

Appendix C: Existing Natural Resource Protection Standards and Recommendations

Figure C-1
 EAST COVENTRY TOWNSHIP
Existing Natural Resource Protection Standards

Resource	Protected?	Ordinance/Section	Description of Protection Standard
<i>Land Resources:</i>			
Steep Slopes (15-25%, 25%+)	Yes/R	Zoning/§408-416	<ul style="list-style-type: none"> Steep Slope Conservation District - By-right uses strictly limited. Uses permitted by underlying zoning must go through special exception or variance with specified criteria which must be met. Recommendation: Add specific disturbance limitations for slopes for precautionary and prohibitive slopes.
Woodlands Protection	Yes/R	SLDO/§428.9	<ul style="list-style-type: none"> States that no portion of tree masses or trees of eight (8) inches DBH or greater shall not be cleared unless a reforestation plan is prepared that prescribes that two (2) trees of at least 2 1/2" caliper are planted for each tree cleared. Provides guidance for which trees should be preserved vs. removed. Includes criteria for the protection of trees and other vegetation that is to be retained. Recommendation: Include specific disturbance limitations that prescribe the maximum area that can be disturbed.
Timber Harvesting Plan required	Yes/R	Zoning/§1316	<ul style="list-style-type: none"> Timber harvesting plans are requirements based on the implementation of Chapter 102 of the Clean Streams Law and Chapter 105 of the Dam Safety and Encroachments Act. Recommendation: Link the requirement for a timber harvesting plan to the disturbance limitations under woodlands protection.
Specimen Vegetation/PNDI Sites	Limited	Zoning/§201	<ul style="list-style-type: none"> Recommendation: Add protection standards for specimen vegetation and for PNDI sites if applicable.
Hedgerows	No		<ul style="list-style-type: none"> Recommendation: Include hedgerows in woodland definitions and apply protection standards.

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Tree Replacement required	Yes/R	SLDO/§428.9.	<ul style="list-style-type: none"> • Recommendation: Review replacement standards to determine if more specific guidelines are appropriate.
Tree Protection during construction required	Yes	SLDO/§428.9.B	<ul style="list-style-type: none"> • Where trees are to be retained, no disturbance shall be permitted within ten (10) feet of the drip line of the trees...
Tree Removal Permit	No		<ul style="list-style-type: none"> • Recommendation: Consider implementing tree permit requirement if high priority for Township and/or Region.
Water Resources:			
Wetlands	Yes	Zoning/§417 SLDO/§429.A.	<ul style="list-style-type: none"> • Wetlands are defined and deducted from the lot area. • Wetlands shall not be disturbed by the construction of any structure or any subsurface sewage system. • Wetlands and wetlands margins shall not be altered, regarded, developed, filled, piped, diverted, or built upon except in strict compliance with the PaDEP regulations and where no other reasonable alternative is available.
Wetland Margins	Yes/R	SLDO/§429.A.	<ul style="list-style-type: none"> • Wetlands and wetlands margins shall not be altered, regarded, developed, filled, piped, diverted, or built upon except in strict compliance with the PaDEP regulations and where no other reasonable alternative is available. • Recommendation: Add wetland margin protection standards in Zoning.
Riparian Buffers	Yes/R	Zoning/§418	<ul style="list-style-type: none"> • A riparian buffer of fifty (50) feet shall be provided from the top of the bank of Pigeon Creek, Stony Run, and the Schuylkill River shall be provided, within which no land disturbance shall be permitted with a few low-impact exceptions. • Recommendation: Expand buffer requirements to protect all stream corridors especially those of the first order and/or containing headwaters.
Floodplain	Limited	Zoning/§403	<ul style="list-style-type: none"> • Allows development in the 100-year floodplain (flood fringe only) if it complies with floodproofing standards of ordinance. • Recommendation: Prohibit construction within the 100-year floodplain.
Stormwater BMP's	Yes/R	Chapter 9 of Code	<ul style="list-style-type: none"> • A comprehensive stormwater management ordinance that emphasizes the use of natural processes that require a minimum of structures. Attempts to maintain the predevelopment water balance of watersheds and restore natural hydrologic regimes. • References the <i>Comprehensive Stormwater Management Procedure</i>

Resource	Protected?	Ordinance/Section	Description of Protection Standard
			<p><i>Handbook</i> which emphasizes prevention first and mitigation second through the use of BMPs.</p> <ul style="list-style-type: none"> • Recommendation: Review for consistency with NPDES II.
Administrative:			
Plan Requirements for Natural Resources	Yes/R	SLDO/§303.C.3. SLDO/§303.C.4.	<ul style="list-style-type: none"> • Requires a Site Context Map that shows the location of the proposed development in relationship to the existing neighborhood and protected and/or sensitive natural features. • Requires a Resource Impact and Conservation Plan. • Recommendation: Plan information requirements should be revised as needed for consistency with recommended expanded resource protection standards.
Provisions for continued protection	No	Zoning	<ul style="list-style-type: none"> • Recommendation: Add requirement for continued preservation of all protected resources through deed restrictions, easements, etc. (not just those associated with TDRs).
Protection Standards Centrally Located	Yes	ZO/Article IV	This section is entitled "Natural Features Protection" and provides comprehensive and specific standards for the protection of natural features.

Source: Municipal Ordinances, Chester County Planning Commission, 2003

*Y/N/L = Yes/No/Limited Protection **SLDO = Subdivision and Land Development Ordinance

Figure C-2
EAST NANTMEAL TOWNSHIP
Existing Natural Resource Protection Standards

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Land Resources:			
Steep Slopes (15-25%, 25%+)	Yes	Zoning/Article IX	<ul style="list-style-type: none"> Steep Slope Conservation District - By-right uses strictly limited. Uses permitted by underlying zoning must go through special exception procedure with specified criteria which must be met. Disturbance of 25% plus slopes limited to 20% of slope area or 10% of lot area, whichever is less. Disturbance of 15% to 25% slopes limited to 40% of slope area or 20% of lot area, whichever is less.
Woodlands Protection	Yes	Zoning/§1502.F.	<ul style="list-style-type: none"> Requirements for a timber harvesting plan when disturbance of woodlands or hedgerows exceeds 30% (residential) or 40% (non-residential). Guidelines for determining permitted woodland disturbance. Criteria to establish a tree protection zones for the trees that will be retained on the site.
Timber Harvesting Plan required	Yes	Zoning/§1502.F. Zoning/§1327	<ul style="list-style-type: none"> Requires timber-harvesting plan for uses determined to be timber-harvesting operations. Criteria set forth for timber harvesting plans.
Specimen Vegetation/PNDI Sites	Yes/R	Zoning/§1502.F.	<ul style="list-style-type: none"> Specimen vegetation shall not be removed unless the applicant can prove that the removal is essential to eliminate a hazardous condition. Where it is approved, tree removal shall be minimized. The above restrictions also apply to sites that contain species of concern. Recommendation: Define PNDI and Specimen Vegetation in Article II.
Hedgerows	Yes/R	Zoning/§1502.F.	<ul style="list-style-type: none"> Requirements for a timber harvesting plan when disturbance of woodlands or hedgerows exceeds 35% (residential) or 50% (non-residential). Recommendation: Define Hedgerow in Article II.
Tree Replacement required	No		<ul style="list-style-type: none"> Recommendation: Require replacement of trees when more than a threshold area of woodlands/large trees are cleared.
Tree Protection during construction required	Yes	Zoning/§1502.F	<ul style="list-style-type: none"> Criteria to establish a tree protection zone for the trees that will be retained on the site.
Tree Removal Permit	No		<ul style="list-style-type: none"> Specimen vegetation shall not be removed unless the applicant can prove that the removal is essential to eliminate a hazardous condition. Where it is

