



STORMWATER MANAGEMENT PLAN

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STORMWATER POLLUTION PREVENTION PLAN

FOR THE TOWNSHIP OF COLTS NECK MONMOUTH COUNTY, NJ

Prepared By

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1.0 INTRODUCTION

The Municipal Stormwater Management Plan (MSWMP) documents the strategy for the Township of Colts Neck (“the Township”) to address stormwater-related impacts. The creation of this plan is required by the Municipal Stormwater Regulations (N.J.A.C. 7:14A-25). This 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 acre of land or add ¼ acre or more of impervious cover. 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 base flow in receiving water bodies. The plan also describes long-term operation and maintenance measures for existing and future stormwater facilities.

Overall this Plan relies on the existing regulatory framework as the basis for the management of stormwater. These regulatory requirements and the technical guidance documents on which they are based have been incorporated into this Plan. The Township of Colts Neck Stormwater Ordinance further strengthens the reliance on these technical specifications and provides the means for ensuring implementation and ongoing evaluation.

A “build-out analysis” of land use and land cover has also been included in this Plan based upon existing zoning and land available for development. The Plan also addresses the review and updating 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 overall impact of existing development.

Approximately 25% of the land area within Colts Neck Township lies within U.S. Naval Weapons Station Earle. While the land area is shown on all exhibits, the land area is tabulated separately and is not included (excluded) **within** all of the build out calculations.

2.0 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, redevelopment or construction projects;
- work with the State and Monmouth County to assure the adequacy of existing and proposed culverts and bridges, and other in-stream structures;
- maintain groundwater recharge and base flow of streams during periods of drought;
- 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;
- assure that new development avoids environmentally sensitive features such as slopes greater than 15%, **floodplains**, wetlands and related transition areas.
- protect and enhance the environmental quality of the Township and protect and enhance the water quality of the Swimming River Reservoir;
- Work with the County and private golf courses, **School Boards and Parks** on utilization of Best Management Practices (BMP's) to minimize potential non-point pollution from fertilizers, **phosphorous** and pesticides. **Encourage compliance with the Township Low Phosphorous Fertilizers Ordinance Chapter 151 adopted 12/21/06.**
- protect public safety through the proper design and operation of stormwater basins and the use of Best Management Practices.
- **Minimize the impacts to water bodies from horse trails through BMP's and enforcement of the Pet Waste Ordinance.**
- **The following goals from the Colts Neck Township Master Plan adopted February 10, 2004 are included and adopted by reference: Character of Area – to preserve the Township's rural and scenic character; Agriculture – To**

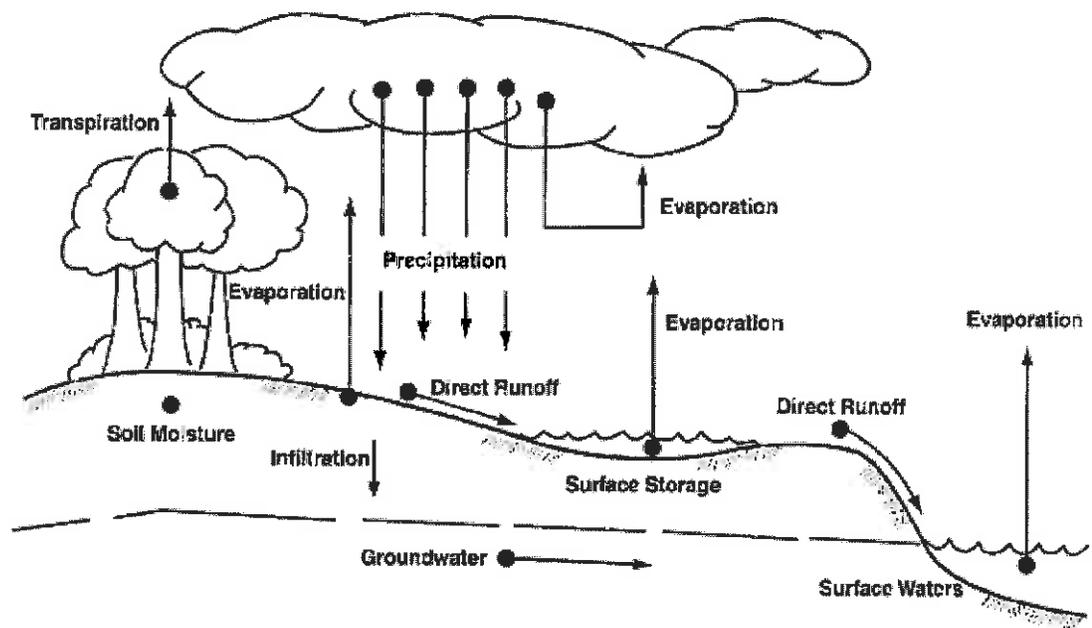
preserve a viable agricultural industry; Environment – to preserve environmentally sensitive features; Open Space – To preserve and expand non-agricultural open space; and Water Resources – To preserve water resource functions.

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.

3.0 STORMWATER DISCUSSION

Land development can dramatically alter the hydrologic cycle 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 remained in the root zone 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 under natural conditions. These increases can create new and 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 habitats by creating conditions to which some species cannot adapt.

Figure 5-1: The Hydrologic Cycle



Source: Fundamentals of Urban Runoff Management.

Figure C-1: Groundwater Recharge in the Hydrologic Cycle

Source: New Jersey Geological Survey Report GSR-32.

In addition to increases in runoff peaks and 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.

4.0 BACKGROUND

The Township of Colts Neck encompasses approximately a 32 square mile area or 20,713 acres in Monmouth County, New Jersey, (See Figure C-3, “Township Boundary on NJDEP aerial photo”). While the Township holds on to its historically agricultural character, increasingly, farmland is being diverted to large lot residential development. The February 20, 2004 Master Plans shows that the Township contains 327 farm parcels on about 6,000 acres. This represents 29% of the Township. Horse breeding and training have been major components of the Township’s agricultural industry. Approximately 7,300 acres or 35% of the Township are non-farm wooded areas. A large part of Colts Neck's land area (approximately 25%) belongs to the federal government as part of Naval Weapons Station Earle. Overall, the land use pattern in the Township, excluding Naval Weapons Station Earle, is dominated by agriculture, public land and residential use developed at low densities under a cluster design. Additionally, Monmouth County Farmland Preservation Plan has designated a significant amount of farmland in the Township as first priority for continued agricultural use and farmland preservation.

The population of the Township has increased from 8,559 in 1990 to 11,179 in 2000, which represents a growth of approximately 31%. The population, excluding US Naval Weapons Station Earle, increased from 7,215 in 1990 to 9,493 in 2000. This population increase has increased the number of housing units which has changed the landscape and increased impervious cover. It is most likely to have also increased stormwater runoff volumes and pollutant loads to the waterways of the municipality although clustering, buffering and lot coverage limits have all been designed to minimize these impacts. It remains a goal of the Master Plan to maintain low lot coverage standards, to minimize stormwater runoff, erosion and siltation as well as to increase groundwater infiltration and recharge.

The Township of Colts Neck lies in three regional drainage basins. The major portion of the Township (Approximately 95%) is in the Navesink River/Raritan Bay drainage basin. The two smaller ones are the Shark River/Atlantic Ocean and the Manasquan River/Atlantic Ocean drainage basins. Since Colts Neck is located in the watersheds of three (3) Category One (C-1) streams and two trout maintenance streams, it is important to manage stormwater. Figure C-2 illustrates the waterways in the Township. The three C-1 water bodies are the Swimming River Reservoir, a tributary of the Manasquan River and the Shark River. These three HUC-14 watersheds are shown on Figure C-7 as 02030104070070 (Swimming River Reservoir/Slope Brook), 02030104100060 (Mingamahone Brook of the Manasquan River Watershed) and 0203104090040 (Shark

River). The Township of Colts Neck also has 3 HUC-14 watersheds that touch the Swimming River Reservoir which are 02030104070020 (Willow Brook); 02030104070030 (Big Brook) and 02030104070100 (**Poricy Brook/Swimming River Reservoir below Swimming River Road**). All five of these HUC-14's require the special storm water protection area enhanced buffers. The trout maintenance streams are the Mingamahone Brook and the Hockhockson Brook.

In addition to these, there are several other water bodies located within the Township. They include Trout Brook, Pine Brook, Yellow Brook, Mine Brook, Barren Neck Brook, Miry Bog Brook, and Shark River.

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. The major goal of AMNET is to establish a network of stream sites that would adequately represent New Jersey's major drainage basins and NJDEP's Watershed Management Areas (WMA). Twenty (20) WMAs have been delineated within New Jersey's five (5) major basins. The results from the 1999-2000 Atlantic Region AMNET Study for Watershed Management Area 12 indicate that bioassessment ratings for the Willow Brook, Big Brook, Yellow Brook, Mine Brook, and Hockhockson Brook stations in Colts Neck are moderately impaired. There were no significant macroinvertebrate abnormalities found during the sampling period for any of these streams.

The New Jersey Integrated Water Quality Monitoring and Assessment Report including the (305(b) and 303(d) Integrated List) is required by the Federal Clean Water Act. It is 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 Total Maximum Daily Load (TMDL) limits are required. 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 including point sources, such as stormwater and wastewater discharges, which require a New Jersey Pollutant Discharge Elimination System (NJPDDES) 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 best management practices (BMPs).

The Swimming River Reservoir is the only water body listed as attaining the water quality standard in NJDEP's 2004 Integrated List in Colts Neck. The Barren Neck Brook, Big Brook, Mingamahone Brook near Earle and Willow Brook are listed in Sublist 5 of the Integrated List for not attaining water quality standards for phosphorus. However, Barren Neck Brook, Big Brook and Mingamahone Brook were all delisted for fecal coliform until after the TMDL is completed. Trout Brook at Richdale Road is still listed with high fecal coliform values.

All or parts of four HUC-14 watersheds lie within the U.S. Naval Weapons Station Earle. The lands of Earle occupy about 31% of 02030104070050 (**Mine Brook**); 57% of 02030104070080 (**Pine Brook/Hockhockson Brook**); 67% of 02030104090040 (**Shark River**); and 100% of 02030104100060 (**Mingamahone Brook**). See Figure C-8 for acreage and locations. The boundary of Earle is shown on Figure C-8.

A map showing the Township's groundwater recharge areas is shown in figure C-4. The recharge rate within the Township varies based upon the impervious coverage, soil permeability, vegetative cover and slope of the land. The ability to recharge ground water is reduced when vegetative cover is changed and as impervious surface is increased as vacant sites are developed or existing sites are redeveloped. As impervious surface is increased or vegetative cover reduced, it is encouraged to promote groundwater recharge in those areas with the ability to accept groundwater recharge. Groundwater recharge is needed to reduce both the volume of direct runoff into our waterbodies which carries pollutants and erosion potential and to replenish the subsurface aquifers, which lie underneath the surface of the land. In order to promote recharge, it is recommended to encourage surface water runoff to be directed to flow over vegetated areas as opposed to discharge over paved areas. Other methods to promote groundwater recharge includes utilizing sand filters and infiltration basins, as well as pervious paving systems.

