

**ARTICLE XIV**  
**SPECIAL OVERLAY DISTRICTS**

1400. AH Airport Hazard

(1.) Purpose

The purpose of this ordinance is to create an airport district overlay that considers safety issues around the Airport, regulates and restricts the heights of constructed structures and objects of natural growth, creates appropriate zones, establishing the boundaries thereof and providing for changes in the restrictions and boundaries of such zones, creates the permitting process for use within said zones and provides for enforcement, assessment of violation penalties, an appeals process, and judicial review.

(2.) Relation to Other Zone Districts

The Airport District Overlay shall not modify the boundaries of any underlying zoning district. Where identified, the Airport District Overlay shall impose certain requirements on land use and construction in addition to those contained in the underlying zoning district.

(3.) Definitions

The following words and phrases when used in this ordinance shall have the meaning given to them in this section unless the context clearly indicates otherwise.

- (a.) Airport Elevation – The highest point of an airport’s useable landing area measured in feet above sea level. The airport elevation of the Airport is 510 feet above mean sea level.
- (b.) Airport Hazard – Any structure or object, natural or manmade, or use of land which obstructs the airspace required for flight or aircraft in landing or taking off at an airport or is otherwise hazardous as defined in 14 CFR Part 77 and 74 Pa. Cons. Stat. § 5102.
- (c.) Airport Hazard Area – Any area of land or water upon which an airport hazard might be established if not prevented as provided for in this ordinance and the Act 164 of 1984 (Pennsylvania Laws Relating to Aviation).
- (d.) Approach Surface (Zone) – An imaginary surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of the runway based on the primary surface and expands uniformly depending on the planned approach. The approach surface zone, as shown on Figure 1, is derived from the approach surface.
- (e.) Conical Surface (Zone) – An imaginary surface extending outward and upward from the periphery of the horizontal surface at a slope of twenty (20) feet horizontally to one (1) foot vertically for a horizontal distance of 4,000 feet. The conical surface zone, as shown on Figure 1, is based on the conical surface.
- (f.) Department – Pennsylvania Department of Transportation.

- (g.) FAA – Federal Aviation Administration of the United States Department of Transportation.
- (h.) Height – For the purpose of determining the height limits in all zones set forth in this ordinance and shown on the zoning map, the datum shall be mean sea level elevation unless otherwise specified.
- (i.) Horizontal Surface (Zone) – An imaginary plane 150 feet above the established airport elevation that is constructed by swinging arcs of various radii from the center of the end of the primary surface and then connecting the adjacent arc by tangent lines. The radius of each arc is based on the planned approach. The horizontal surface zone, as shown on Figure 1, is derived from the horizontal surface.
- (j.) Larger than Utility Runway – A runway that is constructed for and intended to be used by propeller driven aircraft of greater than 12,500 pounds maximum gross weight and jet powered aircraft.
- (k.) Non-Conforming Use – Any pre-existing structure, object of natural growth, or use of land which is inconsistent with the provisions of this ordinance or an amendment thereto.
- (l.) Non-Precision Instrument Runway – A runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight in non-precision instrument approach procedure has been approved or planned.
- (m.) Obstruction – Any structure, growth, or other object, including a mobile object, which exceeds a limiting height set forth by this ordinance.
- (n.) Precision Instrument Runway – A runway having an existing instrument approach procedure utilizing an Instrument Landing System (ILS) or a Precision Approach Radar (PAR). It also means a runway for which a precision approach system is planned and is so indicated on an approved airport layout plan or any other planning document.
- (o.) Primary Surface (Zone) – An imaginary surface longitudinally centered on the runway, extending 200 feet beyond the end of paved runways or ending at each end of turf runways. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The primary surface zone, as shown on Figure 1, is derived from the primary surface.
- (p.) Runway – A defined area of an airport prepared for landing and takeoff of aircraft along its length.
- (q.) Structure – An object, including a mobile object, constructed or installed by man, including but without limitation, buildings, towers, cranes, smokestacks, earth formation and overhead transmission lines.
- (r.) Transitional Surface (Zone) – An imaginary surface that extends outward and upward from the edge of the primary surface to the horizontal surface at a slope of seven (7) feet horizontally to one (1) foot

vertically (7:1). The transitional surface zone, as shown on Figure 1, is derived from the transitional surface.

- (s.) Tree – Any object of natural growth.
- (t.) Utility Runway – A runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 pounds maximum gross weight or less.
- (u.) Visual Runway – A runway intended solely for the operation of aircraft using visual approach procedures.

(4.) Establishment of Airport Zones –

There are hereby created and established certain zones within the Airport Hazard Overlay District, defined in Section 3 and depicted on Figure 1 and illustrated on Airport Hazard Area Map, hereby adopted as part of this ordinance, which include:

- (a.) Approach Surface Zone
- (b.) Conical Surface Zone
- (c.) Horizontal Surface Zone
- (d.) Primary Surface Zone
- (e.) Transitional Surface Zone

(5.) Permit Applications

As regulated by Act 164 and defined by 14 Code of Federal Regulations, Part 77.13(a) (as amended or replaced), any person who plans to erect a new structure, to add to an existing structure, or to erect and maintain any object (natural or manmade), within the Airport District Overlay as by this section, *shall first notify the Department's Bureau of Aviation (BOA) by submitting PENNDOT Form AV-57 to obtain an obstruction review of the proposal at least 30 days prior to commencement thereof.* The Department's BOA response must be included with this permit application for it to be considered complete. If the Department's BOA returns a determination of no penetration of airspace, the permit request should be considered in compliance with the intent of this overlay ordinance. If the Department's BOA returns a determination of a penetration of airspace, the permit shall be denied, and the project sponsor may seek a variance from such regulations as outlined in Section 6.

No permit is required to make maintenance repairs to or to replace parts of existing structures which do not enlarge or increase the height of an existing structure.

(6.) Variance

Any request for a variance shall include documentation in compliance with 14 Code of Federal Regulations, Part 77 Subpart B (FAA Form 7460-1 as amended or replaced). Determinations of whether to grant a variance will depend on the determinations made by the FAA and the Department's BOA as to the effect of the proposal on the operation of air navigation facilities and the safe, efficient use of navigable air space. In particular,

the request for a variance shall consider which of the following categories the FAA has placed the proposed construction in:

- (a.) No Objection – The subject construction is determined not to exceed obstruction standards and marking/lighting is not required to mitigate potential hazard. Under this determination, a variance shall be granted.
- (b.) Conditional Determination – The proposed construction/alteration is determined to create some level of encroachment into an airport hazard area which can be effectively mitigated. Under this determination, a variance shall be granted contingent upon implementation of mitigating measures as described in Section 9 – Obstruction Marking and Lighting.
- (c.) Objectionable – The proposed construction/alteration is determined to be a hazard and is thus objectionable. A variance shall be denied and the reasons for this determination shall be outlined to the applicant.