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			approved, tree removal shall be minimized. <ul style="list-style-type: none"> Recommendation: Consider implementing tree permit requirement if high priority for Township and/or Region.
Water Resources:			
Wetlands	Yes	Zoning/§1502.C.	<ul style="list-style-type: none"> Wetlands shall not be graded, filled, piped, diverted, channeled, built upon, or otherwise altered or disturbed except where state and federal permits have been obtained.
Wetland Buffers	Yes	Zoning/§1502.C.	<ul style="list-style-type: none"> No more than twenty (20%) of a wetland buffer shall be graded, filled, built upon, or otherwise altered with the exception of a few specified low impact activities or uses.
Riparian Buffers	Yes	Zoning/§1502.E.	<ul style="list-style-type: none"> Identification of the Zone One (70 feet) and Zone Two (30 feet) Riparian Buffer and identification of uses and activities that are permitted in each. Maximum disturbance limits and a 100 foot buffer width on each side of the related watercourse with an exception (reduced width) when conservation techniques are utilized in the buffer area.
Floodplain	Yes	Zoning/Article VIII	<ul style="list-style-type: none"> Section 802.B does not appear to allow structures in the floodplain and Section 803 limits the expansion of existing structures. Amendments to floodplain standards in 1996 appear to bring the ordinance into consistency with FEMA standards.
Stormwater BMP's	Limited	SLDO/§607	<ul style="list-style-type: none"> No specific mention of BMPs but ordinance promotes on-site groundwater recharge where conditions permit. Subsurface disposal of groundwater is required where natural, well-drained soils exist. Recommendation: Update ordinance to promote innovative stormwater management techniques. (Note: NPDES II requirements do not apply).
Administrative:			
Plan Requirements for Natural Resources	Yes/R	SLDO/§303.B and C Zoning/§1327	<ul style="list-style-type: none"> Requires mapping of major resources and submittal of a site analysis plan and conservation plan. Recommendation: May need to expand information requirements if new resource protection requirements are added.
Provisions for continued protection	No		<ul style="list-style-type: none"> Recommendation: Add requirement for continued preservation of all protected resources through deed restrictions, easements, etc.
Protection Standards Centrally Located	Yes		<ul style="list-style-type: none"> Article XV: Natural Resource Protection.

Source: Municipal Ordinances, Chester County Planning Commission, 2003

*Y/N/L = Yes/No/Limited Protection **SLDO = Subdivision and Land Development Ordinance

Figure C-3
EAST PIKELAND TOWNSHIP
Existing Natural Resource Protection Standards

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Land Resources:			
Steep Slopes (15-25%, 25%+)	Yes	Zoning/§402	<ul style="list-style-type: none"> • Steep Slope Conservation District - divided into prohibitive (over 25%) and precautionary (15% to 25%) slopes. • Strictly limits uses on prohibitive slopes and allows uses permitted by underlying zoning in the precautionary slopes by special exception. Limits regrading or stripping of vegetation both on steep and very steep slopes to 30% of the lot area. • Additional information required to indicate compliance with applicable requirements of Steep Slope District. • Recommendation: Consider restricting disturbance of prohibitive slopes to no more than 15%.
Woodlands Protection	Limited	Zoning/§404 (See also SLDO §425) Zoning Article II SLDO/Article II	<ul style="list-style-type: none"> • Disturbance of woodlands is to be minimized; as much of woodlands are to be retained as possible with guidance of a certified arborist or other qualified consultant. • In no case may more than 50% of woodlands on a lot be disturbed without the approval of the Township based upon the recommendation of the township arborist. • Definition of “woodlands” excludes hedgerows, but “woodland disturbance” includes hedgerows. There is a different definition of woodland in the SLDO.¹ • Recommendation: Include hedgerows in the definition of woodlands so that 50% disturbance limitation also applies to hedgerows. Consider 35% woodland disturbance limitation for residential development. • Definitions in the two ordinances should be revised for consistency. Suggest that zoning ordinance definition, with the above suggested change, be retained.

¹ In addition to the definitions of woodlands and wetlands, there are other natural resources are not defined consistently between the zoning ordinance and the SLDO. These discrepancies should be corrected throughout the definition sections.

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Woodlands Protection <i>continued</i>			<ul style="list-style-type: none"> The terms “caliper” and “dbh” are sometimes used interchangeably - for example in caliper is used in Section 303.C.2.e and dbh in Section 304.C.5.b(12) even though they are referring to the same regulation. DBH is the correct measurement to use for existing woodlands or mature trees.
Timber Harvesting Plan required	No	Zoning/Article II	<ul style="list-style-type: none"> Woodland management plan is defined but does not appear to be required under any ordinance provisions. Recommendation: Indicate when a woodland management plan is required. Define timber harvesting operations and create separate timber harvesting standards.
Specimen Vegetation/PNDI Sites	Limited	Zoning/§404.2.B	<ul style="list-style-type: none"> Disturbance to single or groups of specimen trees is to be minimized. (Specimen tree has a dbh of 24 inches or more.) PNDI and RTE sites defined but not protected. Recommendation: Consider additional protection standards for specimen vegetation (i.e., only remove to address hazardous condition or demonstrable financial hardship). Include in woodland definition.
Hedgerows	Limited	Zoning/§404.2.B	<ul style="list-style-type: none"> Disturbance of hedgerows is to be minimized. Replacement of hedgerows may be required (see below). Recommendation: Include hedgerows in definition of woodlands so that disturbance limitation also includes hedgerows.
Tree Replacement required	Yes	Zoning/§404.5	<ul style="list-style-type: none"> Two replacement trees required for removal of each tree of 6 inches dbh or more. Where significant areas of shrubs or hedgerows are removed, Landscape Plan must include planting of native shrubs in edging or masses suitable for wildlife cover. Recommendation: Because of high level of replacement required, might want to make provision for some of the replacement trees to be located off-site with township approval (e.g., for riparian buffer creation).