Wellhead protection areas are shown in Figure C-5. There are and none **within the Community Wellhead Protected Area Classification** in Colts Neck. **Over 30 Non-Community Wellhead Protection Areas exist within the Township. They are shown**

predominately at the School Sites, County and Municipal facilities areas and commercial sites with food or beverage service.

Figure C-6 shows the HUC-14 areas which exists within the Township. There are 10 main HUC-14's and one additional small area of less than 4 acres which is totally within the lands of the Swimming River Reservoir. Figure C-8 also shows the HUC-14's and only the 10 main areas are mapped. The 11th is too small, is within the Reservoir Area and no changes will ever take place with that land.

Figure C-7 shows all the NJDEP Wetlands within the Township.

5.0 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 through its stormwater management ordinance 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 Monmouth County for review and approval within 12 months of the adoption date of the Stormwater Management Plan.

Non-structural measures to be considered first shall include site design and preventive source controls. To confirm the effectiveness of such measures, applicants must verify the control of stormwater quantity impacts as detailed in the Stormwater Management Rules. The tests for assuring control of the quantity impacts as detailed in these Rules will be incorporated into the Township's Stormwater Ordinance.

The general standards for structural measures are specified in the Stormwater Management Rules and will be incorporated into the Township of Colts Neck's Stormwater Ordinance. These measures shall be incorporated as needed to meet the soil erosion, infiltration and runoff quantity standards included in the Township's Stormwater Ordinance. The design standards for the specific structural stormwater management measures are those included in the New Jersey Stormwater Best Management Practices Manual. This manual can be obtained at the website <http://www.njstormwater.org/bmp-manual2.htm>. Other designs or practices may be used if they are approved by the Soil Conservation District. The design and construction of such facilities must comply with the NJ Soil Erosion and Sediment Control Standards as well as any other applicable state regulations including the Freshwater Wetland Protection Act rules, the Flood Hazard Control Rules, the Surface Water Quality Standards and the Dam Safety rules. Since many stormwater facilities hold and detain stormwater for extended time, new development or redevelopment drainage facilities should be coordinated with the Monmouth County Mosquito Extermination Commission

so that Mosquito breeding habitat is not increased and facilities can be properly maintained. The requirement to be consistent with all other applicable rules will be included in the Township's Stormwater Ordinance. Stormwater runoff quality controls for total suspended solids and nutrient load shall meet the design and performance standards as specified in the Stormwater Management Rules. The minimum design and performance standards for infiltration and groundwater recharge specified in the Stormwater Management Rules will be incorporated into the Township's Stormwater Ordinance and will be required to be met for all applicable development. Consistent with the Stormwater Management Rules, the Ordinance will allow for an exemption from this requirement where the applicant can demonstrate that it is not practicable to meet the standards but has taken all possible steps to meet all stormwater management measures.

During construction, Township inspectors will observe the construction of the project to ensure that the stormwater management measures are constructed and function as designed. Adequate long term operation as well as preventative and corrective maintenance of the selected stormwater management measures will be ensured by requiring the design engineer to prepare a maintenance plan for stormwater management facilities to be incorporated into the design of all major developments. The maintenance plan shall have specific preventative maintenance tasks, schedules and cost estimates as well as identification of the responsible party for corrective and preventative maintenance.

Where the Township assumes maintenance responsibility, preventative maintenance shall be performed on a regular basis and will be appropriate for the particular structural management measure being implemented. These maintenance measures shall be in accordance with N.J.A.C 7:8-5 and may include: periodic inspections, vegetation management, sediment, debris and trash removal and mosquito control. Corrective maintenance shall be performed on an as needed basis for structure repairs or replacements, removal of outlet and pipe blockages, restoration of eroded areas, snow and ice removal, etc. The person or persons responsible for maintenance shall keep a detailed log of all preventative and corrective maintenance for the structural management measures incorporated into the design of the development, including a record of all inspections and work orders. For any stormwater facilities that are maintained by private owners, the Township shall provide maintenance information requirements to the

responsible owners. The Township shall perform periodic inspections of these privately maintained stormwater facilities.

Similarly, all new stormwater management basins will be designed and operated to protect public safety as mandated through ordinance.

6.0 PLAN CONSISTENCY

The Township is not within **an adopted** Regional Stormwater Management Planning Area **at this time** and no TMDLs have been developed for water within the Township; therefore this plan does not need to be consistent with any regional stormwater management plans (RSWMPs) or any TMDLs.

This Municipal Stormwater Management Plan is consistent with the Township Master Plan adopted 2/10/04, the Monmouth County Growth Management Guide and the New Jersey State Development and Redevelopment Plan (SDRP). The Municipal Stormwater Management Plan advances these plans by promoting infiltration, reducing offsite runoff discharge rates and improving water quality. This is particularly important for Colts Neck since the majority of the Township is in a potable water supply watershed and the N. J. SDRP designates the entire Township as Planning Area 4B, Rural/Environmentally Sensitive and Planning Area 5, Environmentally Sensitive Areas.

The 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 projects. 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, if Township inspectors observe any soil erosion control problems at any construction sites, the inspectors shall report any problems or potential problems to the Freehold Soil Conservation District for their evaluation and follow-up

7.0 NONSTRUCTURAL STORMWATER MANAGEMENT STRATEGIES

The Township has reviewed its Master Plan (adopted February 10, 2004) and Land Use/Zoning Ordinances.

The Master Plan continues to encourage agricultural uses and low density housing. The plan encourages future development to utilize design flexibility of clustering and lot size averaging. The basic goal is for new growth to continue the existing pattern of development and preserve large contiguous tracts of land for agriculture and open space uses. Low lot coverage standards are proposed to be retained to minimize stormwater runoff and erosion, increase infiltration and protect the water quality of the Swimming River Reservoir.

The Zoning and Design Requirements of the Township Code were reviewed with regard to incorporating nonstructural stormwater management strategies. Several changes are recommended and described below. Prior to the adoption of any ordinance changes, they shall be reviewed by the Municipal Engineer to determine if they are appropriate within the intent specified. Non-structural measures to be considered shall include site design and preventive source controls. To confirm the effectiveness of such measures applicants must verify the control of stormwater quantity impacts as detailed in the Stormwater Management Rules. The tests of assuring control of the quantity impacts as detailed in these rules will be incorporated into the Township Ordinance.

Buffers: Section 102-90. Buffers are required along all business and light industrial zone lot lines and for the A-4 mixed housing district. The buffer area is required to be planted and maintained with grass or ground cover, massed evergreens and deciduous trees & shrubs of such species and size that will produce within two growing seasons a four foot screen and of such density as will obscure all of the glare of automobile headlights. **It is recommended that plants used be limited to native and non-invasive plantings.** The existing code adequately addresses non-structural stormwater management strategies.

Open Space: Section 102-85.2. All subdivisions and site plans for residential development in the A-6 Zone on tracts of more than thirty (30) acres that have streams, wetlands, transition areas, floodplains and required buffer areas shall concentrate the residential development outside of the conservation areas to create continuous open space to the maximum extent possible. Stormwater management facilities, individual water supply wells and associated facilities and wastewater collection/treatment systems may be located in the contiguous open space. A landscaped open buffer shall be provided in subdivisions and site plans for residential developments along and abutting the right of

way of existing primary arterial and secondary collector streets. The existing code adequately addresses non-structural stormwater management strategies.

Cluster Development: Section 102-91. Provides for a method of development of residential land in the A-1 district which will preserve desirable open spaces, conservation areas, floodplains, steep slopes, wetlands and park areas for public purposes by allowing the reduction of lot sizes and certain other regulations without increasing the number of lots in the total area to be subdivided. Land area equal to a minimum of forty percent (40%) of the gross area of the proposed development shall not be included in lots but shall be offered to the Township for open space, wetland or floodplain areas for public purposes or set aside as common property and maintained by a homeowners association. This provision maximizes preservation of large tracts of open land which is a key non-structural stormwater management strategy. It allows for smaller lots with smaller front and side yard setbacks. The encouragement of clustering with specific requirements for open space will contribute to the overall goal of minimizing stormwater runoff and the associated flood damage. The existing code adequately addresses non-structural stormwater management strategies.

Drainage: Section 102-54. Provides for requirements to control drainage. All on street and off street parking areas shall be provided with inlets, catch basins and pipes where necessary for proper drainage. Catch basins shall be designated in accordance with NJ State Highway Department Standard Plans and Specifications. Frames and grates shall be Campbell Foundry Company Pattern No. 2617 or 2618, bicycle pipe grates with eight inch curb face or equal. It is recommended that this section be replaced with the requirements of the State's model Stormwater Control Ordinance attached to this report.

Floodplain : Section 102-59. Implements NJDEP regulations for floodways and special flood hazard areas in the Township of Colts Neck. The purposes of this Ordinance include discouraging construction and regrading in flood hazard areas, obstructing water, controlling erosion and preventing pollution. It further restricts specific permitted uses in the flood hazard area. The existing code adequately addresses non-structural stormwater management strategies.

Natural Features: Section 102-63. Natural features such as trees, brooks, swamps, wetlands, steep slopes, hilltops, and views shall be preserved whenever possible. On individual lots, care shall be taken to preserve selected specimen trees and other areas of mature plant growth in order to maintain soil stability. The existing code adequately addresses non-structural stormwater management strategies.

Off-site and off-tract improvements: Section 102-65. Requirements for off site and off tract improvements including street improvements, water systems, sewer, drainage and easements. It is recommended that language be added to this section to require that any off site and off tract stormwater management and drainage improvement conform to the Design and Performance Standards described in this Plan and provided in the Township Stormwater Ordinance.

Conservation, open space, drainage and utility Right-of-Way Easements: Section 102-69, B(1). An easement is required to extend 25 feet back from the top of the bank along streams and environmentally sensitive areas. It is recommended that this section be

modified to require the easement to also encumber the 300 foot buffer areas required along C-1 waterways.

Shade Trees, Wooded Areas and Landscaping: Section 102-71. Requires nursery grown shade trees to be planted twenty feet from the curb. Stripping trees from a lot shall not be permitted unless it can be demonstrated that the removal is necessary. These lots shall be replanted with trees. When a developer is required to replace dead, missing or defective shade trees, the replacement trees shall be of a caliber and height equal to or greater than that of the four nearest shade trees that have passed inspection. This Section also encourages site design that preserves existing wooded areas and specimen trees. Buildings, pavement and other site improvements shall take into consideration the location and quality of the wooded areas and individual trees and shall be located to preserve as much as the natural condition as possible. This Section complies with minimizing land disturbance, which is a non-structural stormwater management strategy.

