Municipal

Stormwater Management Plan

Mullica Township

Atlantic County

New Jersey

Dated: March 7, 2005

Amended: November, 2006

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Introduction

This Municipal Stormwater Management Plan (MSWMP) documents the strategy for the Township of Mullica Township, Atlantic County, New Jersey ("the Township") to address stormwater related impacts. The creation of this plan is required by N.J.A.C. 7:14A-25 Municipal Stormwater Regulations. This plan contains all of the required elements described in N.J.A.C. 7:8 Stormwater Management Rules. The plan addresses groundwater recharge, stormwater quantity, and stormwater quality impacts by incorporating stormwater design and performance standards for new major development, defined as projects that disturb one or more acres of land. These standards are intended to minimize the adverse impact of stormwater runoff on water quality and water quantity and the loss of groundwater recharge that provides baseflow in receiving water bodies. The plan describes long-term operation and maintenance measures for existing and future stormwater facilities.

A "build-out" analysis has been included in this plan based upon existing zoning and land available for development. The plan also addresses the review and update of existing ordinances, the Township Master Plan, and other planning documents to allow for project designs that include low impact development techniques. The final component of this plan is a mitigation strategy for when a variance or exemption of the design and performance standards is sought. As part of the mitigation section of the stormwater plan, specific stormwater management measures are identified to lessen the impact of existing development.

Goals

The goals of this MSWMP are to:

- reduce flood damage, including damage to life and property;
- minimize, to the extent practical, any increase in stormwater runoff from any new development;
- reduce soil erosion from any development or construction project;
- assure the adequacy of existing and proposed culverts and bridges, and other in-stream structures;
- maintain groundwater recharge;
- prevent, to the greatest extent feasible, an increase in nonpoint pollution;
- maintain the integrity of stream channels for their biological functions, as well as for drainage;
- minimize pollutants in stormwater runoff from new and existing development to restore, enhance, and maintain the chemical, physical, and biological integrity of the waters of the state, to protect public health, to safeguard fish and aquatic life and scenic and ecological values, and to enhance the domestic, municipal, recreational, industrial, and other uses of water; and
- protect public safety through the proper design and operation of stormwater basins.
- promote awareness of and protection for existing wellhead protection areas.

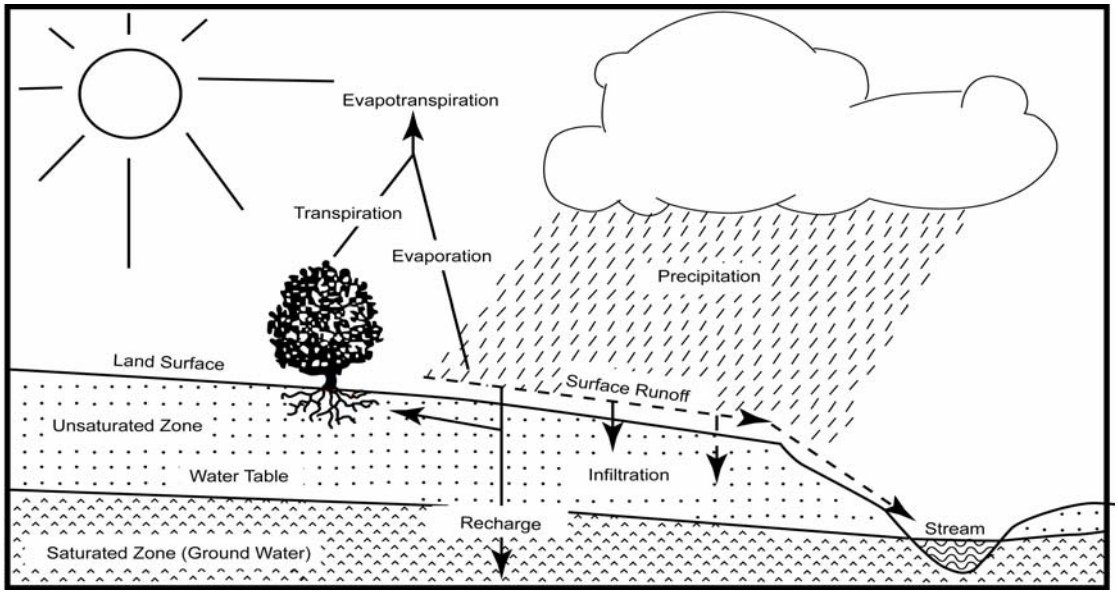
To achieve these goals, this plan outlines specific stormwater design and performance standards for new development. Additionally, the plan proposes stormwater management controls to address impacts from existing development. Preventative and corrective maintenance strategies are included in the plan to

ensure long-term effectiveness of stormwater management facilities. The plan also outlines safety standards for stormwater infrastructure to be implemented to protect public safety.

Stormwater Discussion

Land development can dramatically alter the hydrologic cycle (See Figure 1) of a site and, ultimately, an entire watershed. Prior to development, native vegetation can either directly intercept precipitation or draw that portion that has infiltrated into the ground and return it to the atmosphere through evapotranspiration. Development can remove this beneficial vegetation and replace it with lawn or impervious cover, reducing the site's evapotranspiration and infiltration rates. Clearing and grading a site can remove depressions that store rainfall. Construction activities may also compact the soil and diminish its infiltration ability, resulting in increased volumes and rates of stormwater runoff from the site. Impervious areas that are connected to each other through gutters, channels, and storm sewers can transport runoff more quickly than natural areas. This shortening of the transport or travel time quickens the rainfall-runoff response of the drainage area, causing flow in downstream waterways to peak faster and higher than natural conditions. These increases can create new, aggravate existing downstream flooding and erosion problems, and increase the quantity of sediment in the channel. Filtration of runoff and removal of pollutants by surface and channel vegetation is eliminated by storm sewers that discharge runoff directly into a stream. Increases in impervious area can also decrease opportunities for infiltration, which, in turn, reduces stream base flow and groundwater recharge. Reduced base flows and increased peak flows produce greater fluctuations between normal and storm flow rates, which can increase channel erosion. Reduced base flows can also negatively impact the hydrology of adjacent wetlands and the health of biological communities that depend on base flows. Finally, erosion and sedimentation can destroy habitat from which some species cannot adapt.

Figure 1: Groundwater Recharge in the Hydrologic Cycle



Source: New Jersey Geological Survey Report GSR-32.

In addition to increases in runoff peaks, volumes, and loss of groundwater recharge, land development often results in the accumulation of pollutants on the land surface that runoff can mobilize and transport to streams. New impervious surfaces and cleared areas created by development can accumulate a variety of pollutants from the atmosphere, fertilizers, animal wastes, and leakage and wear from vehicles. Pollutants can include metals, suspended solids, hydrocarbons, pathogens, and nutrients.

In addition to increased pollutant loading, land development can adversely affect water quality and stream biota in more subtle ways. For example, stormwater falling on impervious surfaces or stored in detention or retention basins can become heated and raise the temperature of the downstream waterway, adversely affecting cold water fish species such as trout. Development can remove trees along stream banks that normally provide shading, stabilization, and leaf litter that falls into streams and becomes food for the aquatic community.

Background

Mullica Township is located in the Northeast portion of Atlantic County, in the New Jersey Pinelands. The Township has a total area of 56.58 square miles. It is bounded on the northeast by Washington Township in Burlington County; on the southeast by the City of Egg Harbor and Galloway Township; on the southwest by Hamilton Township; and on the northwest by the Town of Hammonton. In recent years, the Township has been under steadily increasing development pressure because of the effects of the New Jersey Pinelands Commission's Comprehensive Management Plan. As the land areas within the Pinelands designated growth areas of the state are developed, the value of the undeveloped land in those growth areas has increased. This has the effect of making the vacant and less expensive lands outside of the growth areas more attractive.

The population of the Township has increased from 5243 in 1980, to 5896 in 1990, to 5912 in 2000. This population increase has resulted in considerable demand for new development; changes in the landscape have most likely increased stormwater runoff volumes and pollutant loads to the waterways of the municipality. Figure 2 depicts the Township boundary on the USGS quadrangle maps. Figure 3 illustrates the waterways in the Township.

The New Jersey Department of Environmental Protection (NJDEP) has established an Ambient Biomonitoring Network (AMNET) to document the health of the state's waterways. There are over 800 AMNET sites throughout the state of New Jersey. These sites are sampled for benthic macroinvertebrates by NJDEP on a five-year cycle. Streams are classified as non-impaired, moderately impaired, or severely impaired based on the AMNET data. The data is used to generate a New Jersey Impairment Score (NJIS), which is based on a number of biometrics related to benthic macroinvertebrate community dynamics. The aerial extent of the Township is spread over two major watershed areas that have been identified by the State. They are the Great Egg Harbor River watershed and the Mullica River watershed. The divide between these two major watersheds is generally a line running from the northwest to the southeast, parallel with the southwest boundary of the Township that is common with Hamilton Township. This line is generally located near the White Horse Pike and Moss Mill Road.

The portion of the municipality that lies within the Great Egg Harbor River watershed is located to the southwest of that line. The portion of the municipality that lies within the Mullica River watershed is located to the northeast of that line. The major river that borders the Township to the northeast, the Mullica River, is moderately impaired. The major tributaries to this river that flow through the Township include Sleeper Branch, Nescochague Creek, Hammonton Creek, Indian Cabin Creek and Landing Creek.

The major tributaries to the Great Egg Harbor River on the southwest side of the Township include Makepeace Stream and Watering Race Branch.

Many of these tributaries are also moderately impaired based on AMNET data. In addition to the AMNET data, the NJDEP and other regulatory agencies collect water quality chemical data on the streams in the state. These data show that the instream total phosphorus concentrations and fecal coliform concentrations of the Mullica River frequently exceed the state's criteria. This means that this river is an impaired waterway and the NJDEP is required to develop a Total Maximum Daily Load (TMDL) for these pollutants for each waterway.

Figure 2

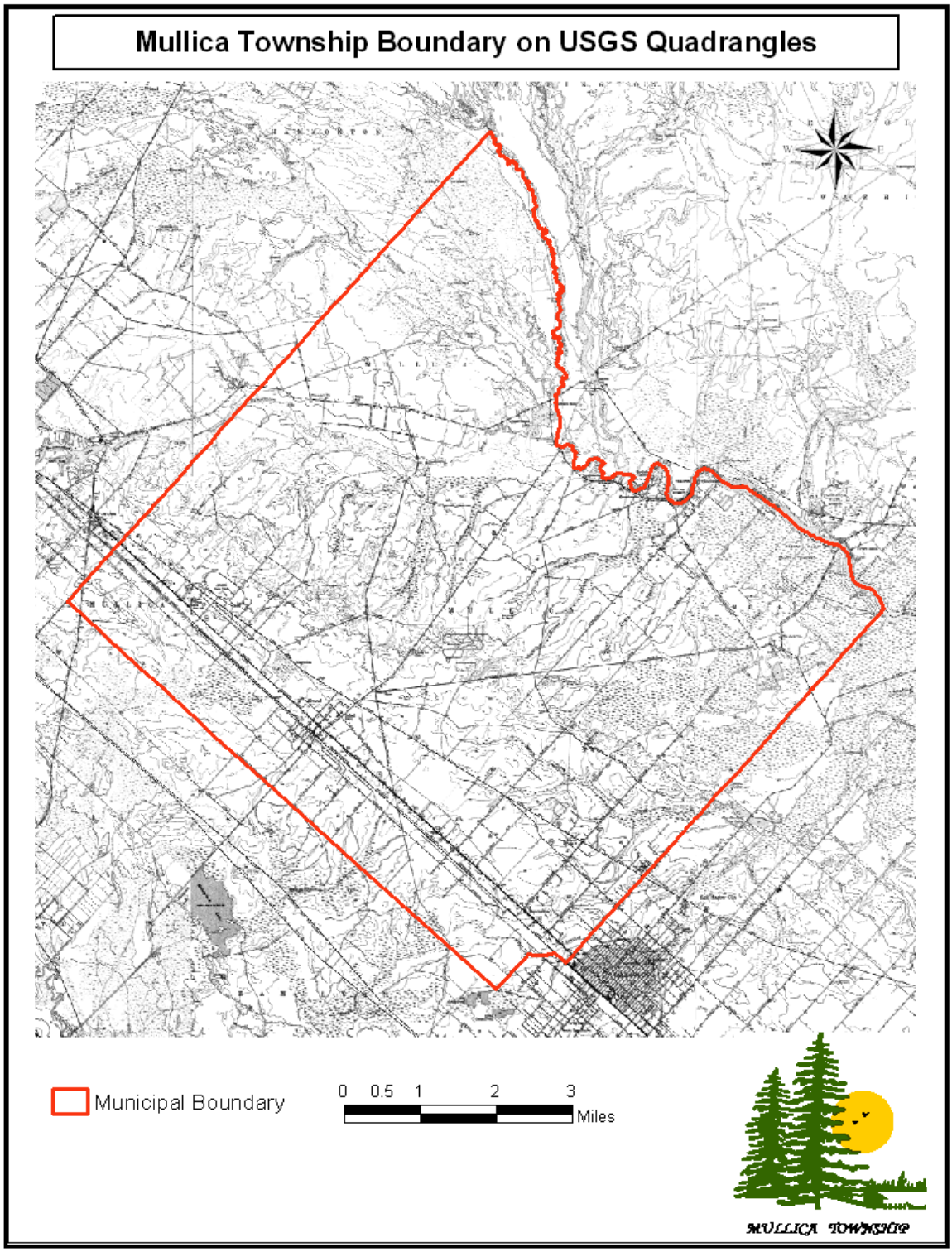
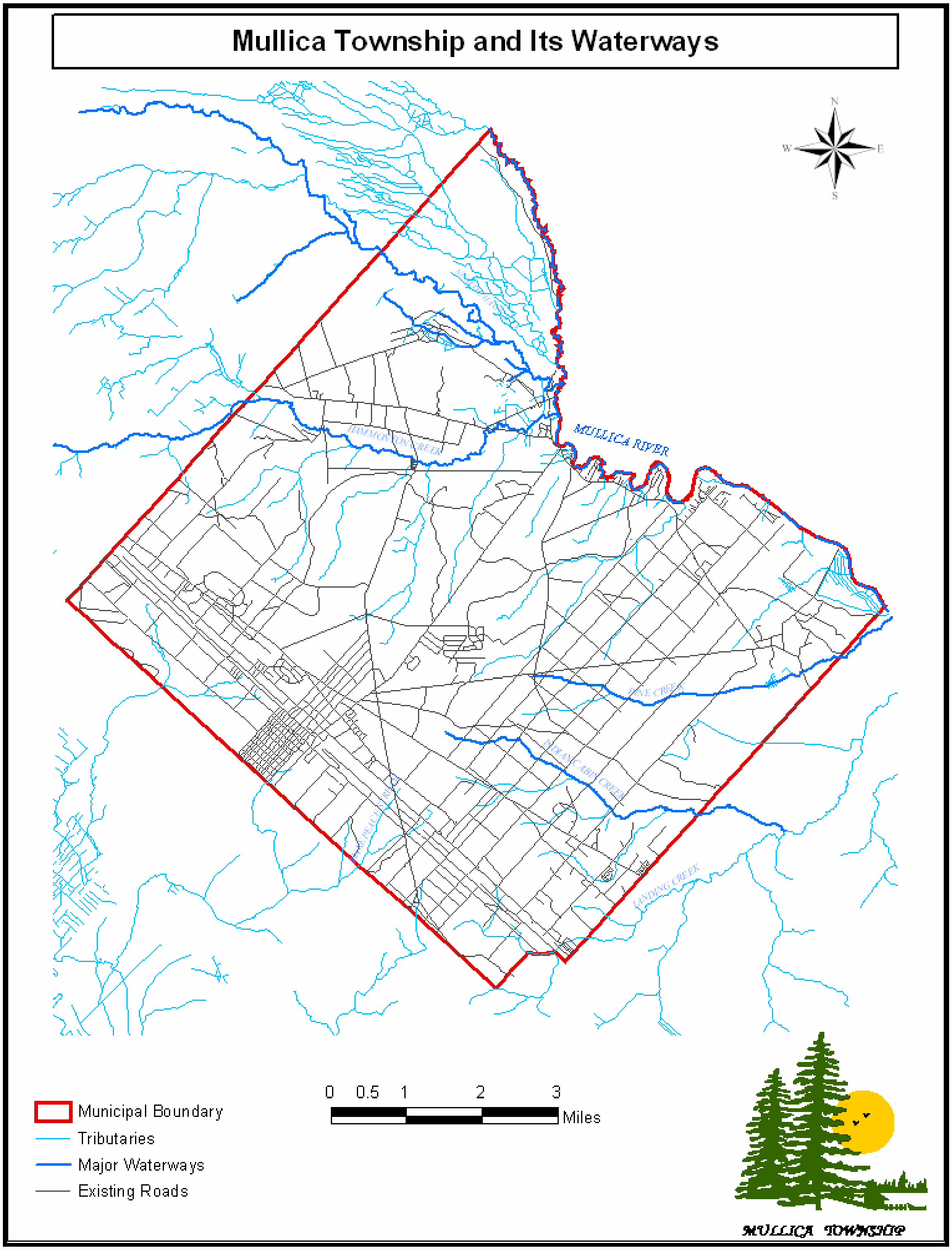

Mullica Township Boundary on USGS Quadrangles
Municipal Boundary
0 0.5 1 2 3
Miles
MULLICA TOWNSHIP

Figure 3


Mullica Township and Its Waterways
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MULLICA RIVER
Municipal Boundary
Tributaries
Major Waterways
Existing Roads
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Miles
MULLICA TOWNSHIP

A TMDL is the amount of a pollutant that can be accepted by a waterbody without causing an exceedance of water quality standards or interfering with the ability to use a waterbody for one or more of its designated uses. The allowable load is allocated to the various sources of the pollutant, such as stormwater and wastewater discharges, which require an NJPDES permit to discharge, and nonpoint source, which includes stormwater runoff from agricultural areas and residential areas, along with a margin of safety. Provisions may also be made for future sources in the form of reserve capacity. An implementation plan is developed to identify how the various sources will be reduced to the designated allocations. Implementation strategies may include improved stormwater treatment plants, adoption of ordinances, reforestation of stream corridors, retrofitting stormwater systems, and other BMPs.