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Tree Protection during construction required	Yes	Zoning/§404.6	<ul style="list-style-type: none"> • Specific requirements included for the protection of vegetation during construction. • Recommendation: Consider requiring protective fencing around all trees to be protected on site, not just those within 25 feet of proposed disturbed areas. This will prevent heavy equipment from passing through protected areas on the way to the construction zone.
Tree Removal Permit	No		<ul style="list-style-type: none"> • Recommendation: Consider implementing tree permit requirement if high priority for Township and/or Region.
Water Resources:			
Wetlands	Limited	Zoning/§403 (See also SLDO §425) SLDO/Zoning Art. II	<ul style="list-style-type: none"> • Soils with seasonally high water tables cannot be disturbed by construction of any structure or subsurface sewage system. • Wetlands delineation required to be performed by a qualified professional. Where disturbance is proposed, plans must be submitted to the U.S Army Corps of Engineers and PA DEP for boundary confirmation and wetland permits. Final plan approval is contingent on receipt of permits. • Definition of wetlands in zoning ordinance differs from that of the subdivision and land development ordinance. • Recommendation: Ordinance could more clearly state that wetlands may not be disturbed except where state and federal permits have been obtained. • Definitions in two ordinances should be made consistent.
Wetland Margins	Limited	Zoning/§403.D (See also SLDO §425) Zoning/§408 Zoning Article II SLDO/Article II	<ul style="list-style-type: none"> • No proposed structure is permitted less than 50 feet from the established boundary of wetlands or soils with seasonally high water tables. • The riparian buffer standards below include any area within 35 feet of a wetland and also include hydric soils in the riparian buffer definition. • Wetland margin is defined in the SLDO as a 300 foot border around the border of a wetland. This is the third setback measurement for wetlands in the two ordinances. • Recommendation: Create a separate wetland margin standard of 50 feet and remove from riparian standards and address SLDO definition that creates further confusion about the extent of the protected area.

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Riparian Buffers	Yes	Zoning/§408 Article II - definition	<ul style="list-style-type: none"> Riparian buffers include any area within 75 feet of a streambank or pond edge, any area within 35 feet of a wetland, and any area of hydric soil. No buildings or structures are permitted in the buffer area and, with a limited number of exceptions, no disturbance of the buffer area is permitted. An appeals process to the zoning hearing board is included. Recommendations: Consider increasing the streambank standard to 100 feet. Remove riparian buffer for wetlands here and create wetland margin standard as recommended above. The hydric soils might more appropriately be included with the wetland provisions than the riparian buffer standards.
Floodplain	Yes	Zoning/§401	<ul style="list-style-type: none"> Appears to be consistent with FEMA standards Prohibits buildings in the floodway and flood fringe with the exception of sewage treatment plants and pumping stations in the flood fringe.
Stormwater BMP's	Yes	SLDO/§306.B, 422, and 602.B	<ul style="list-style-type: none"> Purpose statements emphasize groundwater recharge and prevention of surface water pollution. Standards provide hierarchy of preferred stormwater management techniques with on-site filtration most preferred method and detention basins least preferred. Also lists BMPs that may be used. Recommendation: Review for consistency with NPDES II requirements.
Administrative:			
Plan Requirements for Natural Resources	Limited	SLDO/§303, 304 SLDO/§306.D.2.d, §306.D.4.f	<ul style="list-style-type: none"> Information required for "Existing Resources and Site Analysis Plan" (Section 303.C.2) is not entirely consistent with resources protected in the ordinances. An environmental impact study is required if more than 25% of the site contains protected natural resources. Information requirements are generalized. Recommendation: Upon making suggested revisions to the natural resource protection standards above, revise the plan requirement sections to ensure that all protected resources are shown on the site analysis plan. Several of the cross-references in Section 306.D.2.d that refer to the impact statements are incorrect and should be revised.

Provisions for continued protection	No		<ul style="list-style-type: none"> • Recommendation: Add requirement for continued preservation of all protected resources through deed restrictions, easements, etc.
Protection Standards Centrally Located	Limited	Zoning/Article IV SLDO/§425	<ul style="list-style-type: none"> • Natural Features Protection article includes floodplains, steep slopes, woodlands, wetlands, and riparian buffer standards. • Contains more limited provisions for preservation of natural resources, but is generalized and is not entirely consistent with the protection standards of Article IV of the Zoning Ordinance. • Recommendation: Remove protection standards from Section 425 of the SLDO and replace with a cross-reference to the provisions of the zoning ordinance to avoid gaps and inconsistencies in the protection standards. (If there are specific provisions in the SLDO not included in the zoning ordinance, add those provisions to the applicable sections of the zoning ordinance.)

Source: Municipal Ordinances, Chester County Planning Commission, 2003

*Y/N/L = Yes/No/Limited Protection **SLDO = Subdivision and Land Development Ordinance

Other: Well Withdrawal Impact Study required for larger subdivisions.

Figure C-4
EAST VINCENT TOWNSHIP
Existing Natural Resource Protection Standards

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Land Resources:			
Steep Slopes (15-25%, 25%+)	Limited	Zoning/§1502	<ul style="list-style-type: none"> Disturbance of and uses permitted on very steep slopes (25%+) severely restricted. Uses permitted in underlying zoning allowed on steep slopes (15-25%) subject to specified standards. No maximum disturbance specified. Recommendation: Include maximum disturbance limitation for all steep slopes.
Woodlands Protection	Limited	Zoning/§1503 SLDO/§426.B	<ul style="list-style-type: none"> Zoning Ordinance refers to standards in SLDO and includes provisions for modification of requirements.² SLDO encourages woodland preservation and does not allow removal unless “clearly necessary to effectuate the proposed development” but no maximum disturbance specified. Cost of tree replacement (described below) should act as a deterrent to wide scale removal of trees. Woodland management plan required for areas not subject to woodland disturbance or areas of woodland replacement. Recommendation: Include maximum disturbance limitation for woodlands.
Timber Harvesting Plan required	Limited	SLDO/§426.C.3	<ul style="list-style-type: none"> Woodland management plan required where timber harvesting is proposed in a riparian buffer area. However, requirements for “woodland management plan” are not directly applicable to timber harvesting since those standards are meant for areas of woodlands to be retained, not harvested. Recommendation: Require plan for all forestry/timber harvesting activities, regardless of location. Include standards specific to a timber harvesting plan.
Specimen Vegetation/PNDI Sites	Yes	Zoning/§1503 SLDO/§426.B	<ul style="list-style-type: none"> Zoning Ordinance refers to standards in SLDO. SLDO states specimen vegetation can only be removed if it eliminates a hazardous condition or would otherwise prevent lawful use of the lot.

² Although the specific protection standards are located in SLDO, the Zoning Ordinance indicates the standards apply to building permits, zoning variances, special exceptions, and conditional uses as well as to subdivision and land developments.