Performance Standards: Section 102-66. Provides pollution source control for noise, electricity, glare, heat, odor, waste storage and disposal and vibrations. It prohibits materials and wastes from being deposited upon a lot in such form or manner that they can be transferred off the lot by natural forces. It also prohibits any substance which can contaminate a stream, watercourse or underground aquifer or otherwise render such stream, watercourse or underground aquifer undesirable as a source of water supply or recreation or which will destroy aquatic life from entering any stream, watercourse or underground aquifer. The existing code adequately addresses non-structural stormwater management strategies.

Curbs and gutters: Section 102-77 O (4). All streets shall be curbed. On all streets constructed with concrete curb or Belgian block curb, a subsurface gutter drain shall be constructed and connected to a suitable drainage system. It is recommended that this Section be amended to allow for curb cuts or flush curbs with curb stops to allow vegetated swales to be used for stormwater conveyance and to allow for the disconnection of impervious areas. In those instances with steep slopes and/or erosion concerns, curbing may still be used to alleviate these problems.

Sidewalks: Section 102-72. This Section describes the requirements for construction of sidewalks. It is recommended that language be added 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.

Soil Erosion and Sediment Control: Section 102-75. Requires that major site plans and major subdivisions incorporate soil erosion and sediment control measures for surface water retention and drainage and for the protection of exposed soil surface. This Section also requires developers to comply with the NJ Soil Erosion and Sediment Control Standards and outlines some general design principals including, but not limited to, minimizing disturbance, protecting natural vegetation, minimizing runoff and facilitating groundwater recharge. This Section complies with the recommended non-structural stormwater management strategy.

Design Standards in Stream Corridors: Section 102-94. This section requires that the limit of disturbance along stream corridors to be restricted from a point 50 feet back from

a specified transition point. Except for additional restrictions imposed by C-1 waters, this section conforms with the recommended non-structural stormwater management strategy.

Streets: Section 102-77. This Section describes the requirements for streets in the Township. In all residential zones, all major developments bounding upon any freeway, primary arterial street or secondary collector street, that portion of the development abutting said right of way to a depth of 75 feet from the Right-of-Way and for the full length of the development shall be conveyed to the Township for public use to promote safety and maintain open space. In certain instances the 75-foot strip can remain on the private lot provided a Landscape Easement encumbers this land. The developer shall be required to landscape this area. In a cluster development, a greenway area shall be provided in the center of the loop. Cul-de-sacs shall have a center landscaped median. It is recommended that this Section be amended to allow for narrower paved widths and limit on street parking and to eliminate landscape islands in cul-de-sacs. Additionally, **Section 102-77D & F** requires widening of exiting roadways along the frontage of new developments. This isolated widening creates bump outs along the existing roads and increases the volume of runoff and amount of disturbance. These sections should be revised to eliminate the need for this isolated widening provided the existing half width meets the RSIS standards.

Off Street Parking: Section 102-119 and Section 102-99. This Section requires the landscaping for parking areas and between off street parking areas and lot lines for non residential districts. Additionally, **Section 102-99** requires the landscaping between off street parking areas and lot lines or street lines for residential zones. These Sections also includes the guidance on minimum number of parking spaces. It is recommended that these sections be amended to allow pervious paving to be used in areas to provide overflow parking, vertical parking structures and shared parking and to include design of landscape buffers and islands to include stormwater infiltration capacity.

Slope Regulations Section 102-105. This section restricts construction on steep slopes within residential zones. The existing code adequately addresses non-structural stormwater management strategies.

Slope Regulation in Business Zones Section 102-124. This section restricts construction on steep slopes in business zones. This existing code also adequately addresses non-structural stormwater management strategies.

The Township has six (6) types of residential districts. Each district has a maximum percent impervious surface allocation ranging from 10% to 40%. There are six (6) non-residential districts with maximum allowable impervious surface ranging from 40% to 60%. The Township will also be evaluating the maximum allowable impervious surface for each zone to determine whether a reduction in the impervious cover requirement is appropriate. Additionally, if a developer is given a variance to exceed the maximum allowable percent of impervious cover, the developer must mitigate the impact of the

additional impervious surface allowed. The detailed descriptions of suitable mitigation areas in the Township is discussed in Section 9 of this SWMP.

Once the ordinance texts are completed, they will be submitted to Monmouth County for review and approval. A copy will be sent to the Department of Environmental Protection at the time of submission.

8.0 LAND USE/BUILD-OUT ANALYSIS

A detailed Land Use/Land Cover analysis for the Township was conducted. First an analysis underneath the existing development patterns was performed and then another analysis was conducted presuming full build out under each existing zoning category for each HUC-14 drainage area in the Township. This is actually a land cover analysis and not a build out analysis of the number of residential units or the floor area of non-residential units which could be constructed in the Township. Figure C-8 is a land use map of the Township. It shows the ten HUC-14 areas within the Township and then a detailed breakdown of each land use and zoning within that HUC-14 and whether it is developed currently or could be developed in the future. The land within US Naval Weapons Station Earle has been listed separately in Figure C-8 and separately within Tables C-1 through C-5. The land area within Earle has been excluded from both the Township existing calculations as well as from the Township of Colts Neck Total Build Out Calculations.

Tables C-1 through C-4 deals with existing and future impervious area, pollutant loads for land use type, existing pollutant loads by land cover and build out pollutant loads by land cover. Each HUC-14 was divided into the zones which are located within that sub-water shed area. Each zone within the HUC-14 was then broken down into the following land use categories:

- **Municipal Parks, Greenways, Recreation Areas, Open Space and Reservoir**
 - These lands mainly include the Township Parks, County Recreation/Park Areas, Municipal Core Site Area, the greenway areas, Township Recreation Areas and the Swimming River Reservoir.
- **Golf Course**
 - These Lands include the five Golf Course within the Township. These are the County Hominy Hill Golf Course and the private golf course of Due Process, Pebble Creek, Colts Neck Golf Course and Shadow Isle Golf Course.
- **Monmouth County and State Preserved Farmland and Township Deed Restricted Farmland**
 - These lands include the properties within the Township which are currently in the Farmland Preservation Program either through the County or State. These properties also include the Deed Restricted Farmland created from Clustering Provisions under the Agricultural Zoning Development.

- **Existing Developed Area**
 - These lands include those properties which are currently developed and are not able or likely to be redeveloped in the future to contain a more intense use. The vast majority of these lands include existing residential properties and existing developed commercial and industrial property.
- **Existing Impervious Coverage**
 - These areas include all roadways and an estimate of existing impervious coverage taken from applying the maximum lot coverage allowed within the densely developed areas of the Township and from a view of aerial mapping and physical inspections of other areas within the Township.
- **Constrained Developable Area (Wetlands, Water, FEMA 100 Year Flood Plains)**
 - The constrained developable area column within the tables indicates the portions of the land labeled as developable which are constrained and considered un-developable because of the presence of Wetlands, Streams, Water Bodies or Flood Plains. These areas were taken from NJDEP maps.
- **Unconstrained Developable Area**
 - These lands are the portion of the developable area which do not include any of the Wetlands, Streams, Water Bodies or Flood Plains. Within the Commercial Zones, these are predominately vacant land and within the Residential Zones, they are currently farmland or other agriculture uses.

Within Table C-1, once each zone within a HUC-14 was divided as indicated above, two more columns were added to the tables. One for allowable impervious coverage and the second for future additional impervious cover. The allowable impervious cover is simply the maximum impervious coverage allowed for that particular zone as shown in the Colts Neck Development Regulations Ordinance. The future additional impervious cover column is calculated by taking the unconstrained developable area times the allowable impervious coverage which yields the future additional impervious coverage in acres. This is what can be expected as a result of the zone being fully developed underneath the existing zoning regulations beyond that which currently exists.

The final column within Table C-1 is labeled build out impervious coverage. This is simply an addition of the one column of existing impervious area added to the column of future additional impervious cover. This is the total amount of impervious coverage within each zone of each HUC-14 once full build out is achieved under the current zoning regulations.

Table C-2 is broken into Tables C-2a and C-2b and shows the pollutant loading coefficients for Total Phosphorus, Total Nitrogen and Total Suspended Solids by land cover. Table C-2a contains the pollutant loading coefficients for the existing land cover and Table C-2b contains the pollutant loadings for the build out land cover. The loading coefficient for the two tables are the same with the exception of the last column. In Table C-2a all unconstrained developable land was considered to currently be in an Agricultural Use and within Table C-2b the last column reflects the loading factors for the zone should the unconstrained areas be developed. The loading factors were applied to the various categories of the Land Use rather than applying the same loading coefficient to the entire zone. This was done in order to try to more accurately model the existing conditions and the anticipated pollutant loadings. The loading factors were not arbitrarily assigned but were taken from the pollutant loading coefficients table from the NJDEP Stormwater BMP manual.

Table C-3 presents the existing loading coefficients applied to each zone within each HUC-14. The table is further divided as follows:

- C-3a – Total Existing Phosphorus
- C-3b – Total Existing Nitrogen
- C-3c – Total Existing Suspended Solids

The loading factors from Table C-2A were utilized within these three tables. Each of these tables indicates the approximate total amount of Phosphorus, Nitrogen and Total Suspended Solids which are currently produced from each zone within each HUC-14.

Table C-4 presents the build-out loading coefficients applied to each zone within each HUC-14. The Table is further divided into:

- C-4A – Total Build-Out Phosphorous
- C-4b – Total Build-Out Nitrogen
- C-4c – Total Build-Out Suspended Solids

The loading factors from Table C-2b were utilized for Tables C-4a, C-4b and C-4c. Each of these tables indicates the approximate total amount of Phosphorous, Nitrogen and Suspended Solids which could be produced for each zone within each HUC-14 assuming they are to be fully developed utilizing the current zoning regulations. It should be noted that the only column which differs from Table C-3 to C-4 is the last column. Table C-3 assumes all current unconstrained developable lands are utilized for agriculture while

Table C-4 applies the loadings assuming all unconstrained developable land was developed based upon the zoning regulations of the Township.

Table C-5 presents a summary comparing the existing pollutant loadings to the build-out pollutant loadings as well as a comparison of the existing impervious coverage versus the build-out impervious coverage. This is really a summary from the calculations produced in Tables C-1 through C-4. It should be noted that in many cases the pollutant loadings within a zone are reduced. When this occurs it is a result of many of the existing agricultural uses being replaced by low density, rural residential development which produces less pollutant loadings per acre.

9.0 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.

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 impacts 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.

The applicant can select one of the following projects listed to compensate for the deficit from the performance standards resulting from the proposed project. If a mitigation project is used, it must be equivalent to the type requested in the variance. 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.

