

Section 1108 Critical Natural Areas (CNA)

The applicant is required to contact the DNREC for the determination of all potential CNA and shall follow the State guidelines for developmental procedures.

Section 1109 Water Resources Protection Areas (WRPA).

Water resource protection areas are Wellheads Class A and Recharge Areas. All such areas are as depicted on the three-map series "Water Resource Protections Areas for the City of Newark, City of Wilmington, New Castle County, Delaware," prepared by the Water Resources Agency for New Castle County that is dated 1993, or as amended. These areas shall be protected as required by the following sections to protect the Town's water resources from contamination and pollution.

Section 1110 Wellheads Class A.

- A. Areas within three hundred (300) feet of the well shall be one hundred (100) percent open space.
- B. The protection area around the well may be reduced to a one hundred and fifty (150) foot radius provided a hydrogeological report, prepared by a Delaware Registered Geologist and submitted to the satisfaction of the Delaware Geological Survey and the DNREC, is prepared. The report must certify that (1) the minimum 60-day time of-travel from a point to the public water supply well is maintained and (2) the well draws from a confined aquifer.
- C. The natural runoff flowing into wellhead areas shall be allowed and all new stormwater run-off shall be diverted around the wellhead protection areas wherever practical.
- D. The stormwater system's discharge to wellhead WRPA's shall be by sheet through a grassland or discharge from a stormwater management facility having a wetland or aquatic bench. Stormwater runoff from all parking areas shall be directed to a stormwater management facility before it is discharged into a wellhead WRPA.
- E. Within the wellhead area, impervious surfaces shall be limited to the buildings and access associated with the well and distribution and treatment facilities and their maintenance.
- F. The minimum lot area for a proposed public water supply well and related facility drawing from a confined aquifer shall be 1 acre and the minimum lot area for a public well drawing from an unconfined aquifer shall be 2 acres.
- G. This Section does not apply to wellheads constructed prior to August 2001. All existing wellheads constructed prior to this date are considered as being "grandfathered" and the regulations of the section do not apply.

Section 1111 Recharge Areas.

Recharge Areas are those areas with high percentages of sand and gravel that have "excellent" potential for recharge as determined through a Stack Unit Mapping Analysis performed originally by the Delaware Geological Survey.

- A. Within Townsend Proper - Development within the environs of downtown Townsend (Townsend Proper, as defined in Section 1101) may occur provided the gross percent impervious cover of the parcel within the recharge area is either 50% or as dictated under Appendix A of the Town Code for maximum lot coverage (whichever is most stringent). In situations where the existing impervious cover of a property is over 50% and the applicant desires to re-develop the property, the gross impervious cover shall be equal to

or less than the original impervious cover percentage of the original site. In areas zoned as either Commercial (C) or Industrial (I) within Townsend Proper, the applicant can seek relief by submitting an environmental study and report certified by a state registered professional geologist or professional engineer with a background in hydrogeology that indicates that additional development would not endanger the public or the environment.

- B. Within Townsend Greenbelt - New development within the environs outside of Townsend Proper (Townsend Greenbelt, as defined in Section 1101) may occur provided the gross percent impervious cover of the entire parcel and/or development within the recharge area to be constructed is 30% or less.
- C. No underground storage tanks containing petroleum or any chemicals shall be permitted in a designated recharge area.
- D. For all new construction, all structures shall be required to discharge all roof drains into underground recharge systems. No above ground discharge is permitted in recharge areas by roof drains.
- E. Refer to Figure 11-11.1 for the Town boundaries of the areas designated as "Townsend Proper" and "Townsend Greenbelt".

THE TOWN OF TOWNSEND
UNIFIED DEVELOPMENT CODE
NEW CASTLE COUNTY, DELAWARE
APPROVED BY THE BOARD OF SUPERVISORS
REVISION NO. 1000
Remington & Vernick Engineers
200 West 10th Street, Newark, Delaware 19711