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Hedgerows	Limited	Zoning/§1503 SLDO/§426.B	<ul style="list-style-type: none"> The woodland protection standards described above also apply to hedgerows. Recommendation: Revise woodland protection standards as described above. Continue to protect hedgerows through the woodland protection standards.
Tree Replacement required	Yes	SLDO/§426.B.3.c	<ul style="list-style-type: none"> Tree replacement required when woodland disturbance exceeds specified thresholds (i.e. 20,000 s.f. per use or 25% of woodland area)
Tree Protection during construction required	Yes	SLDO/§426.B.3.e	<ul style="list-style-type: none"> Standards established to protect remaining trees on site during construction.
Tree Removal Permit	No		<ul style="list-style-type: none"> Recommendation: Consider implementing tree permit requirement if high priority for Township and/or Region.
Water Resources:			
Wetlands	Yes	SLDO/§426.C	<ul style="list-style-type: none"> Wetlands included in riparian buffer definition. See "riparian buffers" below for applicable protection measures.
Wetland Margins	Yes	SLDO/§426.C	<ul style="list-style-type: none"> Wetland margins included in riparian buffer definition (25 ft. from edge of wetland). See "riparian buffers" below for applicable protection measures. Recommendation: Consider increasing wetland margin width to 50 feet and regulating separate from the riparian buffer standards.
Riparian Buffers	Yes	Zoning/§1504 SLDO/§426.C	<ul style="list-style-type: none"> Zoning Ordinance refers to standards in SLDO and includes provisions for modification of requirements. (See footnote 1) Buffer includes area within 75 feet of lake, pond, or stream bank. Disturbance of riparian buffer not permitted except for very limited activities. Plan for long term management of riparian buffer areas required. Reforestation may be required in French Creek Scenic Corridor District (§1401) Recommendation: Consider increasing buffer width to 100 feet.
Floodplain	Yes	Zoning/§1501	<ul style="list-style-type: none"> Structures prohibited in the floodplain. Appears to be consistent with FEMA standards.

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Stormwater BMP's	Yes	SLDO/§306.C	<ul style="list-style-type: none"> • Stated purposes include encouraging groundwater recharge and use of innovative stormwater management techniques. • Encourages the use of BMPs and includes hierarchy of preferred stormwater management practices with recharge/infiltration listed as most preferred and detention structures listed as least preferred. • Recommendation: Review for consistency with NPDES II requirements.
Administrative:			
Plan Requirements for Natural Resources	Yes	SLDO/§306	<ul style="list-style-type: none"> • Plan requirements include protected resources. • Conservation Plan and Environmental Impact Study required.
Provisions for continued protection	Limited	SLDO/§426.B.5 and §426.C.3	<ul style="list-style-type: none"> • Long-term management plans required for riparian buffer areas and protected woodland areas. • No specific requirements for long term protection of other resources. • Recommendation: Add requirement for continued preservation of all protected resources through deed restrictions, easements, etc.
Protection Standards Centrally Located	Yes	Zoning/Article XV SLDO/§426	<ul style="list-style-type: none"> • Majority of protection standards located in Zoning Ordinance Article XV, Natural Features Conservation or SLDO Section 426, Natural and Historic Features Protection.

Source: Municipal Ordinances, Chester County Planning Commission, 2003

*Y/N/L = Yes/No/Limited Protection **SLDO = Subdivision and Land Development Ordinance

Figure C-5
NORTH COVENTRY TOWNSHIP
Existing Natural Resource Protection Standards

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Land Resources:			
Steep Slopes (15-25%, 25%+)	Yes	Zoning/§902.B.3	<ul style="list-style-type: none"> Disturbance limited to 20% for precautionary slopes (15to 25%) and 10% for prohibitive steep slopes (25%+) Uses severely restricted on very steep slopes (i.e., only driveways, utilities)
Woodlands Protection	Yes	Zoning/§902.B.7.b	<ul style="list-style-type: none"> Disturbance limited to 25% for residential uses and 35% for non-residential uses.
Timber Harvesting Plan required	Yes	Zoning/§902.B.7.b	<ul style="list-style-type: none"> Timber harvesting plan required for approved timber harvesting operation.
Specimen Vegetation/PNDI Sites	Yes	Zoning/§902.B.7.b	<ul style="list-style-type: none"> Specimen vegetation may only be removed due to hazardous condition or demonstrable financial hardship
Hedgerows	Yes	Zoning/§902.B.7.b	<ul style="list-style-type: none"> Woodlands regulations apply to hedgerows.
Tree Replacement required	Yes	Zoning/§902.B.7.d	<ul style="list-style-type: none"> Tree replacement required when woodland disturbance exceeds set thresholds.
Tree Protection during construction required	Yes	Zoning/§902.B.7.c	<ul style="list-style-type: none"> Tree protection standards during construction established for trees to remain on site.
Tree Removal Permit	Yes	Zoning/§902.B.7.e	<ul style="list-style-type: none"> Unless otherwise exempted, tree removal requires permit. Depending on size of lot, 3 to 6 trees of 6" or less dbh may be removed from residential lots in any two year period without a permit.
Water Resources:			
Wetlands	Yes	Zoning/§902.B.5	<ul style="list-style-type: none"> 100% protection of wetlands unless federal or state permits have been obtained. Delineation by qualified professional required. Wetland protection standards apply to lakes and ponds.
Wetland Margins	Yes	Zoning/§902.B.6	<ul style="list-style-type: none"> No more than 10% of wetland margin can be disturbed. Wetland margin extends 50 to 100 feet from edge of wetland, depending on presence of hydric soils.

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Riparian Buffers	Yes	Zoning/§902.B.4	<ul style="list-style-type: none"> • 100% protection of Zone One (Inner) Buffer except for limited specified activities. • No more than 10% of Zone Two (Outer) Buffer may be disturbed except for limited activities. • Total buffer width = 100 feet (Zone One = 35 ft., Zone Two = 65 ft.)
Floodplain	Yes	Zoning/§901	<ul style="list-style-type: none"> • 100% protection of 100 year floodplain. • No building permitted in floodplain. • Standards consistent with FEMA requirements.
Stormwater BMP's	Yes	SLDO/§620	<ul style="list-style-type: none"> • Stormwater systems to be based on PA Handbook of BMP's for Developing Areas, groundwater recharge emphasized. • Recommendation: Review for consistency with NPDES II requirements.
Administrative:			
Plan Requirements for Natural Resources	Yes	Zoning/§902.C.1 SLDO**/§402/403	<ul style="list-style-type: none"> • Zoning requires delineation of protected resources/SLDO requires existing Resources and Site Analysis Plan and Natural Resource Protection Plan for preliminary and final plans.
Provisions for continued protection	Yes	Zoning/§902.C.3	<ul style="list-style-type: none"> • Deed restrictions or covenants required for protected resources; conservation easements also accepted.
Protection Standards Centrally Located	Yes	Zoning/§902	<ul style="list-style-type: none"> • Natural resource protection standards located in single overlay district.

Source: Municipal Ordinances, Chester County Planning Commission, 2003

*Y/N/L = Yes/No/Limited Protection **SLDO = Subdivision and Land Development Ordinance

Other: The "Growing Greener" process uses environmental factors to determine the maximum density in subdivisions in the RC, RR, and R-1 districts.