Water Quality and Quantity:

1. De-slag and remove sediment in order to provide minimum 5-6 feet of storage volume for online ponds and provide outlet control structures to regulate flow at the following locations:
 - a. Municipal Complex Site: Block 16, Lot 11
 - b. Mulberry Lane Pond Site: Block 7.21, Lots 14, 15 & 16
 - c. Bucks Mill Pond: Block 23, Lot 19.01 & 19.02;Block 25, Lots 1-6
 - d. Bucks Mill Recreation Site: Block 23, Lot 37

2. Removal of excess pavement widening from Public Streets in areas where streets have been selectively widened in front of individual lots. In order to reduce the amount of impervious coverage and improve water quality the pavement widening in excess of RSIS half width shall be removed and the areas revegetated.

3. Clean, refurbish and retrofit the existing stormwater management facilities to provide for removal of 80% of total suspended solids at the following (location to be determined by the Colts Neck Planning Board):
 - a. The Grande
 - b. Rivers Edge
 - c. Cambridge Manor
 - d. Due Process
 - e. Willow Brook
 - f. Colabelli Development
 - g. Hillcrest Drive
 - h. Twin Lakes
 - i. Yearling Path
 - j. Rancho Polo
 - k. Stonehill Estates
 - l. Abatiello Development
 - m. Lunvan Development
 - n. Conover Estates
 - o. Cook Development
 - p. Kuretti Development
 - q. Spatial Design/Blackburn Development
 - r. Any other detention/retention facility needing upgrading to meet current Stormwater Management Standards.

If a suitable site cannot be located in the same drainage area as the proposed development, the mitigation project may provide mitigation that is not equivalent to the impacts for which the variance or exemption is sought, but that address 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.

The Township of Colts Neck may allow a developer to provide funding or partial funding to the Township for an environmental enhancement project that has been identified in a Municipal 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.

Table C-1: Colts Neck Township Build-Out Calculations

ID	HUC14 and Zone	Total Area (acres)	Municipal Park, Greenways, Recreation, Open Space Sites and Reservoir (acres)	Golf Courses (acres)	Monmouth County and State Preserved Farmland/Deed Restricted Farmland (acres)	Existing Developed (acres)	Existing Impervious (acres)	Constrained Developable Area [Wetlands, Water, FEMA 100-yr Floodplains] (acres)	Unconstrained Developable Area (acres)	Allowable Impervious (%)	Future Additional Impervious (acres)	Build-Out Impervious (acres)
02030104070020 - Willow Brook												
2	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	693.67	64.89	0.00	12.14	537.00	125.00	36.93	43.01	20%	6.60	133.60
3	AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	28.82	0.00	0.00	0.00	23.81	3.25	0.00	5.01	20%	1.00	4.25
4	AGRICULTURAL DISTRICT (AG)	141.66	13.34	0.00	90.22	38.10	4.25	0.00	0.00	10%	0.00	4.25
TOTALS		864.15	78.23	0.00	102.36	598.91	132.50	36.93	48.02			142.10
02030104070030 - Big Brook												
5	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	1,455.65	358.87	0.00	14.67	967.79	94.73	32.18	82.13	20%	16.43	111.16
6	AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	487.84	69.21	0.00	0.00	428.63	84.57	0.00	0.00	20%	0.00	84.57
7	RURAL AGRICULTURAL DISTRICT (A-5)	124.43	0.00	0.00	0.00	112.14	2.12	2.10	10.19	20%	2.04	4.16
8	AGRICULTURAL DISTRICT (AG)	866.42	42.43	0.00	226.73	438.84	7.38	72.03	86.39	10%	8.64	16.02
TOTALS		2,844.35	470.51	0.00	241.40	1,947.41	189.80	106.32	179.71			215.91
02030104070040 - Yellow Brook (above Bucks Mill)												
9	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	612.29	79.07	16.89	0.00	488.25	101.24	0.00	28.08	20%	5.62	106.86
10	VILLAGE RESIDENTIAL DISTRICT (A-3)	48.66	0.00	0.00	0.00	48.66	15.32	0.00	0.00	30%	0.00	15.32
11	MIXED HOUSING DISTRICT (A-4)	83.24	24.78	0.00	0.00	55.08	24.10	7.36	6.02	40%	2.41	26.51
12	RURAL RESIDENTIAL DISTRICT (A-5)	13.88	0.00	0.00	0.00	13.88	3.12	0.00	0.00	20%	0.00	3.12
13	RESIDENTIAL DISTRICT (A-6)	42.22	0.00	0.00	0.00	42.22	0.00	0.00	37.88	20%	7.58	40.40
14	AGRICULTURAL DISTRICT (AG)	927.15	132.01	0.00	381.98	314.68	15.10	9.84	88.62	10%	8.86	23.96
TOTALS		1,737.44	235.86	16.89	381.98	928.57	159.83	21.54	180.60			183.33
02030104070050 - Mine Brook (Monmouth Co.)												
15	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	471.19	22.38	165.42	0.00	246.87	51.25	0.00	38.52	20%	7.30	58.55
16	VILLAGE RESIDENTIAL DISTRICT (A-3)	32.35	0.00	0.00	0.00	32.35	10.10	0.00	0.00	30%	0.00	10.10
17	RURAL RESIDENTIAL DISTRICT (A-5)	101.51	0.00	0.00	0.00	101.51	21.50	0.00	0.00	20%	0.00	21.50
18	AGRICULTURAL DISTRICT (AG)	888.20	0.00	326.80	125.39	405.81	48.20	105.12	26.28	10%	2.63	50.83
19	AGRICULTURAL DISTRICT (AG) NWS EARLE	815.12	0.00	0.00	0.00	815.12	0.00	0.00	0.00	N/A	0.00	0.00
20	BUSINESS DISTRICT (B-1)	136.72	0.00	0.00	0.00	98.42	52.10	0.00	40.30	50%	20.15	72.25
21	BUSINESS DISTRICT (B-1A)	14.40	0.00	0.00	0.00	14.40	6.10	0.00	0.00	40%	0.00	6.10
22	BUSINESS DISTRICT (B-2)	10.75	0.00	0.00	0.00	10.75	6.20	0.00	0.00	50%	0.00	6.20
23	BUSINESS DISTRICT (B-3)	8.08	0.00	0.00	0.00	8.08	5.10	0.00	0.00	50%	0.00	5.10
TOTALS		3,679.33	22.38	482.22	125.39	616.00	200.55	105.12	102.10			230.84
02030104070060 - Yellow Brook (below Bucks Mill)												
24	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	812.48	90.35	0.00	0.00	646.58	148.71	30.21	45.32	20%	9.06	157.78
25	VILLAGE RESIDENTIAL DISTRICT (A-3)	64.75	0.00	0.00	0.00	64.75	13.60	0.00	0.00	30%	0.00	13.60
26	RURAL RESIDENTIAL DISTRICT (A-5)	97.02	0.00	0.00	0.00	97.02	8.21	0.00	0.00	20%	0.00	8.21
27	AGRICULTURAL DISTRICT (AG)	842.29	6.32	160.49	96.58	368.36	48.21	21.05	188.49	10%	18.95	67.16
28	BUSINESS DISTRICT (B-1)	31.61	0.00	0.00	0.00	31.61	10.81	0.00	0.00	50%	0.00	10.81
29	MUNICIPAL PURPOSES DISTRICT (MP)	57.28	55.33	0.00	0.00	1.95	16.52	0.00	0.00	50%	0.00	16.52
TOTALS		1,905.41	132.00	160.49	96.58	1,210.27	246.97	51.26	244.81			274.08
02030104070070 - Swimming River Reservoir/Slope Brook												
30	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	1,983.07	201.72	9.08	101.88	1,568.21	328.51	12.68	102.42	20%	20.48	348.99
31	VILLAGE RESIDENTIAL DISTRICT (A-3)	47.26	0.00	0.00	0.00	47.26	13.20	0.00	5.93	30%	1.78	14.98
32	AGRICULTURAL DISTRICT (AG)	1,879.92	282.78	85.64	416.40	530.62	58.24	57.45	517.03	10%	51.70	109.94
33	BUSINESS DISTRICTS (B-1)	18.43	0.00	0.00	0.00	9.94	5.21	0.00	9.49	50%	4.75	9.96

Table C-1: Colts Neck Township Build-Out Calculations

ID	FLUCL4 and Zone	Total Area (acres)	Municipal Park, Greenways, Recreation, Open Space Sites and Reservoir (acres)	Golf Courses (acres)	Monmouth County and State Preserved Farmland/Deed Restricted Farmland (acres)	Existing Developed (acres)	Existing Impervious (acres)	Constrained Developable Area [Wetlands, Water, FEMA 100-yr Floodplains] (acres)	Unconstrained Developable Area (acres)	Allowable Impervious (%)	Future Additional Impervious (acres)	Build-Out Impervious (acres)
34	LIGHT INDUSTRIAL DISTRICT (D)	19.17	0.00	0.00	0.00	19.17	13.25	0.00	0.00	60%	0.00	13.25
TOTALS		3,853.35	464.60	104.72	518.39	2,168.27	418.41	70.51	394.87			497.12
02030104070080 - Pine Brook/Hockockoon Brook												
36	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	267.48	27.14	0.00	0.00	107.41	26.58	10.30	122.64	20%	24.53	51.11
36	AGRICULTURAL DISTRICT (AG)	2,085.48	287.57	244.26	235.97	866.86	91.23	202.92	227.90	10%	22.79	114.02
37	AGRICULTURAL DISTRICT (AG) NWS EARLE	3,270.37								N/A		
38	BUSINESS DISTRICT (B-1)	9.05	0.00	0.00	0.00	1.51	1.10	0.00	7.54	50%	3.77	4.87
39	LIGHT INDUSTRIAL DISTRICT (D-1)	18.07	0.00	0.00	0.00	18.07	12.58	0.00	0.00	80%	0.00	12.58
40	MUNICIPAL PURPOSES DISTRICT (MP)	42.62	0.00	0.00	0.00	42.62	24.65	0.00	0.00	50%	0.00	24.65
TOTALS		6,672.08	314.71	244.26	235.97	1,036.47	156.14	213.23	368.08			207.33
02030104070100 - Portcy Bk/Swimming River (below Swimming River Road)												
42	VILLAGE RESIDENTIAL DISTRICT (A-3)	35.84	0.00	0.00	0.00	25.73	4.25	0.00	10.11	10%	1.01	5.26
TOTALS		35.84	0.00	0.00	0.00	25.73	4.25	0.00	10.11			5.26
02030104090040 - Shark River (above Remsen Mill gauge)												
43	AGRICULTURAL DISTRICT (AG) NWS EARLE	308.40										N/A
44	LIGHT INDUSTRIAL DISTRICT (D-1)	158.83	0.00	0.00	0.00	158.83	5.63	0.00	0.00	60%	0.00	5.63
TOTALS		468.23	0.00	0.00	0.00	158.83	5.63	0.00	0.00			5.63
02030104100060 - Mingsmahone Brook (above Asbury Ave)												
45	AGRICULTURAL DISTRICT (AG) NWS EARLE	548.66										N/A
TOTALS		548.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00