Such requests for variances shall be granted where it is duly found that a literal application or enforcement of the regulations will result in unnecessary hardship and that relief granted will not be contrary to the public interest, will not create a hazard to air navigation, will do substantial justice, and will be in accordance with the intent of this ordinance.

#### (7.) Use Restrictions

Notwithstanding any other provisions of this ordinance, no use shall be made of land or water within the Airport Hazard Overlay District in such a manner as to create electrical interference with navigational signals or radio communications between the airport and aircraft, make it difficult for pilots to distinguish between airport lights and others, impair visibility in the vicinity of the airport, create bird strike hazards or otherwise endanger or interfere with the landing, takeoff or maneuvering of aircraft utilizing the Airport.

#### (8.) Pre-Existing Non-Conforming Uses

The regulations prescribed by this ordinance shall not be construed to require the removal, lowering, or other change or alteration of any structure or tree not conforming to the regulations as of the effective date of this ordinance, or otherwise interfere with the continuance of a non-conforming use. No non-conforming use shall be structurally altered or permitted to grow higher, so as to increase the non-conformity, and a non-conforming use, once substantially abated (subject to the underlying zoning ordinance), may only be re-established consistent with the provisions herein.

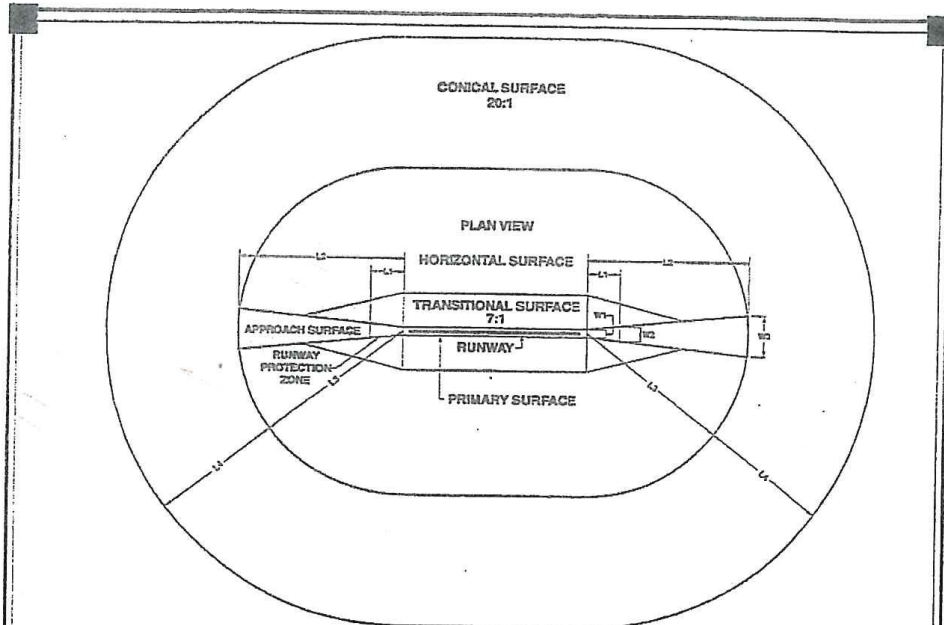
#### (9.) Obstruction Marking and Lighting

Any permit or variance granted pursuant to the provisions of this ordinance may be conditioned according to the process described in Section 1400(6) to require the owner of the structure or object of natural growth in question to permit the municipality, at its own expense, or require the person requesting the permit of variance, to install, operate, and maintain such marking or lighting as deemed necessary to assure both ground and air safety.

(10.) Conflicting Regulations

Where there exists a conflict between any of the regulations or limitations prescribed in this ordinance and any other regulation applicable to the same area, the more stringent limitation or requirement shall govern and prevail.

See Figure 1 – Part 77 Surface Areas



**FAR PART 77 "IMAGINARY SURFACES" DIMENSION REQUIREMENTS**

Runway Type	Runway End		Conical Surface (L4)	Horizontal Surface (L3)	Approach Surface			Approach Slope	Primary Surface Width	Transitional Surface
	Approach	Other			Length (L2)	Inner Width (W1)	Outer Width (W3)			
Small Airplanes <sup>2</sup>	V	V	4,000	5,000	5,000	250	1,250	20:1	250	7:1
		NP	4,000	5,000	5,000	500	1,250	20:1	500	7:1
		NP 3/4	4,000	5,000	5,000	1,000	1,250	20:1	1,000	7:1
	NP	P	4,000	5,000	5,000	1,000	1,250	20:1	1,000	7:1
		V	4,000	5,000	5,000	500	2,000	20:1	500	7:1
		NP 3/4	4,000	5,000	5,000	1,000	2,000	20:1	1,000	7:1
Large Airplanes <sup>3</sup>	V	V	4,000	5,000	5,000	500	1,500	20:1	500	7:1
		NP	4,000	10,000	5,000	500	1,500	20:1	500	7:1
		NP 3/4	4,000	10,000	5,000	1,000	1,500	20:1	1,000	7:1
	NP	P	4,000	10,000	5,000	1,000	1,500	20:1	1,000	7:1
		V	4,000	10,000	10,000	500	3,500	34:1	500	7:1
		NP 3/4	4,000	10,000	10,000	500	3,500	34:1	500	7:1
Large and Small Airplanes	NP 3/4	V	4,000	10,000	10,000	1,000	4,000	34:1	1,000	7:1
		NP	4,000	10,000	10,000	1,000	4,000	34:1	1,000	7:1
		NP 3/4	4,000	10,000	10,000	1,000	4,000	34:1	1,000	7:1
	P	V	4,000	10,000	10,000/40,000	1,000	4,000/16,000	50:1/40:1	1,000	7:1
		NP	4,000	10,000	10,000/40,000	1,000	4,000/16,000	50:1/40:1	1,000	7:1
		NP 3/4	4,000	10,000	10,000/40,000	1,000	4,000/16,000	50:1/40:1	1,000	7:1

1 - In Feet  
 2 - Less than 12,500 lbs maximum certified takeoff weight  
 3 - Greater than 12,500 lbs maximum certified takeoff weight