Figure C-6
SOUTH COVENTRY TOWNSHIP
Existing Natural Resource Protection Standards

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Land Resources:			
Steep Slopes (15-25%, 25%+)	Limited	Zoning/§1506	<ul style="list-style-type: none"> Slopes are divided into steep (15-25%) and very steep (25%+). Limited uses are permitted by special exception on very steep slopes. The underlying uses are permitted on steep slopes subject to special exception approval. Other standards also apply to any permitted development on steep slopes. Recommendation: Include maximum disturbance limitation for steep slopes. Also, wording in Section 1506.B and 1506.C is somewhat confusing. Section 1506.B may imply that more uses are permitted than is the case in 1506.C.
Woodlands Protection	Limited	Zoning/§1502 SLDO/§625	<ul style="list-style-type: none"> Zoning Ordinance refers to standards in SLDO and includes provisions for modification of requirements.³ Requires applicant to make a reasonable effort to preserve existing trees and hedgerows and to minimize disturbance but no maximum disturbance specified. Cost of tree replacement (described below) should act as a deterrent to wide scale removal of trees. Guidelines are provided for selecting vegetation to be removed. Woodland management plan is required for long-term maintenance of wooded areas to be retained. Recommendation: Include maximum disturbance limitation for woodlands.
Timber Harvesting Plan required	Limited	SLDO/§625.E SLDO/§618.C.3.b	<ul style="list-style-type: none"> Woodland management plan required where timber harvesting is proposed in a riparian buffer area. However, requirements for "woodland management plan" are not directly applicable to timber harvesting since those standards are meant for areas of woodlands to be retained, not harvested. Recommendation: Require plan for all forestry/timber harvesting activities, regardless of location. Include standards specific to a timber harvesting plan.

³ Although the specific protection standards are located in SLDO, the Zoning Ordinance indicates the standards apply to building permits, zoning variances, special exceptions, and conditional uses as well as to subdivision and land developments.

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Specimen Vegetation/PNDI Sites	Yes	Zoning/§1502 SLDO/§625	<ul style="list-style-type: none"> • Zoning cross-references standards in SLDO. • Specimen vegetation cannot be removed unless it's to eliminate a hazardous condition or necessary to permit a lawful use of the tract. • Preserved specimen veg. can be credited towards tree replacement requirements.
Hedgerows	Limited	Zoning/§1502 SLDO/§625	<ul style="list-style-type: none"> • The woodland protection standards described above also apply to hedgerows. • Recommendation: Revise woodland protection standards as described above. Continue to protect hedgerows through the woodland protection standards.
Tree Replacement required	Yes	SLDO/§625.C.3, 625.D	<ul style="list-style-type: none"> • Tree replacement required when woodland disturbance exceeds specified thresholds (i.e. 20,000 s.f. per use or 25% of woodland area)
Tree Protection during construction required	Yes	SLDO/§625.C.5	<ul style="list-style-type: none"> • Standards established to protect remaining trees on site during construction.
Tree Removal Permit	No		<ul style="list-style-type: none"> • Recommendation: Consider implementing tree permit requirement if high priority for Township and/or Region.
Water Resources:			
Wetlands	Yes	Zoning/§1503, 1504 SLDO/§626	<ul style="list-style-type: none"> • Wetlands included in riparian buffer definition. • See "riparian buffers" below for applicable protection measures.
Wetland Margins	Limited	Zoning/§1503, 1504 SLDO/§626	<ul style="list-style-type: none"> • Wetland margins included in riparian buffer definition (15 ft. from edge of wetland). • See "riparian buffers" below for applicable protection measures. • Recommendation: Consider increasing wetland margin width to 50 feet and regulating separate from the riparian buffer standards.

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Riparian Buffers	Yes	Zoning/§1503, 1504 SLDO/§626	<ul style="list-style-type: none"> • Zoning Ordinance refers to standards in SLDO and includes provisions for modification of requirements.⁴ • Buffer includes area within 75 feet of a stream bank, any wetlands and any area within 15 feet of a wetlands, and any area of hydric soil. • Disturbance of riparian buffer not permitted except for very limited activities. Vegetation management is more strictly controlled within 25 feet of a streambank or wetland. • Plan for long term management of riparian buffer areas required. • Recommendation: Consider increasing buffer width to 100 feet and 50 feet for wetlands (see also above recommendation).
Floodplain	Yes	Zoning/§1508	<ul style="list-style-type: none"> • Structures generally prohibited within the floodplain. • Standards appear to be consistent with FEMA requirements.
Stormwater BMP's	No	SLDO/§618	<ul style="list-style-type: none"> • Standards date back to 1983, so more innovative approaches have not been incorporated into the ordinance and BMPs are not mentioned. • Section 618.D.8 does emphasize that "natural infiltration and water resource potentials shall guide design, construction, and vegetation decisions." • Recommendation: Update ordinance to promote innovative stormwater management techniques. Review for consistency with NPDES II requirements.
Administrative:			
Plan Requirements for Natural Resources	Limited	SLDO/§501	<ul style="list-style-type: none"> • Plan requirements are not closely tied to resources protected in the ordinances. • Conservation plan (for erosion control) requires some natural resources to be shown, but no site analysis or resource protection plan is required. • Supervisors may require impact statements, one of which must consider the compatibility of the proposed use with natural features and environmental constraints on the site. • Recommendation: Revise the plan requirement sections to ensure that all protected resources are shown on a site analysis plan or resource protection plan. These requirements should apply to all submitted plans.

⁴ Although the specific protection standards are located in SLDO, the Zoning Ordinance indicates the standards apply to building permits, zoning variances, special exceptions, and conditional uses as well as to subdivision and land developments.

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Provisions for continued protection	Limited	SLDO/§625 and 626	<ul style="list-style-type: none"> • Long term management plans required for riparian buffer areas and protected woodland areas. • No specific requirements for long term protection of other resources. • Recommendation: Add requirement for continued preservation of all protected resources through deed restrictions, easements, etc.
Protection Standards Centrally Located	Yes	Zoning/Article XV SLDO/§625 and 626	<ul style="list-style-type: none"> • Majority of protection standards located in Zoning Ordinance Article XV, Natural Resources Conservation or SLDO Sections 625 and 626 Conservation of Woodlands and Conservation of Riparian Buffer Areas.