Table C-2: Pollutant Loadings

Table C-2a: Colts Neck Pollutant Loads for Existing Land Cover

ZONE	LAND COVER																	
	Municipal Park, Greenways, Recreation, Open Space Sites and Reservoir (acres)			Golf Courses (acres)			Monmouth County and State Preserved Farmland/Deed Restricted Farmland (acres)			Developed Area			Constrained Developable Area [Wetlands, Water, FEMA 100-yr Floodplains]			Unconstrained Developable Lands/Current Farm Land		
	TP (lbs/ac/yr)	TN (lbs/ac/yr)	TSS (lbs/ac/yr)	TP (lbs/ac/yr)	TN (lbs/ac/yr)	TSS (lbs/ac/yr)	TP (lbs/ac/yr)	TN (lbs/ac/yr)	TSS (lbs/ac/yr)	TP (lbs/ac/yr)	TN (lbs/ac/yr)	TSS (lbs/ac/yr)	TP (lbs/ac/yr)	TN (lbs/ac/yr)	TSS (lbs/ac/yr)	TP (lbs/ac/yr)	TN (lbs/ac/yr)	TSS (lbs/ac/yr)
AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	0.6	5.0	100.0	0.1	3.0	40.0	1.3	10.0	300.0
AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	0.6	5.0	100.0	0.1	3.0	40.0	1.3	10.0	300.0
VILLAGE RESIDENTIAL DISTRICT (A-3)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	0.6	5.0	100.0	0.1	3.0	40.0	1.3	10.0	300.0
MIXED HOUSING DISTRICT (A-4)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	0.6	5.0	100.0	0.1	3.0	40.0	1.3	10.0	300.0
RURAL RESIDENTIAL DISTRICT (A-5)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	0.6	5.0	100.0	0.1	3.0	40.0	1.3	10.0	300.0
RESIDENTIAL DISTRICT (A-6)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	0.6	5.0	100.0	0.1	3.0	40.0	1.3	10.0	300.0
AGRICULTURAL DISTRICT (A-8)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	0.6	5.0	100.0	0.1	3.0	40.0	1.3	10.0	300.0
BUSINESS DISTRICT (B-1)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	2.1	22.0	200.0	0.1	3.0	40.0	1.3	10.0	300.0
BUSINESS DISTRICT (B-1A)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	2.1	22.0	200.0	0.1	3.0	40.0	1.3	10.0	300.0
BUSINESS DISTRICT (B-2)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	2.1	22.0	200.0	0.1	3.0	40.0	1.3	10.0	300.0
BUSINESS DISTRICT (B-3)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	2.1	22.0	200.0	0.1	3.0	40.0	1.3	10.0	300.0
MUNICIPAL PURPOSES DISTRICT (MP)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	1.5	16	200	0.1	3.0	40.0	1.3	10.0	300.0
LIGHT INDUSTRIAL DISTRICT (DI)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	1.5	16	200	0.1	3.0	40.0	1.3	10.0	300.0
LIGHT INDUSTRIAL DISTRICT (DI-1)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	1.5	16	200	0.1	3.0	40.0	1.3	10.0	300.0

Table C-2b: Colts Neck Pollutant Loads for Build-Out Land Cover

ZONE	LAND COVER																	
	Municipal Park, Greenways, Recreation, Open Space Sites and Reservoir (acres)			Golf Courses (acres)			Monmouth County and State Preserved Farmland/Deed Restricted Farmland (acres)			Developed Area			Constrained Developable Area [Wetlands, Water, FEMA 100-yr Floodplains]			Unconstrained Developable Lands/Current Farm Land		
	TP (lbs/ac/yr)	TN (lbs/ac/yr)	TSS (lbs/ac/yr)	TP (lbs/ac/yr)	TN (lbs/ac/yr)	TSS (lbs/ac/yr)	TP (lbs/ac/yr)	TN (lbs/ac/yr)	TSS (lbs/ac/yr)	TP (lbs/ac/yr)	TN (lbs/ac/yr)	TSS (lbs/ac/yr)	TP (lbs/ac/yr)	TN (lbs/ac/yr)	TSS (lbs/ac/yr)	TP (lbs/ac/yr)	TN (lbs/ac/yr)	TSS (lbs/ac/yr)
AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	0.6	5.0	100.0	0.1	3.0	40.0	0.6	5.0	100.0
AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	0.6	5.0	100.0	0.1	3.0	40.0	0.6	5.0	100.0
VILLAGE RESIDENTIAL DISTRICT (A-3)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	0.6	5.0	100.0	0.1	3.0	40.0	0.6	5.0	100.0
MIXED HOUSING DISTRICT (A-4)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	0.6	5.0	100.0	0.1	3.0	40.0	0.6	5.0	100.0
RURAL RESIDENTIAL DISTRICT (A-5)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	0.6	5.0	100.0	0.1	3.0	40.0	0.6	5.0	100.0
RESIDENTIAL DISTRICT (A-6)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	0.6	5.0	100.0	0.1	3.0	40.0	0.6	5.0	100.0
AGRICULTURAL DISTRICT (A-8)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	0.6	5.0	100.0	0.1	3.0	40.0	0.6	5.0	100.0
BUSINESS DISTRICT (B-1)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	2.1	22.0	200.0	0.1	3.0	40.0	2.1	22.0	200.0
BUSINESS DISTRICT (B-1A)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	2.1	22.0	200.0	0.1	3.0	40.0	2.1	22.0	200.0
BUSINESS DISTRICT (B-2)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	2.1	22.0	200.0	0.1	3.0	40.0	2.1	22.0	200.0
BUSINESS DISTRICT (B-3)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	2.1	22.0	200.0	0.1	3.0	40.0	2.1	22.0	200.0
MUNICIPAL PURPOSES DISTRICT (MP)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	1.5	16	200	0.1	3.0	40.0	1.5	16	200
LIGHT INDUSTRIAL DISTRICT (DI)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	1.5	16	200	0.1	3.0	40.0	1.5	16	200
LIGHT INDUSTRIAL DISTRICT (DI-1)	0.1	3.0	40.0	1.3	10.0	100.0	1.3	10.0	300.0	1.5	16	200	0.1	3.0	40.0	1.5	16	200

Table C-3a: Existing Phosphorous Loadings

ID	HUC14 and Zone	Total Area (acres)	Municipal Park, Greenways, Recreation, Open Space Sites and Reservoir (acres)		Golf Courses (acres)		Monmouth County and State Preserved Farmland/Deed Restricted Farmland (acres)		Developed Area (acres)		Constrained Developable Area [Wetlands, Water, FEMA 100-yr Floodplains] (acres)		Unconstrained Developable Area (acres)		TOTAL PHOSPHOROUS LOAD (lbs/yr)	
			Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)		
02030104070020 - Willow Brook																
2	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	693.67	64.89	0.10	0.00	0.00	1.30	12.14	1.30	537.00	0.6	36.63	0.10	43.01	1.30	404.047
3	AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	28.82	0.00	0.10	0.00	0.00	1.30	23.81	1.30	23.81	0.6	0.00	0.10	5.01	1.30	20.796
4	AGRICULTURAL DISTRICT (AG)	141.66	13.34	0.10	0.00	0.00	1.30	90.22	1.30	38.10	0.6	0.00	0.10	0.00	1.30	141.48
TOTALS		864.15	78.23		0.00		102.36		588.81		36.83		48.92			566.33
02030104070030 - Big Brook																
5	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	1,455.55	358.87	0.10	0.00	0.00	1.30	14.67	1.30	967.79	0.6	32.19	0.10	82.13	1.30	745.8206
6	AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	497.84	69.21	0.10	0.00	0.00	1.30	428.63	1.30	112.14	0.6	2.10	0.10	10.19	1.30	284.096
7	RURAL AGRICULTURAL DISTRICT (A-5)	124.43	0.00	0.10	0.00	0.00	1.30	112.14	1.30	438.84	0.6	72.03	0.10	86.39	1.30	681.806
8	AGRICULTURAL DISTRICT (AG)	868.42	42.43	0.10	0.00	0.00	1.30	226.73	1.30	1,347.41	0.6	106.32	0.10	178.71	1.30	1,172.27
TOTALS		2,944.36	470.51		0.00		261.40		1,847.41		106.32		178.71			1,772.27
02030104070040 - Yellow Brook (above Bucks Mill)																
9	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	612.28	79.07	0.10	0.00	0.00	1.30	0.00	1.30	488.25	0.6	0.00	0.10	28.08	1.30	359.32
10	VILLAGE RESIDENTIAL DISTRICT (A-3)	48.66	0.00	0.10	0.00	0.00	1.30	48.66	1.30	48.66	0.6	0.00	0.10	0.00	1.30	29.20
11	MIXED HOUSING DISTRICT (A-4)	93.24	24.78	0.10	0.00	0.00	1.30	0.00	1.30	55.08	0.6	7.36	0.10	6.02	1.30	44.09
12	RURAL RESIDENTIAL DISTRICT (A-5)	13.88	0.00	0.10	0.00	0.00	1.30	13.88	1.30	13.88	0.6	0.00	0.10	0.00	1.30	8.33
13	RESIDENTIAL DISTRICT (A-6)	42.22	0.00	0.10	0.00	0.00	1.30	0.00	1.30	0.00	0.6	4.34	0.10	37.88	1.30	49.67
14	AGRICULTURAL DISTRICT (AG)	927.15	132.01	0.10	0.00	0.00	1.30	381.99	1.30	314.59	0.6	9.84	0.10	86.62	1.30	814.79
TOTALS		1,757.44	236.86			16.39	351.99		520.57		21.54		180.63			1,305.40
02030104070050 - Mine Brook (Monmouth Co.)																
15	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	471.19	22.38	0.10	0.00	0.00	1.30	0.00	1.30	246.67	0.6	0.00	0.10	36.52	1.30	412.88
16	VILLAGE RESIDENTIAL DISTRICT (A-3)	32.35	0.00	0.10	0.00	0.00	1.30	0.00	1.30	32.35	0.6	0.00	0.10	0.00	1.30	19.41
17	RURAL RESIDENTIAL DISTRICT (A-5)	101.51	0.00	0.10	0.00	0.00	1.30	101.51	1.30	101.51	0.6	0.00	0.10	0.00	1.30	60.91
18	AGRICULTURAL DISTRICT (AG)	689.20	0.00	0.10	0.00	0.00	1.30	125.39	1.30	410.04	0.6	105.12	0.10	26.28	1.30	872.79
19	AGRICULTURAL DISTRICT (AG) NWS EARLE	815.12														
20	BUSINESS DISTRICT (B-1)	136.72	0.00	0.10	0.00	0.00	1.30	0.00	1.30	96.42	2.1	0.00	0.10	40.30	1.30	254.87
21	BUSINESS DISTRICT (B-1A)	14.40	0.00	0.10	0.00	0.00	1.30	14.40	1.30	14.40	2.1	0.00	0.10	0.00	1.30	30.24
22	BUSINESS DISTRICT (B-2)	10.75	0.00	0.10	0.00	0.00	1.30	10.75	1.30	10.75	2.1	0.00	0.10	0.00	1.30	22.56
23	BUSINESS DISTRICT (B-3)	8.08	0.00	0.10	0.00	0.00	1.30	8.08	1.30	8.08	2.1	0.00	0.10	0.00	1.30	16.97
TOTALS		2,679.33	22.38			487.79	125.39		920.43		105.12		105.10			1,680.55