The New Jersey Integrated Water Quality Monitoring and Assessment Report (305(b) and 303(d)) (Integrated List) is required by the federal Clean Water Act to be prepared biennially and is a valuable source of water quality information. This combined report presents the extent to which New Jersey waters are attaining water quality standards, and identifies waters that are impaired. Sublist 5 of the Integrated List constitutes the list of waters impaired or threatened by pollutants, for which one or more TMDLs are needed.

In addition to water quality problems, many of the streams within the Township have exhibited water quantity problems including flooding, stream bank erosion, and diminished base flows. Many of the roadway culverts associated with road crossings in the Township are undersized. During severe storm events, these undersized culverts do not have adequate capacity, thereby causing backwater effects, flooding of upstream tributary areas and roadway flooding.

These culverts were generally designed for much different hydrologic conditions (i.e., less impervious area) than presently exist in the Township. As the imperviousness increases in the Township, the peak rates and volumes of stream flows also increase. The increased volumes of stormwater result in stream bank erosion, which results in unstable areas at roadway/bridge crossings, and degraded stream habitats. The increasing imperviousness of the Township has decreased groundwater recharge, with the potential for decreasing base flows in streams during dry weather periods. Lower base flows can have negative impacts on instream habitat during the summer months. A map of the groundwater recharge areas in the Township is shown in Figure 4. Wellhead protection areas, also required as part of the MSWMP, are shown in Figure 5.

Figure 4

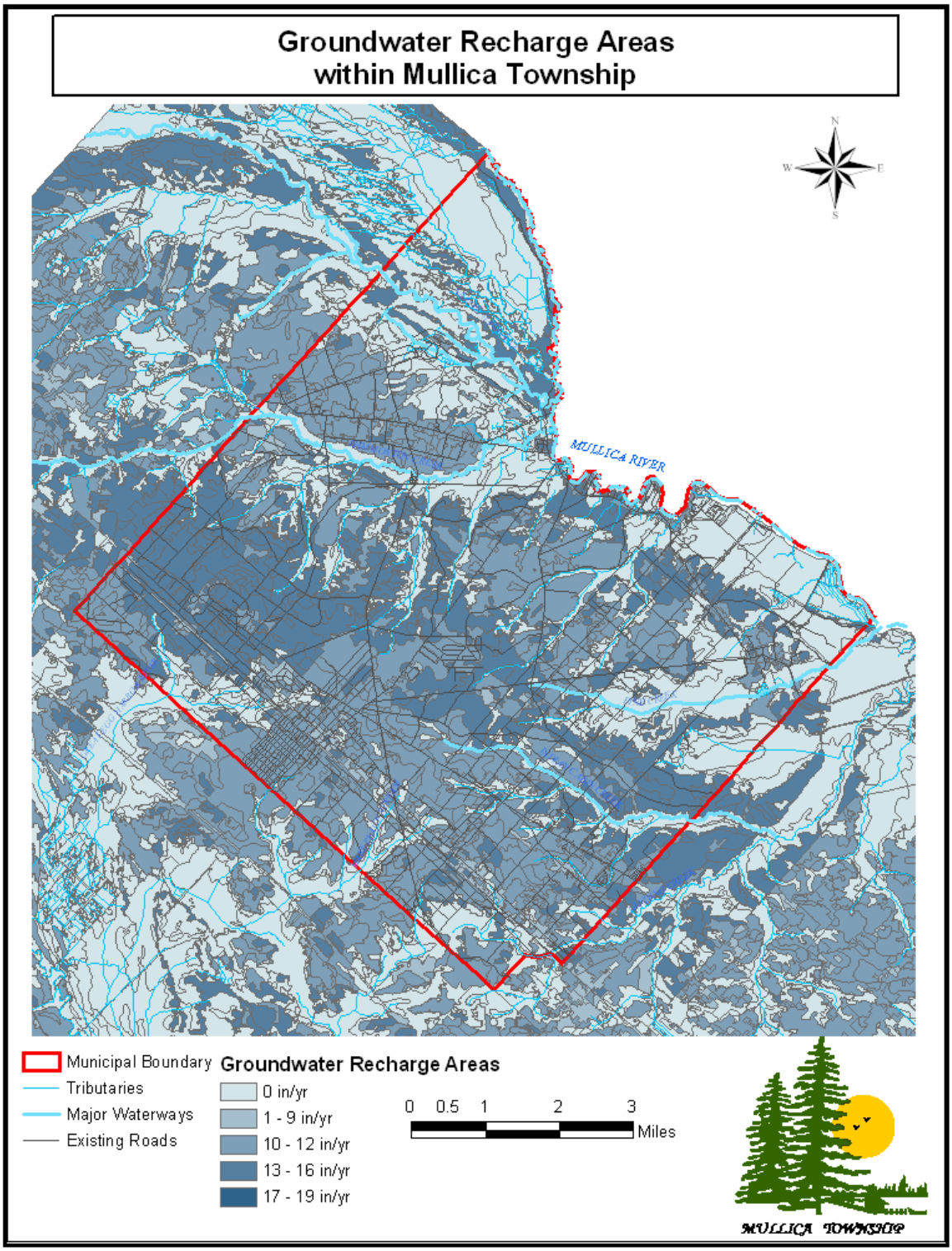
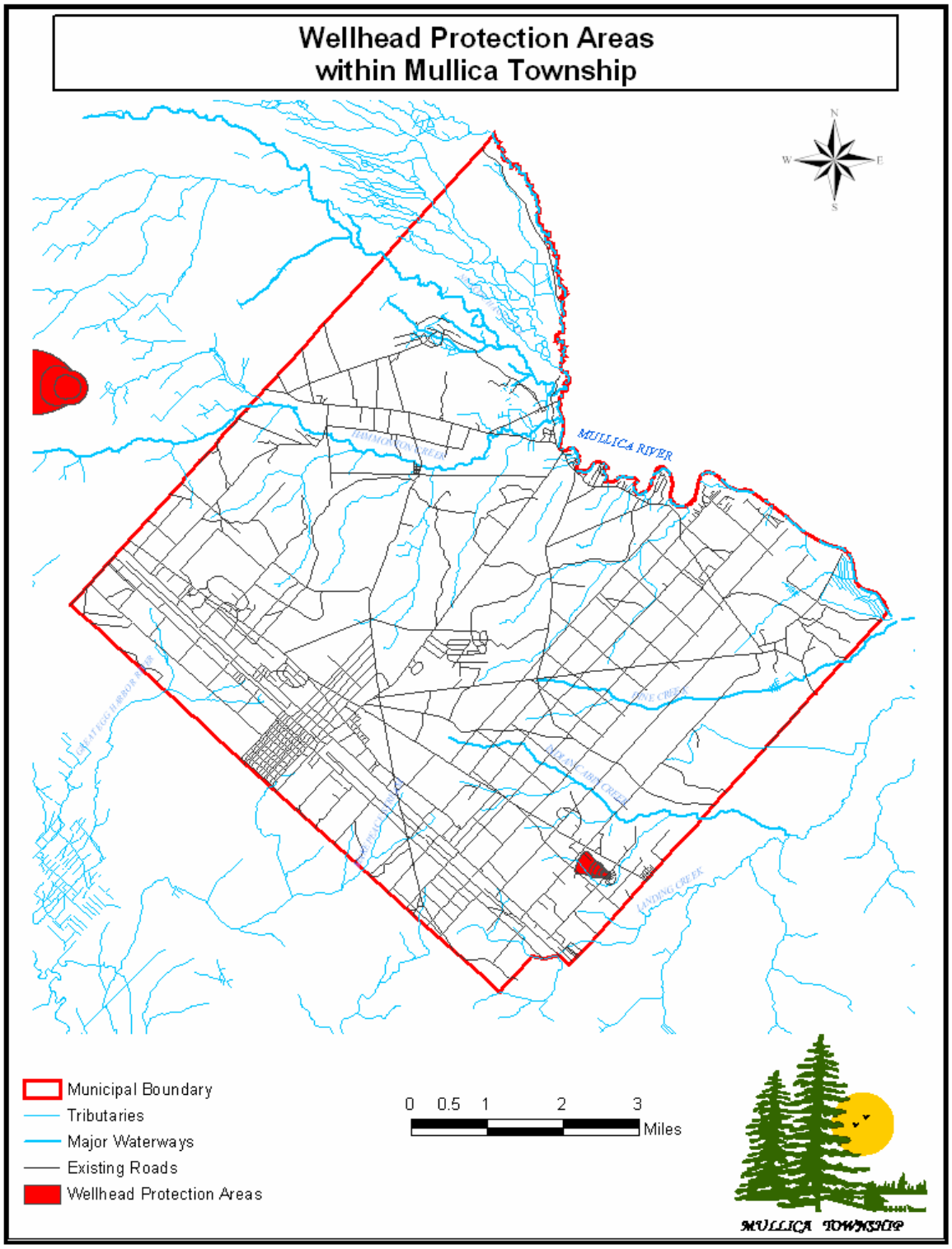

Groundwater Recharge Areas
within Mullica Township
N
W
E
S
MULLICA RIVER
Municipal Boundary
Tributaries
Major Waterways
Existing Roads
Groundwater Recharge Areas
0 in/yr
1 - 9 in/yr
10 - 12 in/yr
13 - 16 in/yr
17 - 19 in/yr
0 0.5 1 2 3
Miles
MULLICA TOWNSHIP

Figure 5


Wellhead Protection Areas
within Mullica Township
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MULLICA RIVER
Municipal Boundary
Tributaries
Major Waterways
Existing Roads
Wellhead Protection Areas
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Design and Performance Standards

The Township will adopt the design and performance standards for stormwater management measures as presented in N.J.A.C. 7:8-5 and 7:50-6.84 to minimize the adverse impact of stormwater runoff on water quality and water quantity and loss of groundwater recharge in receiving water bodies. The design and performance standards include the language for maintenance of stormwater management measures consistent with the stormwater management rules at N.J.A.C. 7:8-5.8 Maintenance Requirements, and language for safety standards consistent with N.J.A.C. 7:8-6 Safety Standards for Stormwater Management Basins. The ordinances will be submitted to the county for review and approval within [24 months of the effective date of the Stormwater Management Rules.]

During construction of both private and municipal projects, Township inspectors will observe the construction of the project to ensure that the stormwater management measures are constructed and function as designed.

Plan Consistency

As outlined above the in the Background section of this Plan, the Township lies within two Watershed Management Areas that have been delineated by the New Jersey Department of Environmental Protection. They are the Great Egg Harbor River (WMA 14) and the Mullica River (WMA 15) watersheds.

The agency responsible for planning in the Great Egg Harbor River (WMA 14) watershed is the Atlantic County Department of Regional Planning and Development. The agency responsible for planning in the Mullica River (WMA 15) watershed is the New Jersey Pinelands Commission.

No TMDLs have been developed as yet for waters within the Township; therefore this plan does not need to be consistent with any regional stormwater management plans (RSWMPs) nor any TMDLs. If any RSWMPs or TMDLs are developed in the future, this Municipal Stormwater Management Plan will be updated to be consistent. The NJDEP Division of Watershed Management has established the following New Jersey TMDL Development timeline per its memorandum of understanding with the Environmental Protection Agency.

Table 1 - NJDEP TMDL Development Timeline

Atlantic Coastal	Estimated Time	Manasquan River	Monmouth Watersheds	Mullica and Wading Rivers	Great Egg Harbor, Tuckahoe River	Barnegat Bay Watersheds	Cape May Watersheds
Recon. Monitoring	Summer '00	Completed 10/98	Sites selected 10/98	Projected 6/00	Projected 6/00	Projected 6/00	Projected 9/00
Assess Current 303(D) List; ID Portion for Delisting; Scope TMDL	2-4 mo.	Requested from DRST 5/2/00					
PAC/TAC Discussion of Approach	1-2 mo.	Ongoing					
Develop Tech Approach	2-6 mo.						
TMDL Monitoring	2-6 mo.						
Model Verified/ Calibrated & Run Scenarios	6-24 mo.						

Table 1 - NJDEP TMDL Development Timeline							
PAC/TAC Discussion of Scenarios & Negotiate WLA'S & LA'S	2-6 mo.						
Prepare Draft TMDL	2-6 mo.						
PAC/TAC Review & Comment on Draft TMDL; Informal EPA Review	2-3 mo.	10/31/01	10/31/02	10/31/05	10/31/05	10/31/05	10/31/06
Proposed TMDL in NJR	1-2 mo.	12/31/01	12/31/03	12/31/05	12/31/05	12/31/05	12/31/06
Establish TMDL & Formally Submit to EPA (30 Day Review Per MOA)		6/03/02	6/30/04	6/30/06	6/30/06	6/30/06	6/30/07
Adopt TMDL as WQMP Amendment	1-2 mo.						
Adoption Notice Published in NJR	2-3 mo.						

This Municipal Stormwater Management Plan is consistent with the Residential Site Improvement Standards (RSIS) at N.J.A.C. 5:21. The municipality will utilize the most current update of the RSIS in the stormwater management review of residential areas. This Municipal Stormwater Management Plan will be updated to be consistent with any future updates to the RSIS.

The Township's Stormwater Management Ordinance requires all new development and redevelopment plans to comply with New Jersey's Soil Erosion and Sediment Control Standards. During construction, Township inspectors will observe on-site soil erosion and sediment control measures and report any inconsistencies to the local Soil Conservation District.

The Township's Stormwater Management Plan is consistent with the requirements of the Pinelands Comprehensive Management Plan and any amendments to the CMP shall be incorporated into this Municipal Stormwater Management Plan.

Nonstructural Stormwater Management Strategies

The Township Planning Board has recently reviewed the master plan as required by the Municipal Land Use Law. A revised Land Development Ordinance has been recommended by the Planning Board to the Township Committee for adoption. At the present time, the Township Committee is working in conjunction with the Pinelands Commission on a few changes to the recommended ordinance prior to its adoption and eventual certification by the Pinelands Commission. This process is ongoing and once the ordinance texts are completed, they will be submitted to the county review agency for review and approval within [24 months of the effective date of the Stormwater Management Rules]. A copy will be sent to the Department of Environmental Protection at the time of submission.

The proposed Chapter 144 of the Township Code (referenced above), entitled Land Development Ordinance, has been reviewed with regard to incorporating nonstructural stormwater management strategies. Several changes are recommended to Article 11 of this Chapter, entitled "Design, Performance and Evaluation Standards" to incorporate these strategies.

Section 144-54: Off-tract Improvements

The original text reads:

144-54. OFF-TRACT IMPROVEMENTS

1. The approving authority shall require, as a condition of preliminary subdivision or site plan approval, that the applicant pay pro-rata share of the cost of providing only reasonable and necessary street improvements, water, sewerage and drainage facilities, and easements located outside the development. Applicant must also pay pro-rata share for utility service plans included in the Township Master Plan pursuant to subsection 144-10.1(4) and (5), Master Plan of this Ordinance. The applicant shall either install the improvements or contribute his/her pro-rata share of the costs, at the option of the applicant. If the applicant installs the improvements, he shall be compensated by the Township for all but his pro-rata share of the cost of the improvements.
2. Standards for determining the pro-rata share of off-tract improvements are included herein:
    A. Any applicant whose application will require the providing of municipal services by way of storm sewers, municipal water, sewer lines, street improvements, or other improvements of off the tract to be developed shall be required to pay his/her fair share of the cost of said off-tract improvements. The applicant shall pay the full cost of all off-tract improvements required by the approving authority, if the off-tract improvements are wholly necessitated by his/her proposed development and said improvements do not benefit any land other than the land within the subdivision site plan or conditional use plan. Where it is determined that there is benefit to other lands not within the subdivision or site plan, the applicant's fair share shall be computed by determining the total frontage on a street that is affected by the off-tract improvements including that portion of the street fronting the premises to be developed and thence determining the amount of interior roadways and frontage thereon within the tract to be developed. The applicant shall pay a share computed by dividing the total amount of frontage including both the frontage on the off-tract street, the frontage on said street fronting the affected premises and all frontage on interior streets as shown on the plan as submitted into the total amount of the frontage fronting the affected premises plus all the frontage on interior streets. The result of this computation shall provide the fraction, which shall be superimposed against the total cost of off-tract improvements to determine an applicant's fair share thereof.
    B. The determination as to whether off-tract improvements are required in connection with any subdivision, site or conditional use plan shall be the determination of the approving authority. Where the approving authority determines that such off-tract improvements are required in connection with any subdivision site or conditional use plan, prior to granting final approval:
        1. The approving authority shall report to the Township Committee the following:
            a. The location, character and extent of the required off-tract improvements; and
            b. The proposed allocation of the said total cost determined in accordance with the standards set forth in subsections and below.
        2. The Township Committee shall determine and report to the approving authority whether and by what date the off-tract improvements will be constructed by the Township as a general improvement, or as a local improvement or as a combination thereof; or where the applicant, at his/her option may construct the required off-tract improvements and be reimbursed pursuant to a formula

specified by the Township Committee if the improvement specifically benefits property other than that within the subdivision or site plan.