Source: Municipal Ordinances, Chester County Planning Commission, 2003

*Y/N/L = Yes/No/Limited Protection **SLDO = Subdivision and Land Development Ordinance

Figure C-7
WALLACE TOWNSHIP
Existing Natural Resource Protection Standards

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Land Resources:			
Steep Slopes (15-25%, 25%+)	Yes	Zoning/§1213 SLDO/§401.F ⁵	<ul style="list-style-type: none"> • Protection standards apply to slopes of 15 to 20% and 20%+. Maximum disturbance of 15-20% slopes is 10% of the lot area within that category. For 20%+ slopes, no structures are permitted, disturbance is limited to that necessary to provide access to the lot. Maximum coverage limitations apply to both slope categories. • Cross-references Zoning section 1213 and includes additional standards for site disturbance.
Woodlands Protection	Limited	Zoning/§1209.B.5 SLDO/§401.D SLDO/§626.B	<ul style="list-style-type: none"> • Tree removal, within a period of three years or ten of more trees greater than eight inches DBH must be consistent with a tree cutting plan approved by the BOS. (see timber harvesting plan below) • Requires woodlands on site to be evaluated and woodlands exceeding one acre are to be included in “greenway” areas to the maximum extent possible. Disturbance or removal of woodlands in environmentally sensitive areas to be minimized and only undertaken on a limited basis when approved by the Board. • Conservation of Existing Vegetation - Native vegetation on the site is to be preserved to the maximum extent possible; site improvements are to be located to minimize loss of vegetation, particularly “native woodlands, old fields, hedgerows, and specimen trees.” • Recommendation: Include specific maximum disturbance limitation for woodlands to strengthen “maximum extent possible” language. Consider consolidating vegetation protection requirements into one location - i.e., woodlands, specimen vegetation, and hedgerows.

⁵ All SLDO 400 sections are located in Article IV - “Resource Conservation and Greenway Delineation Guidelines.”

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Timber Harvesting Plan required	Yes	Zoning/§1209.B	<ul style="list-style-type: none"> • Tree removal, within a period of three years of ten or more trees greater than eight inches DBH must be consistent with a tree cutting plan approved by the BOS. • Bond is required equaling 25% of the value of the trees to pay for possible damage to roads, bridges, and other public facilities. • Standards apply whether or not cutting is for commercial gain, so appears to apply to both forestry and clearing for development. • Recommendation: Determine if separate woodland management plan standards would be more appropriate for non-timber harvesting operations. (Plan requirements seem general enough that they may work for both types of tree removal.)
Specimen Vegetation/PNDI Sites	Yes	Zoning/§1209.B SLDO/§401.G SLDO/§626.B	<ul style="list-style-type: none"> • Specimen trees cannot be marked for cutting or cut and must be protected from damage during the execution of the tree cutting plan. • Significant Natural Areas and Features - For PNDI sites and other significant natural areas, either documented by township or in required resource inventory, applicant is to take "reasonable measures" to protect them by incorporating them into greenway areas or avoiding their disturbance in areas proposed for development. • Conservation of Existing Vegetation - Native vegetation on the site is to be preserved to the maximum extent possible; site improvements are to be located to minimize loss of vegetation, particularly "native woodlands, old fields, hedgerows, and specimen trees." • Recommendation: Consider consolidating vegetation protection requirements into one location - i.e., woodlands, specimen vegetation, and hedgerows.

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Hedgerows	Yes	SLDO/§401.D.3(b) SLDO/§626.B SLDO/§626.E	<ul style="list-style-type: none"> • Encourages preservation of woodlands along lines created by “streams, swales, stones, fences, and hedgerows” to provide buffering between adjacent properties and uses within the site. • Conservation of Existing Vegetation - Native vegetation on the site is to be preserved to the maximum extent possible; site improvements are to be located to minimize loss of vegetation, particularly “native woodlands, old fields, hedgerows, and specimen trees.” • Requires 50 foot buffers to be maintained along all “hedgerows, streams, swales, etc.” Contains guidelines for type of vegetation to be preserved or created in buffer. • Recommendation: Include hedgerows with woodlands if specific maximum disturbance limitation for woodlands are added to strengthen “maximum extent possible” language. Consider consolidating vegetation protection requirements into one location - i.e., woodlands, specimen vegetation, and hedgerows.
Tree Replacement required	No		<ul style="list-style-type: none"> • Recommendation: Require replacement of trees when more than a threshold area of woodlands/large trees are cleared.
Tree Protection during construction required	Yes	SLDO/§404.B SLDO/§626.B	<ul style="list-style-type: none"> • Includes standards for the protection of vegetation during site preparation, construction, and clean-up. • Also includes standards for protection of vegetation to be remain on the site.
Tree Removal Permit	Yes	Zoning/§1209.B	<ul style="list-style-type: none"> • Tree cutting exceeding a certain level (see “timber harvesting above) may not occur unless the property owner obtains prior approval by the BOS. Tree cutting plan is required regardless of whether tree removal is for commercial gain.
Water Resources:			
Wetlands	Yes	Zoning/Article VIII	<ul style="list-style-type: none"> • See Floodplain regulations below - Wetlands are protected within the Flood Hazard and Wet Soils District. • Recommendation: May want to consider specific protection standards for wetlands since some of the permitted uses in the floodplain (e.g., agriculture) may not be appropriate in wetlands.
Wetland Margins	No		<ul style="list-style-type: none"> • Recommendation: Add wetland margin protection standards - could do this by including area within 50 feet of wetlands in the FH and WS district.

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Riparian Forest Buffers	Yes	Zoning/Article VIII SLDO/§626.B SLDO/§626.E	<ul style="list-style-type: none"> • See Floodplain regulations below - Regulates land within 50 feet of banks of any watercourse or body of water. • Vegetation in environmentally sensitive areas, including vegetation performing important soil stabilizing functions on wet soils, stream banks, and sloping lands, can only be disturbed when approved by the Board. • Requires 50-foot buffers to be maintained along all “hedgerows, streams, swales, etc.” Contains guidelines for type of vegetation to be preserved or created in buffer. • Recommendation: Create separate riparian buffer standards so regulations are all in one place. Consider increasing buffer width to 100 feet.
Floodplain	Yes	Zoning/Article VIII SLDO/§401.C	<ul style="list-style-type: none"> • Flood Hazard and Wet Soils District - Regulates floodplain plus areas of alluvial and hydric soils, wetlands, and land within 50 feet of banks of any watercourse or body of water. • Structures, fill, and storage not permitted in the FH and WS district. Limited uses permitted such as agriculture with conservation plan. Selective cutting allowed to within 50 feet of stream bank. • Cross references Flood Hazard and Wet Soils District. “Stream valleys, swales, springs and lowland areas” are to generally be located in “greenway” lands.
Stormwater BMP's	No	SLDO/§620	<ul style="list-style-type: none"> • Stated intent is to preserve natural watercourses, improve water quality, maximize, groundwater recharge, and limit use of stormwater structures that present maintenance problems. • Does not specifically mention use of BMPs or innovative stormwater management techniques. (Standards were adopted in 1993.) • Recommendation: Update ordinance to promote innovative stormwater management techniques. Review for consistency with NPDES II requirements.
Administrative:			
Plan Requirements for Natural Resources	Yes	SLDO/§502.C, D SLDO/§502.E	<ul style="list-style-type: none"> • Existing Resources and Site Analysis Plan and Resource Conservation Plan requires all relevant natural resources information to be shown on preliminary plan. • This section includes requirements for the Four-Step Design Process for determining layout of greenway lands, house sites, streets, and lot lines in the FRR District - layout is to be designed around sites natural features.

