge habitats. Yet forest-edge is the habitat type provided by most suburban woodlands.
>
> Forest-interior habitat, already limited in area, is vulnerable to clearing, since any fragmentation will increase the amount of forest *edge* relative to forest *interior*. Large (≥50 acres), square or round forest stands provide the highest ratio of interior-to-edge and, hence, the most valuable forest-interior conditions. Well-rounded woodlands of 100 acres or more provide over 50 acres of interior habitat, and are among the most important lands for conservation at the municipal level."

NATURAL RESOURCE PROTECTION STANDARDS
AND
CONSERVATION ZONING DISTRICT

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for
Natural Resource Protection Standards

Section 000. Natural Resource Protection Standards

000.1. **Purpose** – The provisions within this Section are designed to protect the natural resources and environmentally sensitive areas in all applicable areas of [*Municipality*], within all Zoning Districts. The standards are intended to define and conserve selected natural resources by minimizing adverse impacts to them, thereby protecting the rights of the residents of [Municipality] to clean air, pure water, and the natural, scenic, historic and aesthetic values of the environment, as set forth in Article I, Section 27 of the Pennsylvania Constitution.

000.2. **Resource Types –** The following subsections address individual natural resource types by prescribing performance standards governing Land Disturbance[3] where the resources exist.

1. Forest Blocks and Interior Forests

Forest Blocks and Interior Forests are essential elements of the local green infrastructure, and the remaining locations of these prime woodlands should be conserved for future generations. These areas provide the highest quality habitat for native plant and animal species, provide natural beauty, facilitate groundwater recharge, slow runoff, and stabilize soil from erosion. The standards contained in this section are intended to maintain large areas of woodlands, especially those insulated from clearing and other impacts. *[The Municipality may wish to identify Forest Blocks and Interior Forests within the municipality on an Official Map or other reference map.]*

a. Defining Criteria

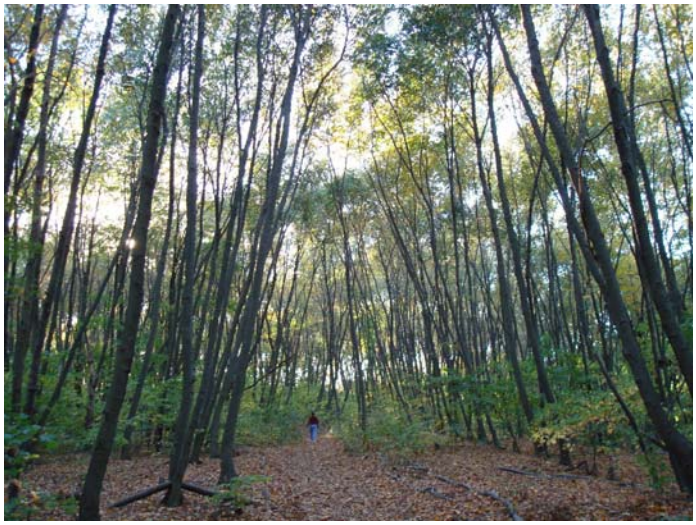
(1) Forest Blocks are contiguous areas of Woodland one hundred (100) acres or greater, regardless of the location of parcel lines, municipal boundaries, zoning districts, or other similar features, as depicted on the Natural Resource Overlay Map appended hereto. [*Note: Lancaster County GIS's depiction of the Natural Heritage Inventory of Lancaster County (or other municipal natural resource inventory*

[3] The Municipal Zoning Ordinance's existing definition of "Land Disturbance" will apply throughout the model. Otherwise, one should be added to the article or section containing definitions. If a similar term is already contained in the Ordinance, it should replace Land Disturbance in this text.

mapping) may be consulted for the location of qualifying Forest Blocks.]

(2) Interior Forests are Woodlands of five (5) acres or greater, located at least three hundred twenty-eight (328) feet (an equivalent conversion of 100 meters) in from the woodland edge or from an opening such as a field, road, railway line, or utility right-of-way, as depicted on the Natural Resource Overlay Map. [Note: Lancaster County GIS's depiction of the Natural Heritage Inventory of Lancaster County [*or other municipal natural resource inventory mapping*] may be consulted for the location of qualifying Interior Forests.]

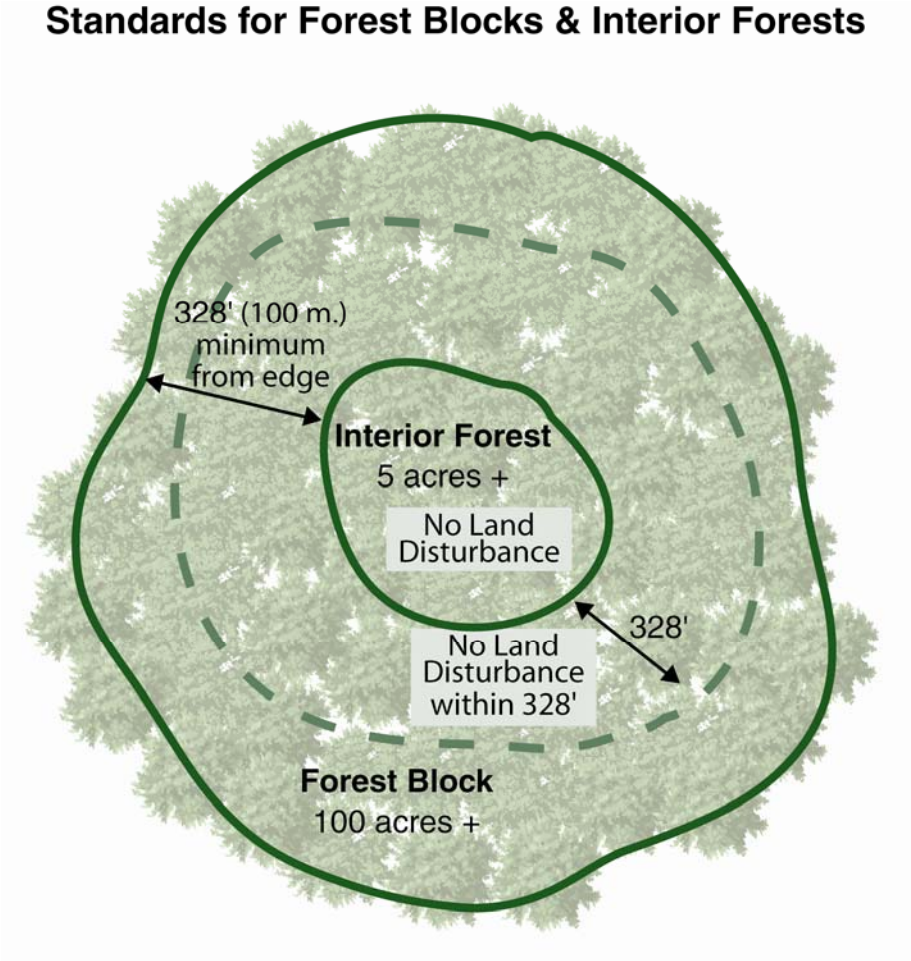
(3) Woodland is land predominantly covered with trees and shrubs. Without limiting the foregoing, Woodlands include all land areas of 10,000 square feet or greater, supporting at least 100 trees per acre, so that either (i) at least 50 trees are two inches or greater in DBH, or (ii) 50 trees are at least 12 feet in height.



b. Performance Standards

Each of the following standards shall apply to Forest Blocks and (as applicable) Interior Forests. Where more than one performance standard is applicable, each standard shall be independently complied with.

(1) There shall be no Land Disturbance within an Interior Forest.



(2) No Land Disturbance shall be located closer than three hundred twenty-eight (328) feet from the outer edge of an Interior Forest. *[This standard is intentionally written strongly in order to maintain the integrity of these highly important, but uncommon woodlands. Breaching the 328' (100 meter) perimeter around an Interior Forest reduces the area of the Interior Forest itself, perhaps resulting in a gradual elimination of the resource.]*

(3) Where forestry activities are permissible, at least seventy-five (75) percent of trees having a dbh (diameter at breast height) of six (6) inches or greater within the portion of a Forest Block located outside of an Interior Forest shall be retained, unless a lesser percentage is proposed, which shall be subject to the mitigation requirements of Section [*002.l.c(2)*]. [*This subsection may be changed so that a proposal to retain less than 75% of qualifying trees is approved by either the Governing Body or Zoning Hearing Board through the Conditional Use or Special Exception process.*]

(4) At least eighty (80) percent of areas defined as a Forest Block within a lot shall be retained as Woodland.