V = Visual approach 20:1  
 NP = Nonprecision approach 34:1  
 NP 3/4 = Nonprecision approach with visibility minimums as low as 3/4 statute miles 34:1  
 P = Precision approach 50:1

Note: L1 is the length of the RPZ and W2 is the outer width of the RPZ as defined by approach velocity minimums

Source: Federal Aviation Administration



Pennsylvania Land Use  
Compatibility  
Guidelines

**FAR PART 77 SURFACES  
AND DIMENSION REQUIREMENTS**

Exhibit  
**3**

1401. RESERVED

1402.SS Steep Slope Conservation District

(1.) Purposes and General Provisions

The purposes of the establishment and control of the Steep Slope Conservation District are as follows:

- (a.) To promote the public health, safety and welfare by the protection of steep slope areas, which are subject to erosion when disturbed and which exacerbate stormwater run-off problems during and following construction.
- (b.) To permit only those uses of steep slope areas which are compatible with the conservation of natural conditions and which maintain stable soil conditions by (a) minimizing disturbances to vegetative ground covers; and (b) restricting the regrading of steep slope areas.
- (c.) To limit soil erosion, siltation of streams, and damage to private and public property.
- (d.) To protect low-lying areas from flooding by limiting the increase in stormwater run-off caused by grading of sloped areas, changes of ground cover, or the erection of structures.
- (e.) To maintain the ecological integrity of steeply sloped areas that could be adversely affected by disturbances.
- (f.) To foster the continuing replenishment of groundwater resources and the maintenance of springs.

(2.) General provisions relating to the Steep Slope Conservation District are as follows:

- (a.) No area within the Steep Slope Conservation District shall hereafter be used without full compliance with the terms of this Section and other applicable regulations.
- (b.) The Steep Slope Conservation District established hereby shall be an overlay on any zoning district(s) now or hereafter enacted to regulate the use of land in South Middleton Township.
  - (i.) The Steep Slope Conservation District shall have no effect on the permitted uses in the underlying zoning district, except where said uses are intended to be located within the boundaries of the Steep Slope Conservation District, as defined herein, and said uses are in conflict with the permitted uses in the Steep Slope Conservation District.
  - (ii.) In those areas of the Township where the Steep Slope Conservation District applies, the requirements of the Steep Slope Conservation District, if more restrictive, shall supersede the requirements of the underlying zoning district(s).
  - (iii.) Should the Steep Slope Conservation District boundaries be changed or eliminated as a result of legislative or administrative actions or judicial decision, the zoning requirements applicable to the area in question shall revert to the requirements of the

underlying zoning district(s) without consideration of the provisions relating to the Steep Slope Conservation District.

(iv.) For any parcel or any part thereof on which the Steep Slope Conservation District is an overlay, should the underlying zoning classification(s) be changed as a result of legislative or administrative actions or judicial decision, such change(s) in classification shall have no effect on the boundaries of the Steep Slope Conservation District, unless an amendment to said boundaries was included as part of the proceedings from which the subsequent change(s) originated.

(c.) The provisions hereof relating to the Steep Slope Conservation District shall not repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where the provisions relating to the Steep Slope Conservation District impose greater restrictions, such provisions shall prevail.

(d.) Any determination that a proposed use complies with the provisions of the Steep Slope Conservation District, or any approval of a subdivision or land development plan, or any issuance of a building permit within or near the Steep Slope Conservation District shall not constitute a representation, guarantee, or warranty of any kind by the Township, or by any official or employee thereof, of the practicability or safety of the proposed use and shall create no liability upon the Township, its officials or employees. The provisions relating to the Steep Slope Conservation District do not imply that areas outside the Steep Slope Conservation District boundaries or land uses permitted within said District will be free from the adverse effects of erosion.

### (3.) Designation and Interpretation of District Boundary

(a.) The Steep Slope Conservation District consists of two areas which are delineated and defined as follows:

(i.) Prohibitive Slope - Prohibitive slopes are those of greater than twenty-five (25) percent slope.

(ii.) Precautionary Slope - Precautionary slopes are those of fifteen (15) to twenty-five (25) percent slope.

(b.) Boundary Interpretation and Appeals Procedure.

(i.) Each application for construction, land disturbance or subdivision containing land within the Steep Slope Conservation District shall be submitted in accordance with such other provisions of the Ordinances of South Middleton Township as are applicable thereto. Any area of the Steep Slope Conservation District that falls within the subject lot or lots shall be shown on the site plan through shading of such area or areas.

(ii.) Any party seeking land development and/or subdivision approval in what might be a Steep Slope Conservation District shall have the burden to present evidence of the boundaries of the District in the area in question. This presentation must include applicable

topographic data with respect to the property and any other pertinent documentation for consideration.

- (iii.) Whenever there is a difference between any Zoning Map and the applicable United States Geological Survey Topographic Map, the Topographic Map shall determine the boundaries of the Steep Slope Conservation District.

(4.) Permitted Uses in the Steep Slope Conservation District

(a.) Standards Applicable to All Uses within Steep Slope Conservation Districts.

- (i.) All grading shall be minimized.
- (ii.) Finished slopes of all cuts and fills shall not exceed 33%, unless the applicant can demonstrate that steeper slopes can be stabilized and maintained adequately.

(b.) Uses Permitted in Areas of Prohibitive Slope. The following are the only uses permitted as of right in areas of Prohibitive Slope. Such uses also shall comply with the base-zoning district, and shall not involve the erection of buildings, construction of streets, installation of sewage disposal systems, or permanent removal of topsoil.

- (i.) Parks and outdoor recreational uses, consistent with the goals of watershed protection.
- (ii.) Logging and woodcutting, where such activity is limited to highly selective removal of trees. Maximum precautions shall be taken to avoid destruction of or injury to under-story brush and trees.
- (iii.) Grading for the minimum portion of a driveway necessary to access a single-family dwelling when it can be demonstrated that no other routing which avoids slopes exceeding 25 percent is feasible.
- (iv.) Yard areas of a building not within the Steep Slope Conservation District, so long as no building is within the Prohibitive Slope area.
- (v.) Greenways and trails.