3. The approving authority shall require, as a condition of final approval of the subdivision site or conditional use plan; that;
    a. If the improvement is to be constructed by the Township as a general improvement, the applicant shall deposit with the Township Treasurer an amount equal to the difference, if any, between the estimated cost of the improvement and the estimated total amount by which all properties, including the subdivision site or conditional use plan to be served by the improvement, will be specially benefited by the improvement; or
    b. If the improvement is to be constructed by the Township as a local improvement, the applicant shall deposit with the Township Treasurer, in addition to the amount specified in paragraph (1) above, the estimated amount which the subdivision or site plan will be specially benefited by the improvement.

C. The applicant shall have the right to apply to the Planning Board of the Township for a variance as to the strict application of the formula set forth in paragraph "A" of this section above where the applicant can establish that said formula does not set forth an equitable basis for computing his/her fair share of the cost of the off-tract improvements and shall further set forth in the resolution granting relief the alternative basis upon which said computation of the applicant's fair share should be computed. Should the Planning Board determine that the formula established in paragraph 1 of this section is not equitable in the premises, it shall have the right to determine such other suitable formula as it deems appropriate but shall consider the following factors:
    1. The total estimated cost of off-tract improvements.
    2. The increase in market values of the properties affected and any other benefits conferred.
    3. The needs created by the application.
    4. Population and land use projections for the land within the general area of the subdivision or site plan and other areas to be served by the off-tract improvements.
    5. The estimated time for construction of the off-tract improvements.
    6. The condition and periods of usefulness of the improvements, which may be based upon the criteria of N.J.S.A. 40A: 2-22.
    7. With respect to street, curb, gutter, sidewalk, street light, street sign and traffic light improvements, the approving authority may consider:
        a. Traffic counts
        b. Existing and projected traffic patterns
        c. Quality of roads and sidewalks in the area
        d. Such other factors as it may deem relevant to the needs created by the proposed development.
    8. With respect to drainage facilities, the approving authority may consider:
        a. The relationship between the areas of the subdivision site or conditional use plan and the area of the total drainage basin of which the subdivision site or conditional use plan is part.
        b. The proposed use of land within the subdivision site or conditional use plan and the amount of land area to be covered by the impervious surfaces on the land within the subdivision or site plan.

c. The use, condition or status of the remaining land area in the drainage basin.

9. With respect to water, gas and electric supply and distribution facilities the approving authority may consider the use requirements of the use proposed for the subdivision site or conditional use plan and the use requirements of all other properties to be benefited by the improvements.
10. With respect to sewerage facilities, the approving authority may consider:
    a. The anticipated volume of effluent from the use proposed for the subdivision site or conditional use plan and the anticipated volume of effluent form all other properties to be benefited by the improvement.
    b. The types of effluent anticipated and particular problems requiring special equipment or added costs.
    c. Should the Planning Board determine that the relief requested is appropriate and makes said findings of fact, the Planning Board shall make a recommendation to the Township Committee of its findings of fact and its proposed variation from the formula set forth in paragraph "A" above with its recommendations as to the percentage of off-tract improvements to be allocated to the applicant.

D. The Township Committee shall have the right upon such a recommendation being made by the Planning Board to either accept the recommendation or allocate the share of off-tract improvements to the applicant as computed in paragraph "A" of this section.

E. The Planning Board shall have the right, if it determines that the installation of all or part of the necessary off-tract improvements related to the applicant should be postponed, to accept in lieu of the actual installation of said improvements, providing the applicant consents thereto, a cash deposit in the amount equal to the applicant's fair share of the cost of said off-tract improvements as hereinabove computed as a percentage of the engineer's estimate of costs, which money shall be deposited with the Chief Financial Officer of the Township in an escrow account pending the determination by the Township Committee of when the deferred improvements shall be installed and the installation of said off-tract improvements so deferred shall be installed by the Township with the Township having the right to draw against said escrow for the applicant's fair share. Said deposit shall be used only for the construction of the improvements for which said funds are deposited and all engineering, legal and publication costs relating thereto. If said improvements are not constructed within five (5) years from the date of deposit, the amount deposited, with any interest thereon, shall be returned to the applicant or his/her successor in interest.

F. Upon completion of any improvements constructed by the Township as a general or local improvement, the total cost of such improvement shall be determined by the Ordinance providing for such improvements. The difference between the actual cost as so determined and the estimated cost shall be computed. The applicant, or his/her successor in interest, shall make an additional remittance to the Township if the estimated cost exceeds the actual cost in an amount which bears the same relationship to the difference between the actual and estimated cost as the amount deposited by the applicant for his/her proportionate share of the estimated cost bears to the total estimated cost. Any sum payable by the applicant or his/her successor in interest may be levied and collector by the Township in the same manner as is provided by law for the levy and collection of real estate taxes.

G. In the absence of an express provision in a deed or deeds of conveyance, it shall be presumed that the fee owners of all lots in the subdivision or site plan at the date any

deposit or portion thereof is returned or additional charge is made pursuant to subsections 6 and 7 of this section, are the lawful successor in interest to the applicant and each such fee owner shall be charged with or entitled to receive a pro-rata share, based on lot area, of any funds to be returned or additional charge to be made pursuant to this section. Upon payment of any such sums to the said fee owners, the Township shall be released of liability to any other person.

H.

Off-Tract Improvements describes essential off-site and off-tract improvements. The following language is recommended for addition to this section to require that any off-site and off-tract stormwater management and drainage improvements must conform to the "Design and Performance Standards" described in this plan.

3. Any off-site or off-tract stormwater management and drainage improvements required by the Planning Board as part of this section shall conform to the requirements of Section 144-105.

Section 144-81:

The original text reads:

144-81. CONFORMANCE REQUIRED

1. The design of any development shall conform to the highest and best principles of land development as set forth in this Ordinance, the Master Plan and the Official Map of Mullica Township and will encourage good development patterns within the Township, enhance the public welfare and also conform to the standards set forth within this Chapter.
2. In the absence of any other stated design standard the requirements of the current editions of the following regulations and publications shall be applied:
   A. New Jersey Residential Site Improvements Standards, N.J.A.C. 5:21-1.1 et seq.
   B. Standards for Soil Erosion and Sediment Control in New Jersey, N.J.A.C. 2:90-1.1 et seq.
   C. Atlantic County Land Development Standards.
   D. Design Manual-Roadway, New Jersey Department of Transportation.
   E. Standard Specifications for Road and Bridge Construction, New Jersey Department of Transportation.
   F. Manual on Uniform Traffic Control Devices for Streets and Highways, United States Department of Transportation, Federal Highway Administration.
   G. Trip Generation, Institute of Transportation Engineers.
   H. Parking Generation, Institute of Transportation Engineers.
   I. A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials.
   J. Bicycle Compatible Roadway and Bikeway Planning and Design Guidelines, New Jersey Department of Transportation.
   K. Other applicable regulations of the New Jersey Department of Environmental Protection and the New Jersey Department of Transportation.

The following language is recommended for addition to this section that outlines some general design principles to minimize the impacts on the natural environment of increased rates and volumes of stormwater runoff that are generated by development.

3. The following general design principals shall be considered and employed to the maximum extent practicable:
   A. Retain and protect natural vegetation.
   B. Minimize and retain stormwater runoff to facilitate groundwater recharge.
   C. Install diversions, sediment basins and similar required structures prior to any on-site grading or disturbance.

Section 144-86:

The original text reads:

144-86. CURBS & GUTTERS

1. All curbs and gutters shall meet the requirements of the R.S.I.S.

It is recommended that this section should be amended as follows:

1. All curbs and gutters that are required as part of a residential or other type of development shall meet the requirements of the Residential Site Improvement Standards (N.J.A.C. 5:21-4.3).
2. Where applicable design constraints permit, preference shall be given to the installation of curb cuts or flush curbs with curb stops to allow vegetated swales to be used for stormwater conveyance and to allow the disconnection of impervious areas.

Section 144-87:

The original text reads:

144-87. DRIVEWAY STANDARDS

1. Driveways and parking lot drive aisles for all development except individual single family residences shall conform to the requirements of the R.S.I.S.
2. Driveways for individual single family residential units shall be constructed to allow safe and efficient entry and exit for fire or other emergency vehicles.
3. When a driveway for an individual single family residence extends two hundred (200) feet, or more, from a road it shall be a minimum of fifteen feet (15) feet in width and provide adequate area to turn around at the end.
4. All new home construction shall provide the ability to turn vehicles around entirely on the subject parcel.

Driveways Standards describes the procedure for construction of any new driveway or accessway to any street. This section was amended to allow the use of pervious paving materials to minimize stormwater runoff and promote groundwater recharge.

1. Driveways and parking lot drive aisles for all development except individual single family residences shall meet the requirements of the Residential Site Improvement Standards (N.J.A.C. 5:21-4.16).

2. Driveways for individual single family residential units shall be constructed to allow safe and efficient entry and exit for fire or other emergency vehicles.
3. When a driveway for an individual single family residence extends two hundred (200) feet, or more, from a road it shall be a minimum of fifteen feet (15) feet in width and provide adequate area to turn around at the end.
4. All new home construction shall provide the ability to turn vehicles around entirely on the subject parcel.
5. Where the use of a durable pavement surface is required and other design constraints permit, preference shall be given to the use of pervious paving materials to minimize stormwater runoff and promote groundwater recharge.

Section 144-91:

The original text reads:

144-91. FIRE MANAGEMENT

1. The following vegetation classifications shall be used in determining the fire hazard of a parcel of land:

HAZARD		VEGETATION TYPE
Low	-	Atlantic white cedar
		Hardwood swamps
Moderate	-	Non-pine barrens forest
		Prescribed burned areas
High	-	Pine Barrens forest including mature forms of pine, pine-oak, or oak-pine
Extreme	-	Immature dwarf forms of pine-oak or oak-pine
		All classes of pine-scrub oak and pine-lowland

2. No development shall be carried out in the Pinelands Area in vegetated areas which are classified as moderate, high or extreme hazard under the fire hazard classification set out in subsection 1 above unless such development complies with the following standards:
    A. All proposed development, or units or sections thereof, of 25 dwelling units or more will have two access ways or a width and surface composition sufficient to accommodate and support fire fighting equipment;
    B. All dead-end roads will terminate in a manner which provides safe and efficient entry and exit for fire equipment;
    C. The rights-of-way of all roads will be maintained so that they provide an effective fire break;
    D. A fire hazard fuel break is provided around structures proposed for human use by the selective removal of thinning of trees, bushes, shrubs and ground cover as follows:
        1. In moderate fire hazard areas, a fuel break of 30 feet measured outward from the structure in which:
            a. Shrubs, understory trees and bushes and ground cover are to be selectively removed, mowed or pruned on an annual basis; and
            b. All dead plant material is removed.
        2. In high fire hazard areas a fuel break of 75 feet measured outward from the structure in which:

a. Shrubs, understory trees and bushes and ground cover are to be selectively removed, mowed or pruned on an annual basis; and
b. All dead plant material is removed.

3. In extreme high hazard areas a fuel break of 100 feet measured outward from the structure in which:
   a. Shrubs, understory trees and bushes and ground cover are to be selectively removed, mowed or pruned on an annual basis;
   b. No pine tree (Pinus supp.) is closer than 25 feet to another pine tree; and
   c. All dead plant material is removed.

E. All residential development of 100 dwelling units or more in high or extreme high hazard areas will have a 200 foot perimeter fuel break between all structures and the forest in which:
   1. Shrubs, understory trees and bushes and ground coverage are selectively removed, mowed or pruned and maintained on an annual basis;
   2. All dead plant material is removed;
   3. Roads, rights-of-way, wetlands and waste disposal sites shall be used as fire breaks to the maximum extent practical; and
   4. There is specific program for maintenance.

F. All structures will meet the following specifications:
   1. Roofs and exteriors will be constructed of fire resistant materials such as asphalt rag felt roofing, title, slate, asbestos cement shingles, sheet iron, aluminum or brick. Fire retardant treated wood shingles or shake type roofs are prohibited in high or extreme fire hazard areas.
   2. All projections such as balconies, decks and roof gables shall be constructed of fire resistant materials or materials treated with fire retardant chemicals;
   3. Any openings in the roof, attic, and the floor shall be screened;
   4. Chimneys and stove pipes which are designed to burn solid or liquid fuels shall be equipped with screens over the outlets;
   5. Flat roofs are prohibited in areas where vegetation is higher than the roof.

It is recommended that the following language should be added to this section.

3. Disturbance or removal of vegetation in excess of the limits required above to provide for the safety of residents and owners from various fire hazards shall be discouraged.

Section 144-99:

The original text reads:

144-99. SIDEWALKS

1. All sidewalks shall meet the requirements of the R.S.I.S.

Sidewalks describe sidewalk requirements for the Township. Although sidewalks are not required along all streets, the Township can require them in areas where the probable volume of pedestrian traffic, the development's location in relation to other populated areas and high vehicular traffic, pedestrian access to bus stops, schools, parks, and other public places, and the general type of improvement intended indicate the advisability of providing a pedestrianway. Sidewalks are to be a minimum of four feet wide and constructed of concrete. Language was added to this section to

require developers to design sidewalks to discharge stormwater to neighboring lawns where feasible to disconnect these impervious surfaces, or use permeable paving materials where appropriate.

1. All sidewalks that are required as part of a residential or other type of development shall meet the requirements of the Residential Site Improvement Standards (N.J.A.C. 5:21-4.18).
2. Where applicable design constraints permit, preference shall be given to the installation of sidewalks such that the lateral slope discharges stormwater runoff onto adjoining lawns, not into the adjoining street to allow for the disconnection of impervious areas.
3. Where applicable design constraints permit, the use of permeable paving materials shall be encouraged.

Section 144-101:

The original text reads:

144-1. STREET CLASSIFICATION AND RIGHT OF WAY WIDTHS

1. All streets except those that service a residential development shall be classified and have a minimum right-of-way width measured from lot line to lot line as follows:

Arterial:	one hundred twenty (120) feet.
Major:	eighty (80) feet.
Collector:	sixty (60) feet.
Minor:	fifty (50) feet - pavement width forty (40) feet.
Marginal Areas:	fifty (50) feet - pavement width thirty-six (36) feet.

2. Internal roads and alleys in commercial and industrial developments shall be determined by the Planning Board on an individual basis to safely accommodate the maximum anticipated traffic, parking, loading and access for fire fighting and other emergency equipment.
3. The arrangement of streets not shown on the Master Plan or official map shall be so coordinated as to provide for the appropriate extension of existing streets, to accommodate prospective traffic and to provide access for fire fighting and emergency equipment.
4. Reserve strips denying or controlling access thereto from abutting lands are not permitted except where control or ownership of such strips is vested in Mullica Township for future street or road purposes or where reverse frontage is provided and tree planting, noise abatement or other buffer zones are established and such lots or lands do not require direct access.
5. Minor streets shall be so designed as to discourage through traffic.
6. Subdivisions abutting arterial streets shall provide either a marginal access service road, reverse frontage with a planted buffer strip, or an additional lane for acceleration and deceleration along the entire frontage of the subdivision to present direct turning movements onto or from arterial streets, as determined by the Board to be appropriate.
7. Subdivisions that adjoin or include existing streets that do not conform to widths shown on the Master Plan or official map or as required by this Ordinance shall dedicate additional width along either one or both sides of said street. If the subdivision is along one side only, one half of the required extra width shall be dedicated.
8. Dead-end streets (cul-de-sacs) serving other than residential development shall not exceed six hundred (600) feet in length and shall provide a turn around at the end with a radius of not less than fifty (50) feet at the curb line and tangent whenever possible to the right side of the street. If a dead-end street is of a temporary nature, a turn around shall be provided

with a fifty (50) foot radius tangent to the right side of the street, and provision shall be made for future extension of the street and reversion of the excess right-of-way to the adjoining properties.