(5) Any Land Disturbances within a Forest Block should occur as close as possible to a property line and/or Forest Block edge in order to maintain the integrity of large Woodland blocks.

c. Mitigation Standards

(1) Any subdivision plan, land development plan, or zoning application proposing the removal of any trees shall clearly illustrate those trees to be removed and the manner that the applicant intends to replace or replant the removed trees, where applicable.

(2) If the percentage of trees having a dbh of six (6) inches or greater being retained within a Forest Block located outside of an Interior Forest is less than seventy-five (75) percent as part of a proposed Land Disturbance, mitigation shall be required. [*NOTE: If subsection b(3) has been amended to require Conditional Use or Special Exception approval, this should be included here.*] Mitigation of qualified trees that are intended to be removed, in accordance with Section [*002.1.b(3)*], can be accomplished by replacing and/or replanting them on the lot. Replacement trees shall be provided in accordance with the table below, which bases the number of replacement trees on the size of those trees being removed. The landowner shall be required to maintain all replacement trees for two (2) years after the trees are planted and to replace any tree that dies within the two-year guarantee period.

Size of Removed Tree, in dbh (Diameter at Breast Height)	**Number of Required Replacement Trees With a dbh of at Least 2”**
6.0 – 11.9”	1
12.0 – 17.9”	2
18.0 or greater	3

(3) The species replacing native trees should be similar to those being removed. Tree species classified as invasive by the Pennsylvania Department of Natural Resources shall be replaced by native species.

2. Karst Topography

[This Section may be omitted by the municipality if effective Karst Topography standards have been enacted within the Subdivision and Land Development Ordinance and/or Stormwater Management Ordinance. Adopting overlapping standards via the Zoning Ordinance may create administrative conflicts and potential hardships for applicants, specifically in the variance process.]

A Karst landscape is created by groundwater dissolving sedimentary rock, such as limestone and dolomite, which creates such features as shafts, tunnels, caves, faults, closed depressions, and sinkholes. Water then seeps into these features which results in a scenic landscape which may be beautiful, but fragile and vulnerable to erosion and pollution. This topography in Lancaster County presents constraints on development within urban and rural areas. Specific examples are soil creep near sinkholes and closed depressions, as well as potential groundwater contamination from stormwater runoff and sewage effluent. The standards contained herein are intended to minimize the risks associated with this type of topography.

a. Defining Criteria

(1) Karst Topography consists of geologic formations associated with carbonate rock types, generally consisting of limestone and dolomite. Carbonate rock is affected by a dissolution weathering process caused by slightly acidic groundwater.

(2) Karst Features consist of sinkholes, closed depressions, fracture traces, caves, faults, tunnels, shafts, and ghost lakes.

b. Performance Standards

(1) There shall be no disposal of any materials into a Karst Feature.

(2) The filling, grading, or excavating of Karst Features is prohibited, except in regard to the mitigation standards found in Section [*000.2.c*].

(3) No buildings, structures, agricultural terraces, stormwater features, or impervious cover shall be placed over or within a Karst Feature unless mitigation standards below

have been attained as determined by the [*municipal or geotechnical*] engineer.

(4) Buildings, structures, agricultural terraces, and stormwater management basins shall be located no closer than 100 feet from a Karst Feature and no closer than 50 feet from a mitigated Karst Feature.

(5) Uses or developments within Karst topography shall neither increase the surface runoff onto adjoining properties nor into existing Karst Features.

(6) Outflow from a stormwater management basin and/or post-development stormwater flows shall not be directed to a Karst Feature.

(7) Storage and handling areas of any hazardous materials or leachate generating operations, like mulch production, must have impermeable surfaces designed to contain materials stored/handled from which they shall be directed to a predetermined collection point, away from Karst Features.

c. Mitigation Standards

(1) Any person or entity proposing to mitigate a Karst Feature shall follow the generally accepted practices for such mitigation. An inspection shall be conducted by the [*municipal or geotechnical*] engineer upon completion of the mitigation measure to ensure these engineering standards have been met.

(2) Prior to mitigation measures being performed or approved, safety fencing must be installed in areas where general public safety is a concern.

(3) If a Karst Feature like a closed depression is filled as part of an approved mitigation process, the approximate size and location of such Feature shall be reported to the municipality.

3. Natural Heritage Areas

Natural Heritage Areas for Lancaster County are identified in the *2008 Natural Heritage Inventory of Lancaster County, Pennsylvania*, and include both Natural Communities and the

habitats of Species of Concern.[4] The *2008 Natural Heritage Inventory* update was conducted as part of the creation of *Greenscapes: the Green Infrastructure Element* of the *Lancaster County Comprehensive Plan* to identify the Core Habitat and Supporting Areas for each of the designated Natural Heritage Areas. These lands are extremely sensitive and cannot absorb significant levels of habitat-disturbing activity, like land development, without substantial impact to the plant and animal species that they harbor. Therefore, effective safeguards against habitat degradation are necessary to preserve the plant and animal species that depend upon these habitats for survival.

Natural Communities are groups of organisms in a particular area based on the environmental conditions, and include exemplary natural communities and areas with exceptional natural diversity. Designated Natural Communities are considered to be uncommon or among the best type within Pennsylvania. Species of Concern are plants or animals considered to be rare, threatened, or endangered by the Commonwealth of Pennsylvania and/or the Federal government. Their habitats consist of the natural conditions and environments in which the plant or animal lives. They may be found singularly, overlap, or be adjacent to one another.

a. Defining Criteria

(1) Core Habitat Areas are identified in the *2008 Natural Heritage Inventory of Lancaster County, Pennsylvania* as the actual and adjacent similar habitats of individual Species of

[4] See the Map of Natural Heritage Areas on page 35 of *Greenscapes*.

Concern, exemplary Natural Communities, and areas of exceptional natural diversity.

(2) Supporting Landscapes are identified in the *2008 Natural Heritage Inventory of Lancaster County, Pennsylvania* as areas that contain natural resources important to maintaining vital ecological processes, or secondary habitats that support plant and animal species in Core Habitats.

(3) The Core Habitat Areas and Supporting Landscapes within [*Municipality*] are as depicted on the Natural Resource Overlay Map appended hereto.

b. Performance Standards

(1) Applicants proposing a Land Disturbance in an area designated as a Core Habitat Area shall submit receipt of a Pennsylvania Natural Diversity Inventory (PNDI) query.

(2) Where not otherwise regulated more restrictively under, the provisions of this Ordinance, any site containing a Core Habitat Area shall not be regraded, filled, built upon, or otherwise altered or disturbed, except the following uses or activities are permitted by right:

(a) Regulated activities permitted by the Commonwealth (i.e. permitted stream or wetland crossing).

(b) Recreational trails.

(c) Selective removal of hazardous or invasive alien vegetative species.

(d) Vegetation management in accordance with an approved landscape plan or open space management plan.

(3) A buffer of no less than twenty-five (25) feet of the Supporting Landscape shall be provided around the entire perimeter of a Core Habitat Area, within which no Land Disturbance shall be permitted.

4. Riparian Corridors

A Riparian Corridor incorporates a perennial or intermittent body of water, its lower and upper banks, and the vegetation that stabilizes its slopes. It includes the channel plus an adjoining strip of land. Riparian Corridors protect the waterway from erosion and sediment, provide cover and shade, maintain wildlife habitat and filter air and water pollution. Portions of Riparian Corridors can be utilized for greenways, trails and some stormwater management practices that minimize stormwater impacts to streams. The intent of these regulations is to reduce the amount of nutrients, sediment, organic matter, pesticides, and other harmful substances that reach water courses, floodplains, adjoining wetlands and subsurface and surface water bodies.