(c.) Uses Permitted in Areas of Precautionary Slope. The following are the only uses permitted as of right in areas of Precautionary Slope, provided they also are in compliance with the base zoning district and all other provisions of this Ordinance:

- (i.) Any use permitted in the area of Prohibitive Slope.
- (ii.) Tree farming, forestry, and other agricultural uses when conducted in conformity with conservation practices, including minimum tillage methods, approved by the Cumberland County Conservation District, or the U.S. Department of Agriculture.
- (iii.) Single-family detached dwellings.
- (iv.) Yard areas of a building not within the Steep Slope Conservation District, so long as no building other than that permitted in Section 1403 (4.) is permitted within the Precautionary Slope area.

(v.) Greenways and trails.

(5.) Uses by Conditional Use in the Steep Slope Conservation District.

Any of the following uses shall be permitted in areas of Precautionary Slope as a conditional use when approved by the Board of Supervisors, subject to requirements of this Section. Consideration for granting of a conditional use shall include the extent to which the requested uses will disrupt the stability of soils and natural vegetation and contribute to erosion during and after construction.

- (a.) Sealed public water supply wells, where approved by all regulatory agencies.
- (b.) Access roads that shall be suitable for the passage of emergency vehicles in case of fire or accident. Such roads shall be constructed only when no viable alternative for emergency access exists.

(6.) Administration of the Steep Slope Conservation District.

- (a.) Application Procedures. Before a permit is issued for any construction or land disturbance activity on land within or affecting the Steep Slope Conservation District, the following material, in full or in pertinent parts, shall be submitted for review by the Township:
  - (i.) An engineered site plan of the property, consistent with the applicable requirements of the South Middleton Township Subdivision and Land Development Ordinance, indicating existing grades with contour lines at ten (10) foot intervals and proposed grades within the area of the proposed construction. All areas of Prohibitive and/or Precautionary Slope as defined above shall be shaded accordingly.
  - (ii.) Landscaping plan indicating proposed impervious surfaces, storm drainage facilities, retaining walls, and ground cover, as well as trees and ornamental shrub locations.
  - (iii.) A statement signed and sealed by a registered architect or engineer, explaining the building methods to be used in overcoming foundation and other structural problems created by any slope conditions.
  - (iv.) Location and slopes of sides of all proposed cuts and fills.
  - (v.) Plan, profile, and typical cross-sections of any proposed driveway, with the seal of a registered professional engineer thereon.
  - (vi.) Plan for on-site sewage disposal facilities if use of a public sanitary sewer system is not contemplated.

(vii.) No approval or building permit shall be authorized by the Township, and no conditional use shall be granted by the Board of Supervisors, without the Township Engineer's review of this submitted material and his recommendation thereon. If a prohibitive steep slope area extends to the boundary of a proposed site, the slopes on adjacent sites for a distance of two hundred (200) feet in all directions from the boundaries of the site in question shall be additionally presented.

(b.) Additional Criteria for Review of Conditional Uses. In evaluating any application for conditional use, the Board of Supervisors shall consider the following factors:

(i.) The percent of steep slope on the total site.

(ii.) The extent and proposed disturbance of the existing vegetative cover on the site.

(iii.) The soil types and underlying geology of the site.

(iv.) The length of extent of the slope both on the site in question and on adjacent lands within 200 feet of the site.

(v.) Evidence that the proposed development, any impervious ground cover and the resultant disturbance to the land and existing vegetative cover will not cause an increase in the rate of runoff and/or related environmental problems on or off the site.

(7.) Uses and/or Structures Rendered Nonconforming to the Steep Slope Conservation District.

Following the effective date of the Ordinance adopting the Steep Slope Conservation District, any use or structure which is situated within the boundaries of the Steep Slope Conservation District and which does not conform to the permitted uses specified in Sections 1403 (4.) or 1403 (5.) shall become a nonconforming use or structure, regardless of its conformance to the District in which it is located without consideration of the Steep Slope Conservation District. The expansion or continuance of said nonconforming use or structure shall be governed by the requirements of Article XXIII of this Ordinance. However, the Zoning Hearing Board shall also ensure that the standards contained in this Section are applied to the expansion or continuance of said nonconforming use or structure.

#### 1403. SR SCENIC RIVER DISTRICT

Because of the historical, environmental and cultural nature of certain rivers, streams and waterways located within the boundaries of South Middleton Township, the following standards and provisions shall be applicable to waterways specified herein. The purpose of this district shall be the protection and management of the aesthetic, ecological and cultural values of the said waterways for the benefit of present and future citizens.

(1.) Designated Stream Segments

The following waterway segments within or adjacent to South Middleton Township are designated as scenic waterways subject to the provisions of this Section:

<u>Stream Name</u>	<u>Segment Limits</u>
(a.) Letort Spring	Entire length from State Route 34 bridge to the Borough Line
(b.) Left Branch, Letort Spring Run	Springs on Spring Garden Street Extended to Borough Line
(c.) Yellow Breeches Creek	Entire length from Western to Eastern Township Line

(2.) Scenic River Corridor Delineation

- (a.) For the purpose of this Section, the Letort Spring Run Scenic River Corridor shall be delineated as an area five hundred (500) feet from the centerline of the designated stream segments identified in Section 1403 (1.) above.
- (b.) The Scenic River Corridor for the Yellow Breeches Creek shall be five hundred (500) feet from the centerline of the main creek bed.

(3.) Design Standards

(a.) Clearing of Lots

- (i.) No living or viable trees, shrubs or vegetation within one hundred (100) feet of a waterway designated in Subsection 1403 (1.) herein, shall be cut, removed, or cleared from the land adjacent to or along said waterway; provided however that the pruning, trimming, or cutting of weeds, dead trees or shrubs, and undergrowth shall not be prohibited.
- (ii.) The maximum area permitted to be cleared on any lot adjacent to a designated waterway shall be as established by the impervious coverage requirements applicable to the Zoning District in which the lot is located.

(b.) Timber Harvest

Where permitted by this Ordinance and the Township Subdivision and Land Development Ordinance, timber harvest in the designated stream segments shall be by selective cut method and in accordance with Pennsylvania Department of Forestry standards. Clear-cutting and the utilization of logging roads or skid trails on slopes of fifteen percent (15%) and above shall be prohibited. On slopes of less than fifteen percent (15%) clear-cutting may be permitted for wildlife management, reforestation to a more desirable commercial tree type, removal of diseased trees, or clearing land for agricultural purposes. Clear-cutting shall be prohibited within one hundred (100) feet of any designated stream segment, except for safety or access purposes.

(4.) Screening

Any new building or structure within the designated stream segments shall be screened from view from any designated stream segment by vegetative screen according to the screening requirements of Section 1607. The screen shall provide a year-round, fifty percent (50%) visual screen. Species used as part of a vegetative screen shall be selected based on their ability to provide the required screening within ten (10) years of planting.