Table C-3a: Existing Phosphorous Loadings

ID	HUC14 and Zone	Total Area (acres)	Municipal Park, Greenways, Recreation, Open Space Sites and Reservoir (acres)		Golf Courses (acres)		Monmouth County and State Preserved Farmland/Deed Restricted Farmland (acres)		Developed Area (acres)		Constrained Developable Area [Wetlands, Water, FEMA 100-yr Floodplains] (acres)		Unconstrained Developable Area (acres)		TOTAL PHOSPHOROUS LOAD (lbs/yr)
			Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	
02030104070060 - Yellow Brook (below Bucks Mill)															
24	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	812.46	90.35	0.10	0.00	1.30	0.00	1.30	646.58	0.6	30.21	0.10	45.32	1.30	458.92
25	VILLAGE RESIDENTIAL DISTRICT (A-3)	64.75	0.00	0.10	0.00	1.30	0.00	1.30	84.75	0.6	0.00	0.10	0.00	1.30	38.85
26	RURAL RESIDENTIAL DISTRICT (A-5)	97.02	0.00	0.10	0.00	1.30	0.00	1.30	97.02	0.6	0.00	0.10	0.00	1.30	58.21
27	AGRICULTURAL DISTRICT (AG)	842.29	6.32	0.10	160.49	1.30	96.58	1.30	368.36	0.8	21.05	0.10	188.49	1.30	804.28
28	BUSINESS DISTRICT (B-1)	31.61	0.00	0.10	0.00	1.30	0.00	1.30	31.61	2.1	0.00	0.10	0.00	1.30	66.38
29	MUNICIPAL PURPOSES DISTRICT (MP)	57.28	56.33	0.10	0.00	1.30	0.00	1.30	1.95	1.00	0.00	0.10	0.00	1.30	7.48
TOTALS		1,905.41	182.00		162.49		96.58		1,210.27		51.26		233.81		1,434.13
02030104070070 - Swimming River Reservoir/Slope Brook															
30	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	1,893.07	201.72	0.10	9.08	1.30	101.98	1.30	1,565.21	0.6	12.66	0.10	102.42	1.30	1238.09
31	VILLAGE RESIDENTIAL DISTRICT (A-3)	47.26	0.00	0.10	0.00	1.30	0.00	1.30	41.33	0.6	0.00	0.10	5.93	1.30	32.51
32	AGRICULTURAL DISTRICT (AG)	1,878.82	262.78	0.10	95.64	1.30	416.40	1.30	530.62	0.8	57.45	0.10	517.03	1.30	1888.19
33	BUSINESS DISTRICTS (B-1)	19.43	0.00	0.10	0.00	1.30	0.00	1.30	9.94	2.1	0.00	0.10	9.49	1.30	33.21
34	LIGHT INDUSTRIAL DISTRICT (D)	19.17	0.00	0.10	0.00	1.30	0.00	1.30	19.17		0.00	0.10	0.00	1.30	0.00
TOTALS		3,868.35	463.60		104.72		610.38		2,166.27		70.11		584.87		2,891.89
02030104070080 - Pine Brook/Hockhockton Brook															
35	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	267.49	27.14	0.10	0.00	1.30	0.00	1.30	107.41	0.6	10.30	0.10	122.64	1.30	227.62
36	AGRICULTURAL DISTRICT (AG)	2,065.48	287.57	0.10	244.26	1.30	236.97	1.30	866.86		202.92	0.10	227.90	1.30	969.62
37	AGRICULTURAL DISTRICT (AG) NWS EARLE	3,270.37													
38	BUSINESS DISTRICT (B-1)	9.05	0.00	0.10	0.00	1.30	0.00	1.30	1.51	2.1	0.00	0.10	7.54	1.30	12.97
39	LIGHT INDUSTRIAL DISTRICT (D-1)	18.07	0.00	0.10	0.00	1.30	0.00	1.30	18.07	1.50	0.00	0.10	0.00	1.30	27.11
40	MUNICIPAL PURPOSES DISTRICT (MP)	42.62	0.00	0.10	0.00	1.30	0.00	1.30	42.62	1.00	0.00	0.10	0.00	1.30	42.62
TOTALS		6,673.08	314.71		244.26		236.97		1,898.37		212.22		363.08		1,276.54
02030104070100 - Percy Blk/Swimming River (below Swimming River Road)															
42	VILLAGE RESIDENTIAL DISTRICT (A-3)	35.64	0.00	0.10	0.00	1.30	0.00	1.30	25.73	0.6	0.00	0.10	10.11	1.30	28.58
TOTALS		36.64	0.00		0.00		0.00		26.73		0.00		10.11		28.58
02030104090040 - Shark River (above Ramson Mill gauge)															
43	AGRICULTURAL DISTRICT (AG) NWS EARLE	309.40													
44	LIGHT INDUSTRIAL DISTRICT (D-1)	158.93	0.00	0.10	0.00	1.30	0.00	1.30	158.93	1.50	0.00	0.10	0.00	1.30	238.25
TOTALS		468.33	0.00		0.00		0.00		158.93		0.00		0.00		238.25
02030104100060 - Mingamahone Brook (above Asbury Ave)															
45	AGRICULTURAL DISTRICT (AG) NWS EARLE	546.65													
TOTALS		546.65	0.00		0.00		0.00		0.00		0.00		0.00		0.00

Table C-3b: Existing Nitrogen Loadings

ID	HUC14 and Zone	Total Area (acres)		Municipal Park, Greenways, Recreation, Open Space Sites and Reservoir (acres)		Golf Courses (acres)		Monmouth County and State Preserved Farmland/Deed Restricted Farmland (acres)		Developed Area (acres)		Constrained Developable Area [Wetlands, Water, FEMA 100-yr Floodplains] (acres)		Unconstrained Developable Area (acres)		TOTAL NITROGEN LOAD (lbs/yr)
		Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	
02030104070020 - Willow Brook																
2	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	693.87	3.00	64.89	3.00	0.00	10.00	12.14	10.00	537.00	5.0	36.63	3.00	43.01	10.00	3541.06
3	AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	28.82	3.00	0.00	3.00	0.00	10.00	0.00	10.00	23.81	5.0	0.00	3.00	5.01	10.00	169.15
4	AGRICULTURAL DISTRICT (AG)	141.86	3.00	13.34	3.00	0.00	10.00	90.22	10.00	38.10	5.0	0.00	3.00	0.00	10.00	1132.72
TOTALS		864.15		78.23		0.00		102.36		598.91		36.63		48.02		4,342.52
02030104070030 - Big Brook																
5	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	1,455.65	3.00	358.87	3.00	0.10	10.00	14.67	10.00	987.79	5.0	32.19	3.00	82.13	10.00	5939.412
6	AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	487.84	3.00	69.21	3.00	0.10	10.00	0.00	10.00	428.63	5.0	0.00	3.00	0.00	10.00	2150.071
7	RURAL AGRICULTURAL DISTRICT (A-5)	124.43	3.00	0.00	3.00	0.10	10.00	0.00	10.00	112.14	5.0	2.10	3.00	10.19	10.00	668.9
8	AGRICULTURAL DISTRICT (AG)	868.42	3.00	42.43	3.00	0.10	10.00	228.73	10.00	488.84	5.0	72.03	3.00	88.39	10.00	5545.793
TOTALS		2,944.36		470.51		0.00		241.40		1,927.41		106.32		178.71		14,304.32
02030104070040 - Yellow Brook (above Bucks Mill)																
9	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	612.29	3.00	79.07	3.00	16.89	10.00	0.00	10.00	488.25	5.0	0.00	3.00	28.08	10.00	3128.16
10	VILLAGE RESIDENTIAL DISTRICT (A-3)	48.66	3.00	0.00	3.00	0.00	10.00	0.00	10.00	48.66	5.0	0.00	3.00	0.00	10.00	243.30
11	MIXED HOUSING DISTRICT (A-4)	93.24	3.00	24.78	3.00	0.00	10.00	0.00	10.00	55.08	5.0	7.36	3.00	6.02	10.00	432.02
12	RURAL RESIDENTIAL DISTRICT (A-5)	13.88	3.00	0.00	3.00	0.00	10.00	0.00	10.00	13.88	5.0	0.00	3.00	0.00	10.00	69.40
13	RESIDENTIAL DISTRICT (A-6)	42.22	3.00	0.00	3.00	0.00	10.00	0.00	10.00	0.00	5.0	4.34	3.00	37.88	10.00	391.80
14	AGRICULTURAL DISTRICT (AG)	927.16	3.00	132.01	3.00	0.00	10.00	381.99	10.00	314.69	5.0	9.84	3.00	88.62	10.00	6705.10
TOTALS		1,737.64		236.86		16.39		381.99		924.67		21.54		180.50		10,968.78
02030104070050 - Mine Brook (Monmouth Co.)																
15	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	471.19	3.00	22.38	3.00	165.42	10.00	0.00	10.00	246.87	5.0	0.00	3.00	38.52	10.00	3320.89
16	VILLAGE RESIDENTIAL DISTRICT (A-3)	32.35	3.00	0.00	3.00	0.00	10.00	0.00	10.00	32.35	5.0	0.00	3.00	0.00	10.00	161.75
17	RURAL RESIDENTIAL DISTRICT (A-5)	101.51	3.00	0.00	3.00	0.00	10.00	0.00	10.00	101.51	5.0	0.00	3.00	0.00	10.00	507.56
18	AGRICULTURAL DISTRICT (AG)	989.20	3.00	0.00	3.00	322.37	10.00	125.39	10.00	410.04	5.0	105.12	3.00	26.28	10.00	7105.98
19	AGRICULTURAL DISTRICT (AG) NWS EARLE	815.12	3.00	0.00	3.00	0.00	10.00	0.00	10.00	0.00	22.0	0.00	3.00	0.00	10.00	2524.24
20	BUSINESS DISTRICT (B-1)	138.72	3.00	0.00	3.00	0.00	10.00	0.00	10.00	14.40	22.0	0.00	3.00	0.00	10.00	316.80
21	BUSINESS DISTRICT (B-1A)	10.75	3.00	0.00	3.00	0.00	10.00	0.00	10.00	10.75	22.0	0.00	3.00	0.00	10.00	298.50
22	BUSINESS DISTRICT (B-2)	8.08	3.00	0.00	3.00	0.00	10.00	0.00	10.00	8.08	22.0	0.00	3.00	0.00	10.00	177.76
23	BUSINESS DISTRICT (B-3)	2.57	3.00	22.38	3.00	487.73	10.00	125.39	10.00	920.42	22.0	106.12	3.00	103.10	10.00	14,381.47
TOTALS		2,873.33		22.38		487.73		125.39		920.42		106.12		103.10		14,381.47