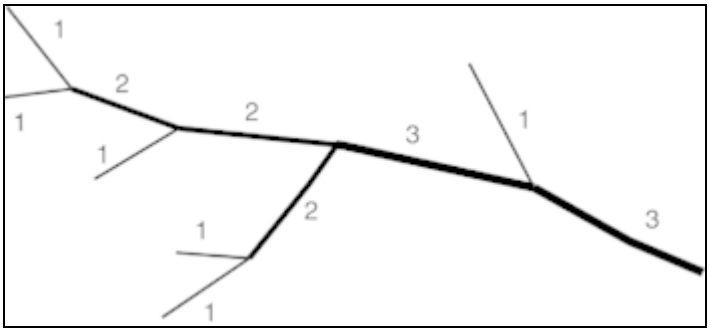
A Riparian Corridor includes the limits of a floodplain, which is established to reduce the loss of life and property in a specified flood event, and therefore takes into consideration a waterway's capacity, surrounding topography, and projected flows from a flood. However, the purpose of creating a Riparian Corridor is focused less on avoiding loss and casualty resulting from a natural disaster, and more on improving and ensuring the quality of surface water resources and the health of the reliant ecosystem.

Enhancing water quality through the application of Riparian Corridors makes an impact not only on local water resources, but on regional waters like the Chesapeake Bay. Therefore, these standards incorporate the Alliance for the Chesapeake Bay and the Center for Watershed Protection's *Recommended Model Development Principles* as well as the United States Environmental Protection Agency's *Model Ordinance to Protect Local Resources*. In addition

to these documents' specific performance standards, the stream order basis for determining corridor width was set forth in the *Recommended Model Development Principles* "to [satisfy] the need to address site-specific concerns while providing a way to arrive at a quantifiable buffer width."

a. Defining Criteria

(1) Except as provided in subparagraphs (2) and (3) below, the Riparian Corridor shall be determined by the stream order and, as applicable, by status as a specially protected watercourse. In order to define stream order, the Strahler method shall be used. As shown in the diagram below, the Strahler method indicates that first order streams are the smallest streams that typically feed into larger streams. First order streams have no tributaries or branches. When two first order streams merge, a second order stream is created. Any stream ordered higher than six is considered a river.



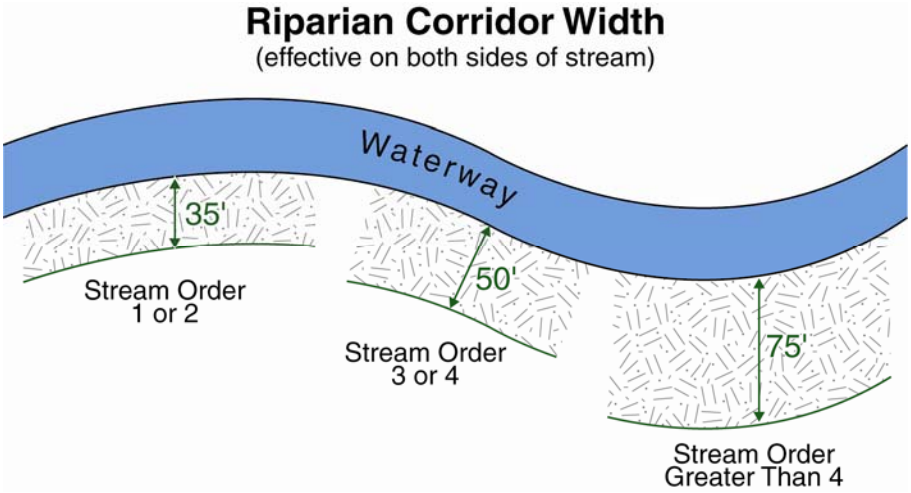
U.S. Army Corps of Engineers diagram showing the Strahler stream order

(a) Streams ordered one (1) and two (2) together represent headwaters, and shall have a minimum Riparian Corridor width of thirty-five (35) feet on each side of the water course, measured from the top of each stream bank.

(b) Streams ordered three (3) and four (4) shall have a minimum Riparian Corridor width of fifty (50) feet on each side of the water course, measured from the top of each stream bank.

(c) Streams ordered greater than four (4) shall have a minimum Riparian Corridor width of seventy-five (75) feet on each side of the water course, measured from the top of each stream bank.

(d) The Riparian Corridor width shall be increased to one hundred (100) feet on each side of the water course for a State-designated Special Protection water course (High Quality and Exceptional Value Stream) as determined by the Pennsylvania State Code Chapter 93.4b, as identified within the Lancaster County Comprehensive Plan's Green Infrastructure Element, *Greenscapes*.



(2) Riparian Corridors shall be extended to encompass, at a minimum, the entire one hundred (100) year floodplain.

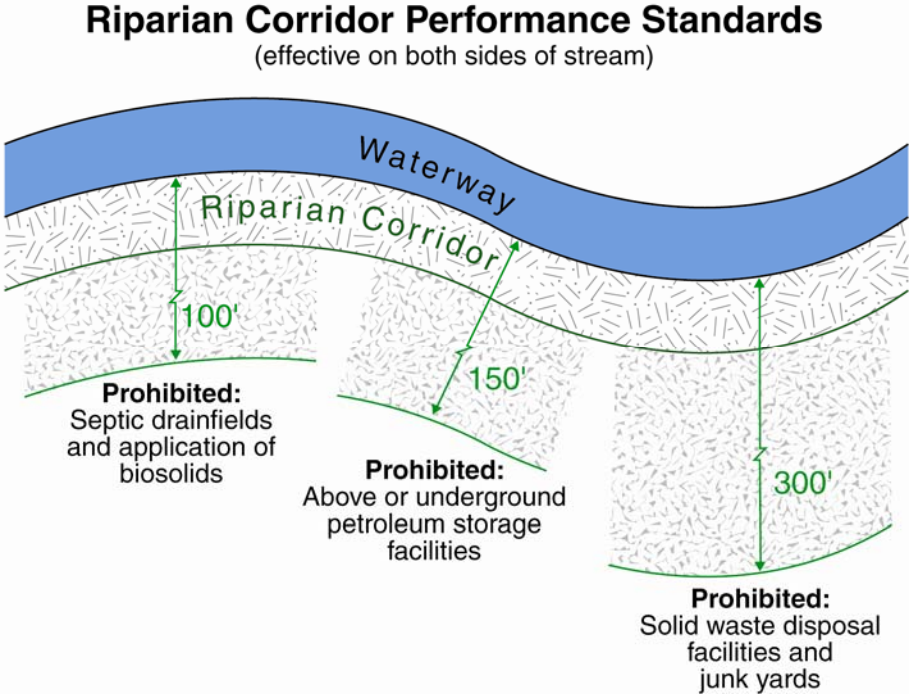
(3) If a Wetland is located adjacent to a Riparian Corridor, the entire Wetland area shall be included within the Riparian Corridor and shall be subject to all standards for Wetlands within this ordinance.

b. Performance Standards

(1) Existing vegetated areas within the Riparian Corridor shall be preserved to the maximum extent possible.

(2) The planting of additional native trees, shrubs and other plant material and the removal of invasive species as determined necessary in order to create a suitable Riparian canopy and understory within the Riparian Corridor shall be permitted.

(3) Septic drainfields and sewage disposal systems shall not be permitted within the Riparian Corridor and shall maintain a minimum distance of one hundred (100) feet from the top of the stream bank.



(4) Solid waste disposal facilities and junkyards shall not be permitted within three hundred (300) feet of the top of the stream bank.

(5) Above or underground petroleum storage facilities shall not be permitted within one hundred fifty (150) feet of the top of the stream bank.

(6) The application of biosolids shall not be permitted within one hundred (100) feet of the top of the stream bank.

(7) Storage and handling areas of any hazardous materials must have impermeable surfaces designed to contain materials stored/handled from which they shall be directed to a predetermined collection point, which shall not be located within a Riparian Corridor.

(8) With the exception of trail construction, waterway access, waterway restoration and enhancement, livestock crossings, and infrastructure and utilities, the filling, grading or excavating of Riparian Corridors shall be prohibited.

(9) There shall be no disposal of trash or other materials within the Riparian Corridor.

(10) The grazing, housing or other maintenance of livestock within the Riparian Corridor shall be prohibited.

5. Steep Slopes and Highly Erodible Soils

Steep Slopes can offer a variety of amenities such as significant views of valleys and hills, proximity to large natural open space areas and privacy. However, improper development on Steep Slopes and Highly Erodible Soils can cause significant destruction of the scenic beauty of the area, decreased water quality, increased downstream runoff and flooding problems, loss of sensitive habitats, erosion, slope failures, fire hazards, high utility costs, lack of safe access for emergency vehicles, and high costs for maintenance of public improvements. The protection sought by these regulations is considered reasonable for regulatory purposes. This does not imply that areas that are not considered Steep Slopes and Highly Erodible Soils will be free from erosion or slope instability. This section shall not create liability on the part of [*Municipality*] or any officer or employee thereof for any damages that result from reliance on this Section or any administrative decision lawfully made hereunder.

a. Defining Criteria

For purposes of this Section, the areas of Highly Erodible Soils and Precautionary and Prohibitive Slopes, as defined below, are considered to be "Restricted Areas."