(5.) Access

In addition to the requirements of this Ordinance and the Township Subdivision and Land Development Ordinance, any new road, street, or bridge within the designated stream segments shall be located, designed, and constructed according to the "Guidelines to Improve the Aesthetic Quality of Roads in Pennsylvania," prepared by the Pennsylvania Departments of Transportation and Environmental Protection, June 1978.

(6.) Grading and Earthmoving

No grading or earthmoving shall be permitted which alters or changes any natural ridgeline within the designated stream segments.

(7.) Sludge Disposal

The disposal of sludge generated from public or community sewage disposal systems shall be prohibited within the designated stream segments.

(8.) Protection of Water Quality

No landowner, developer or occupant of property adjacent to a waterway specified as a designated stream segment in Section 1403 (1.) herein shall cause or permit the pollution or degradation of the water quality of a designated waterway by any means including, but not limited to, erosion, siltation or the disposal or dumping of waste, foreign matter or toxic materials of every nature.

(9.) Greenways and trails shall be considered a permitted use within the Scenic River District.

1404. WP Wellhead Protection District

The Wellhead Protection District as established in the Wellhead Protection Ordinance No. 6 of 2016, as amended, shall be incorporated herein and made a part of by reference, as an overlay zone.

(1.) Purpose

The purpose of the Wellhead Protection District is to safeguard the public health, safety and welfare, by providing regulation of land use and the manufacture, use, storage, transport, or disposal of hazardous and other substances which pose a threat to the quality and quantity of groundwater being extracted from the South Middleton Township municipal wells. It is the further intent of this District to recognize and protect a uniquely vulnerable groundwater resource area, defined by a carbonate geologic formation which is prone to the development of sinkholes and fractures that allow rapid infiltration of contaminants to these wells.

(2.) Objective

The objective of this District as it applies to delineated wellhead protection areas are:

- (a.) To limit land uses and activities involving the generation, use, transport, or storage of hazardous substances;
- (b.) To regulate other land uses and activities with the potential to pollute groundwater;
- (c.) To assure appropriate nutrient management practices;
- (d.) To establish siting standards to guide development onto the least environmentally-sensitive portions of property;
- (e.) To preserve vegetated buffer areas and establish setbacks for uses around streams, water bodies, springs, and sinkholes;
- (f.) To provide for maximum lot coverage standards to minimize impervious surfaces and reduce stormwater runoff;
- (g.) To provide for stormwater management that maximizes groundwater recharge;
- (h.) To protect and enhance surface and groundwater quality from the impacts of development on stormwater quality with Best Management Practices;
- (i.) To establish disturbance standards for wetlands, woodlands and steep slopes to minimize sedimentation of waters and to maximize water recharge;
- (j.) To require the regular maintenance of on-lot sewage disposal systems to minimize the potential for contamination of groundwater; and,
- (k.) To alert landowners, potential buyers, appraisers, assessors and lessees of the legal restrictions inherent in certain land uses and activities in this Overlay District.

### (3.) Statutory Authority

Section 1428 of the Federal Safe Drinking Water Act Amendments of 1986 requires the States to establish Wellhead Protection Programs to protect groundwater from contamination. In Pennsylvania, the responsibilities for development and implementation of Wellhead Protection Programs is shared between water suppliers, the Commonwealth and local municipal governments. The Pennsylvania Department of Environmental Protection (DEP) recognizes that, in Pennsylvania, DEP is responsible for regulating water suppliers and discharges of contaminants. DEP also recognizes that it is the responsibility of local governments to regulate land use. South Middleton Township is empowered, under the provisions of the Pennsylvania Municipalities Planning Code (MPC), as amended, 53 P.S. § 10101, to enact ordinances regulating development and land uses.

### (4.) Definitions

For the purpose of implementing the requirements of the Wellhead Protection Overlay District, the following definition shall apply:

- (a.) Abandonment of Well - An abandoned or unused well may be defined as one or more of the following:

- (i.) A well, other than a monitoring well, which has been out of service continuously for one year or more, and does not meet the definition of a standby well.
  - (ii.) A monitoring well from which no measurement or sample has been taken for a period of three years.
  - (iii.) A well that is in such a state of disrepair that it cannot be made operational for its intended purpose.
  - (iv.) A test hole or exploratory boring 24 hours after construction and testing work has been completed.
  - (v.) A cathodic protection well that is no longer functional for its original purpose.
  - (vi.) Any boring that cannot be satisfactorily completed as a well.
  - (vii.) An inactive geothermal groundwater heat exchange system.
- (a.) Alteration of Natural Features - Any earth moving, clearcutting, filling, mining, dredging, grading, paving, excavating or drilling activities which require a permit or approval from Federal, State or local officials.
  - (b.) Best Management Practices (BMPs) - State-of-the-art recommended practices for controlling stormwater runoff, or handling hazardous substances.
  - (c.) Carbonate - A sedimentary bedrock made up of limestone and/or dolomite that is highly permeable and prone to fractures, solution channels and the formation of sinkholes.
  - (d.) Community or Package Sewage Disposal System - A private sewage disposal system releasing treated effluent either into the ground or a surface water source. A large-scale system is intended to serve over 25 equivalent dwelling units (EDUs); a small-scale system is intended to serve between 2 and 24 EDUs.
  - (e.) Existing Land Use - The use of a property as of the date this ordinance was adopted.
  - (f.) Fracture Trace - Natural, linear-drainage, soil-tonal and topographic alignments, usually visible on aerial photographs, which are commonly the surface manifestations of corresponding zones of fracture concentration within underlying bedrock. Particularly in soluble rocks (e.g., limestone and dolomite), fracture zones cause increased bedrock porosity and permeability, resulting in rates of groundwater movement that are greater than the surrounding bedrock.
  - (g.) Impermeable - Impervious, impenetrable to moisture.
  - (h.) Integrated Pesticide Management Plan - A plan that provides for the use of multiple pest management tactics that minimize the risk of undesirable environmental and health effects.
  - (i.) Junked Materials - The accumulation of used and/or discarded materials with the potential for leaching pollutants into the groundwater, including, but not

limited to, trash, appliances, machinery, vehicles, or parts thereof, whether on the land surface, into a sinkhole or into a stream, wetland or other water body.