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Provisions for continued protection	Yes	Zoning/Article XI, /§1102.C SLDO/§307.C.4 SLDO/§626.E.4	<ul style="list-style-type: none"> • Permanent protection of greenway lands is required; in many cases sensitive resources would be located within these areas (i.e., wetlands, floodplain, watercourses, slopes of 20%+) • Requires easements for open space with final plan. • Requires buffer areas to be deed restricted.
Protection Standards Centrally Located	Limited	SLDO/Article IV SLDO/§403.A	<ul style="list-style-type: none"> • Resource Conservation and Greenway Delineation Guidelines - Provides guidelines for the protection of most resources, but specific protection standards are located throughout the ordinances and are sometimes repeated in more than one place. • Resource conservation guidelines applies to all subdivisions and land developments; greenway delineation and 4-step process applies to development with greenway lands in the FRR district. • Outlines resources that should be located in greenway lands to the fullest extent possible. • Recommendation: Consider pulling resource protection measures, particularly more specific standards, into one centralized location for ease of administration. This could also eliminate some redundancy in the ordinances.

Source: Municipal Ordinances, Chester County Planning Commission, 2003

*Y/N/L = Yes/No/Limited Protection **SLDO = Subdivision and Land Development Ordinance

Other: The “Growing Greener” process uses environmental factors to determine the maximum density in subdivisions in the FRR Flexible Rural Residential district (includes most of township). New development or expansion of existing development may not create a negative water balance (SLDO Section 401.B.)

Figure C-8
WARWICK TOWNSHIP
Existing Natural Resource Protection Standards

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Land Resources:			
Steep Slopes (15-25%, 25%+)	Yes/R	Zoning/Article §1604 and §1605	<ul style="list-style-type: none"> Allows certain structures by conditional use on very steep slopes (25%+). Additional uses, including dwellings permitted by conditional use on 15% to 25% slopes. Criteria included for approving conditional use, including a provision that limits regrading or stripping of vegetation to no more than 30% of the steep slope area on the lot. Recommendation: Disturbance limitation should apply in all cases, not just for conditional uses.
Woodlands Protection	Yes	Zoning/§2505	<ul style="list-style-type: none"> Requires a conservation plan for any site disturbance of trees greater than 5,000 feet or more than 5% of the tree cover on the lot, or that lies within a scenic viewshed. Plan requires impact assessment and provisions for mitigation and long-term maintenance. Criteria is included to provide protection to trees that have been identified protection that focuses on the protection of the tree's critical root zone. Maximum disturbance limits are included for woodlands, hedgerows, specimen trees, and other vegetation.
Timber Harvesting Plan required	Yes	Zoning/§1923	<ul style="list-style-type: none"> Timber harvesting plan required for commercial timber harvesting. Includes specific information requirements for plan.
Specimen Vegetation/ PNDI Sites	Yes	Zoning/§2505 and §2508	<ul style="list-style-type: none"> Individual trees of 8 inch DBH or greater are to be included in conservation plan. Grading, buildings, and structures prohibited within 100 feet of a PNDI site. Specimen vegetation shall not be removed unless the applicant can prove that the removal is essential to eliminate a hazardous condition.
Hedgerows	Yes	Zoning/§2505	<ul style="list-style-type: none"> Maximum disturbance limits are included for woodlands, hedgerows, specimen trees, and other vegetation. Hedgerows are included in the conservation plan requirements.

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Tree Replacement required	Yes	Zoning/§2505.e	<ul style="list-style-type: none"> If more 20% or more of trees of 8 inch DBH or a wooded lot are disturbed, tree replacement is required. If located in the Scenic River Corridor or within 250 feet of a ridgeline, tree replacement required if more than 10% of the trees are disturbed.
Tree Protection during construction required	Yes	Zoning/§2505.C	<ul style="list-style-type: none"> Standards included for the protection of vegetation from mechanical injury and grading change.
Tree Removal Permit	Limited ⁶		<ul style="list-style-type: none"> Requires plan and permit for the site disturbance of trees for major subdivisions or land developments. Does not apply to individual property owners.
Water Resources:			
Wetlands	Limited	Zoning/§2502	<ul style="list-style-type: none"> No wetlands disturbance permitted without disturbance permits. Final plan approval is contingent on applicant receiving all wetlands permits and/or waivers permits. Structures and/or subsurface sewage systems are not permitted on or within any soil type with a seasonally high water table. Recommendation: Standards should more clearly state that structures and earth disturbance are not permitted within a wetland, except with appropriate permit. While implied, it is not as clearly stated as for wetland buffer and riparian buffer.
Wetland Margins	Yes	Zoning/§2502.A.3	<ul style="list-style-type: none"> 2003 amendment established a 100-foot buffer around the edge of a wetland within which no structure or earth disturbance is permitted.
Riparian Buffers	Yes	Zoning/§2510.A	<ul style="list-style-type: none"> 2003 amendment established a 100-foot buffer from the top bank of a watercourse or the edge of a pond or other waterbody within which no structure or earth disturbance is permitted.
Floodplain	Yes	Zoning/Article 15	<ul style="list-style-type: none"> Structures are not permitted in the 100-year floodplain. Appears to be consistent with FEMA standards.
Stormwater BMP's	Yes	SLDO/§810	<ul style="list-style-type: none"> Requires the use of BMPs and Cross-references "PA Handbook of BMPs for Developing Areas" Comprehensive standards for erosion and sedimentation control. Note: NPDES II requirements do not apply.

⁶ Applies only to major subdivisions and land developments.

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Administrative:			
Plan Requirements for Natural Resources	Yes	SLDO/Articles 4, 5, 6, 7 and §1007	<ul style="list-style-type: none"> • Sketch, preliminary, and final plan required to show all protected resources and include a conservation plan. • Environmental impact assessment report required for developments above a specified size (10 units for residential development). Assessment requirements are detailed and comprehensive.
Provisions for continued protection	Yes/R	Zoning/§2505.D.	<ul style="list-style-type: none"> • The Conservation Plan does include specifications for Mitigation and Maintenance. • Recommendation: Add requirement for continued preservation of protected resources through deed restrictions, easements, etc.
Protection Standards Centrally Located	Yes	Zoning/Article 25	<ul style="list-style-type: none"> • Majority of resource protection measures are centrally located in Article 25, Natural Resources Protection. • Steep slopes and floodplain standards are in two separate articles. • Recommendation: Consider including cross-references in Article 25 to other resource related sections of the ordinance.