(1) Highly Erodible Soils are defined as those satisfying criteria (a) and/or (b) below, which are based upon the United States Department of Agriculture Soil Conservation Service's *Soil Survey of Lancaster County, Pennsylvania*:

(a) Soils labeled as Class VI or Class VII by the *Soil Survey of Lancaster County, Pennsylvania*. Both Class VI and Class VII soils are defined as having very severe limitations that make them unsuitable for cultivation.

(b) Soils having an Erosion Factor K of 0.40 or greater, as listed in Table 16 of the *Soil Survey of Lancaster County, Pennsylvania*.

(c) Any Class VI or VII soils in an urbanized area shall not be defined as a Highly Erodible Soil for the purposes of this Section.

(2) Steep Slopes are natural slopes above fifteen (15%) percent grade, and are classified as being either Precautionary Steep Slopes or Prohibitive Steep Slopes. Precautionary Steep Slopes are natural slopes between fifteen (15) and twenty-five (25) percent. They are generally considered steep and require precautionary measures, while natural slopes over twenty-five (25) percent are considered Prohibitive and are unsuitable for agricultural and land development. The percentage of slope shall be calculated as the ratio of the vertical rise in elevation to the horizontal distance of the slope, measured from the top to the toe of the slope. [*The Zoning Ordinance's existing definition of Slope may be used in lieu of the last sentence by default, if consistent with this section.*]

b. Performance Standards

(1) All Highly Erodible Soils, as defined above, and slopes over fifteen (15) percent shall be shown on all plans, with a differentiation of slopes between fifteen and twenty-five (15-25) percent and those greater than twenty-five (25) percent.

(2) Any disturbance of Steep Slopes shall be completed within one construction season, and disturbed areas shall not be left bare and exposed during the winter and spring thaw periods. Permanent vegetative cover shall be planted within three (3) days after completion of grading.

(3) Grading or earthmoving on all Steep Slopes shall not result in earth cuts or fills whose highest vertical dimensions exceed ten (10) feet, except where no reasonable alternatives exist for construction of roads, drainage structures, and other public improvements, in which case such vertical dimensions shall not exceed twenty (20) feet. Finished slopes of all cuts and fills shall not exceed three to one (3:1), unless the applicant can satisfactorily demonstrate to the [*Municipal*] Engineer that steeper slopes can be stabilized and maintained adequately. The landscape shall be preserved in its natural state insofar as practicable.

(4) Any fill placed on the lot shall be properly stabilized and, when found necessary depending upon existing slopes and soil types, supported by retaining walls or other appropriate structures as approved by the [*Municipal*] Engineer.

(5) Any cuts shall be supported by retaining walls or other appropriate retaining structures, when, depending upon the nature of the soil characteristics, such structures are approved by the [*Municipal*] Engineer in order to prevent erosion. Where the face of such retaining wall does not exceed three (3) feet in height, [*Municipal*] Engineer approval is not required.

(6) No retaining wall shall exceed the height prescribed in Section [*Insert Zoning Ordinance Section*] of the Zoning Ordinance, and there shall be at least ten (10) horizontal feet between stepped retaining walls. All retaining walls greater than three (3) feet in height require certification by a professional engineer that the wall was constructed in accordance with the approved plans and applicable building codes.

(7) The alignment of roads and driveways shall follow the natural topography, minimize regrading and comply with design standards for maximum grades set forth in the [*Municipality*] Subdivision and Land Development Ordinance.

(8) Disturbance limits:

(a) Class VI soils, soils with an Erosion Factor K exceeding 0.40, and slopes of at least fifteen (15) percent but less than twenty-five (25) percent shall have a disturbance limit of thirty (30) percent of the Restricted Area.

(b) Class VII soils and slopes greater than or equal to twenty-five (25) percent shall have a disturbance limit of ten (10) percent of the Restricted Area.

6. Unique Geologic Features

Unique Geologic Features are natural resources that have been identified as having a geological significance in Pennsylvania and are depicted on the Natural Resources Overlay Map appended hereto. These resources are typically scenic and offer opportunities to learn about the natural history of Lancaster County and the State of Pennsylvania. *[The Municipality may wish to identify the specific*

Unique Geologic Features within the municipality on an Official Map or other reference map.]

a. Defining Criteria – Unique Geologic Features are derived from the Pennsylvania Geological Survey's publication, *Outstanding Scenic Geological Features of Pennsylvania (Part 1 & 2)*, or as determined by the [*Governing Body*] through the municipal or regional comprehensive plan.

b. Performance Standards

(1) There shall be no construction, earth moving, filling, or blasting of Unique Geological Features.

(2) A buffer area surrounding the Unique Geologic Feature of one hundred (100) feet shall be maintained with natural vegetation.

(a) No structures or stormwater features shall be permitted within the buffer area.

7. Wetlands

Wetlands are unique natural resources that serve multiple green infrastructure purposes, and should be conserved for their ecological functions and practical value. Their role in improving water quality, storing stormwater runoff, maintaining surface water flow, and providing habitat for flora and fauna are of high importance. The conservation of Wetlands, as with Riparian Corridors, serves these

purposes for the local community's benefit as well as the greater region that includes the Chesapeake Bay.

a. Defining Criteria – Wetlands are areas inundated or saturated by surface 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 saturate soil conditions, including swamps, marshes, bogs and similar areas. Without limiting the foregoing, wetlands shall be identified where one or more of the following criteria are met:

(1) Areas delineated as Wetlands by the *National Wetlands Inventory* and/or the *1990 Lancaster County Natural Areas Inventory*.

(2) Areas consisting of one or more of the following soil types having a very high percentage of hydric components, as designated by United States Department of Agriculture Soil Conservation Service's *Soil Survey of Lancaster County, Pennsylvania*:

Baile silt loam (Ba)
Bowmansville silt loam (Bo)
Holly silt loam (Hg)
Towhee silt loam, 0-3 percent slopes (1ToA)
Watchung extremely stony silt loam, 0-8 percent slopes (WbB)

(3) Areas created to replicate the functionality of naturally-occurring wetlands for the purpose of stormwater management, advanced treatment of wastewater, mitigation of other wetlands, or other similar purpose.

b. Performance Standards

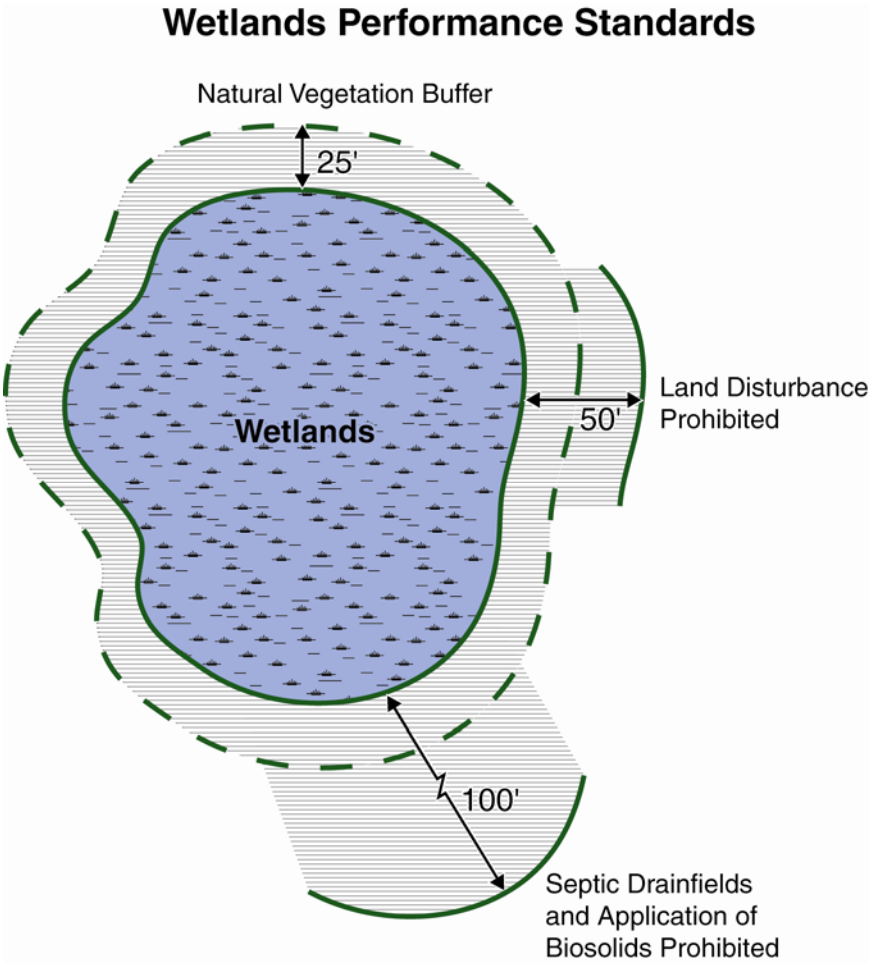
(1) Wetlands shall not be altered, regraded, filled, piped, diverted, or built upon except where Commonwealth and Federal permits have been obtained.