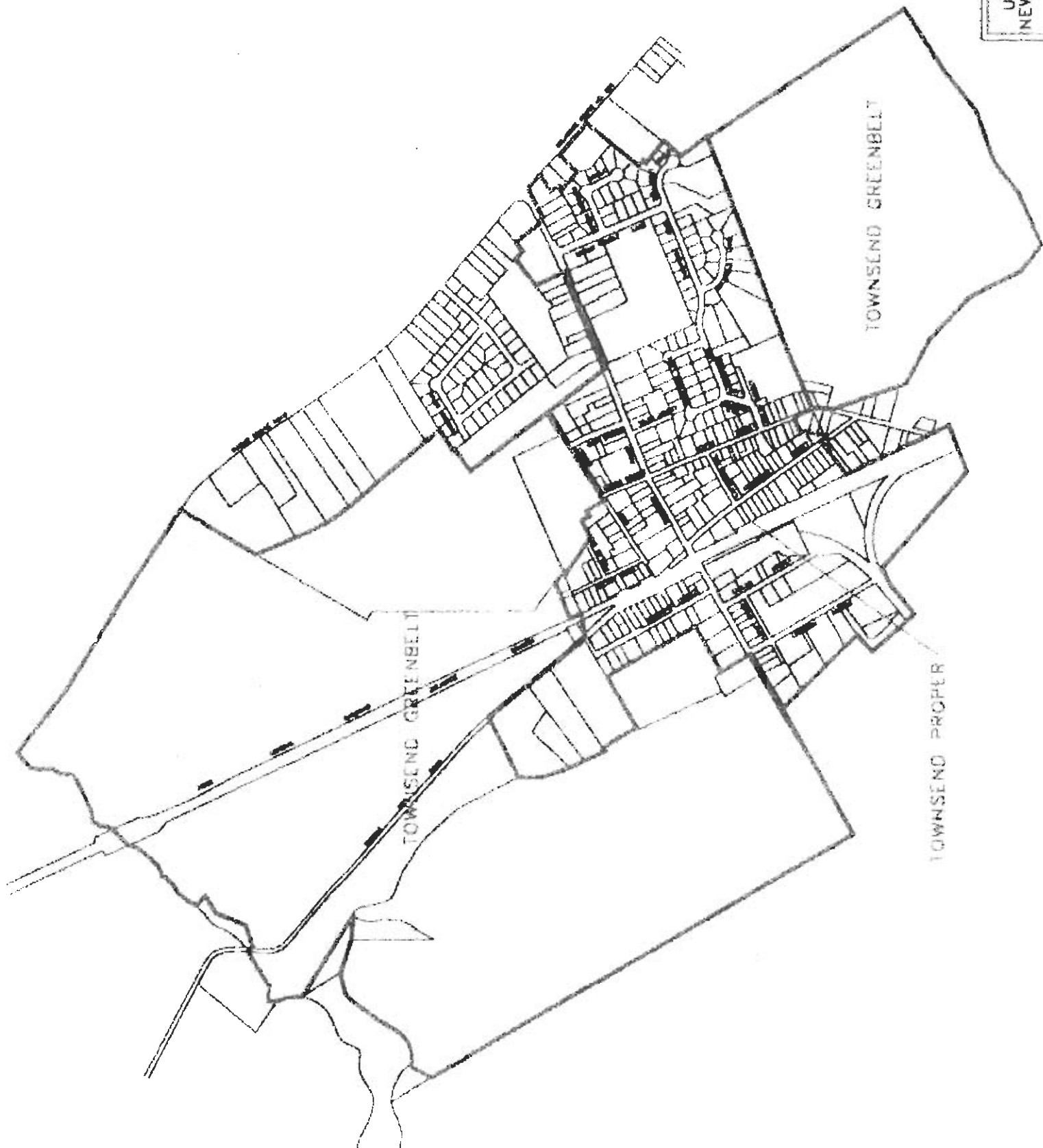


Figure 11-11.1

Section 1112**Boundary Determination for WRPA.**

- A. All subdivision and land development plans depicting development or land disturbance submitted for Town review shall be evaluated for the existence of water resource protection areas by scaling for distances shown on the water resource protection area map. If existing, the boundaries of the areas shall be delineated on the plan by the applicant's engineer.
- B. When there appears to be a conflict between the mapped boundary and actual site conditions, the applicant may engage the services of professional practitioners set forth in this section to prepare a report intended to determine more accurately the precise boundary of the water resource protection area, which report shall be submitted to the Town with the detailed findings necessary to indicate the location of the boundary.
- C. The plan showing the boundary conflict should indicate the following:
 - 1. A detailed topographic layout of the subdivision and/or area to be developed prepared by a land surveyor or engineer.
 - 2. For floodplain and erosion-prone slopes boundary determinations, a revised surface soils map of the subdivision and/or area prepared by a DNREC-licensed soil scientist including a written report of the on-site field inspection and test boring data;
 - 3. For reservoir watershed, wellhead and recharge boundary determinations, a site-specific geological and hydro-geological analysis shall be performed by a state-registered professional geologist or engineer with a background in hydro-geology and shall be based upon through site investigation and testing; and
 - 4. Evidence derived from a site-specific investigation which may include aquifer testing, test borings, test pits, observation wells, groundwater elevations and topography surveys as appropriate for the type of water resource protection area to clearly demonstrate that the area in question does not meet the definition of a water resource protection area as defined in this section.
- D. The applicant is permitted to make a submission to the County with the advice of the Delaware Geological Survey and the Water Resources Agency, to adjust the boundary or area designation based thereon. Such adjustments shall have the effect of exempting the subject parcel from the use regulations of this section and shall have the effect of amending the limits of the water resource protection area. The applicant will then be required to provide a notification sent by the County indicating that they concur with the amended boundary location in order to be exempted from the requirements of this section.