Table C-3b: Existing Nitrogen Loadings

ID	HUC14 and Zone	Total Area (acres)	Municipal Park, Greenways, Recreation, Open Space Sites and Reservoir (acres)		Golf Courses (acres)		Monmouth County and State Preserved Farmland/Deed Restricted Farmland (acres)		Developed Area (acres)		Constrained Developable Area [Wetlands, Water, FEMA 100-yr Floodplains] (acres)		Unconstrained Developable Area (acres)		TOTAL NITROGEN LOAD (lbs/yr)
			Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	
02030104070060 - Yellow Brook (below Bucks Mill)															
24	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	812.46	90.35	3.00	0.00	10.00	0.00	10.00	646.58	5.0	30.21	3.00	45.32	10.00	4047.77
25	VILLAGE RESIDENTIAL DISTRICT (A-3)	64.75	0.00	3.00	0.00	10.00	0.00	10.00	64.75	5.0	0.00	3.00	0.00	10.00	323.75
26	RURAL RESIDENTIAL DISTRICT (A-5)	97.02	0.00	3.00	0.00	10.00	0.00	10.00	97.02	5.0	0.00	3.00	0.00	10.00	485.10
27	AGRICULTURAL DISTRICT (AG)	842.29	6.32	3.00	160.49	10.00	96.58	10.00	369.36	5.0	21.06	3.00	189.49	10.00	6399.52
28	BUSINESS DISTRICT (B-1)	31.61	0.00	3.00	0.00	10.00	0.00	10.00	31.61	22.0	0.00	3.00	0.00	10.00	885.42
29	MUNICIPAL PURPOSES DISTRICT (MP)	57.28	56.33	3.00	0.00	10.00	0.00	10.00	1.95	10.00	0.00	3.00	0.00	10.00	185.49
TOTALS		1,906.41	162.00	180.49	0.00	10.00	96.58	10.00	1,210.27	5.0	51.26	3.00	23.81	10.00	12,127.85
02030104070070 - Swimming River Reservoir/Slope Brook															
30	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	1,993.07	201.72	3.00	9.08	10.00	101.98	10.00	1,565.21	5.0	12.88	3.00	102.42	10.00	10603.99
31	VILLAGE RESIDENTIAL DISTRICT (A-3)	47.28	0.00	3.00	0.00	10.00	0.00	10.00	41.33	5.0	0.00	3.00	5.93	10.00	265.95
32	AGRICULTURAL DISTRICT (AG)	1,979.92	282.78	3.00	95.84	10.00	416.40	10.00	530.62	5.0	57.46	3.00	517.03	10.00	13904.49
33	BUSINESS DISTRICTS (B-1)	19.43	0.00	3.00	0.00	10.00	0.00	10.00	9.94	22.0	0.00	3.00	0.00	10.00	313.58
34	LIGHT INDUSTRIAL DISTRICT (D)	19.17	0.00	3.00	0.00	10.00	0.00	10.00	19.17	5.00	0.00	3.00	0.00	10.00	95.95
TOTALS		3,969.65	464.50	104.72	0.00	10.00	516.38	10.00	2,106.27	5.00	70.11	3.00	64.37	10.00	26,163.95
02030104070080 - Pine Brook/Hockhockson Brook															
35	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	287.49	27.14	3.00	0.00	10.00	0.00	10.00	107.41	5.0	10.30	3.00	122.64	10.00	1875.77
36	AGRICULTURAL DISTRICT (AG)	2,065.48	287.57	3.00	244.26	10.00	235.97	10.00	866.86	5.00	202.92	3.00	227.90	10.00	12887.07
37	AGRICULTURAL DISTRICT (AG) NWS EARLE	3,270.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	BUSINESS DISTRICT (B-1)	9.05	0.00	3.00	0.00	10.00	0.00	10.00	1.51	22.0	0.00	3.00	7.54	10.00	108.62
39	LIGHT INDUSTRIAL DISTRICT (D-1)	19.07	0.00	3.00	0.00	10.00	0.00	10.00	18.07	16.00	0.00	3.00	0.00	10.00	289.12
40	MUNICIPAL PURPOSES DISTRICT (MP)	42.62	0.00	3.00	0.00	10.00	0.00	10.00	42.62	10.00	0.00	3.00	0.00	10.00	426.20
TOTALS		6,975.88	314.71	244.26	0.00	10.00	236.97	10.00	1,036.47	5.00	215.24	3.00	358.08	10.00	15,584.78
02030104070100 - Poricy Bk/Swimming River (below Swimming River Road)															
42	VILLAGE RESIDENTIAL DISTRICT (A-3)	35.84	0.00	3.00	0.00	10.00	0.00	10.00	25.73	5.0	0.00	3.00	10.11	10.00	229.75
TOTALS		36.84	0.00	0.00	0.00	10.00	0.00	10.00	25.73	5.00	0.00	3.00	10.11	10.00	229.75
02030104080040 - Shark River (above Rensen Mill gauge)															
43	AGRICULTURAL DISTRICT (AG) NWS EARLE	309.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	LIGHT INDUSTRIAL DISTRICT (D-1)	159.83	0.00	3.00	0.00	10.00	0.00	10.00	159.83	16.00	0.00	3.00	0.00	10.00	2541.28
TOTALS		469.23	0.00	0.00	0.00	10.00	0.00	10.00	159.83	16.00	0.00	3.00	0.00	10.00	2,541.28
02030104100060 - Mingamahone Brook (above Asbury Ave)															
45	AGRICULTURAL DISTRICT (AG) NWS EARLE	546.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS		546.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table C-3c: Existing TSS Loadings

ID	HUC14 and Zone	Total Area (acres)	Municipal Park, Greenways, Recreation, Open Space Sites and Reservoir (acres)		Golf Courses (acres)		Monmouth County and State Preserved Farmland/Deed Restricted Farmland (acres)		Developed Area (acres)		Constrained Developable Area [Wetlands, Water, FEMA 100-yr Floodplains] (acres)		Unconstrained Developable Area (acres)		TOTAL SUSPENDED SOLID LOAD (lbs/yr)
			Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	
02030104070020 - Willow Brook															
2	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	693.67	64.89	40.00	0.00	100.00	12.14	300.00	537.00	100.00	36.63	40.00	43.01	300.00	74305.8
3	AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	28.82	0.00	40.00	0.00	100.00	23.81	300.00	23.81	100.00	0.00	40.00	5.01	300.00	3884
4	AGRICULTURAL DISTRICT (AG)	141.66	13.34	40.00	0.00	100.00	80.22	300.00	38.10	100.00	0.00	40.00	0.00	300.00	31409.6
TOTALS		864.15	78.23		0.00		192.36		593.91		35.63		48.02		109,588.40
02030104070030 - Big Brook															
5	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	1,458.65	358.87	40.00	0.00	100.00	14.87	300.00	987.79	100.00	32.19	40.00	82.13	300.00	141481.5
6	AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	487.84	68.21	0.10	0.00	100.00	0.00	300.00	428.63	100.00	0.00	40.00	0.00	300.00	42869.921
7	RURAL AGRICULTURAL DISTRICT (A-5)	124.43	0.00	0.10	0.00	100.00	0.00	300.00	112.14	100.00	2.10	40.00	10.19	300.00	14355
8	AGRICULTURAL DISTRICT (AG)	868.42	42.43	0.10	0.00	100.00	228.73	300.00	436.84	100.00	72.03	40.00	86.39	300.00	140706.443
TOTALS		3,944.35	470.51		0.00		241.60		1,547.41		106.32		178.71		538,591.87
02030104070040 - Yellow Brook (above Bucks Mill)															
9	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	612.29	79.07	40.00	18.88	100.00	0.00	300.00	488.25	100.00	0.00	40.00	28.08	300.00	62100.80
10	VILLAGE RESIDENTIAL DISTRICT (A-3)	48.66	0.00	40.00	0.00	100.00	0.00	300.00	48.66	100.00	0.00	40.00	0.00	300.00	4866.00
11	MIXED HOUSING DISTRICT (A-4)	89.24	24.78	40.00	0.00	100.00	0.00	300.00	55.08	100.00	7.36	40.00	6.02	300.00	8699.60
12	RURAL RESIDENTIAL DISTRICT (A-5)	13.88	0.00	40.00	0.00	100.00	0.00	300.00	13.88	100.00	0.00	40.00	0.00	300.00	1388.00
13	RESIDENTIAL DISTRICT (A-6)	42.22	0.00	40.00	0.00	100.00	0.00	300.00	0.00	100.00	4.34	40.00	37.88	300.00	11536.60
14	AGRICULTURAL DISTRICT (AG)	927.15	132.01	40.00	0.00	100.00	381.99	300.00	314.69	100.00	9.84	40.00	88.62	300.00	178326.00
TOTALS		1,737.44	235.86		18.88		381.99		820.67		21.64		166.60		266,417.00
02030104070050 - Mine Brook (Monmouth Co.)															
15	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	471.19	22.38	40.00	165.42	100.00	0.00	300.00	246.87	100.00	0.00	40.00	36.52	300.00	53080.20
16	VILLAGE RESIDENTIAL DISTRICT (A-3)	32.35	0.00	40.00	0.00	100.00	0.00	300.00	32.35	100.00	0.00	40.00	0.00	300.00	3235.00
17	RURAL RESIDENTIAL DISTRICT (A-5)	101.51	0.00	40.00	0.00	100.00	0.00	300.00	101.51	100.00	0.00	40.00	0.00	300.00	10151.00
18	AGRICULTURAL DISTRICT (AG)	888.20	0.00	40.00	322.37	100.00	125.39	300.00	419.04	100.00	105.12	40.00	28.28	300.00	122947.13
19	AGRICULTURAL DISTRICT (AG) NWS EARLE	815.12													
20	BUSINESS DISTRICT (B-1)	186.72	0.00	40.00	0.00	100.00	0.00	300.00	66.42	200.00	0.00	40.00	40.30	300.00	31374.00
21	BUSINESS DISTRICT (B-1A)	14.40	0.00	40.00	0.00	100.00	0.00	300.00	14.40	200.00	0.00	40.00	0.00	300.00	2880.00
22	BUSINESS DISTRICT (B-2)	10.75	0.00	40.00	0.00	100.00	0.00	300.00	10.75	200.00	0.00	40.00	0.00	300.00	2150.00
23	BUSINESS DISTRICT (B-3)	8.08	0.00	40.00	0.00	100.00	0.00	300.00	8.08	200.00	0.00	40.00	0.00	300.00	1616.00
TOTALS		2,679.33	21.36		437.79		123.39		920.43		105.12		102.10		227,433.33