(2) A twenty-five (25) foot buffer surrounding the Wetlands boundary shall be conserved for naturally occurring vegetation, or the reestablishment of native plant species

(3) Land Disturbance shall not occur within fifty (50) feet of the Wetlands boundary.

(4) Septic drainfields and sewage disposal systems shall not be located within one hundred (100) feet of the Wetlands boundary. The replacement of an existing sewage disposal system located within this setback line shall comply with the setbacks set forth herein.

(5) The application of biosolids shall not occur within the Wetlands or within one hundred (100) feet of the Wetlands boundary.



c. Appeals – Where an Applicant feels that an area has been incorrectly identified as Wetlands by the criteria established in Section 000.2.7.a, the following appeal procedure shall be followed:

(1) The Applicant shall conduct Wetlands delineation and/or soil testing shall be conducted in accordance with the criteria outlined in the U.S. Army Corps of Engineers' 1987

Wetlands Delineation Manual and any subsequent update, including the 1992 memorandum entitled *Clarification and Interpretation of the 1987 Manual*.

(2) Wetlands delineation and/or soil testing shall be performed by a qualified individual, such as a qualified soil scientist.

(3) Wetlands delineation and/or soil testing shall be performed at the expense of the applicant.

000.3 Relationship to Other Sections – If the provisions of this Section apply and are more restrictive than those of any other applicable standards in this Zoning Ordinance, or any other Ordinance of [*Municipality*], these provisions shall constitute an overlay and both these provisions and all other provisions of all other sections of this Zoning Ordinance and all other Ordinances of [*Municipality*] shall remain in full force, the more restrictive to govern in the event of conflict.

000.4 Severability – If any sentence, clause, section or part of this Section is for any reason found to be unconstitutional, illegal or invalid, such unconstitutionality, illegality or invalidity shall not affect or impair any of the remaining provisions, sentences, clauses, sections or parts of this Section. It is herby declared as the intent of the [*Board of Supervisors of Municipality or Borough Council of Municipality]* that this Section would have been adopted had such unconstitutional, illegal or invalid sentence, clause, section or part thereof not been included herein.

Conservation Zoning District

Section 001. (C) Conservation Zoning District

001.1. **<u>Purpose</u> –** This District seeks to protect the integrity of landscapes containing [*Municipality's*] highest-quality natural resources by restricting the amount of subdivision and development potential on these lands. These resources are the foundation of the local and countywide green infrastructure, including the highest quality streams and riparian areas, high-quality habitat areas, unique geologic features, and forest blocks greater than 100 acres. The provisions of this Conservation District are supportive of Section 604.(1) of the Pennsylvania Municipalities Planning Code, as amended, that requires zoning ordinances to "promote, protect and facilitate…preservation of the natural, scenic and historic values in the environment and preservation of forests, wetlands, aquifers and floodplains." [*If the municipality has adopted a Designated Natural Area(s) per* Balance, the Growth Management Element of the Lancaster County Comprehensive Plan*, a statement can be included relating that plan feature to the location of the Conservation Zoning District.*]

001.2. **<u>Permitted Uses</u>**

1. Conservation uses, including public parks, and fish, wildlife, and/or nature preserves.

2. Forestry.

3. One (1) single family detached dwelling.

4. No-impact home-based businesses (see Section [*XXX…which would contain standards specific to this use, if applicable to the*

municipal ordinance]) and customary uses accessory to single family dwellings.

001.3. <u>Conditional [*or Special Exception*] Uses</u>

1. [*Note: At the municipality's discretion, other low-impact uses may be provided here*.]

2. <u>Site Plan Required</u> – To ensure compliance with the standards for natural resource protection, a site plan shall be prepared for any zoning permit request proposing a Land Disturbance[1] of 1,000 square feet or greater. Where a subdivision or land development plan is required under the Subdivision and Land Development Ordinance, the elements from the site plan may be incorporated into the subdivision or land development plan. The site plan shall provide the following information:

   a. Boundary of the tract of land on which the Land Disturbance is proposed to take place.

   b. Limits of each natural resource type, as defined within Section [*reference section containing Natural Resource Protection Standards, or Section 001.4 below if these standards are incorporated into this zone*].

   c. Location of any existing and proposed structures, driveways, roadways, and on-lot utilities.

   d. Limits of the proposed Land Disturbance.

   e. Grading plan that shows both the existing and proposed topographic contours within the proposed area of disturbance.

   f. Calculations indicating the area of each resource type to be impacted by the proposed activity.

   g. Applicable features, such as setbacks, that are required by the Natural Resource Protection Standards contained in Section [*XXX*].

[1] The Municipal Zoning Ordinance's existing definition of "Land Disturbance" will apply throughout the model. Otherwise, one should be added to the article or section containing definitions. If a similar term is already contained in the Ordinance, it should replace Land Disturbance in this text.

001.4. **Natural Resource Protection Standards** – Section [*XXX*] of this Ordinance contains provisions designed to protect natural resources and environmentally sensitive areas through individual natural resource protection standards. The identifying criteria and performance standards contained within Section [*XXX*] shall be effective within the Conservation District, and are essential components of the site plan required in Section 001.3, above.

[*The recommended method for including Natural Resource Protection Standards in the zoning ordinance is through a separate section within the Specific Criteria, Supplementary Provisions, or other similar article, which can be referenced here. However, if the municipality so feels, it may incorporate and adapt all of the resource standards for inclusion in this section of the Conservation District rather than use the referencing language provided above.]*

001.5. **Lot Size and New Lot Creation Standards**

1. Lot Area – Minimum _____ (___) acres. [*Note: The municipality should set a minimum lot area based upon the natural features of the Conservation Zoning District. LCPC recommends a 25 acre minimum to maintain large natural areas and reduce fragmentation of ecosystems, but a provision for smaller lot sizes could be included through a Conditional Use or Special Exception process where the proposed land use warrants. Density is separately controlled under subsection 001.5.3 below.*]

2. Minimum Lot Width – Two hundred (200) feet at the front building setback line.

3. Restrictions on New Lot Creation – A parent tract shall be assigned a number of subdivision rights dependent upon the size of the contiguous lands in single ownership as of [*date of adoption*], in accordance with the table below. Each lot subdivided from [*and/or additional dwelling to*] the parent tract shall constitute the use of a subdivision right. A note shall be included on the subdivision plan, identifying the number of subdivision rights remaining as well as to which lot(s) they are being assigned.

Parent Tract Size	**# of Subdivision Rights**
Less than 50.0 acres	1
50.0 – 99.9 acres	2
100.0 – 149.9 acres	3
150.0 – 199.9 acres	4
200.0 acres or greater	5

001.6. Building Setback and Height Regulations

1. Front Yard Setback – Fifty (50) feet.

2. Side Yard Setback – Fifty (50) feet, which may be reduced to no less than twenty-five (25) feet where the applicant is conforming to the performance standards prescribed by the Natural Resource Protection Standards found in Section [*000*].

3. Rear Yard Setback – Fifty (50) feet, which may be reduced to no less than twenty-five (25) feet where the applicant is conforming to the performance standards prescribed by the Natural Resource Protection Standards found in Section [*000*].