9. No street shall have a name which will duplicate or so nearly duplicate as to be confused with the names of existing streets or places within Mullica Township.
10. Grades of arterial and collector streets shall not exceed four (4%) percent. Grades on other streets shall not exceed ten (10%) percent. No street shall have a grade of less than one half of one percent.
11. All changes in grade shall be connected by vertical curves of sufficient radius to provide a smooth transition and proper sight distance.
12. A tangent at least one hundred (100) feet long shall be introduced between reverse curves on arterial and collector streets.

Street Classification and Right of Way Widths describes the requirements for streets in the Township whose purpose is for other than residential access. The Residential Site Improvement Standards control all aspects of the design of residential streets. The Township has several street classifications, ranging from "Arterial," which has a minimum right-of-way of 120 feet, to "Marginal Access," which has a minimum right-of-way of 50 feet. Street cartway widths are a function of the number of units and type of development served, whether a street is curbed, whether on-street parking is permitted, and whether on-site topographical and design constraints allow design flexibility. Depending on these factors, paving width for secondary local streets has a range from 36 to 40 feet. This section was amended to encourage developers to limit on-street parking to allow for narrower paved widths. This section also required that cul-de-sacs have a minimum radius of 50 feet at the curb line. Language was added to this section to recommend a reduction in the minimum radius of cul-de-sac designs to that which is necessary to safely accommodate the emergency vehicles expected in this type of street. Cul-de-sacs with flush curbs can have a reduced minimum radius provided that they have reinforced shoulder to accommodate larger equipment and emergency vehicles.

1. All streets except those that service a residential development shall be classified and have a minimum right-of-way width measured from lot line to lot line as follows:

Arterial:	one hundred twenty (120) feet.
Major:	eighty (80) feet.
Collector:	sixty (60) feet.
Minor:	fifty (50) feet - pavement width forty (40) feet with on street parking, pavement width thirty (30) feet without on street parking.
Marginal Areas:	fifty (50) feet - pavement width thirty-six (36) feet with on street parking, pavement width twenty-four (24) feet without on street parking.

2. Internal roads and alleys in commercial and industrial developments shall be determined by the Planning Board on an individual basis to safely accommodate the maximum anticipated traffic, parking, loading and access for fire fighting and other emergency equipment.
3. The arrangement of streets not shown on the Master Plan or official map shall be so coordinated as to provide for the appropriate extension of existing streets, to accommodate prospective traffic and to provide access for fire fighting and emergency equipment.
4. Reserve strips denying or controlling access thereto from abutting lands are not permitted except where control or ownership of such strips is vested in Mullica Township for future street or road purposes or where reverse frontage is provided and tree planting, noise

abatement or other buffer zones are established and such lots or lands do not require direct access.

5. Minor streets shall be so designed as to discourage through traffic.
6. Subdivisions abutting arterial streets shall provide either a marginal access service road, reverse frontage with a planted buffer strip, or an additional lane for acceleration and deceleration along the entire frontage of the subdivision to present direct turning movements onto or from arterial streets, as determined by the Board to be appropriate.
7. Subdivisions that adjoin or include existing streets that do not conform to widths shown on the Master Plan or official map or as required by this Ordinance shall dedicate additional width along either one or both sides of said street. If the subdivision is along one side only, one half of the required extra width shall be dedicated.
8. Dead-end streets (cul-de-sacs) serving other than residential development shall not exceed six hundred (600) feet in length and shall provide a turn around at the end with a radius of not less than fifty (50) feet at the curb line and tangent whenever possible to the right side of the street. If a dead-end street is of a temporary nature, a turn around shall be provided with a fifty (50) foot radius tangent to the right side of the street, and provision shall be made for future extension of the street and reversion of the excess right-of-way to the adjoining properties.
9. No street shall have a name which will duplicate or so nearly duplicate as to be confused with the names of existing streets or places within Mullica Township.
10. Grades of arterial and collector streets shall not exceed four (4%) percent. Grades on other streets shall not exceed ten (10%) percent. No street shall have a grade of less than one half of one percent.
11. All changes in grade shall be connected by vertical curves of sufficient radius to provide a smooth transition and proper sight distance.
12. A tangent at least one hundred (100) feet long shall be introduced between reverse curves on arterial and collector streets.
13. Parking of vehicles within the cartway of streets shall be discouraged to allow for narrowing of the required pavement widths.
14. The curb radius in cul-de-sacs shall be the minimum necessary to accommodate the turning radius of emergency vehicles expected in this type of street.
15. Where design constraints permit, the turning radius in cul-de-sacs may be reduced to less than required above provided that there is a reinforced shoulder of a width sufficient to accommodate the emergency vehicles expected in this type of street.

Section 144-105:

The original text reads:

144-105. STORMWATER MANAGEMENT SYTEMS

1. All stormwater management systems shall meet the requirements of the R.S.I.S.

Stormwater Management Systems generally requires that all streets be provided with inlets and pipes where the same are necessary for proper drainage. This section was amended to encourage the use of natural vegetated swales in lieu of inlets and pipes. Section Stormwater Management Systems addresses stormwater runoff by referencing all requirements outlined in N.J.A.C. 7:8-5. These changes were presented earlier in this document.

1. All stormwater management systems shall meet the requirements of the Stormwater Management Regulations (N.J.A.C. 7:8-5 et seq.).
2. Nonstructural stormwater management strategies that are contained within the above regulations shall be preferred.
3. Where design constraints permit, the use of natural vegetated swales for stormwater collection and transmission shall be encouraged.

Section 144-107:

The original text reads:

144-107. SHADE TREES

1. Shade trees are to be located so as not to interfere with utilities or sidewalks, and to be planted at least eight (8) feet to one (1) side of the area directly over utility lines. Allowable trees shall be those as specified in Article 11, 144-94 Landscaping. All trees shall be at least six (6) feet in height and one and one-half (1-1/2) inches in diameter. However, the Planning Board of the Township of Mullica shall have the power to require more or less shade trees and different types depending upon the subdivision presented.

This ordinance recognizes that the preservation of mature trees and forested areas is a key strategy in the management of environmental resources, particularly watershed management, air quality, and ambient heating and cooling. This complies with minimizing land disturbance, which is a nonstructural stormwater management strategy.

1. Where design constraints permit, preference shall be given to maximizing the retention of natural areas of vegetation with as little disturbance as is practicably possible.
2. If the Planning Board determines that shade trees are required, they shall be located so as not to interfere with utilities, sidewalks or non structural stormwater management measures that may be included within a design plan, and shall be planted at least eight (8) feet to one (1) side of the area directly over underground utility lines. Allowable trees shall be those as specified in Article 11, 144-94 Landscaping. All trees shall be at least six (6) feet in height and one and one-half (1-1/2) inches in diameter. However, the Planning Board of the Township of Mullica shall have the power to require more or less shade trees and different types depending upon the development plans presented.

Several changes are also recommended to Article 12 of this Chapter, entitled “Zoning Districts and Permitted Uses” to incorporate these strategies.

Section 144-121:

The original text reads:

144-121. EFFECT ON ESTABLISHMENT OF DISTRICTS

1. Following the effective date of this Ordinance:

A. No building shall be erected, moved, altered, rebuilt or enlarged, except as specified elsewhere in this Ordinance, nor shall any land or building be used, designed or arranged to be used for any purpose or in any manner, except in conformity with all regulations, requirements and/or restrictions specified in this Ordinance for the district in which such building or land is located.

B. No yard or open space required in connection with any building or use shall be considered as providing a required open space for any other building of the same or any other lot. No lot shall be formed from part of a lot already occupied by a building unless such building, all yards, and open spaces connected therewith, and the remaining lot comply with all requirements prescribed by this Ordinance for the district in which said lot is located. No permit shall be issued for the erection of a building on any new lot thus created unless such building and lot comply with all the provisions of this Ordinance.

Language has been recommended to add a requirement for a mitigation plan as part of a variance application for existing structures proposing additions that exceed the maximum percentage of impervious building or lot coverage. The owner must mitigate the impact of the additional impervious surfaces unless the stormwater management plans for the development provided for these increases in impervious surfaces. This mitigation effort must address water quality, flooding, and groundwater recharge as described in Section ***. A detailed description of how to develop a mitigation plan is present in the Township Code.

C. Any application for a variance to exceed the maximum allowable impervious building or lot coverage shall include a plan to mitigate the effects of the additional impervious surfaces on water quality, flooding and groundwater recharge.

Section 144-123.17:

The original text reads:

144-123.17. OFF-STREET PARKING

A. General provisions.
1. Lighting. All parking areas providing five or more parking spaces shall be lighted in accordance with the provisions specified in section 144-95 of this Ordinance.
2. Surfacing and curbing. All on-site, off-street parking and loading areas and access driveways shall be paved and curbed as recommended by the Township Engineer and approved by the Planning Board/Zoning Board of Adjustment as part of the site plan approval.
3. Location of parking spaces. All required off-street parking spaces shall be located on the same lot or premises as the use served.
4. Setbacks.
   a. In order to protect adjacent uses in different zoning districts, the side and rear yard setbacks of any improvements, both building or paving, shall not be less than one hundred (100) feet.
   b. The front yard setback form the right-of-way shall not be less than seventy-five (75) feet for any parking area and not less than fifty (50) feet for any other improvement.
   c. The side setback between buildings on the same site shall not be less than twenty-five (25) feet.

5. Landscaping.
    a. Landscaping shall be in accordance with section 144-94.6.
    b. All loading areas shall be landscaped and screened sufficiently to obscure the view of the loading platforms from any public street, adjacent residential districts or uses and the front yards of adjacent commercial and industrial uses. Such screening shall be by a fence, wall, planting or combination of the three and shall not be less than four feet in height.
    c. Type of facility. Parking spaces may be on, above or below the surface of the ground. When parking spaces are provided within a garage or other structure, said structure shall adhere to the proper accessory or principal building setbacks, as applicable.
    d. The provision of parking spaces shall also include adequate driveways and necessary turning areas for handling the vehicles for which provision is made. Except for detached and two-family dwelling units, parking areas shall be designed to permit each motor vehicle to proceed to and from the parking space provided for it without requiring the moving of any other motor vehicles. Aisles providing access to parking spaces shall have the following minimum dimensions. Where the angle of parking is different on both sides of the aisle, the larger aisle width shall prevail.

B. Specific requirements. Each individual use shall provide parking spaces according to the following provisions. Where a permitted use of land includes different specific activities with different specific parking requirements, the total number of required parking spaces shall be obtained by individually computing the parking requirements for each different activity and adding the resulting numbers together.
    1. Residential.
        a. Single-family detached or attached or two-family dwelling units shall provide two spaces for each dwelling unit.
        b. Apartments or other multifamily-type units shall provide 1.75 spaces per unit.
    2. Churches shall provide one space per every five permanent seats. One seat shall be considered 22 inches in calculating the capacity of pews or benches.
    3. Golf courses and public utilities shall provide sufficient spaces and maneuvering ~ area to prevent any parking along public rights-of-way or private driveways, fire lanes and aisles.
    4. Local retail and service activities, banks and offices shall provide parking at a ratio of five spaces per 1,000 square feet of gross floor area.
    5. Theaters shall provide one space for every four seats. This requirement may be waived if the theater is located within a shopping center and the minimum requirements for the theater can be met by other shopping center activities.
    6. Bowling alleys shall provide four spaces per bowling lane.
    7. Service stations shall provide at least six spaces for the first lift, wheel alignment pit or similar work area; five additional spaces for a second work area; and an additional three spaces for each additional work area. Such spaces shall be separated from the driveway and general apron areas, which give access to the gasoline and air pumps and service areas. No designated parking space shall obstruct access to such facilities.
    8. Automobile, camper and travel trailer sales shall provide 10 spaces for customer convenience, separated from vehicular displays and not used by employees.
    9. Car washes shall provide two access lanes for each mechanized car wash entrance, with each lane having a minimum capacity for 15 vehicles; one separate space for each waxing, upholstery cleaning, or similar specialized service area: and one space for every two employees. All vehicle entrances shall be from the rear of the building, and all parked and waiting vehicles shall be accommodated on the lot.

10. Hotels and motels shall provide 1-1/4 spaces per room.
11. Manufacturing plants, industrial plants and wholesale distribution centers and warehouses shall provide parking at the ratios of one space for every 1,000 square feet of gross floor area used for inside storage and warehousing, plus one space for every 700 feet of gross floor area used for manufacturing, plus one space for every 200 square feet of gross floor area used for offices. Additionally, one space shall be provided for every vehicle owned and/or operated by the use operating from the site.
12. Auto body shops, welding shops and auto repair garages shall provide parking at a ratio of one space for every 700 feet of gross floor area used for the auto body, repair or welding work, plus one space for every 200 square feet of floor area used for office space. Additionally, one space shall be provided for every vehicle owned or operated by the use operating from the site.
13. Club, eating and/or drinking establishments shall provide 10 parking spaces for the first 200 square feet of floor area and one space for each additional 100 square feet thereafter.
14. Other uses. Uses other than specified herein shall provide one parking space for each 400 square feet of floor spaces.
15. Medical offices shall provide 1 space per 100 square feet of gross floor area.
16. Medical complexes and nursing homes shall provide 1 space per 250 square feet of gross floor area.
17. Marinas shall provide 1 space per berth.
18. A reduction of up to 20% in the total number of spaces required may be granted upon a showing of adequacy of fewer spaces; provided, however, that area for the additional spaces is available if necessary at a later date.

Off-street Parking details off-street parking and loading requirements. All parking lots with more than 10 spaces and all loading areas are required to have concrete or Belgian block curbing around the perimeter of the parking and loading areas. This section also requires that concrete or Belgian block curbing be installed around all landscaped areas within the parking lot or loading areas. This section was amended to allow for flush curb with curb stop, or curbing with curb cuts to encourage developers to allow for the discharge of impervious areas into landscaped areas for stormwater management. In addition, language was added to allow for use of natural vegetated swales for the water quality design storm, with overflow for larger storm events into storm sewers. This section also provides guidance on minimum parking space requirements. These requirements are based on the number of dwelling units and/or gross floor area. The section allows a developer to demonstrate that fewer spaces would be required, provided area is set aside for additional spaces if necessary. This section was amended to allow pervious paving to be used in areas to provide overflow parking, vertical parking structures, smaller parking stalls, and shared parking.

144-123.17. OFF-STREET PARKING

A. General provisions.
   1. Lighting. All parking areas providing five or more parking spaces shall be lighted in accordance with the provisions specified in section 144-95 of this Ordinance.
   2. Surfacing and curbing. All on-site, off-street parking and loading areas and access driveways shall be paved and curbed as recommended by the Township Engineer and approved by the Planning Board/Zoning Board of Adjustment as part of the site plan approval.

3. Location of parking spaces. All required off-street parking spaces shall be located on the same lot or premises as the use served.
4. Setbacks.
    a. In order to protect adjacent uses in different zoning districts, the side and rear yard setbacks of any improvements, both building or paving, shall not be less than one hundred (100) feet.
    b. The front yard setback form the right-of-way shall not be less than seventy-five (75) feet for any parking area and not less than fifty (50) feet for any other improvement.
    c. The side setback between buildings on the same site shall not be less than twenty-five (25) feet.
5. Landscaping.
    a. Landscaping shall be in accordance with section 144-94.6.
    b. All loading areas shall be landscaped and screened sufficiently to obscure the view of the loading platforms from any public street, adjacent residential districts or uses and the front yards of adjacent commercial and industrial uses. Such screening shall be by a fence, wall, planting or combination of the three and shall not be less than four feet in height.
    c. Type of facility. Parking spaces may be on, above or below the surface of the ground. When parking spaces are provided within a garage or other structure, said structure shall adhere to the proper accessory or principal building setbacks, as applicable.
    d. The provision of parking spaces shall also include adequate driveways and necessary turning areas for handling the vehicles for which provision is made. Except for detached and two-family dwelling units, parking areas shall be designed to permit each motor vehicle to proceed to and from the parking space provided for it without requiring the moving of any other motor vehicles. Aisles providing access to parking spaces shall have the following minimum dimensions. Where the angle of parking is different on both sides of the aisle, the larger aisle width shall prevail.

C. Specific requirements. Each individual use shall provide parking spaces according to the following provisions. Where a permitted use of land includes different specific activities with different specific parking requirements, the total number of required parking spaces shall be obtained by individually computing the parking requirements for each different activity and adding the resulting numbers together.
    1. Residential.
        a. Single-family detached or attached or two-family dwelling units shall provide two spaces for each dwelling unit.
        b. Apartments or other multifamily-type units shall provide 1.75 spaces per unit.
    2. Churches shall provide one space per every five permanent seats. One seat shall be considered 22 inches in calculating the capacity of pews or benches.
    3. Golf courses and public utilities shall provide sufficient spaces and maneuvering ~ area to prevent any parking along public rights-of-way or private driveways, fire lanes and aisles.
    4. Local retail and service activities, banks and offices shall provide parking at a ratio of five spaces per 1,000 square feet of gross floor area.
    5. Theaters shall provide one space for every four seats. This requirement may be waived if the theater is located within a shopping center and the minimum requirements for the theater can be met by other shopping center activities.
    6. Bowling alleys shall provide four spaces per bowling lane.
    7. Service stations shall provide at least six spaces for the first lift, wheel alignment pit or similar work area; five additional spaces for a second work area; and an additional three

spaces for each additional work area. Such spaces shall be separated from the driveway and general apron areas, which give access to the gasoline and air pumps and service areas. No designated parking space shall obstruct access to such facilities.