- (j.) Karst - A type of topography characterized by closed depressions and/or sinkholes, caves, rock pinnacles, fracture traces, and underground drainage, resulting from solution of limestone and dolomite bedrock.
- (k.) Nutrient Management Act - The PA Nutrient Management Act of 1993, which is applicable to agricultural operations with over 2,000 pounds of animal weight per acre which generate or utilize manure. The Act requires the development of a plan demonstrating that nutrients that are land applied do not exceed crop uptake.
- (l.) Sinkhole - A closed, generally circular, depression in the land surface of variable depth and width, characterized by a distinct breaking of the ground surface, and formed by solution of carbonate bedrock and downward movement of soil into bedrock voids or by collapse of underlying caves.
- (m.) Storage Tank - Aboveground - A tank which contains hazardous or petroleum substances as regulated under the Storage Tank and Spill Prevention Act (STSPA), as amended, and which meets the following criteria: a stationary tank with 250 gallons or more of capacity with greater than 90% of its capacity above ground. Specific exceptions to this definition are included within the STSPA, and include, among others, on-premise heating fuel tanks, and farm or residential motor fuel tanks with a capacity of 1,100 gallons or less.
- (n.) Storage Tank - Exempted - Any tank or container which contains hazardous or petroleum substances, either above or underground, which is otherwise unregulated by the Storage Tank and Spill Prevention Act (STSPA), as amended. For the purpose of this Ordinance, exempted tanks are limited to the following: on premise heating fuel tanks, farm or residential motor fuel tanks with a capacity of 1,100 gallons or less, and tanks, drums or containers with a capacity of less than 110 gallons which contain hazardous substances.
- (o.) Storage Tank - Underground - A tank which contains hazardous or petroleum substances as regulated under the Storage Tank and Spill Prevention Act (STSPA), as amended, and which meets the following criteria: a tank with 110 gallons or more of capacity with 10% or greater of its capacity beneath the ground surface. Specific exceptions to this definition are included within the STSPA, and include, among others, on-premise heating fuel tanks, farm or residential motor fuel tanks with a capacity of 1,100 gallons or less.
- (p.) Underground Injection Well - A bored, drilled, driven or dug well for the emplacement of fluids into the ground (except geothermal exchange systems and drilling muds and similar materials used in well construction).
- (q.) Wellhead Protection Area (WHPA) - Zones 1, 2 and 3 adjacent to and surrounding a municipal water well field as delineated on Plate 1 (dated September 20, 2005) of the *Wellhead Protection Plan South Middleton Township Cumberland County Pennsylvania PWSID 7210050*, approved by the PADEP on June 26, 2006. Detailed maps of these areas around the

wells are included in Appendix A, which is hereby made part of this Ordinance.

(6.) General Provisions

General provisions relating to the Wellhead Protection District are as follows:

- (a.) No area within the Wellhead Protection District shall hereafter be used without full compliance with the terms of this Section and other applicable regulations.
- (b.) The Wellhead Protection District established hereby shall be an overlay on any zoning district(s) now or hereafter enacted to regulate the use of land in South Middleton Township.
  - (i.) The Wellhead Protection District shall have no effect on the permitted uses in the underlying zoning district, except where said uses are intended to be located within the boundaries of the Wellhead Protection District, as defined herein, and said uses are in conflict with the permitted uses in the Wellhead Protection District.
  - (ii.) In those areas of the Township where the Wellhead Protection District applies, the requirements of the Wellhead Protection District, if more restrictive, shall supersede the requirements of the underlying zoning district(s).
  - (iii.) The land use restrictions and the land development regulations set forth herein have been carefully determined through engineering and scientific study to be the minimum restriction or regulation necessary to protect the future quality and quantity of this Township's public water supply. Therefore, there shall be no change in the underlying zoning districts or zoning regulations, such that density and impervious coverage limitations are affected, without further engineering and scientific study documenting that any such change will not adversely affect this Township's public water supply.
  - (iv.) In the event of a judicial decision(s) which modifies, changes, or reduces any: (1) restriction on the use or development of land, (2) boundary for the zones or Wellhead Protection Districts, or (3) underlying zoning classifications within the Wellhead Protection Districts, such modification, change or reduction shall be to the minimum extent necessary to satisfy both the judicial objection and the purpose of this Ordinance.
- (c.) The provisions hereof relating to the Wellhead Protection District shall not repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where the provisions relating to the Wellhead Protection District impose greater restrictions, such provisions shall prevail.
- (d.) The following activities and land uses are exempt from the provisions of this District:
  - (i.) Retail sales establishments that store and handle hazardous substances for resale in their original, unopened containers.

- (ii.) Office use where there is no storage and handling of hazardous substances.
  - (iii.) The transportation of any hazardous substance through the WHPAs provided the transporting vehicle is in transit.
  - (iv.) Storage and use of hazardous substances in conjunction with municipal water supply and treatment activities.
  - (v.) Existing Land Uses - All lawfully existing land uses located within a Wellhead Protection Area at the time this Ordinance is adopted shall be exempt from the application of this Ordinance, except Section 1645 (Reporting Requirements) and except as described in Section 1108(2.)(c.) of the Subdivision and Land Development Ordinance. Nothing herein shall be deemed to exempt such existing land uses from compliance with any other statute, ordinance or rule of common law.
- (e.) Disputes regarding boundary designations of or within the Wellhead Protection District or any zone shall be with the Township Engineer and the Zoning Hearing Board. All other disputes, and the authority for the administration and enforcement of this Ordinance, shall be with the governing body of the Township.
- (f.) In any dispute arising under the provisions of this Ordinance, the burden of proof shall be on the person(s) challenging the Ordinance, or provisions therein, upon presentation of clear and convincing evidence. The governing body and the Zoning Hearing Board shall have the right to consult with independent consultants for purposes of testing, analysis, opinion, or the like. All costs associated with such consultation shall be shared equally by the parties to the dispute.

(7.) Designation and Interpretation of District Boundary

- (a.) The Wellhead Protection District consists of all lands located within Wellhead Protection Areas (WHPAs). The Wellhead Protection Area Zones are described in narrative form below. Where there may be a discrepancy between the narrative description of a Zone and the maps referenced in Section 3 above, the maps shall be used to delineate the WHPA Zone.
- (i.) Zone 1 is the protective area immediately surrounding each well. Because the location of all three wells is in carbonate geology, a minimum 400-foot radius from the wellhead was established. Zone 1 boundaries were extended an additional 400 feet along the fractures intersecting the perimeter of the 400-foot radius. Justification for a minimum 400-foot radius and extending the Zone 1 protection along these fractures is documented in the Wellhead Protection Study: "Production Wells 1, 2 and 3 (September, 1997), R. E. Wright Environmental, Inc.
  - (ii.) Zone 2 is the area encompassing the portion of the aquifer through which water is diverted to a well. The area of Zone 2 is defined by DEP as a one-half mile radius around the well unless a more detailed delineation is conducted. Detailed groundwater modeling was

performed as part of the Wellhead Protection Plan South Middleton Township PWSID 7210050, approved by the PADEP on June 26, 2006. Maps of those areas are included on Plate 1 of the plan and in Appendix A of this Ordinance.