4. Maximum Building Height – Thirty-five (35) feet.

001.7. Maximum Lot Coverage – The maximum area of a lot allowed to be covered by impervious surfaces, including, but not limited to structures, driveways, and parking areas, is ten (10) percent. However, conformity to the performance standards prescribed in the Natural Resource Protection Standards found in Section [*000*] may reduce the maximum allowable lot coverage below ten (10) percent.

The Legal Framework:
Federal and Pennsylvania Case Law

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A. General Principles: Constitutional Limitations and Legislative Authority

Do municipalities have the authority to utilize zoning ordinance provisions to stringently regulate the disturbance of sensitive natural features? This question calls for a three-part answer, as follows:

1. *the Pennsylvania legislature must have authorized the municipality to regulate sensitive natural features;*

Legislative Authority: It is clear that both the Pennsylvania Constitution and Article VI of the Pennsylvania Municipalities Planning Code not only authorize but encourage municipalities to protect sensitive natural resources within their municipal zoning ordinances.

Article I, Section 27 of the Pennsylvania Constitution, ratified in 1971, states:

> "The people have a right to clean air, pure water and to the preservation of the natural, scenic, historic and aesthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As the trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people."

Municipal authority with regard to regulating land use and development under zoning ordinances is set forth in Article VI of the Pennsylvania Municipalities Planning Code, 53 P.S. Section 10601, et. seq.

Within Article VI, there are several provisions that authorize municipal zoning ordinances to deal more restrictively with sensitive natural resources than with topographical areas considered to be more suitable for development. Section 603(b)(5) authorizes zoning ordinances to protect and preserve natural resources. Further, Section 604 states that the provisions of zoning ordinances "shall be designed: (1) to promote, protect and facilitate any or all of the following: … preservation of the natural, scenic and historic values in the environment and preservation of forests, wetlands, aquifers and floodplains …"

Likewise, Section 605 authorizes municipal zoning ordinances to have separate classifications for various sensitive natural features, thus specifically authorizing the type of "overlay" restrictive provisions as are set forth in the Model Natural

Resource Protection Standards set forth below and in the Model Conservation Zoning District Regulations, also set forth below.

Nevertheless, municipal implementation of this authorization must comply with constitutional limitations.

2. *the manner of regulation must be consistent with due process of law, so that it cannot be arbitrary or unreasonable; and*

An initial test of constitutional due process is to assure that the restrictive regulations to be applied to sensitive natural features bear a reasonable relationship to the valid public purposes of protecting the natural landscape. In short, the regulations must be designed to protect public health, safety and welfare in order to be constitutional. An example of this test was considered by the Pennsylvania Commonwealth Court in *Hock v. Mt. Pleasant Township*, 622 A.2d 431 (Pa. Cmwlth. 1993). In that case, Mt. Pleasant Township had enacted minimum lot size requirements of two acres and three acres in various zoning districts, and when challenged, the township sought to defend the validity of this "large lot" zoning as a means of preserving farmland and the practice of agriculture. While the preservation of agricultural soils and farm usage is a legitimate public purpose, Commonwealth Court held that agricultural preservation is no more consistent with two and three-acre minimum lot sizes as it is with smaller lot sizes. Consequently, there was no rational connection between the stated purpose—agricultural preservation—and the regulations at issue (two and three-acre minimum lot size requirements).

Being cognizant of this issue, the model regulations as set forth hereinbelow are designed to comply with this constitutional requirement--that they must reasonably serve to protect the sensitive natural resources at issue.

3. *the regulation cannot be so stringent as to deprive the owner of all reasonable use of his property.*

Municipal regulation of land use activities cannot be so severe in its impact on the use of private property that it would, in effect, serve to confiscate all value of that property, without providing adequate compensation. This is the concept of "inverse condemnation" or "regulatory taking."[1]

The United States Supreme Court, in *Lucas v. South Carolina Coastal Council*, 112 S.Ct. 2886 (1992) dealt with the question of the constitutional validity of a

[1] In its 1978 decision in *Penn Central Transportation Company v. New York City*, 98 S.Ct. 2646 (1978), the United States Supreme Court adopted a "balancing test" to deal with restrictive regulations that do not deprive the property owner of essentially the entire value of the property at issue. The *Penn Central* case, involving Grand Central Terminal, is in an entirely different setting than the preservation of sensitive natural resources, with which we are here dealing. Nevertheless, the case provides a fundamental lesson in the constitutional doctrine of regulatory taking.

coastal zone regulation which effectively prohibited the construction of homes on lots seaward of the sand dune line. Mr. Lucas had purchased two approved building lots fronting on the ocean shore of the Island of Palms prior to the enactment of the coastal zone regulation prohibiting the construction of homes on these lots. Clearly, the purpose of the regulation was directly related to the preservation of sensitive natural features, the beach front area seaward of the dune line, and the dunes themselves. Nevertheless, the United States Supreme Court concluded that the regulations were so severe that they deprived Mr. Lucas of "any reasonable economic use of the lots."

The *Lucas* decision is important not only because it sets constitutional limits on the regulation of sensitive natural features, but also because it involved a situation where there was no "relief valve." Mr. Lucas had no opportunity to request what in our zoning laws in Pennsylvania constitutes a "variance" from stringent zoning ordinance provisions. Consequently, it is important in the land use regulatory jurisprudence of Pennsylvania to keep in mind that landowners, faced with zoning ordinance provisions which they feel would be unconstitutionally restrictive, do have an administrative process to seek relief in the form of variances under the Municipalities Planning Code.

The Pennsylvania Commonwealth Court has applied the *Lucas* analysis in the case of *Mock v. Pennsylvania DER*, 623 A.2d 940 (Pa. Cmwlth. 1993). The property at issue contained a total of 5.2 acres, of which 3.94 acres were wetlands. The property owner requested a permit to fill almost an acre of those wetland areas in order to build a proposed auto repair shop and associated driveways and parking spaces. DER (now DEP) denied the permit application. On appeal, Commonwealth Court concluded that the *Lucas* rationale did not here apply, because approximately 1-1/2 acres of upland area on the lot—unregulated by DER—were suitable for development. Thus, there was not a total regulatory taking of the property, and limited development potential remained, in spite of the prohibition against the fill of any portion of the wetlands.

B. Case Law in the Context of Natural Resource Protection Standards

1. In General.

The model Natural Resource Protection Standards Ordinance identifies several natural resource conditions for which the ordinance provisions would provide strict limitations on disturbance/development. These are: (i) forest areas (identified as "Forest Blocks" and "Interior Forests"), Karst (limestone formation) topography, Natural Heritage Areas, Riparian Corridors, Steep Slopes and Highly Erodible Soils, Unique Geologic Features and Wetlands. While there is, of course, some overlap in these natural resource attributes, the draft ordinance properly sets forth the reasons in each case why the particular resource is deserving of special protective treatment over and above the zoning regulations which would otherwise apply under the applicable zoning district regulations.

Consequently, these regulations should be viewed the nature of "overlay" requirements, applicable in all zoning districts of the municipality where the protected natural features occur.

It is a common practice for municipal zoning ordinances in Pennsylvania to provide for the type of natural resource protection standards here proposed (although perhaps not as extensively as here proposed). The legality of such restrictions should be viewed at two levels: first, in terms of general legality, and secondly, in terms of whether or not such regulations would so severely impact a specific parcel of land as to warrant the grant of a "validity variance" from the strict imposition of such restrictions.

First, then, in terms of general legality, our courts and legislature have clearly recognized the propriety of imposing more strict regulations upon natural features, the disturbance of which will have adverse impact on public health, safety and welfare. In Pennsylvania, the leading case is *Jones v. Zoning Hearing Board of the Town of McCandless*, 578 A.2d 1369 (Pa.Cmwlth. 1990).

In that case, a landowner challenged the validity of "performance zoning" regulations as applied to his property. The performance zoning regulations imposed strict limitations on the development of steep slope areas[2] and forest areas.[3] In addition, the performance zoning regulations of *McCandless* strictly regulated floodplain areas.

As in the Mock case discussed above, Mr. Jones, the property owner, challenged the validity of these protective provisions of the zoning ordinance, as unreasonable and confiscatory, essentially arguing that it was a regulatory taking of his private property rights. Commonwealth Court framed the test to be applied in this type of situation:

> "An ordinance which promotes the public health, safety, morals or general welfare of the community and is substantially related to the purpose which it purports to serve substantially advances a legitimate state interest. … However, ordinances may not be unreasonable, arbitrary, or confiscatory." 578 A.2d at 1370.