8. Automobile, camper and travel trailer sales shall provide 10 spaces for customer convenience, separated from vehicular displays and not used by employees.
9. Car washes shall provide two access lanes for each mechanized car wash entrance, with each lane having a minimum capacity for 15 vehicles; one separate space for each waxing, upholstery cleaning, or similar specialized service area: and one space for every two employees. All vehicle entrances shall be from the rear of the building, and all parked and waiting vehicles shall be accommodated on the lot.
10. Hotels and motels shall provide 1-1/4 spaces per room.
11. Manufacturing plants, industrial plants and wholesale distribution centers and warehouses shall provide parking at the ratios of one space for every 1,000 square feet of gross floor area used for inside storage and warehousing, plus one space for every 700 feet of gross floor area used for manufacturing, plus one space for every 200 square feet of gross floor area used for offices. Additionally, one space shall be provided for every vehicle owned and/or operated by the use operating from the site.
12. Auto body shops, welding shops and auto repair garages shall provide parking at a ratio of one space for every 700 feet of gross floor area used for the auto body, repair or welding work, plus one space for every 200 square feet of floor area used for office space. Additionally, one space shall be provided for every vehicle owned or operated by the use operating from the site.
13. Club, eating and/or drinking establishments shall provide 10 parking spaces for the first 200 square feet of floor area and one space for each additional 100 square feet thereafter.
14. Other uses. Uses other than specified herein shall provide one parking space for each 400 square feet of floor spaces.
15. Medical offices shall provide 1 space per 100 square feet of gross floor area.
16. Medical complexes and nursing homes shall provide 1 space per 250 square feet of gross floor area.
17. Marinas shall provide 1 space per berth.
18. A reduction of up to 20% in the total number of spaces required may be granted upon a showing of adequacy of fewer spaces; provided, however, that area for the additional spaces is available if necessary at a later date.

Section 144-123.22: Planned Unit Residential Development provides for a cluster development option to preserve land for public and agricultural purposes, to prevent development on environmentally sensitive areas, and to aid in reducing the cost of providing streets, utilities and services in residential developments. This cluster option is an excellent tool for reducing impervious roads and driveways. The option allows for smaller lots with smaller front and side yard setbacks than traditional development options. It also minimizes the disturbance of large tracts of land, which is a key nonstructural stormwater management strategy. The cluster option is being amended to require that [insert percentage here] of the total tract be preserved as common open space for residential area. The cluster option does require that 25 percent of the green or common area be landscaped with trees and/or shrubs. This language was amended to promote the use of native vegetation, which requires less fertilization and watering than non-native ornamental plants. Although the cluster option requires public concrete sidewalks to be installed along all streets, the option requires paths in open space to be mulched or stone to decrease the impervious areas.

Several changes were made to Article 12 of the Mullica Township Land Development Ordinance entitled “Zoning Districts and Permitted Uses.” The Township has 13 types of residential districts. Each district has a maximum percent impervious surface allocation, ranging from 10 percent for the

Preservation Area, Agricultural Production, Rural Development Area and Devonshire Village Center Districts, to 25 percent for all other Districts. Minimum allowable residential lot sizes range from a maximum of 31 acres to a minimum of 1.0 acre.

Commercial and Professional Office Uses are permitted in only four of the residential districts. Limited Light Industrial Uses are permitted in only three of the residential districts. Each of these districts has a maximum percent impervious surface allocation of 50 percent. Although each zone has a maximum allowable percent impervious surface, the Township Code was amended to remind developers that satisfying the percent impervious requirements does not relieve them of responsibility for complying with the Design and Performance Standards for Stormwater Management Measures contained in Section 144-105 – Stormwater Management Systems. The Township is evaluating the maximum allowable impervious cover for each zone to determine whether a reduction in impervious cover is appropriate. The Township is also evaluating a maximum percent of disturbance for each zone, for those areas identified as natural features in

Land Use/Build-Out Analysis

A detailed land use analysis for the Township was conducted. Figure 6 illustrates the existing land use in the Township based on *1995/97 GIS information from NJDEP. Figure 7 illustrates the HUC14s within the Township. The Township zoning map is shown in Figure 8. Figure 9 illustrates the constrained lands within the Township.

The build-out calculations for impervious cover are shown in Table 2. As expected when developing agricultural and forestlands, the build-out of these two HUC14s will result in a significant increase in impervious surfaces.

Table 3 presents the pollutant loading coefficients by land cover. The pollutant loads at full build-out are presented in Table 4.

Figure 6

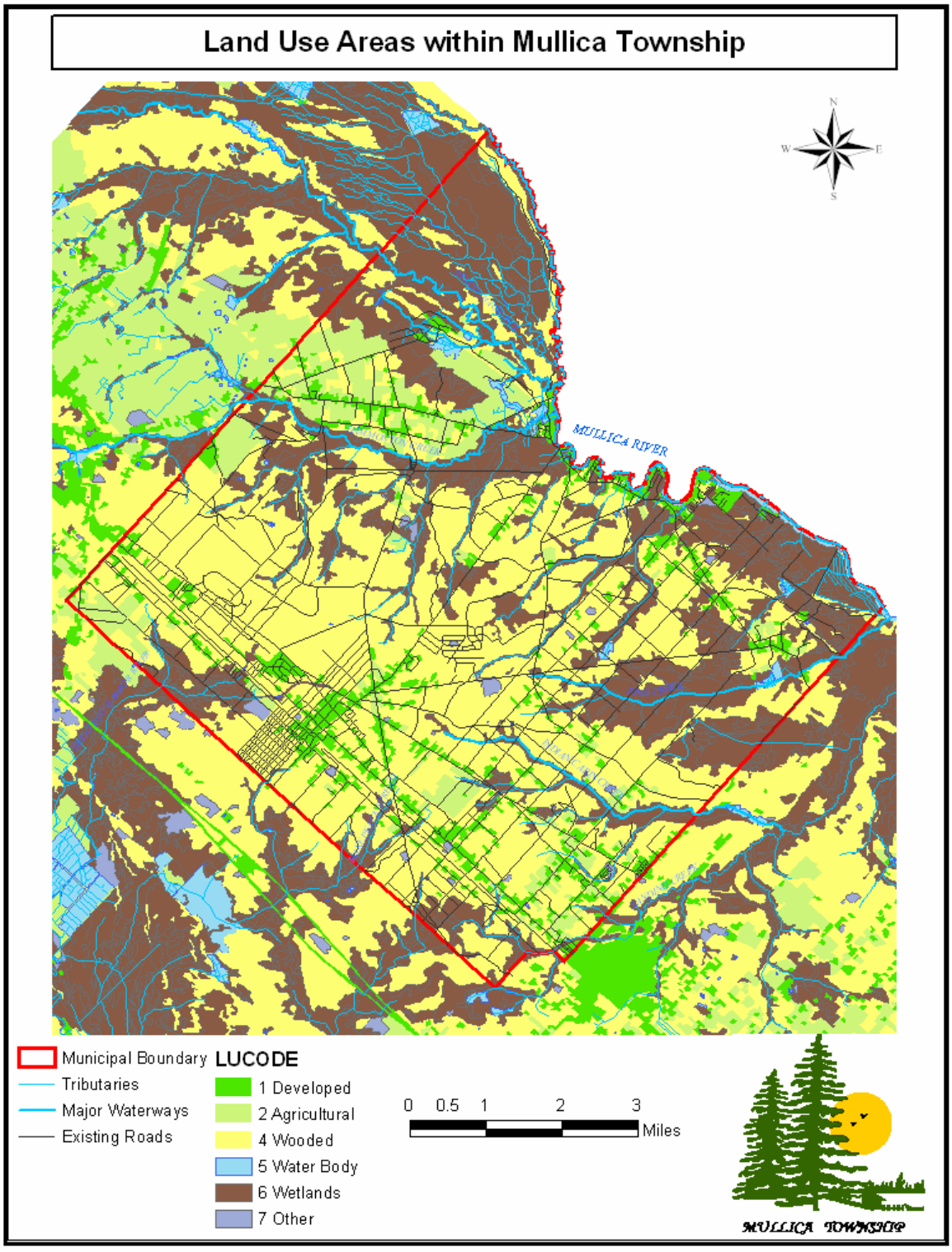
Land Use Areas within Mullica Township
MULLICA RIVER
N
W
E
S
Municipal Boundary
Tributaries
Major Waterways
Existing Roads
LUCODE
1 Developed
2 Agricultural
4 Wooded
5 Water Body
6 Wetlands
7 Other
0 0.5 1 2 3
Miles
MULLICA TOWNSHIP

Figure 7

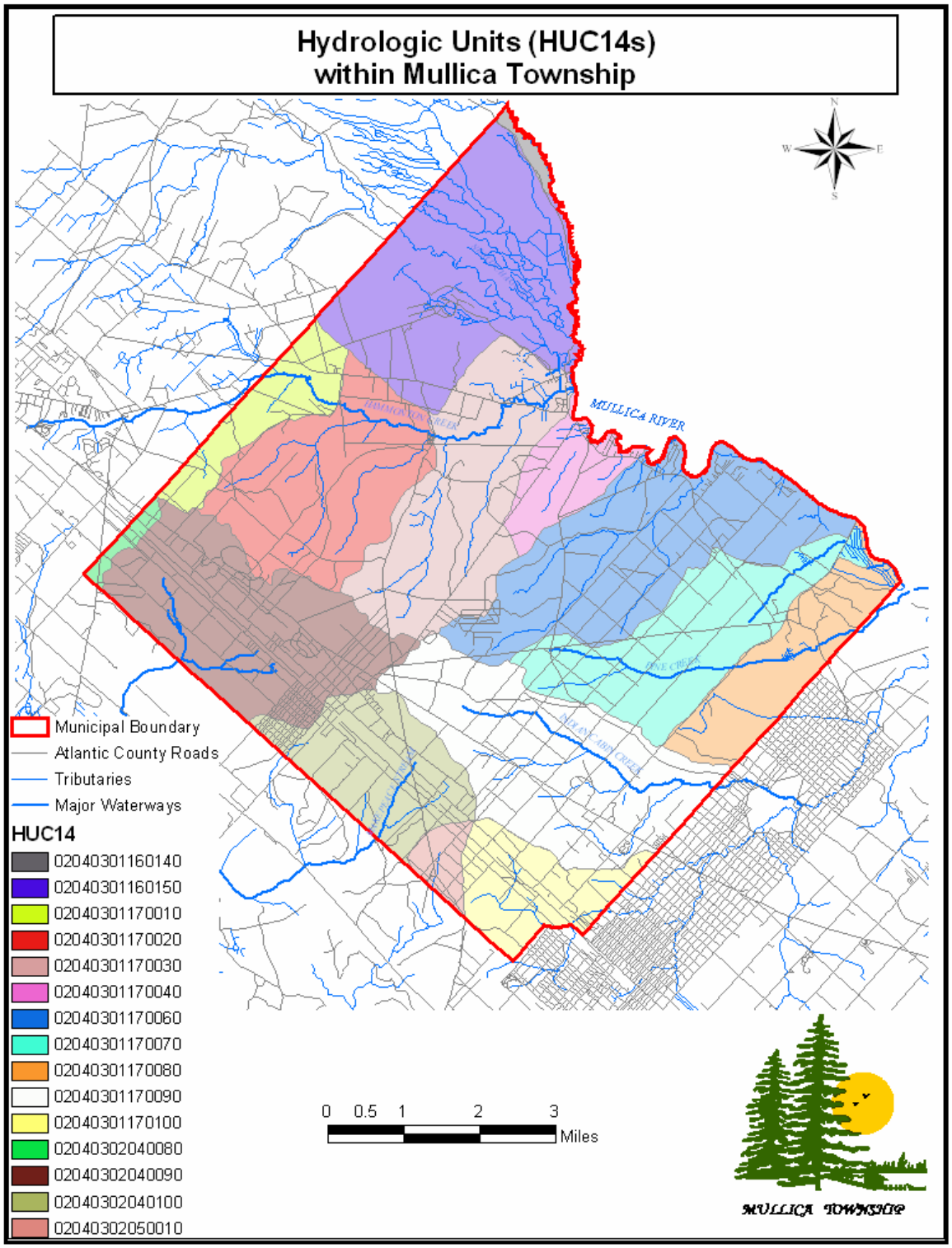
Hydrologic Units (HUC14s)
within Mullica Township
N
W
E
S
MULLICA RIVER
Municipal Boundary
Atlantic County Roads
Tributaries
Major Waterways
HUC14
02040301160140
02040301160150
02040301170010
02040301170020
02040301170030
02040301170040
02040301170060
02040301170070
02040301170080
02040301170090
02040301170100
02040302040080
02040302040090
02040302040100
02040302050010
0 0.5 1 2 3
Miles
MULLICA TOWNSHIP

Figure 8

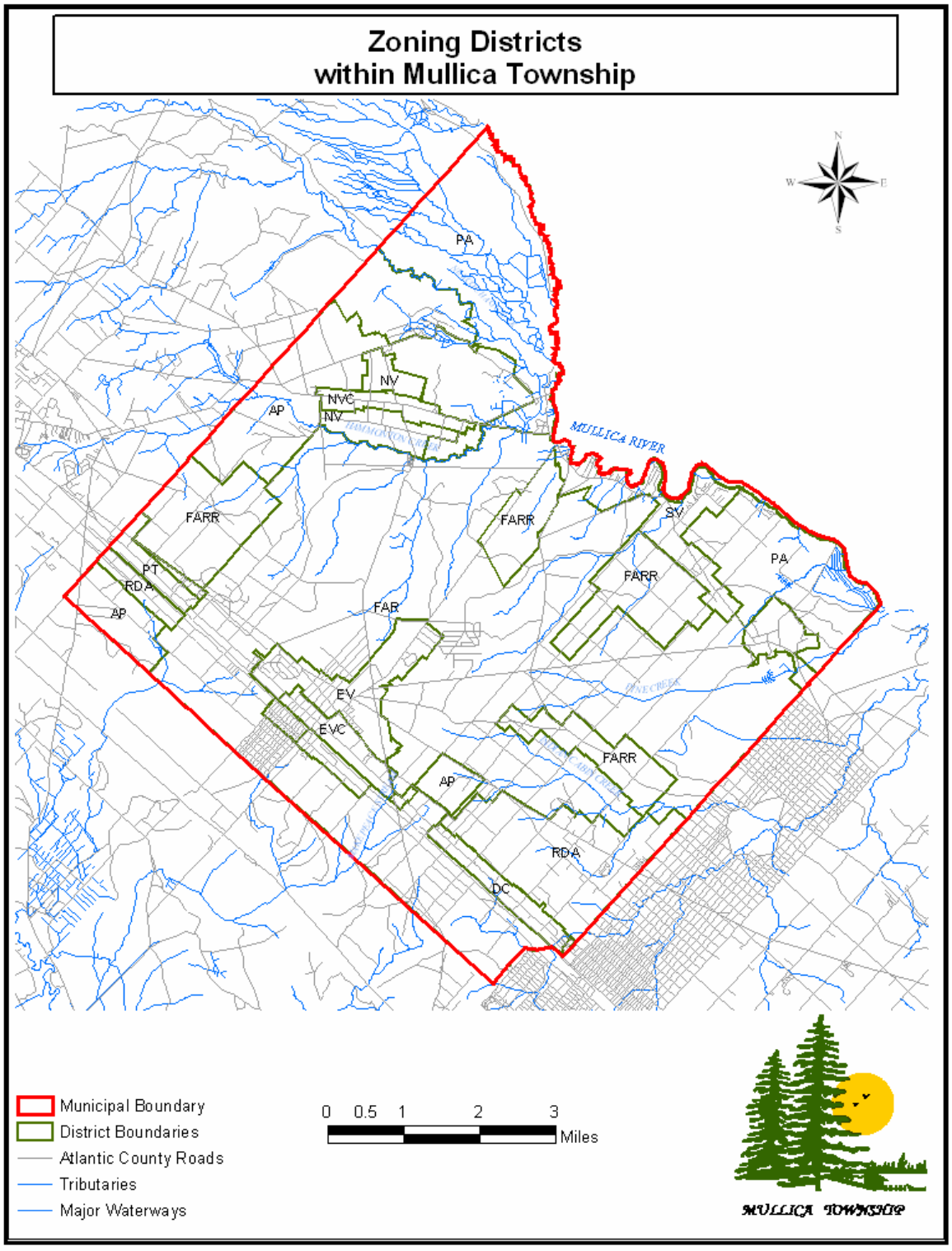
Zoning Districts
within Mullica Township
PA
NV
NVC
AP
MULLICA RIVER
FARR
SV
PT
RDA
EV
EVC
DC
Municipal Boundary
District Boundaries
Atlantic County Roads
Tributaries
Major Waterways
0 0.5 1 2 3
Miles
MULLICA TOWNSHIP