- (iii.) For purposes of regulating certain land uses and activities, a Zone 2 fringe area is hereby created which shall consist of a 200-foot radius beyond the Zone 1 boundary, within which a greater level of protection will be provided than for the remainder of the Zone 2 area. Justification for extending the Zone 1 protection is documented in the Wellhead Protection Study: "Production Wells 1, 2 and 3 (September, 1997), R. E. Wright Environmental, Inc.
- (iv.) Zone 3 is the area beyond Zone 2 that contributes surface water and groundwater to Zones 1 and 2. Zone 3 boundaries were determined using annual average recharge rates, maximum rated yield capacity and topographic drainage divides.

(b.) Boundary Interpretation

- (i.) Each application for land development or subdivision containing land within the Wellhead Protection District shall be submitted in accordance with such other provisions of the ordinances of South Middleton Township as are applicable thereto. Any area of the Wellhead Protection District that falls within the subject lot or lots shall be shown on the site plan through shading of such area or areas.
- (ii.) Any party seeking land development and/or subdivision approval in what might be a Wellhead Protection District shall have the burden to present evidence of the boundaries of the District in the area in question. This presentation must include applicable geographic data with respect to the property and any other pertinent documentation for consideration. The Township Engineer, or other appointed agent, shall review the information and shall make determination regarding the boundaries of lands within a Wellhead Protection Area.
- (iii.) In situations where a property may have parts lying within more than one (1) WHPA Zone, each part of the property shall be governed by the restrictions applicable to the WHPA Zone in which that part of the property is located. The same rule shall apply to properties lying only partially within the Wellhead Protection District.

(8.) Regulated Land Uses and Activities

The Table contained in this Section (Table 1404 (7) - Regulated Land Uses and Activities) sets forth various land uses/activities and the extent of regulation permitted in each of the Zones in the Wellhead Protection Areas. In the event of judicial decision affecting any of the land uses/activities or regulations set forth herein, it is the intent of this Ordinance that any provision found to be illegal shall be stricken, and the remaining provisions shall remain in full force and effect.

The land uses and activities set forth herein [Table 1404(7)] shall be considered conditional uses. Full authority for the administration/application of all criteria, terms and conditions of this Section shall be with the governing body. For those

uses considered conditional uses under this Section, adequate information should be included with the conditional use application to ensure compliance with the provisions of Section 1108 of the Subdivision and Land Development Ordinance. Land uses and activities shall be regulated as follows:

**Table 1404(7)**

<b>REGULATED LAND USES AND ACTIVITIES</b>			
<b>Land Uses and Activities</b>	<b>Zone 1</b>	<b>Zone 2</b>	<b>Zone 3</b>
1. Manufacture, Use or Storage of Hazardous Substances as a Principal Activity	Not Permitted	Not Permitted	Not Permitted
2. Open Burning of Materials Containing Hazardous Substances	Not Permitted	Not Permitted	Not Permitted
3. Quarries & Mining Operations	Not Permitted	Not Permitted	Not Permitted
4. Sanitary Landfills & Junkyards	Not Permitted	Not Permitted	Not Permitted
5. Junked Materials Whether on the Land Surface, in Sinkholes, Streams, Wetlands or Other Water Bodies	Not Permitted	Not Permitted	Not Permitted
6. Collection & Transfer Facilities for Solid Waster or Hazardous Substances, Including Battery & Drum Recycling & Reprocessing	Not Permitted	Not Permitted	Not Permitted
7. Commercial Truck or Rail Tanker Cleaning Operations Where Hazardous Substances Are Involved	Not Permitted	Not Permitted	Not Permitted
8. Commercial Slaughtering, Rendering, Tanneries	Not Permitted	Not Permitted	Not Permitted
9. Land Application of Sewage Sludge	Not Permitted	Not Permitted	Not Permitted
10. Sewage Treatment Plants & Large-scale Community or Package Sewage Disposal Systems (not including municipally-owned & operated pump stations or service lines)	Not Permitted	Not Permitted	Not Permitted
11. Underground Injection Wells	Not Permitted	Not Permitted	Not Permitted
12. Alteration of Natural Site Features Prior to Receiving All Required Permits & Approvals	Not Permitted	Not Permitted	Earth moving activities can be conducted prior to Township approval provided all required DEP and County Conservation District permits have been issued.
13. Liquid Petroleum Product Transmission Lines	Not Permitted	Not Permitted	Not Permitted
14. Commercial or Municipal Solid Waste Recycling & Composting Facilities	Not Permitted	Not Permitted	Storage facilities shall be designed to: a. Have an impervious storage & loading surface. b. Prevent infiltration of rain and surface water into storage areas. c. Provide diking to prevent runoff from storage & loading areas.
15. Cemeteries	Not Permitted	Not Permitted	All caskets shall be encased in concrete grave liners as defined by the Federal Trade Commission in regulations at Part 453, as amended.