The Court noted that the ordinance did not preclude development of the property at issue, but rather limited the extent of development. Consequently, the Court sustained the validity of the ordinance provisions, both in general and as applied to the Jones' property:

> "The ordinance was amended as a comprehensive plan to permit development in the D-district while preserving the sensitive natural resources such as steep slopes, forests, floodplains and streams. The ordinance weighs the maintenance of the ecological balance in the D-

[2] Under the ordinance, slopes were characterized as 12% to 15% with slight limitations, 15% to 25% with more strict regulations, and over 25% with the strictest regulations, limiting disturbance to 15% of the area in excess of 25% slope.

[3] Similarly, forest areas were subcategorized as "mature woodlands," "woodlands" and "young woodlands" with the level of strictness being highest for mature woodlands and least for young woodlands.

> district with the property owner's right to develop his property. Upon review of the record and the regulations attacked, we conclude that the challenged portions of the ordinance are not arbitrary or unreasonable, but rather substantially related to the purpose which they purport to serve." 578 A.2d at 1371.

Further, the Court sustained the ordinance provisions as applied to the subject property, even though approximately 70% of the total tract area was restricted under the performance zoning:

> "The property just cannot be developed as intensively for residential purposes as it could prior to the amendment of the ordinance. … Landowner has not been deprived of the viable use of his property." 578 A.2d at 1372.

While the impacts of the natural resource protective provisions of the *McCandless* ordinance were not so severe in that case, anything approaching a total prohibition of development will increase the odds that a confiscatory-based challenge (properly brought as a validity variance) would be successful. In *C&M Developers, Inc. v. Bedminster Township ZHB*, 820 A.2d 143 (Pa. 2002), the Pennsylvania Supreme Court issued a "cautionary flag" in the context of Bedminster Township's zoning regulations, which restricted agricultural lands and natural resources to the point where the impact on the property at issue was so severe that the property owner was entitled to relief from the strict imposition of the ordinance requirements. In combination, the agricultural zoning restrictions and the "net out" for density purposes of environmentally sensitive areas of land (slopes, floodplains, wetlands, etc.) served to tip the balance too far against the property owner. The Court stated:

> "We find that these [environmentally sensitive net out] restrictions, when required in addition to the [agricultural lands] set aside restrictions, not unduly limit a landowner's ability to sell, subdivide or develop that portion of his tract left over to him, but also do not have a substantial relationship to the township's interest in preserving its agricultural lands and activities or any other general welfare interest of the township."[4]

Reading the Pennsylvania Supreme Court's Opinion as a whole in *C&M Developers*, restricting density based upon "net outs" of environmentally sensitive features of the land is not *per se* unreasonable. The Court's striking of the zoning ordinance provisions was based upon the "triple whammy" of agricultural zoning, environmentally sensitive features net out, and one-acre minimum lot size, in combination. The Court did not cite the *Jones* case as being overruled, or even limited, in its decision in *C&M.*

[4] A contributing factor to the Court's decision was that, over and above these restrictions, the minimum lot size requirement was still one acre, whereas other portions of the township allowed homes to be constructed on lots with a minimum area of 8,000 square feet.

In summary, then, the Natural Resource Protection Standards in and of themselves are not unreasonable, but could, in particular application, be considered severe enough that a property owner would be entitled to relief. In such event, a zoning hearing board should properly grant a "validity variance" to enable reasonable use of a particular property. That is why variances exist and why zoning hearing boards are given the authority to grant them in appropriate circumstances.

2. Restrictions on Forestry.

Section 603(f) of the MPC states that it is the policy of the Commonwealth of Pennsylvania to "encourage maintenance and management of forested or wooded open space and promote the conduct of forestry as a sound and economically viable use of forested land throughout this commonwealth." This purpose is then implemented by the following:

> "Zoning ordinances may not unreasonably restrict forestry activities."
>
> "Forestry activities, including, but not limited to, timber harvesting, shall be a permitted use by right in all zoning districts in every municipality."

Thus, even though "timber harvesting" is mandated to be a permitted use by right in all zoning districts in the Commonwealth of Pennsylvania, forestry activities may be restricted, so long as the restrictions are not unreasonable. Of course, what is reasonable or unreasonable is in the eye of the beholder, and hence, we must look at what our courts may or may not have said about that subject for more precise guidance. Two cases have come from Commonwealth Court with respect to the interpretation of this provision of the Municipalities Planning Code, the first being *Chrin Brothers v. Williams Township ZHB*, 815 A.2d 1179 (Pa.Cmwlth. 2003) and the second being *Taylor v. Harmony Township Board of Commissioners*, 851 A.2d 1020 (Pa.Cmwlth. 2004).

The landowner, Chrin Brothers, Inc., sought to "clear cut" the trees on five separate properties which it owned in Williams Township, Northampton County, aggregating a total of close to 100 acres. The owner filed applications for zoning permits, and the zoning officer denied the requested permits in light of provisions in the Township Zoning Ordinance regulating forestry activities with which the zoning officer determined clear cutting operation would not comply.

In essence, the zoning ordinance regulated commercial forestry activities by (i) requiring a forestry management plan consistent with the timber harvesting guidelines of the Pennsylvania Forestry Association, (ii) prohibiting clear-cutting (except on tracts of less than two acres), (iii) requiring that at least 30% of the forest cover (canopy) be kept intact, with the residual trees being well distributed and of higher value species, (iv) requiring the submission of an erosion and sedimentation control plan, (v) prohibiting clear-cutting on slopes greater than 25% or within a 100-year floodway, and (iv) requiring re-forestation of areas so timbered.

The landowner challenged portions of the ordinance requirements, particularly those which limited clear-cutting on sloped or floodway areas, and those which required the maintenance of 30% of the forest cover (thus prohibiting clear-cutting).

The Zoning Hearing Board then heard the proverbial "battle of the experts" with respect to the validity of these provisions of the zoning ordinance. The township's experts testified that the provisions at issue had a substantial relation to protection of public health, safety and welfare, primarily in their design to prevent accelerated soil erosion which occurs when clear-cutting of trees takes place. According to the testimony, it is not just the exposed condition of the soil after clear-cutting which accelerates erosion, but also the loss of the tree canopy's interception of rainfall during storm conditions that results in the accelerated erosion after clear-cutting:

> "[The canopy] helps absorb some of the water with the initial rainfall. And it acts as a shield basically protecting the soils from the initial impact that is part of the erosion process."

During the pendency of the validity challenge, the township also modified the forestry regulations, primarily by prohibiting clear-cutting on slopes in excess of 15%, rather than 25%.

In the alternative, the landowner requested the grant of a validity variance from these requirements of the forestry regulations, on the basis that strict adherence thereto would be confiscatory of the economic value of the property.

The Zoning Hearing Board, citing the township's expert as being more credible, concluded that the challenged restrictions on commercial forestry were not unreasonably restrictive of forestry activities and, therefore, valid. The ZHB also denied the requested validity variance, concluding that reasonable use of the property can be made in compliance with the restrictions on clear-cutting. On appeal to the Northampton County Court, the decision of the Zoning Hearing Board was affirmed. The landowner then appealed to Commonwealth Court.

The first issue dealt with on appeal was whether the restrictions at issue were in contravention of Section 603(f) of the MPC, which requires that timber harvesting be a permitted use by right in all zoning districts in every municipality, and further states that zoning ordinances may not unreasonably restrict forestry activities. Commonwealth Court concluded that the restrictions did not contravene this provision of the MPC:

> "It is evident that Section 603(f) merely codifies many years of case law setting forth the general principle that zoning ordinances may not unreasonably restrict the manner in which a landowner chooses to use his land."

Consequently, the statutory test under Section 603(f) as to reasonableness coincides with the constitutional test historically applied by the courts to determine whether a particular

ordinance provision has the requisite substantial relationship to protection of public health, safety and welfare.

Commonwealth Court concluded that these restrictions were not unreasonable, and did have the requisite substantial relationship to protection of public health, safety and welfare. In so holding, the Court relied substantially on its prior decision in *Jones v. Town of McCandless ZHB*, 578 A.2d 1369 (Pa. Cmwlth. 1990), discussed above.

The Court then addressed the Zoning Board's denial of the requested validity variance, again affirming the Board's denial.