Figure 9

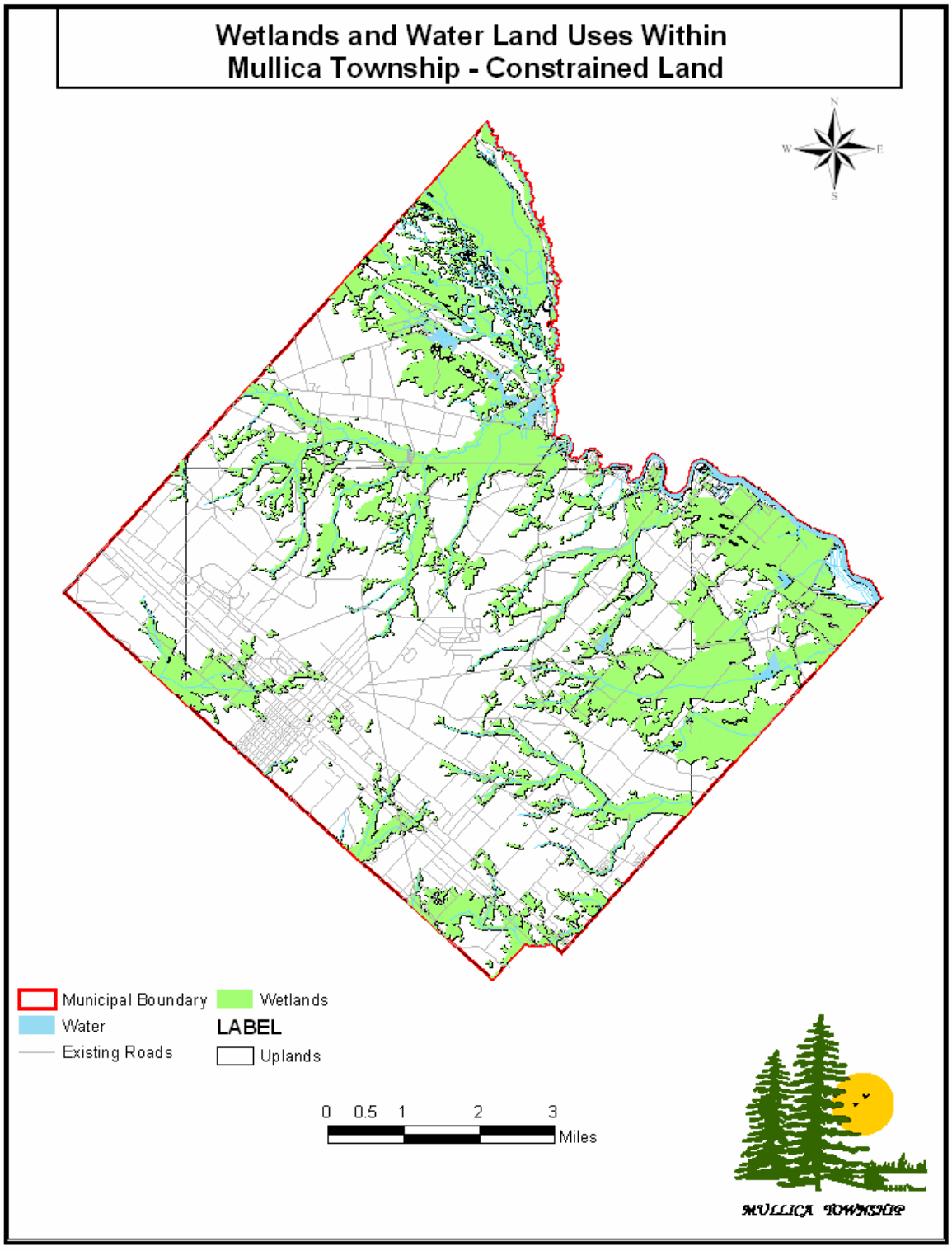
Wetlands and Water Land Uses Within
Mullica Township - Constrained Land
N
W
E
S
Municipal Boundary
Water
Existing Roads
Wetlands
LABEL
Uplands
0 0.5 1 2 3
Miles

Table 2: Pollutant Loads by Land Cover

Land Cover	Total Phosphorus Load (lbs/acre/year)	Total Nitrogen Load (lbs/acre/year)	Total Suspended Solids Load (lbs/acre/yr)
High, Medium Density Residential	1.4	15	140
Low Density, Rural Residential	0.6	5	100
Commercial	2.1	22	200
Industrial	1.5	16	200
Urban, Mixed Urban, Other Urban	1.0	10	120
Agricultural	1.3	10	300
Forest, Water, Wetlands	0.1	3	40
Barrenland/Transitional Area	0.5	5	60

Source: NJDEP Stormwater BMP Manual 2004.

Table 3: Build-Out Calculations for HUC14s

HUC14 AND ZONE	TOTAL AREA (AC)	EXISTING IMPERVIOUS (%)	EXISTING IMPERVIOUS (AC)	WETLANDS/WETLANDS BUFFER/WATER AREA (AC)	DEVELOPABLE AREA (AC)	ALLOWABLE IMPERVIOUS (%)	BUILD-OUT IMPERVIOUS (AC)
02040301160140	**139.1**						
AGRICULTURAL PRODUCTION (AP)	0.0			0.0	0.0	10	0.0
RURAL DEVELOPMENT AREA (RDA)	0.0			0.0	0.0	10	0.0
FOREST AREA RESIDENTIAL (FAR)	0.0			0.0	0.0	25	0.0
FOREST AREA RESIDENTIAL RECEIVING (FARR)	0.0			0.0	0.0	25	0.0
PRESERVATION AREA (PA)	139.1			127.3	11.8	10	1.2
PINELANDS TOWN (PT)	0.0			0.0	0.0	15	0.0
DEVONSHIRE CENTER (DC)	0.0			0.0	0.0	10	0.0
ELWOOD VILLAGE (EV)	0.0			0.0	0.0	25	0.0
ELWOOD VILLAGE CENTER (EVC)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE (NV)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE CENTER (NVC)	0.0			0.0	0.0	25	0.0
SWEETWATER VILLAGE (SV)	0.0			0.0	0.0	25	0.0
WEEKSTOWN VILLAGE (WV)	0.0			0.0	0.0	25	0.0
	139.1			127.3	11.8		1.2
02040301160150	**4752.3**						

HUC14 AND ZONE	TOTAL AREA (AC)	EXISTING IMPERVIOUS (%)	EXISTING IMPERVIOUS (AC)	WETLANDS/WETLANDS BUFFER/WATER AREA (AC)	DEVELOPABLE AREA (AC)	ALLOWABLE IMPERVIOUS (%)	BUILD-OUT IMPERVIOUS (AC)
AGRICULTURAL PRODUCTION (AP)	935.7			486.2	449.5	10	45.0
RURAL DEVELOPMENT AREA (RDA)	0.0			0.0	0.0	10	0.0
FOREST AREA RESIDENTIAL (FAR)	845.1			813.6	31.5	25	7.9
FOREST AREA RESIDENTIAL RECEIVING (FARR)	0.0			0.0	0.0	25	0.0
PRESERVATION AREA (PA)	2535.0			2492.4	42.6	10	4.3
PINELANDS TOWN (PT)	0.0			0.0	0.0	15	0.0
DEVONSHIRE CENTER (DC)	0.0			0.0	0.0	10	0.0
ELWOOD VILLAGE (EV)	0.0			0.0	0.0	25	0.0
ELWOOD VILLAGE CENTER (EVC)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE (NV)	271.5			56.9	214.6	25	53.6
NESCO VILLAGE CENTER (NVC)	161.2			1.6	159.6	25	39.9
SWEETWATER VILLAGE (SV)	0.0			0.0	0.0	25	0.0
WEEKSTOWN VILLAGE (WV)	0.0			0.0	0.0	25	0.0
	4748.5			3850.7	897.8		150.7
02040301170010	**1212.1**						

HUC14 AND ZONE	TOTAL AREA (AC)	EXISTING IMPERVIOUS (%)	EXISTING IMPERVIOUS (AC)	WETLANDS/WETLANDS BUFFER/WATER AREA (AC)	DEVELOPABLE AREA (AC)	ALLOWABLE IMPERVIOUS (%)	BUILD-OUT IMPERVIOUS (AC)
AGRICULTURAL PRODUCTION (AP)	889.5			442.6	446.9	10	44.7
RURAL DEVELOPMENT AREA (RDA)	0.0			0.0	0.0	10	0.0
FOREST AREA RESIDENTIAL (FAR)	0.0			0.0	0.0	25	0.0
FOREST AREA RESIDENTIAL RECEIVING (FARR)	299.6			95.2	204.4	25	51.1
PRESERVATION AREA (PA)	0.0			0.0	0.0	10	0.0
PINELANDS TOWN (PT)	9.0			0.0	9.0	15	1.4
DEVONSHIRE CENTER (DC)	0.0			0.0	0.0	10	0.0
ELWOOD VILLAGE (EV)	0.0			0.0	0.0	25	0.0
ELWOOD VILLAGE CENTER (EVC)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE (NV)	2.4			1.0	1.4	25	0.3
NESCO VILLAGE CENTER (NVC)	9.6			0.0	9.6	25	2.4
SWEETWATER VILLAGE (SV)	0.0			0.0	0.0	25	0.0
WEEKSTOWN VILLAGE (WV)	0.0			0.0	0.0	25	0.0
	1210.1			538.8	671.3		99.9
02040301170020	**3409.0**						

HUC14 AND ZONE	TOTAL AREA (AC)	EXISTING IMPERVIOUS (%)	EXISTING IMPERVIOUS (AC)	WETLANDS/WETLANDS BUFFER/WATER AREA (AC)	DEVELOPABLE AREA (AC)	ALLOWABLE IMPERVIOUS (%)	BUILD-OUT IMPERVIOUS (AC)
AGRICULTURAL PRODUCTION (AP)	224.7			165.7	59.0	10	5.9
RURAL DEVELOPMENT AREA (RDA)	0.0			0.0	0.0	10	0.0
FOREST AREA RESIDENTIAL (FAR)	2228.9			1458.1	770.8	25	192.7
FOREST AREA RESIDENTIAL RECEIVING (FARR)	602.2			216.2	386.0	25	96.5
PRESERVATION AREA (PA)	0.0			0.0	0.0	10	0.0
PINELANDS TOWN (PT)	0.0			0.0	0.0	15	0.0
DEVONSHIRE CENTER (DC)	0.0			0.0	0.0	10	0.0
ELWOOD VILLAGE (EV)	0.0			0.0	0.0	25	0.0
ELWOOD VILLAGE CENTER (EVC)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE (NV)	265.2			125.6	139.6	25	34.9
NESCO VILLAGE CENTER (NVC)	87.6			0.0	87.6	25	21.9
SWEETWATER VILLAGE (SV)	0.0			0.0	0.0	25	0.0
WEEKSTOWN VILLAGE (WV)	0.0			0.0	0.0	25	0.0
	3408.6			1965.6	1443.0		351.9
02040301170030	**3677.2**						

HUC14 AND ZONE	TOTAL AREA (AC)	EXISTING IMPERVIOUS (%)	EXISTING IMPERVIOUS (AC)	WETLANDS/WETLANDS BUFFER/WATER AREA (AC)	DEVELOPABLE AREA (AC)	ALLOWABLE IMPERVIOUS (%)	BUILD-OUT IMPERVIOUS (AC)
AGRICULTURAL PRODUCTION (AP)	565.0			473.4	91.6	10	9.2
RURAL DEVELOPMENT AREA (RDA)	0.0			0.0	0.0	10	0.0
FOREST AREA RESIDENTIAL (FAR)	2594.9			1656.6	938.3	25	234.6
FOREST AREA RESIDENTIAL RECEIVING (FARR)	15.4			0.0	15.4	25	3.8
PRESERVATION AREA (PA)	168.4			135.9	32.5	10	3.3
PINELANDS TOWN (PT)	0.0			0.0	0.0	15	0.0
DEVONSHIRE CENTER (DC)	0.0			0.0	0.0	10	0.0
ELWOOD VILLAGE (EV)	189.8			29.2	160.6	25	40.1
ELWOOD VILLAGE CENTER (EVC)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE (NV)	81.9			9.9	72.0	25	18.0
NESCO VILLAGE CENTER (NVC)	62.0			0.0	62.0	25	15.5
SWEETWATER VILLAGE (SV)	0.0			0.0	0.0	25	0.0
WEEKSTOWN VILLAGE (WV)	0.0			0.0	0.0	25	0.0
	3677.4			2305.0	1372.4		324.5
02040301170040	**1053.9**						

HUC14 AND ZONE	TOTAL AREA (AC)	EXISTING IMPERVIOUS (%)	EXISTING IMPERVIOUS (AC)	WETLANDS/WETLANDS BUFFER/WATER AREA (AC)	DEVELOPABLE AREA (AC)	ALLOWABLE IMPERVIOUS (%)	BUILD-OUT IMPERVIOUS (AC)
AGRICULTURAL PRODUCTION (AP)	0.0			0.0	0.0	10	0.0
RURAL DEVELOPMENT AREA (RDA)	0.0			0.0	0.0	10	0.0
FOREST AREA RESIDENTIAL (FAR)	298.3			213.6	84.7	25	21.2
FOREST AREA RESIDENTIAL RECEIVING (FARR)	496.5			263.9	232.6	25	58.1
PRESERVATION AREA (PA)	23.9			23.6	0.3	10	0.0
PINELANDS TOWN (PT)	0.0			0.0	0.0	15	0.0
DEVONSHIRE CENTER (DC)	0.0			0.0	0.0	10	0.0
ELWOOD VILLAGE (EV)	0.0			0.0	0.0	25	0.0
ELWOOD VILLAGE CENTER (EVC)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE (NV)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE CENTER (NVC)	0.0			0.0	0.0	25	0.0
SWEETWATER VILLAGE (SV)	235.0			178.4	56.6	25	14.1
WEEKSTOWN VILLAGE (WV)	0.0			0.0	0.0	25	0.0
	1053.7			679.5	374.2		93.5
02040301170060	**4504.0**						

HUC14 AND ZONE	TOTAL AREA (AC)	EXISTING IMPERVIOUS (%)	EXISTING IMPERVIOUS (AC)	WETLANDS/WETLANDS BUFFER/WATER AREA (AC)	DEVELOPABLE AREA (AC)	ALLOWABLE IMPERVIOUS (%)	BUILD-OUT IMPERVIOUS (AC)
AGRICULTURAL PRODUCTION (AP)	0.0			0.0	0.0	10	0.0
RURAL DEVELOPMENT AREA (RDA)	0.0			0.0	0.0	10	0.0
FOREST AREA RESIDENTIAL (FAR)	2041.7			1227.5	814.2	25	203.6
FOREST AREA RESIDENTIAL RECEIVING (FARR)	797.3			397.2	400.1	25	100.0
PRESERVATION AREA (PA)	930.5			905.0	25.5	10	2.5
PINELANDS TOWN (PT)	0.0			0.0	0.0	15	0.0
DEVONSHIRE CENTER (DC)	0.0			0.0	0.0	10	0.0
ELWOOD VILLAGE (EV)	17.1			0.0	17.1	25	4.3
ELWOOD VILLAGE CENTER (EVC)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE (NV)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE CENTER (NVC)	0.0			0.0	0.0	25	0.0
SWEETWATER VILLAGE (SV)	717.5			526.0	191.5	25	47.9
WEEKSTOWN VILLAGE (WV)	0.0			0.0	0.0	25	0.0
	4504.0			3055.7	1448.3		358.3
02040301170070	**3056.5**						

HUC14 AND ZONE	TOTAL AREA (AC)	EXISTING IMPERVIOUS (%)	EXISTING IMPERVIOUS (AC)	WETLANDS/WETLANDS BUFFER/WATER AREA (AC)	DEVELOPABLE AREA (AC)	ALLOWABLE IMPERVIOUS (%)	BUILD-OUT IMPERVIOUS (AC)
AGRICULTURAL PRODUCTION (AP)	0.0			0.0	0.0	10	0.0
RURAL DEVELOPMENT AREA (RDA)	0.0			0.0	0.0	10	0.0
FOREST AREA RESIDENTIAL (FAR)	1989.4			1747.2	242.2	25	60.5
FOREST AREA RESIDENTIAL RECEIVING (FARR)	413.9			211.2	202.7	25	50.7
PRESERVATION AREA (PA)	396.4			351.6	44.8	10	4.5
PINELANDS TOWN (PT)	0.0			0.0	0.0	15	0.0
DEVONSHIRE CENTER (DC)	0.0			0.0	0.0	10	0.0
ELWOOD VILLAGE (EV)	0.0			0.0	0.0	25	0.0
ELWOOD VILLAGE CENTER (EVC)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE (NV)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE CENTER (NVC)	0.0			0.0	0.0	25	0.0
SWEETWATER VILLAGE (SV)	121.6			84.7	36.9	25	9.2
WEEKSTOWN VILLAGE (WV)	135.1			86.7	48.4	25	12.1
	3056.4			2481.4	575.0		137.0
02040301170080	**1923.1**						