Section 1113**Uniform Standards and Criteria.**

- A. The following standards and criteria shall be applicable to any limited use, special use or other use requiring an environmental impact assessment permitted pursuant to this Division:
 - 1. Stormwater management facilities shall be designed and constructed in accordance with DNREC "Delaware Sediment and Stormwater Regulations," dated January 23, 1991 or as later revised.

Section 1114**Environmental Impact Assessment Report.**

- A. If a proposed use requires an environmental impact assessment report, the applicant shall have such a report certified by a professional engineer, geologist or other certified professional in the applicable environmental discipline. Mitigation cannot be used where the conflict can be avoided or minimized. The report shall contain the following criteria, given in order of preference:
1. Site character. The report shall identify all potential on-site sensitive environmental concerns.
 2. Avoidance. Alternative sites or routes shall be identified that would not damage the resource or result in less resource damage. Reasons shall be provided explaining why using these sites is impossible or infeasible versus that proposed.
 3. Minimization. The applicant shall demonstrate that the plan minimizes the impact of the activity, route, or use on the resource. The applicant shall also demonstrate that the areas impacted shall be lowest quality and result in the least damage to the resource.
 4. Mitigation. A mitigation plan shall be submitted indicating mitigation activities. On-site replacement is the most acceptable form of mitigation. However, mitigation can include restoration and enhancement after the use is abandoned. Mitigation by replacement on another site shall be at a ratio of two to one (2:1). Mitigation may also include enhancement; this ratio shall be four to one (4:1). Final Town approval is required for all other forms of mitigation not consistent with this section.

Section 1115**Clearing.**

All natural resources. Clearing shall be permitted only under the following conditions:

- A. To prepare land for a use permitted by this Chapter; or
- B. As a reforestation measure, or to enhance to improve the quality of existing vegetation or as a means to eliminate dead, diseased, or hazardous tree stands.
- C. Where a clearcutting operation is deemed permissible for one of the reasons stated in this subsection, it shall be consistent with the terms of Section 1116 and in accordance with the State Department of Agriculture Division of Forest Services.

Section 1116**Reforestation Requirements.**

All open spaces to be reforested shall be planted according to the plant species listed in Table 11-16. The area around each tree shall be mulched. The entire area may be mulched or seeded in a perennial grass mix with a minimum thirty (30) percent indigenous herbaceous forest, or grassland species. Canopy trees shall be selected to provide a diversity of native plants. Plantings shall include a minimum of four (4) species. Where more than one hundred (100) canopy trees are required, a minimum of six (6) species shall be provided; no one species shall have less than five (5) or more than thirty (30) percent of the total trees.

1. Protected resources shall not be disturbed with roadways, parking lots or utility lines. The applicant must demonstrate no possible alternative to crossing the resource exists and the route selected must be the least disruptive.

2. Riparian buffer areas. Stormwater outfall shall be permitted, provided that the discharge velocity from the terminal end of the pipe or the associated energy dissipation practice does not exceed two (2) feet per second (fps) for the two (2) year frequency storm event. In addition, best management practices methods shall be used to convert concentrated flow to uniform, shallow sheet flow, filter sediments, and control erosion.

Table 11-16

REFORESTATION REQUIREMENTS PER ACRE

No. of Plants	Types of Plants
1	4" caliper canopy
4	3" caliper canopy
10	1- ½" caliper canopy
6	1-½ " caliper or 5-6 ft. understory trees
50	6' whip canopy
30	bare root shrubs or 1 gallon pots

Section 1117

Roads, Parking Lots and Utilities.

- A. Protected resources shall not be disturbed with roadways, parking lots or utility lines. The applicant must demonstrate no possible alternate to crossing the resource exists and the route selected must be the least disruptive.
- B. Riparian buffer areas. Stormwater outfall shall be permitted, provided that the discharge velocity from the terminal end of the pipe or the associated energy dissipation practice does not exceed two (2) feet per second (fps) for the two (2) year frequency storm event. In addition, best management practice methods shall be used to convert concentrated flow to uniform, shallow sheet flow, filter sediments, and control erosion.