While forestry is mandated as a use by right in all zoning districts, the *Chrin Brothers* decision leaves the door open for substantial regulations in a zoning ordinance of those permitted forestry activities. The Commonwealth Court reaffirmed the validity of regulations designed to protect environmentally sensitive topography. Indeed, the prohibition against clear-cutting on steeply sloped areas (even categorizing 15% to 25% slopes as within the steep slope category) was within the authorization of Section 604(2)(ii) of the MPC.

It is clear that municipalities can (i) prohibit clear-cutting on steep slope areas and floodway areas, and (ii) limit clear-cutting, so that a substantial forest canopy will remain after the logging activities.

The second Commonwealth Court decision dealing with timber harvesting, *Taylor v. Harmony Township Board of Commissioners*, 851 A.2d 1020 (Pa. Cmwlth. 2004) involved the implementation of a separate ordinance regulating timber harvesting, outside of the municipal zoning ordinance. The ordinance at issue stated that "no timber harvesting shall take place in areas determined by the [township] engineer, with reference to published or commonly accepted guidelines, to be landslide-prone or flood-prone." The township's code enforcement officer, pursuant to the authority of that ordinance, shut down a logging operation that was underway, without the grant of a permit. Aside from procedural issues, the primary issues were (i) whether the area in question was restricted as being "landslide-prone" and (ii) if so, was the landowner entitled to a variance from the restriction in order to harvest the timber, even though the property was landslide-prone.

With the answers to both of these questions going against the landowner, he next argued that Ordinance 335 (as the ordinance was titled) was invalid as imposing unreasonable restrictions on logging and timber harvesting, in contravention of MPC Section 603(f).

Commonwealth Court sustained the validity of the ordinance, stating that "it seeks to minimize floods, landslides and dangerous stormwater runoff; it seeks to prevent damage to roads, damage to drains, damage to public utilities, damage to water courses, fire hazards, and reduction in property value; and it seeks to enhance the natural beauty and environment within Harmony Township."

A substantial part of the Court's Opinion in this case deals with procedural issues and the question whether Ordinance 335 should be properly characterized as a "zoning ordinance," such that the procedural requirements for zoning ordinance enactment should have been followed. For our purposes, the important point is that Commonwealth Court sustained the reasonableness of the regulation, as "it only prohibits logging and timber harvesting in flood-prone and slide-prone areas …"

The Court noted that even if Ordinance 335 could be classified as a zoning ordinance, it would not be substantively invalid:

> "Ordinance 335 does not unreasonably restrict forestry activities because the ordinance does not prohibit logging and timber harvesting activities, but instead limits those activities that are not flood or land-slide prone in order to prevent potentially hazardous results."

The Court cited the *Chrin Brothers* case for its authority in so stating.

The Court also dismissed the landowner's request for a validity variance, since "*Taylor* gives us no economic information explaining how the property has no economic viability as a result of Ordinance No. 335."

C. Case Law in the Context of Conservation District Zoning

While the Pennsylvania courts have dealt extensively with the validity of agricultural zoning regulations—and found agricultural zoning restrictions to be generally valid—there is far less case law dealing with conservation district zoning. While Section 603(b)(5) of the Municipalities Planning Code deals with natural resources and agricultural lands on an equal footing, authorizing zoning ordinances to contain provisions for "protection and preservation of natural resources and agricultural land and activities …," there is an important distinguishing factor which has arisen in our Court's analysis of agricultural zoning on the one hand, and conservation district zoning on the other: with regard to agriculture, the land is being used for an income-producing purpose, whereas with regard to conservation district provisions, the land often is not being used for an income-producing purpose.

The Conservation District Model Ordinance, building on the analogy with agricultural zoning, sets forth a sliding scale of permissible new lots which can be created by subdivision of a parent tract. Generally, the model allows one new lot per 50 acres, a density limitation which has been clearly approved in the context of agricultural zoning. Indeed, the Commonwealth Court in *Ethan-Michael, Inc. v. Board of Supervisors of Union Township*¸ 918 A.2d 203 (Pa. Cmwlth. 2007) affirmed the validity of the township's agricultural district provisions in the face of a challenge to validity based in part on the argument that the restrictions were unreasonable and constituted a regulatory taking. Under the township's ordinance, a parent tract containing between 50 and 200 acres was generally authorized to subdivide off one lot per each 50 acres, whereas for a

parent tract in excess of 200 acres, additional lots were permitted only at the rate of one lot per 100 acres. The landowner in this case conceded that under the prior case law, the sliding scale of permissible new lots was a valid exercise of the police power, properly designed to protect agricultural soils and agricultural usage.

Note, however, that the *Ethan-Michael* case deals with agricultural zoning rather than conservation district zoning. While the two classifications have much in common, with regard to the goal of preserving both agricultural soils on the one hand and sensitive natural features on the other, the Commonwealth Court in *Snyder v. Railroad Borough*, 430 A.2d 339 (Pa. Cmwlth. 1981) distinguished between the two concepts, since agricultural zoning permitted economic usage of land so zoned, while conservation district regulations at issue did not permit economically viable uses. The Court there noted:

> "In the area zoned Conservation, appellants are permitted to subdivide a 3-acre plot off the defined tract, upon which plot they may erect a single family dwelling. Other than that, they may not use their land by right for any profitable purpose whatsoever, be it agricultural, residential, commercial or industrial."

Commonwealth Court reached a different conclusion, however, in the context of reviewing the denial by the Horsham Township Zoning Hearing Board of a request for a variance to build a residence within a flood plain conservation district. *Kraiser v. Zoning Hearing Board of Horsham Township,* 406 A.2d 577 (Pa. Cmwlth. 1979).

The *Kraiser* lot was zoned for residential construction, but after Mr. Kraiser purchased it, the township enacted a flood plain conservation overlay district. Since the entirety of the lot was located within the flood plain conservation overlay district, no construction on the lot was permissible. Mr. Kraiser applied for a variance (again, this is the proper procedure where restrictive provisions of a zoning ordinance allegedly preclude reasonable use of property). The Zoning Hearing Board denied the requested variance, on the grounds that the proposed construction would serve to increase flood levels in the neighborhood, by diverting the natural flow of flood waters on to nearby properties.

Commonwealth Court sustained the denial of the variance, stating that "the zoning ordinance strikes a satisfactory balance between a property owner's interest in developing his property as he wishes and the duty of the board to regulate development of flood-prone land."

Commonwealth Court acknowledged that the lot had been rendered "useless" for all practical purposes. Nevertheless, the Court stated that the property owner, in these circumstances, "must suffer along with other property owners who are likewise affected by the ordinance."[5]

[5] The *Kraiser* case was decided prior to the United States Supreme Court decision in *Lucas*, discussed above. The facts in *Kraiser* and the facts in *Lucas* are similar and it is possible that the *Kraiser* decision would be decided differently if it were brought today, rather than in the late 1970's.

We suggest, however, that this issue is resolved in the Model Conservation District Ordinance set forth below by allowing two separate economically viable uses for property located within a proposed Conservation District. First, the Model Ordinance authorizes forestry activities (subject to reasonable regulation), which is an economically productive use of a portion of a property so zoned.[6]

Secondly, the Model Ordinance authorizes additional building lots on a sliding scale of one lot per 50 acres, a ratio which is well within the boundaries of permissible lot densities under *Ethan-Michael* and prior decisions dealing with lot densities in the context of agricultural zoning.

Given that our courts have not dealt with Conservation District zoning regulations anywhere near as often as with agricultural zoning, the outcome of a validity variance/challenge to a Conservation District zoning based upon the model set forth below is more problematic. In our view, the outcome of any such validity challenge would depend upon the municipality's ability to defend the reasonableness of the severe restrictions on lot size and density—what is called a "fact intensive" case similar to *Chrin Brothers*, discussed above. Certainly, the sensitive natural features sought to be protected under the Conservation District regulations merit the proposed protections. Consequently, the model regulations validly serve a legitimate public purpose. Nevertheless, they are admittedly more vulnerable to a validity challenge based upon a regulatory taking theory than is the case for agriculture zoning district regulations.

[6] Where, however, the forest is large enough on a single property to comprise interior forest areas, forestry activities will be severely restricted under the Model Conservation District Ordinance. If a property owner were so severely restrained that he could argue that the regulations effectively stripped the property of all economic value, then the property owner would be entitled to apply for a validity variance to make some reasonable economic use of the property.

Model Conservation Zoning District and Natural Resource Protection Standards

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