HUC14 AND ZONE	TOTAL AREA (AC)	EXISTING IMPERVIOUS (%)	EXISTING IMPERVIOUS (AC)	WETLANDS/WETLANDS BUFFER/WATER AREA (AC)	DEVELOPABLE AREA (AC)	ALLOWABLE IMPERVIOUS (%)	BUILD-OUT IMPERVIOUS (AC)
AGRICULTURAL PRODUCTION (AP)	0.0			0.0	0.0	10	0.0
RURAL DEVELOPMENT AREA (RDA)	0.0			0.0	0.0	10	0.0
FOREST AREA RESIDENTIAL (FAR)	1127.4			985.7	141.7	25	35.4
FOREST AREA RESIDENTIAL RECEIVING (FARR)	32.8			0.4	32.4	25	8.1
PRESERVATION AREA (PA)	511.1			435.1	76.0	10	7.6
PINELANDS TOWN (PT)	0.0			0.0	0.0	15	0.0
DEVONSHIRE CENTER (DC)	0.0			0.0	0.0	10	0.0
ELWOOD VILLAGE (EV)	0.0			0.0	0.0	25	0.0
ELWOOD VILLAGE CENTER (EVC)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE (NV)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE CENTER (NVC)	0.0			0.0	0.0	25	0.0
SWEETWATER VILLAGE (SV)	0.0			0.0	0.0	25	0.0
WEEKSTOWN VILLAGE (WV)	234.7			201.0	33.7	25	8.4
	1906.0			1622.2	283.8		59.5
02040301170090	**4379.9**						

HUC14 AND ZONE	TOTAL AREA (AC)	EXISTING IMPERVIOUS (%)	EXISTING IMPERVIOUS (AC)	WETLANDS/WETLANDS BUFFER/WATER AREA (AC)	DEVELOPABLE AREA (AC)	ALLOWABLE IMPERVIOUS (%)	BUILD-OUT IMPERVIOUS (AC)
AGRICULTURAL PRODUCTION (AP)	175.1			77.5	97.6	10	9.8
RURAL DEVELOPMENT AREA (RDA)	1414.7			489.4	925.3	10	92.5
FOREST AREA RESIDENTIAL (FAR)	2187.0			963.5	1223.5	25	305.9
FOREST AREA RESIDENTIAL RECEIVING (FARR)	480.3			124.4	355.9	25	89.0
PRESERVATION AREA (PA)	0.0			0.0	0.0	10	0.0
PINELANDS TOWN (PT)	0.0			0.0	0.0	15	0.0
DEVONSHIRE CENTER (DC)	4.0			0.0	4.0	10	0.4
ELWOOD VILLAGE (EV)	111.3			0.0	111.3	25	27.8
ELWOOD VILLAGE CENTER (EVC)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE (NV)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE CENTER (NVC)	0.0			0.0	0.0	25	0.0
SWEETWATER VILLAGE (SV)	0.0			0.0	0.0	25	0.0
WEEKSTOWN VILLAGE (WV)	0.0			0.0	0.0	25	0.0
	4372.5			1654.8	2717.7		525.4
02040301170100	**1512.9**						

HUC14 AND ZONE	TOTAL AREA (AC)	EXISTING IMPERVIOUS (%)	EXISTING IMPERVIOUS (AC)	WETLANDS/WETLANDS BUFFER/WATER AREA (AC)	DEVELOPABLE AREA (AC)	ALLOWABLE IMPERVIOUS (%)	BUILD-OUT IMPERVIOUS (AC)
AGRICULTURAL PRODUCTION (AP)	0.0			0.0	0.0	10	0.0
RURAL DEVELOPMENT AREA (RDA)	421.9			246.1	175.8	10	17.6
FOREST AREA RESIDENTIAL (FAR)	731.0			515.1	215.9	25	54.0
FOREST AREA RESIDENTIAL RECEIVING (FARR)	0.0			0.0	0.0	25	0.0
PRESERVATION AREA (PA)	0.0			0.0	0.0	10	0.0
PINELANDS TOWN (PT)	10.3			9.5	0.8	15	0.1
DEVONSHIRE CENTER (DC)	341.9			232.7	109.2	10	10.9
ELWOOD VILLAGE (EV)	0.0			0.0	0.0	25	0.0
ELWOOD VILLAGE CENTER (EVC)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE (NV)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE CENTER (NVC)	0.0			0.0	0.0	25	0.0
SWEETWATER VILLAGE (SV)	0.0			0.0	0.0	25	0.0
WEEKSTOWN VILLAGE (WV)	0.0			0.0	0.0	25	0.0
	1505.0			1003.4	501.6		82.6
02040302040080	**182.7**						

HUC14 AND ZONE	TOTAL AREA (AC)	EXISTING IMPERVIOUS (%)	EXISTING IMPERVIOUS (AC)	WETLANDS/WETLANDS BUFFER/WATER AREA (AC)	DEVELOPABLE AREA (AC)	ALLOWABLE IMPERVIOUS (%)	BUILD-OUT IMPERVIOUS (AC)
AGRICULTURAL PRODUCTION (AP)	73.5			0.0	73.5	10	7.3
RURAL DEVELOPMENT AREA (RDA)	40.4			0.0	40.4	10	4.0
FOREST AREA RESIDENTIAL (FAR)	0.0			0.0	0.0	25	0.0
FOREST AREA RESIDENTIAL RECEIVING (FARR)	5.5			0.0	5.5	25	1.4
PRESERVATION AREA (PA)	0.0			0.0	0.0	10	0.0
PINELANDS TOWN (PT)	62.1			0.0	62.1	15	9.3
DEVONSHIRE CENTER (DC)	0.0			0.0	0.0	10	0.0
ELWOOD VILLAGE (EV)	0.0			0.0	0.0	25	0.0
ELWOOD VILLAGE CENTER (EVC)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE (NV)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE CENTER (NVC)	0.0			0.0	0.0	25	0.0
SWEETWATER VILLAGE (SV)	0.0			0.0	0.0	25	0.0
WEEKSTOWN VILLAGE (WV)	0.0			0.0	0.0	25	0.0
	181.5			0.0	181.5		22.1
02040302040090	**3968.3**						

HUC14 AND ZONE	TOTAL AREA (AC)	EXISTING IMPERVIOUS (%)	EXISTING IMPERVIOUS (AC)	WETLANDS/WETLANDS BUFFER/WATER AREA (AC)	DEVELOPABLE AREA (AC)	ALLOWABLE IMPERVIOUS (%)	BUILD-OUT IMPERVIOUS (AC)
AGRICULTURAL PRODUCTION (AP)	481.9			107.6	374.3	10	37.4
RURAL DEVELOPMENT AREA (RDA)	239.7			7.0	232.7	10	23.3
FOREST AREA RESIDENTIAL (FAR)	2140.0			779.8	1360.2	25	340.1
FOREST AREA RESIDENTIAL RECEIVING (FARR)	284.6			0.0	284.6	25	71.2
PRESERVATION AREA (PA)	0.0			0.0	0.0	10	0.0
PINELANDS TOWN (PT)	204.9			0.0	204.9	15	30.7
DEVONSHIRE CENTER (DC)	0.0			0.0	0.0	10	0.0
ELWOOD VILLAGE (EV)	522.6			131.1	391.5	25	97.9
ELWOOD VILLAGE CENTER (EVC)	86.7			25.2	61.5	25	15.4
NESCO VILLAGE (NV)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE CENTER (NVC)	0.0			0.0	0.0	25	0.0
SWEETWATER VILLAGE (SV)	0.0			0.0	0.0	25	0.0
WEEKSTOWN VILLAGE (WV)	0.0			0.0	0.0	25	0.0
	3960.4			1050.7	2909.7		615.9
02040302040100	**2221.4**						

HUC14 AND ZONE	TOTAL AREA (AC)	EXISTING IMPERVIOUS (%)	EXISTING IMPERVIOUS (AC)	WETLANDS/WETLANDS BUFFER/WATER AREA (AC)	DEVELOPABLE AREA (AC)	ALLOWABLE IMPERVIOUS (%)	BUILD-OUT IMPERVIOUS (AC)
AGRICULTURAL PRODUCTION (AP)	67.1			0.0	67.1	10	6.7
RURAL DEVELOPMENT AREA (RDA)	24.0			0.9	23.1	10	2.3
FOREST AREA RESIDENTIAL (FAR)	1433.5			565.2	868.3	25	217.1
FOREST AREA RESIDENTIAL RECEIVING (FARR)	0.0			0.0	0.0	25	0.0
PRESERVATION AREA (PA)	0.0			0.0	0.0	10	0.0
PINELANDS TOWN (PT)	0.0			0.0	0.0	15	0.0
DEVONSHIRE CENTER (DC)	41.0			4.9	36.1	10	3.6
ELWOOD VILLAGE (EV)	344.0			49.2	294.8	25	73.7
ELWOOD VILLAGE CENTER (EVC)	289.4			84.4	205.0	25	51.3
NESCO VILLAGE (NV)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE CENTER (NVC)	0.0			0.0	0.0	25	0.0
SWEETWATER VILLAGE (SV)	0.0			0.0	0.0	25	0.0
WEEKSTOWN VILLAGE (WV)	0.0			0.0	0.0	25	0.0
	2199.1			704.6	1494.5		354.7
02040302050010	**388.1**						

HUC14 AND ZONE	TOTAL AREA (AC)	EXISTING IMPERVIOUS (%)	EXISTING IMPERVIOUS (AC)	WETLANDS/WETLANDS BUFFER/WATER AREA (AC)	DEVELOPABLE AREA (AC)	ALLOWABLE IMPERVIOUS (%)	BUILD-OUT IMPERVIOUS (AC)
AGRICULTURAL PRODUCTION (AP)	0.0			0.0	0.0	10	0.0
RURAL DEVELOPMENT AREA (RDA)	0.0			0.0	0.0	10	0.0
FOREST AREA RESIDENTIAL (FAR)	372.3			159.5	212.8	25	53.2
FOREST AREA RESIDENTIAL RECEIVING (FARR)	0.0			0.0	0.0	25	0.0
PRESERVATION AREA (PA)	0.0			0.0	0.0	10	0.0
PINELANDS TOWN (PT)	0.0			0.0	0.0	15	0.0
DEVONSHIRE CENTER (DC)	11.9			0.0	11.9	10	1.2
ELWOOD VILLAGE (EV)	0.0			0.0	0.0	25	0.0
ELWOOD VILLAGE CENTER (EVC)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE (NV)	0.0			0.0	0.0	25	0.0
NESCO VILLAGE CENTER (NVC)	0.0			0.0	0.0	25	0.0
SWEETWATER VILLAGE (SV)	0.0			0.0	0.0	25	0.0
WEEKSTOWN VILLAGE (WV)	0.0			0.0	0.0	25	0.0
	384.2			159.5	224.7		54.4
	36380.7						
	36306.4			21199.2	15107.2		3231.4
	100.20%						

Table 4: Nonpoint Source Loads at Build-Out for HUC14s

HUC14 AND ZONE	BUILD-OUT ZONING	DEVELOPABLE AREA (AC)	TP (LBS/AC/YR)	TP (LBS/AC)	TN (LBS/AC/YR)	TN (LBS/YR)	TSS (LBS/AC/YR)	TSS (LBS/YR)
02040301160140								
AGRICULTURAL PRODUCTION (AP)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
RURAL DEVELOPMENT AREA (RDA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
FOREST AREA RESIDENTIAL (FAR)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
FOREST AREA RESIDENTIAL RECEIVING (FARR)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
PRESERVATION AREA (PA)	Rural Residential	11.8	0.6	7.1	5.0	58.8	100.0	1175.2
PINELANDS TOWN (PT)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
DEVONSHIRE CENTER (DC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
ELWOOD VILLAGE (EV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
ELWOOD VILLAGE CENTER (EVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
NESCO VILLAGE (NV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
NESCO VILLAGE CENTER (NVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
SWEETWATER VILLAGE (SV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
WEEKSTOWN VILLAGE (WV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
		11.8		7.1		58.8		1175.2

HUC14 AND ZONE	BUILD-OUT ZONING	DEVELOPABLE AREA (AC)	TP (LBS/AC/YR)	TP (LBS/AC)	TN (LBS/AC/YR)	TN (LBS/YR)	TSS (LBS/AC/YR)	TSS (LBS/YR)
02040301160150								
AGRICULTURAL PRODUCTION (AP)	Rural Residential	449.5	0.6	269.7	5.0	2247.5	100.0	44950.2
RURAL DEVELOPMENT AREA (RDA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
FOREST AREA RESIDENTIAL (FAR)	Rural Residential	31.5	0.6	18.9	5.0	157.4	100.0	3148.5
FOREST AREA RESIDENTIAL RECEIVING (FARR)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
PRESERVATION AREA (PA)	Rural Residential	42.6	0.6	25.6	5.0	213.2	100.0	4264.8
PINELANDS TOWN (PT)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
DEVONSHIRE CENTER (DC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
ELWOOD VILLAGE (EV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
ELWOOD VILLAGE CENTER (EVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
NESCO VILLAGE (NV)	Rural Residential	214.6	0.6	128.8	5.0	1073.0	100.0	21459.3
NESCO VILLAGE CENTER (NVC)	High, Medium Density Residential	159.6	1.4	223.5	15.0	2394.3	140.0	22346.5
SWEETWATER VILLAGE (SV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
WEEKSTOWN VILLAGE (WV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
		897.8		666.4		6085.4		96169.3
02040301170010								

HUC14 AND ZONE	BUILD-OUT ZONING	DEVELOPABLE AREA (AC)	TP (LBS/AC/YR)	TP (LBS/AC)	TN (LBS/AC/YR)	TN (LBS/YR)	TSS (LBS/AC/YR)	TSS (LBS/YR)
AGRICULTURAL PRODUCTION (AP)	Rural Residential	446.9	0.6	268.1	5.0	2234.5	100.0	44690.6
RURAL DEVELOPMENT AREA (RDA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
FOREST AREA RESIDENTIAL (FAR)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
FOREST AREA RESIDENTIAL RECEIVING (FARR)	Rural Residential	204.4	0.6	122.6	5.0	1021.9	100.0	20437.3
PRESERVATION AREA (PA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
PINELANDS TOWN (PT)	High, Medium Density Residential	9.0	1.4	12.6	15.0	135.4	140.0	1264.1
DEVONSHIRE CENTER (DC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
ELWOOD VILLAGE (EV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
ELWOOD VILLAGE CENTER (EVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
NESCO VILLAGE (NV)	Rural Residential	1.4	0.6	0.8	5.0	6.8	100.0	135.8
NESCO VILLAGE CENTER (NVC)	High, Medium Density Residential	9.6	1.4	13.4	15.0	144.1	140.0	1344.5
SWEETWATER VILLAGE (SV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
WEEKSTOWN VILLAGE (WV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
		671.3		417.7		3542.7		67872.4
02040301170020								

HUC14 AND ZONE	BUILD-OUT ZONING	DEVELOPABLE AREA (AC)	TP (LBS/AC/YR)	TP (LBS/AC)	TN (LBS/AC/YR)	TN (LBS/YR)	TSS (LBS/AC/YR)	TSS (LBS/YR)
AGRICULTURAL PRODUCTION (AP)	Rural Residential	59.0	0.6	35.4	5.0	295.2	100.0	5904.0
RURAL DEVELOPMENT AREA (RDA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
FOREST AREA RESIDENTIAL (FAR)	Rural Residential	770.8	0.6	462.5	5.0	3854.0	100.0	77080.9
FOREST AREA RESIDENTIAL RECEIVING (FARR)	Rural Residential	386.0	0.6	231.6	5.0	1930.0	100.0	38599.1
PRESERVATION AREA (PA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
PINELANDS TOWN (PT)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
DEVONSHIRE CENTER (DC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
ELWOOD VILLAGE (EV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
ELWOOD VILLAGE CENTER (EVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
NESCO VILLAGE (NV)	Rural Residential	139.6	0.6	83.8	5.0	698.0	100.0	13959.2
NESCO VILLAGE CENTER (NVC)	High, Medium Density Residential	87.6	1.4	122.6	15.0	1314.0	140.0	12264.0
SWEETWATER VILLAGE (SV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
WEEKSTOWN VILLAGE (WV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
		1443.0		935.9		8091.2		147807.2
02040301170030								

HUC14 AND ZONE	BUILD-OUT ZONING	DEVELOPABLE AREA (AC)	TP (LBS/AC/YR)	TP (LBS/AC)	TN (LBS/AC/YR)	TN (LBS/YR)	TSS (LBS/AC/YR)	TSS (LBS/YR)
AGRICULTURAL PRODUCTION (AP)	Rural Residential	91.6	0.6	54.9	5.0	457.8	100.0	9156.6
RURAL DEVELOPMENT AREA (RDA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
FOREST AREA RESIDENTIAL (FAR)	Rural Residential	938.3	0.6	563.0	5.0	4691.7	100.0	93834.1
FOREST AREA RESIDENTIAL RECEIVING (FARR)	Rural Residential	15.4	0.6	9.2	5.0	76.9	100.0	1538.7
PRESERVATION AREA (PA)	Rural Residential	32.5	0.6	19.5	5.0	162.6	100.0	3251.8
PINELANDS TOWN (PT)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
DEVONSHIRE CENTER (DC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
ELWOOD VILLAGE (EV)	Rural Residential	160.6	0.6	96.3	5.0	802.9	100.0	16058.1
ELWOOD VILLAGE CENTER (EVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
NESCO VILLAGE (NV)	Rural Residential	72.0	0.6	43.2	5.0	359.9	100.0	7198.9
NESCO VILLAGE CENTER (NVC)	High, Medium Density Residential	62.0	1.4	86.8	15.0	929.8	140.0	8678.0
SWEETWATER VILLAGE (SV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
WEEKSTOWN VILLAGE (WV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
		1372.4		873.0		7481.7		139716.1
02040301170040								