Table 1404 (7) Continued

REGULATED LAND USES AND ACTIVITIES			
Land Uses and Activities	Zone 1	Zone 2	Zone 3
16. Industrial, Commercial or Institutional Facilities Which Use, Store, Transport, or Dispose of Hazardous Substances	Not Permitted	<p>a. No such facilities shall be permitted within 200 feet of the WHPA Zone 1 boundary.</p> <p>b. All such facilities shall be connected to a public wastewater treatment facility.</p> <p>c. The use, storage and transportation of hazardous substances shall be in accordance with best Management practices.</p> <p>d. All storage of hazardous substances shall 1) be indoors, 2) comply with applicable storage tank requirements set forth in this table, and 3) be temporary only.</p> <p>e. On-site disposal of hazardous substances is prohibited.</p>	(Same as for Zone 2., b-d only)
17. Golf Courses	Not Permitted	Not Permitted	<p>The Township encourages:</p> <p>a. Coordination with Penn State Cooperative Extension Service to develop and implement an Integrated Pest Management Plan.</p> <p>b. Coordination with the Cumberland County Conservation District to reduce any excess application of nutrients.</p>
18. Small-scale Community or Package OLDSS	Not Permitted	Not Permitted	<p>a. Testing, approval &amp; reservation of second absorption field.</p> <p>b. Submittal of evidence of pumping of septic tanks every 3 years.</p> <p>c. Prior to the expansion or conversion of the land use, &amp; prior to any transfer of property ownership, submittal of evidence by the SEO of inspection &amp; any necessary repairs or maintenance.</p>
19. Geothermal Exchange Systems (groundwater & ground loop)	Not Permitted	<p>a. No such systems shall be permitted within 200 feet of the WHPA Zone 1 boundary.</p> <p>b. Submittal of evidence that</p> <p>1) the landowner is aware that only food-based antifreeze may be used in piping, 2) professionally designed &amp; installed piping will be encased to prevent leakage, &amp; 3) the recommendations in DEP's Ground Source Heat Pump Manual for protecting water quality will be utilized.</p>	(Same as for Zone 2, b only)
20. Above & Underground Storage Tanks <sup>2</sup>	Not Permitted	<p>a. Underground storage tanks not permitted.</p> <p>b. No aboveground storage tanks permitted within 200 feet of the WHPA Zone 1 boundary.</p> <p>c. No aboveground storage tanks which exceed the threshold levels for hazardous substances indicated in Appendix B of Ordinance No. 2016-06 are permitted.</p> <p>d. Submittal of an approved registration form indicating compliance with STSPA standards.</p> <p>e. All leaking tanks must be immediately emptied by the owner or operator &amp; all released substances removed with 7 days of detection, or sooner if required by DEP.</p>	(Same as for Zone 2)

<sup>1</sup> For a listing of industrial, commercial and institutional uses which commonly generate use, store, or transport hazardous substances at greater than threshold quantities, see Appendix B. This Appendix conveys the threshold levels at which various substances are considered hazardous.

**Table 1404 (7) - Continued**

<b>REGULATED LAND USES AND ACTIVITIES</b>			
<b>Land Uses and Activities</b>	<b>Zone 1</b>	<b>Zone 2</b>	<b>Zone 3</b>
21. Exempted Storage Tanks	Not permitted	a. Underground tanks are prohibited. b. Aboveground tanks shall: 1) be stored; 2) be enclosed by a permanent dike of impermeable construction, the volume of which shall be equal to or greater than the capacity of the tanks within the dike, & 3) be covered by a roof adequate to prevent rainwater from entering the dike. c. All leaking tanks must be immediately emptied by the owner or operator & all released substances removed within 7 days of detection.	a. Only farm & commercial motor fuel tanks & commercial on-premise heating fuel tanks are permitted as underground tanks; these shall 1) be double-hulled steel or fiberglass encased, 2) be enclosed by a concrete vault, the volume of which shall be equal to or greater than the capacity of the tanks within the vault, & 3) utilize piping that is protected from internal & external corrosion. b. Aboveground tanks (same as for Zone 2) c. Leakage (same as for Zone 2)
22. Nonbagged Bulk (1+ ton) Storage & Application of Road Salt & De-icing Chemicals	Not permitted	a. The Township encourages the use of traditional snow & ice removal methods such as snowplow, hand shoveling & sand. The use of salt and de-icing chemicals should be used only as absolutely necessary. b. Storage is not permitted.	a. Same as for Zone 2. b. Storage facilities shall be designed 1) to have an impervious storage & loading surface, 2) to prevent infiltration of rain & surface water into storage areas, & 3) to provide diking to prevent runoff from storage & loading areas.
23. On-lot Sewage Disposal Systems (OLDS)	Not permitted	a. No such systems shall be permitted within 200 feet from the WHPA Zone 1 boundary. b. Testing approval & reservation of second absorption field. c. Submittal of evidence of pumping of OLDS every 3 years. d. Prior to the expansion or conversion of the land use, & prior to any transfer of property ownership, submittal of evidence by the SEO of inspection & any necessary repairs or maintenance.	(Same as for Zone 2, b-d only)
24. Agricultural Land Application of Manure, Fertilizer & Pesticides	Not permitted	a. a fifty-foot (50') agricultural filter strip from the outermost edge of all streams, water bodies, springs, and sinkholes shall be maintained within which no nutrients or pesticides shall be applied. b. The Township encourages farmers having operations with over 2,000 lbs. of animal weight to work with the Cumberland County Conservation District toward compliance with the 1993 Nutrient Management Act. c. For operations with 2,000 lbs. of animal weight per acre or less, the Township encourages farmers to work with the Conservation District to reduce any excess application of nutrients to farm fields. d. For operations in which pesticides are used, the Township encourages farmers to work with the Penn State Cooperative Extension Service in the development & implementation of an Integrated Pest Management Plan. e. The Township encourages farmers to work with the Conservation District to develop a Conservation Plan.	(Same as for Zone 2)

<sup>2</sup> See Section 1404(4.) Definitions and Use 21.

Table 1404 (7) - Continued

<b>REGULATED LAND USES AND ACTIVITIES</b>			
<b>Land Uses and Activities</b>	<b>Zone 1</b>	<b>Zone 2</b>	<b>Zone 3</b>
25. Manure Storage Facility	Not permitted	Not permitted	Submittal of approved plan meeting the standards of U.S. Natural Resources Conservation Service.
26. Well Construction	Only municipal water supply wells may be constructed	Grouting shall be utilized and a sanitary seal shall be provided for all at- or below-grade well openings.	(Same as for Zone 2)
27. Abandonment of Wells	a. Wells shall be sealed within 30 days of abandonment b. A zoning permit demonstrating planned compliance with DEP's water well abandonment guidelines shall be required prior to the sealing of a well. c. Certification by a licensed well driller, professional engineer or registered professional geologist of the sealing of the well consistent with DEP guidelines shall be required.	(Same as for Zone 1)	(Same as for Zones 1 & 2)
28. The Withdrawal of 100,000 GPD or More of Water from Wells or Springs	Not permitted	Not permitted	a. The withdrawal of water for commercial water, soft drink or brewery bottling purposes is prohibited. b. The withdrawal of 100,000 GPD or more of water utilizing one or more wells for any single use is prohibited.
29. Residential Dwellings	Not Permitted	Public outreach and education programs to encourage the proper use of pesticides, herbicides, fertilizers and disposal of household hazardous waste.	Public outreach and education programs to encourage the proper use of pesticides, herbicides, fertilizers and disposal of household hazardous waste.