Source: Municipal Ordinances, CCPC, 2003*Y/N/L = Yes/No/Limited Protection **SLDO = Subdivision and Land Development Ordinance

Figure C-9
WEST VINCENT TOWNSHIP
Existing Natural Resource Protection Standards

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Land Resources:			
Steep Slopes (15-25%, 25%+)	Limited	Zoning/Article XVII SLDO/§702.F	<ul style="list-style-type: none"> Steep Slope Conservation Overlay District - Standards apply to 15 to 25% and 25%+ slopes. Limits types of uses and impervious surface but does not include maximum disturbance standard. The SLDO language is somewhat more stringent - the only site disturbance permitted on 25%+ slopes is driveways and driveways, single-family dwellings, and septic system on 15 to 25% slopes. Recommendation: Include maximum disturbance limitation and ensure that zoning and sldo provisions are consistent.
Woodlands Protection	Limited	SLDO/§702.D	<ul style="list-style-type: none"> Contains criteria for the evaluation of woodlands and extent to which they should be designated as greenway or development lands. Evaluation must be undertaken by a professional and submitted as part of the s/l d plan. Provides guidelines for preservation but there are no maximum disturbance limitations. Recommendation: Include maximum disturbance limitations. Consider consolidating vegetation protection requirements into one location - i.e., woodlands, specimen vegetation, and hedgerows.
Timber Harvesting Plan required	No	Zoning/§2223	<ul style="list-style-type: none"> Timber harvesting/logging - Section requires selective cutting and only in accordance with Pa. Dept. of Forestry standards and “applicable permit requirements.” However, section later states under what conditions clearcutting is permitted, contradicting selective cutting only rule. Clearcutting not permitted with 100 feet of a stream or on steep slopes. Recommendation: Rectify the contradiction noted above and require a timber-harvesting plan.

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Specimen Vegetation/PNDI Sites	Limited	SLDO/§702.G	<ul style="list-style-type: none"> PNDI sites or locally known sites of significant natural areas and features are to be identified and applicants are to take “all reasonable” measures to protect these features by incorporating them into greenway lands or avoiding their disturbance. Recommendation: Include specific protection measures for specimen vegetation and limit circumstances under which they may be removed or disturbed.
Hedgerows	Limited	SLDO/§702.D.4.a	<ul style="list-style-type: none"> Encourages preservation of woodlands along lines created by “streams, swales, stones, fences, and hedgerows” to provide buffering between adjacent properties and uses within the site. Recommendation: Consider including hedgerows with woodlands and add specific disturbance limitations as recommended above. Consider locating vegetation protection standards in one section of the ordinance.
Tree Replacement required	No		<ul style="list-style-type: none"> Recommendation: Require replacement of trees when more than a threshold area of woodlands/large trees are cleared.
Tree Protection during construction required	Yes	SLDO/§705	<ul style="list-style-type: none"> Provides guidelines for the protection of vegetation to be preserved on site. Language states that Board “may require limit of disturbance to be delineated.” Recommendation: Always require that tree protection delineation and standards be applied. Applicant has option of requesting waiver if necessary.
Tree Removal Permit	No		<ul style="list-style-type: none"> Recommendation: Consider implementing tree permit requirement if high priority for Township and/or Region.
Water Resources:			
		Zoning/Article XXIII	Water Resource Protection Overlay District - Covers several of the water resources listed below - intent is to apply standards in the overlay district that would adversely affect the quality or quantity of water recharged to aquifers. Additional site information is required to show how potential adverse impacts will be mitigated.
Wetlands	Yes	Zoning/§2305, see also SLDO/§702.C	<ul style="list-style-type: none"> Wetlands may not be disturbed except for driveways and utilities when proper state and federal permits have been obtained and there is no other practical alternative.

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Wetland Margins	Yes	Zoning/§2305.B	<ul style="list-style-type: none"> • Minimum 50 foot buffer is required measured from delineated wetland boundary and no more than 20% of buffer may be disturbed.
Riparian Buffers	Yes	Zoning/§2307, see also SLDO/§702.C	<ul style="list-style-type: none"> • A 50 foot vegetated stream buffer is required around wetlands, special protection streams, and around all lakes or ponds designated as High Quality or Exceptional Value waters. • Four additional feet of buffer is required for every 1% increase in slope. • Recommendation: Consider requiring up to 100 feet for buffer and apply to all streams/watercourses.
Floodplain	Yes	Zoning/Article XVI, §2306	<ul style="list-style-type: none"> • Floodplain Conservation Overlay District does not permit structures in the floodplain and appears to be consistent with FEMA standards. • Section 2306 applies restrictions to high groundwater areas.
Stormwater BMP's	Yes	SLDO/§610, see also Zoning/§2309	<ul style="list-style-type: none"> • Section 610 requires use of BMPs and encourages maximizing of groundwater recharge capacity and performance standards and design criteria that address water quality. • Section 2309 requires uses proposing land disturbance but which do not fall under the subdivision/land development definition to comply with Section 610 above. • Recommendation: Review for consistency with NPDES II requirements.
Administrative:			
Plan Requirements for Natural Resources	Yes	SLDO/§403.D, E SLDO/§403 F	<ul style="list-style-type: none"> • Existing Resources and Site Analysis Plan and Resource Conservation Plan require all relevant resource information. • This section includes requirements for the Four-Step Design Process for determining layout of greenway lands, house sites, streets, and lot lines - layout is to be designed around sites natural features.
Provisions for continued protection	Yes	SLDO/§404 Zoning/§1905	<ul style="list-style-type: none"> • Requires easements and deed restrictions with final plan. • Greenway land is subject to permanent conservation easement; in many cases sensitive resources would be located within these areas (i.e., wetlands, floodplain, watercourses, steep slopes) •

Resource	Protected?	Ordinance/Section	Description of Protection Standard
Protection Standards Centrally Located	Limited	SLDO/Article VII SLDO/§704.B	<ul style="list-style-type: none"> Resource Conservation and Greenway Delineation Standards - Provides guidelines for the protection of most resources, but specific protection standards are located throughout the ordinances and are sometimes repeated in more than one place. Outlines resources that should be located in greenway lands to the fullest extent possible. Recommendation: Consider pulling resource protection measures, particularly more specific standards, into one centralized location for ease of administration. This could also eliminate some redundancy in the ordinances.

Source: Municipal Ordinances, Chester County Planning Commission, 2003

*Y/N/L = Yes/No/Limited Protection **SLDO = Subdivision and Land Development Ordinance

Other: Article IV, RC Rural Conservation District - Tier I to IV subdivisions intent is to minimize impacts on environmental resources and disturbance of natural and cultural features. Density is determined by the natural resources on the site. (Growing Greener process used)

Article XXIII, Water Resource Protection Overlay District

Article XIX, Design Standards for Site Planning and Greenway Lands - Applies to development with "greenway lands" (i.e., open space) - one purpose is to protect natural features including aquifers, water bodies, floodplains, wetlands, woodlands, and steep slopes from disturbance.

Zoning/Section 2227, Well Ordinance Requirements - refers to separate township well ordinance.

SLDO/Section 702.B - New development or expansion of existing development may not create a negative water balance

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