HUC14 AND ZONE	BUILD-OUT ZONING	DEVELOPABLE AREA (AC)	TP (LBS/AC/YR)	TP (LBS/AC)	TN (LBS/AC/YR)	TN (LBS/YR)	TSS (LBS/AC/YR)	TSS (LBS/YR)
AGRICULTURAL PRODUCTION (AP)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
RURAL DEVELOPMENT AREA (RDA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
FOREST AREA RESIDENTIAL (FAR)	Rural Residential	84.7	0.6	50.8	5.0	423.5	100.0	8469.1
FOREST AREA RESIDENTIAL RECEIVING (FARR)	Rural Residential	232.6	0.6	139.6	5.0	1163.0	100.0	23259.3
PRESERVATION AREA (PA)	Rural Residential	0.3	0.6	0.2	5.0	1.7	100.0	35.0
PINELANDS TOWN (PT)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
DEVONSHIRE CENTER (DC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
ELWOOD VILLAGE (EV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
ELWOOD VILLAGE CENTER (EVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
NESCO VILLAGE (NV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
NESCO VILLAGE CENTER (NVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
SWEETWATER VILLAGE (SV)	Rural Residential	56.6	0.6	33.9	5.0	282.8	100.0	5655.4
WEEKSTOWN VILLAGE (WV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
		374.2		224.5		1870.9		37418.7
02040301170060								

HUC14 AND ZONE	BUILD-OUT ZONING	DEVELOPABLE AREA (AC)	TP (LBS/AC/YR)	TP (LBS/AC)	TN (LBS/AC/YR)	TN (LBS/YR)	TSS (LBS/AC/YR)	TSS (LBS/YR)
AGRICULTURAL PRODUCTION (AP)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
RURAL DEVELOPMENT AREA (RDA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
FOREST AREA RESIDENTIAL (FAR)	Rural Residential	814.2	0.6	488.5	5.0	4071.0	100.0	81420.7
FOREST AREA RESIDENTIAL RECEIVING (FARR)	Rural Residential	400.1	0.6	240.0	5.0	2000.3	100.0	40006.8
PRESERVATION AREA (PA)	Rural Residential	25.5	0.6	15.3	5.0	127.4	100.0	2548.9
PINELANDS TOWN (PT)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
DEVONSHIRE CENTER (DC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
ELWOOD VILLAGE (EV)	Rural Residential	17.1	0.6	10.2	5.0	85.3	100.0	1706.9
ELWOOD VILLAGE CENTER (EVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
NESCO VILLAGE (NV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
NESCO VILLAGE CENTER (NVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
SWEETWATER VILLAGE (SV)	Rural Residential	191.5	0.6	114.9	5.0	957.4	100.0	19147.9
WEEKSTOWN VILLAGE (WV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
		1448.3		869.0		7241.6		144831.2
02040301170070								

HUC14 AND ZONE	BUILD-OUT ZONING	DEVELOPABLE AREA (AC)	TP (LBS/AC/YR)	TP (LBS/AC)	TN (LBS/AC/YR)	TN (LBS/YR)	TSS (LBS/AC/YR)	TSS (LBS/YR)
AGRICULTURAL PRODUCTION (AP)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
RURAL DEVELOPMENT AREA (RDA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
FOREST AREA RESIDENTIAL (FAR)	Rural Residential	242.2	0.6	145.3	5.0	1211.0	100.0	24219.5
FOREST AREA RESIDENTIAL RECEIVING (FARR)	Rural Residential	202.7	0.6	121.6	5.0	1013.3	100.0	20266.2
PRESERVATION AREA (PA)	Rural Residential	44.8	0.6	26.9	5.0	224.2	100.0	4483.6
PINELANDS TOWN (PT)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
DEVONSHIRE CENTER (DC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
ELWOOD VILLAGE (EV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
ELWOOD VILLAGE CENTER (EVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
NESCO VILLAGE (NV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
NESCO VILLAGE CENTER (NVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
SWEETWATER VILLAGE (SV)	Rural Residential	36.9	0.6	22.1	5.0	184.6	100.0	3691.4
WEEKSTOWN VILLAGE (WV)	Rural Residential	48.4	0.6	29.0	5.0	241.9	100.0	4837.3
		575.0		345.0		2874.9		57498.0
02040301170080								

HUC14 AND ZONE	BUILD-OUT ZONING	DEVELOPABLE AREA (AC)	TP (LBS/AC/YR)	TP (LBS/AC)	TN (LBS/AC/YR)	TN (LBS/YR)	TSS (LBS/AC/YR)	TSS (LBS/YR)
AGRICULTURAL PRODUCTION (AP)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
RURAL DEVELOPMENT AREA (RDA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
FOREST AREA RESIDENTIAL (FAR)	Rural Residential	141.7	0.6	85.0	5.0	708.4	100.0	14167.0
FOREST AREA RESIDENTIAL RECEIVING (FARR)	Rural Residential	32.4	0.6	19.4	5.0	162.0	100.0	3240.5
PRESERVATION AREA (PA)	Rural Residential	76.0	0.6	45.6	5.0	380.1	100.0	7601.2
PINELANDS TOWN (PT)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
DEVONSHIRE CENTER (DC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
ELWOOD VILLAGE (EV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
ELWOOD VILLAGE CENTER (EVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
NESCO VILLAGE (NV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
NESCO VILLAGE CENTER (NVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
SWEETWATER VILLAGE (SV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
WEEKSTOWN VILLAGE (WV)	Rural Residential	33.7	0.6	20.2	5.0	168.5	100.0	3370.6
		283.8		170.3		1419.0		28379.2
02040301170090								

HUC14 AND ZONE	BUILD-OUT ZONING	DEVELOPABLE AREA (AC)	TP (LBS/AC/YR)	TP (LBS/AC)	TN (LBS/AC/YR)	TN (LBS/YR)	TSS (LBS/AC/YR)	TSS (LBS/YR)
AGRICULTURAL PRODUCTION (AP)	Rural Residential	97.6	0.6	58.6	5.0	488.0	100.0	9759.3
RURAL DEVELOPMENT AREA (RDA)	Rural Residential	925.3	0.6	555.2	5.0	4626.7	100.0	92533.5
FOREST AREA RESIDENTIAL (FAR)	Rural Residential	1223.5	0.6	734.1	5.0	6117.6	100.0	122352.4
FOREST AREA RESIDENTIAL RECEIVING (FARR)	Rural Residential	355.9	0.6	213.6	5.0	1779.6	100.0	35592.7
PRESERVATION AREA (PA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
PINELANDS TOWN (PT)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
DEVONSHIRE CENTER (DC)	High, Medium Density Residential	4.0	1.4	5.6	15.0	60.4	140.0	563.8
ELWOOD VILLAGE (EV)	Rural Residential	111.3	0.6	66.8	5.0	556.4	100.0	11127.9
ELWOOD VILLAGE CENTER (EVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
NESCO VILLAGE (NV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
NESCO VILLAGE CENTER (NVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
SWEETWATER VILLAGE (SV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
WEEKSTOWN VILLAGE (WV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
		2717.7		1633.8		13628.7		271929.5
02040301170100								

HUC14 AND ZONE	BUILD-OUT ZONING	DEVELOPABLE AREA (AC)	TP (LBS/AC/YR)	TP (LBS/AC)	TN (LBS/AC/YR)	TN (LBS/YR)	TSS (LBS/AC/YR)	TSS (LBS/YR)
AGRICULTURAL PRODUCTION (AP)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
RURAL DEVELOPMENT AREA (RDA)	Rural Residential	175.8	0.6	105.5	5.0	879.0	100.0	17579.5
FOREST AREA RESIDENTIAL (FAR)	Rural Residential	215.9	0.6	129.5	5.0	1079.3	100.0	21585.4
FOREST AREA RESIDENTIAL RECEIVING (FARR)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
PRESERVATION AREA (PA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
PINELANDS TOWN (PT)	High, Medium Density Residential	0.8	1.4	1.1	15.0	12.0	140.0	112.0
DEVONSHIRE CENTER (DC)	High, Medium Density Residential	109.2	1.4	152.9	15.0	1638.0	140.0	15288.0
ELWOOD VILLAGE (EV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
ELWOOD VILLAGE CENTER (EVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
NESCO VILLAGE (NV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
NESCO VILLAGE CENTER (NVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
SWEETWATER VILLAGE (SV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
WEEKSTOWN VILLAGE (WV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
		501.6		389.0		3608.2		54564.9
02040302040080								

HUC14 AND ZONE	BUILD-OUT ZONING	DEVELOPABLE AREA (AC)	TP (LBS/AC/YR)	TP (LBS/AC)	TN (LBS/AC/YR)	TN (LBS/YR)	TSS (LBS/AC/YR)	TSS (LBS/YR)
AGRICULTURAL PRODUCTION (AP)	Rural Residential	73.5	0.6	44.1	5.0	367.3	100.0	7346.9
RURAL DEVELOPMENT AREA (RDA)	Rural Residential	40.4	0.6	24.2	5.0	201.9	100.0	4037.5
FOREST AREA RESIDENTIAL (FAR)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
FOREST AREA RESIDENTIAL RECEIVING (FARR)	Rural Residential	5.5	0.6	3.3	5.0	27.6	100.0	551.1
PRESERVATION AREA (PA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
PINELANDS TOWN (PT)	High, Medium Density Residential	62.1	1.4	86.9	15.0	931.5	140.0	8693.8
DEVONSHIRE CENTER (DC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
ELWOOD VILLAGE (EV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
ELWOOD VILLAGE CENTER (EVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
NESCO VILLAGE (NV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
NESCO VILLAGE CENTER (NVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
SWEETWATER VILLAGE (SV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
WEEKSTOWN VILLAGE (WV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
		181.5		158.6		1528.2		20629.2
02040302040090								

HUC14 AND ZONE	BUILD-OUT ZONING	DEVELOPABLE AREA (AC)	TP (LBS/AC/YR)	TP (LBS/AC)	TN (LBS/AC/YR)	TN (LBS/YR)	TSS (LBS/AC/YR)	TSS (LBS/YR)
AGRICULTURAL PRODUCTION (AP)	Rural Residential	374.3	0.6	224.6	5.0	1871.7	100.0	37433.4
RURAL DEVELOPMENT AREA (RDA)	Rural Residential	232.7	0.6	139.6	5.0	1163.5	100.0	23270.5
FOREST AREA RESIDENTIAL (FAR)	Rural Residential	1360.2	0.6	816.1	5.0	6801.0	100.0	136020.0
FOREST AREA RESIDENTIAL RECEIVING (FARR)	Rural Residential	284.6	0.6	170.8	5.0	1423.0	100.0	28461.0
PRESERVATION AREA (PA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
PINELANDS TOWN (PT)	High, Medium Density Residential	204.9	1.4	286.8	15.0	3073.0	140.0	28681.2
DEVONSHIRE CENTER (DC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
ELWOOD VILLAGE (EV)	Rural Residential	391.5	0.6	234.9	5.0	1957.5	100.0	39150.0
ELWOOD VILLAGE CENTER (EVC)	High, Medium Density Residential	61.5	1.4	86.1	15.0	922.5	140.0	8610.0
NESCO VILLAGE (NV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
NESCO VILLAGE CENTER (NVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
SWEETWATER VILLAGE (SV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
WEEKSTOWN VILLAGE (WV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
		2909.7		1958.9		17212.2		301626.0
02040302040100								

HUC14 AND ZONE	BUILD-OUT ZONING	DEVELOPABLE AREA (AC)	TP (LBS/AC/YR)	TP (LBS/AC)	TN (LBS/AC/YR)	TN (LBS/YR)	TSS (LBS/AC/YR)	TSS (LBS/YR)
AGRICULTURAL PRODUCTION (AP)	Rural Residential	67.1	0.6	40.2	5.0	335.3	100.0	6706.8
RURAL DEVELOPMENT AREA (RDA)	Rural Residential	23.1	0.6	13.9	5.0	115.7	100.0	2315.0
FOREST AREA RESIDENTIAL (FAR)	Rural Residential	868.3	0.6	521.0	5.0	4341.6	100.0	86831.9
FOREST AREA RESIDENTIAL RECEIVING (FARR)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
PRESERVATION AREA (PA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
PINELANDS TOWN (PT)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
DEVONSHIRE CENTER (DC)	High, Medium Density Residential	36.1	1.4	50.5	15.0	541.0	140.0	5049.8
ELWOOD VILLAGE (EV)	Rural Residential	294.8	0.6	176.9	5.0	1474.2	100.0	29484.9
ELWOOD VILLAGE CENTER (EVC)	High, Medium Density Residential	205.0	1.4	287.0	15.0	3075.1	140.0	28700.8
NESCO VILLAGE (NV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
NESCO VILLAGE CENTER (NVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
SWEETWATER VILLAGE (SV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
WEEKSTOWN VILLAGE (WV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
		1494.5		1089.5		9883.1		159089.1
02040302050010								

HUC14 AND ZONE	BUILD-OUT ZONING	DEVELOPABLE AREA (AC)	TP (LBS/AC/YR)	TP (LBS/AC)	TN (LBS/AC/YR)	TN (LBS/YR)	TSS (LBS/AC/YR)	TSS (LBS/YR)
AGRICULTURAL PRODUCTION (AP)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
RURAL DEVELOPMENT AREA (RDA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
FOREST AREA RESIDENTIAL (FAR)	Rural Residential	212.8	0.6	127.7	5.0	1063.9	100.0	21277.5
FOREST AREA RESIDENTIAL RECEIVING (FARR)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
PRESERVATION AREA (PA)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
PINELANDS TOWN (PT)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
DEVONSHIRE CENTER (DC)	High, Medium Density Residential	11.9	1.4	16.7	15.0	178.6	140.0	1666.9
ELWOOD VILLAGE (EV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
ELWOOD VILLAGE CENTER (EVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
NESCO VILLAGE (NV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
NESCO VILLAGE CENTER (NVC)	High, Medium Density Residential	0.0	1.4	0.0	15.0	0.0	140.0	0.0
SWEETWATER VILLAGE (SV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
WEEKSTOWN VILLAGE (WV)	Rural Residential	0.0	0.6	0.0	5.0	0.0	100.0	0.0
		224.7		144.3		1242.5		22944.4

Mitigation Plans

This mitigation plan is provided for a proposed development that is granted a variance or exemption from the stormwater management design and performance standards. Presented is a hierarchy of options.

Mitigation Project Criteria

1. The mitigation project must be implemented in the same drainage area as the proposed development. The project must provide additional groundwater recharge benefits, or protection from stormwater runoff quality and quantity from previously developed property that does not currently meet the design and performance standards outlined in the Municipal Stormwater Management Plan. The developer must ensure the long-term maintenance of the project, including the maintenance requirements under Chapters 8 and 9 of the NJDEP Stormwater BMP Manual.

a. The applicant can select one of the following projects listed to compensate for the deficit from the performance standards resulting from the proposed project. More detailed information on the projects can be obtained from the Township Engineer. Listed below are specific projects that can be used to address the mitigation requirement.

Groundwater Recharge

- Burdick Avenue water ponding between the intersection of Clark Drive and White Horse Pike. Anticipated solution is to provide a subterranean recharge system in this vicinity.

Water Quality

- Storage of roadway deicing materials at the municipal complex at Elm Street and White Horse Pike. Anticipated solution is to provide a storage shed with impervious flooring at this location.

Water Quantity

- Satisfy existing drainage problem along the entire length of Reading Avenue.

2. If a suitable site cannot be located in the same drainage area as the proposed development, as discussed in Option 1, the mitigation project may provide mitigation that is not equivalent to the impacts for which the variance or exemption is sought, but that addresses the same issue. For example, if a variance is given because the 80 percent TSS requirement is not met, the selected project may address water quality impacts due to a fecal impairment. Listed below are specific projects that can be used to address the mitigation option.

Water Quality

- *Replace culverts at Anderson Avenue and Elm Street.*

The municipality may allow a developer to provide funding or partial funding to the municipality for an environmental enhancement project that has been identified in a Municipal Stormwater Management Plan, or towards the development of a Regional Stormwater Management Plan. The funding must be equal to or greater than the cost to implement the mitigation outlined above, including costs associated with purchasing the property or easement for mitigation, and the cost associated with the long-term maintenance requirements of the mitigation measure. Any funds that are collected will be expended within 5 years of their receipt.