Table C-3c: Existing TSS Loadings

ID	HUC14 and Zone	Total Area (acres)	Municipal Park, Greenways, Recreation, Open Space Sites and Reservoir (acres)		Golf Courses (acres)		Morris County and State Preserved Farmland/Deed Restricted Farmland (acres)		Developed Area (acres)		Constrained Developable Area [Wetlands, Water, FEMA 100-yr Floodplains] (acres)		Unconstrained Developable Area (acres)		TOTAL SUSPENDED SOLID LOAD (lbs/yr)		
			Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)		Area (acres)	TSS (lbs/ac/yr)
02030104070060 - Yellow Brook (below Bucks Mill)																	
24	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	812.46	90.35	40.00	0.00	100.00	0.00	300.00	646.58	100.0	30.21	40.00	45.32	300.00	83075.20		
25	VILLAGE RESIDENTIAL DISTRICT (A-3)	64.75	0.00	40.00	0.00	100.00	0.00	300.00	64.75	100.0	0.00	40.00	0.00	300.00	8475.00		
26	RURAL RESIDENTIAL DISTRICT (A-5)	97.02	0.00	40.00	0.00	100.00	0.00	300.00	97.02	100.0	0.00	40.00	0.00	300.00	9702.00		
27	AGRICULTURAL DISTRICT (AG)	842.29	6.32	40.00	160.48	100.00	98.58	300.00	368.36	100.0	21.05	40.00	188.49	300.00	139800.97		
28	BUSINESS DISTRICT (B-1)	31.61	0.00	40.00	0.00	100.00	0.00	300.00	31.61	200.0	0.00	40.00	0.00	300.00	6322.00		
29	MUNICIPAL PURPOSES DISTRICT (MP)	57.28	55.33	40.00	0.00	100.00	0.00	300.00	1.95	10.00	0.00	40.00	0.00	300.00	2232.70		
TOTALS		1,908.61	162.00	160.48	0.00	100.00	0.00	98.58	1,210.27	100.0	51.28	40.00	284.81	900.00	947,908.87		
02030104070070 - Swimming River Reservoir/Slope Brook																	
30	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	1,983.07	201.72	40.00	9.08	100.00	101.98	300.00	1,565.21	100.0	12.86	40.00	102.42	300.00	227524.20		
31	VILLAGE RESIDENTIAL DISTRICT (A-3)	47.28	0.00	40.00	0.00	100.00	0.00	300.00	41.33	100.0	0.00	40.00	5.93	300.00	5812.00		
32	AGRICULTURAL DISTRICT (AG)	1,879.92	282.78	40.00	95.64	100.00	418.40	300.00	530.82	100.0	57.45	40.00	517.03	300.00	355464.20		
33	BUSINESS DISTRICTS (B-1)	19.43	0.00	40.00	0.00	100.00	0.00	300.00	9.94	200.0	0.00	40.00	9.49	300.00	4835.00		
34	LIGHT INDUSTRIAL DISTRICT (D)	19.17	0.00	40.00	0.00	100.00	0.00	300.00	19.17	100.00	0.00	40.00	0.00	300.00	1917.00		
TOTALS		3,969.55	484.50	164.72	0.00	100.00	518.38	1,565.21	2,186.27	100.0	76.11	40.00	634.87	900.00	685,482.40		
02030104070080 - Pine Brook/Hockhockson Brook																	
35	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	267.49	27.14	40.00	0.00	100.00	0.00	300.00	107.41	100.0	10.30	40.00	122.64	300.00	48030.60		
36	AGRICULTURAL DISTRICT (AG)	2,065.48	287.57	40.00	244.26	100.00	295.97	300.00	866.86	100.0	202.92	40.00	227.90	300.00	269892.60		
37	AGRICULTURAL DISTRICT (AG) NWS EARLE	3,270.37															
38	BUSINESS DISTRICT (B-1)	9.05	0.00	40.00	0.00	100.00	0.00	300.00	1.51	200.0	0.00	40.00	7.54	300.00	2564.00		
39	LIGHT INDUSTRIAL DISTRICT (D-1)	18.07	0.00	40.00	0.00	100.00	0.00	300.00	18.07	200.00	0.00	40.00	0.00	300.00	3614.00		
40	MUNICIPAL PURPOSES DISTRICT (MP)	42.62	0.00	40.00	0.00	100.00	0.00	300.00	42.62	120.00	0.00	40.00	0.00	300.00	514.40		
TOTALS		6,673.08	314.71	244.26	0.00	100.00	255.97	765.47	1,855.47	213.22	383.06	40.00	130.14	900.00	330,215.60		
02030104070100 - Percy BK/Swimming River (below Swimming River Road)																	
42	VILLAGE RESIDENTIAL DISTRICT (A-3)	35.84	0.00	40.00	0.00	100.00	0.00	300.00	25.73	100.0	0.00	40.00	10.11	300.00	5906.00		
TOTALS		35.84	0.00	0.00	0.00	100.00	0.00	0.00	25.73	0.00	0.00	40.00	10.11	300.00	5,906.00		
02030104090040 - Shark River (above Rensen Mill gauge)																	
43	AGRICULTURAL DISTRICT (AG) NWS EARLE	309.40															
44	LIGHT INDUSTRIAL DISTRICT (D-1)	158.83	0.00	40.00	0.00	100.00	0.00	300.00	158.83	200.00	0.00	40.00	0.00	300.00	31766.00		
TOTALS		468.23	0.00	0.00	0.00	100.00	0.00	300.00	158.83	158.83	0.00	40.00	0.00	300.00	31,766.00		
02030104100060 - Mingamahone Brook (above Asbury Ave)																	
45	AGRICULTURAL DISTRICT (AG) NWS EARLE	546.65															
TOTALS		546.65	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

Table C-4a: Build Out Phosphorous Loadings

ID	HUC14 and Zone	Total Area (acres)		Municipal Park, Greenways, Recreation, Open Space Sites and Reservoir (acres)		Golf Courses (acres)		Monmouth County and State Preserved Farmland/Deed Restricted Farmland (acres)		Developed Area (acres)		Constrained Developable Area [Wetlands, Water, FEMA 100-yr Floodplains] (acres)		Unconstrained Developable Area Post Build-Out (acres)		TOTAL PHOSPHOROUS LOAD (lbs/yr)
		Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	
02030104070020 - Willow Brook																
2	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	693.67	0.10	0.00	1.30	12.14	1.30	537.00	0.6	36.63	0.10	43.01	0.90	373.94		
3	AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	28.82	0.10	0.00	1.30	23.81	1.30	23.81	0.6	0.00	0.10	5.01	0.60	17.282		
4	AGRICULTURAL DISTRICT (AG)	141.66	0.10	0.00	1.30	90.22	1.30	38.10	0.6	0.00	0.10	0.00	0.60	141.48		
TOTALS		864.15		0.00		102.36		594.91		36.63		48.02		532.71		
02030104070030 - Big Brook																
5	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	1,455.65	0.10	0.00	1.30	14.67	1.30	987.79	0.6	32.19	0.10	82.13	0.60	686.1296		
6	AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	497.84	0.10	0.00	1.30	428.63	1.30	428.63	0.6	0.00	0.10	0.00	0.60	284.089		
7	RURAL AGRICULTURAL DISTRICT (A-5)	124.43	0.10	0.00	1.30	112.14	1.30	112.14	0.6	2.10	0.10	10.19	0.60	73.608		
8	AGRICULTURAL DISTRICT (AG)	866.42	0.10	0.00	1.30	226.73	1.30	436.84	0.6	72.03	0.10	86.39	0.60	621.333		
TOTALS		2,944.35		0.00		241.49		1,947.41		106.32		173.71		1,542.17		
02030104070040 - Yellow Brook (above Bucks Mill)																
9	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	612.29	0.10	16.88	1.30	486.25	1.30	486.25	0.6	0.00	0.10	28.08	1.30	356.32		
10	VILLAGE RESIDENTIAL DISTRICT (A-3)	48.66	0.10	0.00	1.30	48.66	1.30	48.66	0.6	0.00	0.10	0.00	1.30	29.20		
11	MIXED HOUSING DISTRICT (A-4)	93.24	0.10	0.00	1.30	55.08	1.30	55.08	0.6	7.36	0.10	6.02	1.30	44.08		
12	RURAL RESIDENTIAL DISTRICT (A-5)	13.88	0.10	0.00	1.30	13.88	1.30	13.88	0.6	0.00	0.10	0.00	1.30	8.33		
13	RESIDENTIAL DISTRICT (A-8)	42.22	0.10	0.00	1.30	0.00	1.30	0.00	0.6	4.34	0.10	37.88	1.30	49.67		
14	AGRICULTURAL DISTRICT (AG)	927.15	0.10	0.00	1.30	361.99	1.30	314.69	0.6	9.84	0.10	88.62	1.30	614.79		
TOTALS		1,737.44		16.88		381.99		929.57		21.54		130.60		1,306.50		
02030104070050 - Mine Brook (Monmouth Co.)																
15	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	471.19	0.10	165.42	1.30	246.87	1.30	246.87	0.6	0.00	0.10	36.52	0.60	387.32		
16	VILLAGE RESIDENTIAL DISTRICT (A-3)	32.35	0.10	0.00	1.30	32.35	1.30	32.35	0.6	0.00	0.10	0.00	0.60	19.41		
17	RURAL RESIDENTIAL DISTRICT (A-5)	101.51	0.10	0.00	1.30	101.51	1.30	101.51	0.6	0.00	0.10	0.00	0.60	60.91		
18	AGRICULTURAL DISTRICT (AG)	989.20	0.10	322.37	1.30	410.04	1.30	410.04	0.6	105.12	0.10	26.28	0.60	854.39		
19	AGRICULTURAL DISTRICT (AG) NWS EARLE	815.12	0.10	0.00	1.30	68.42	1.30	68.42	2.1	0.00	0.10	40.30	2.10	287.11		
20	BUSINESS DISTRICT (B-1)	14.40	0.10	0.00	1.30	14.40	1.30	14.40	2.1	0.00	0.10	0.00	2.10	30.24		
21	BUSINESS DISTRICT (B-1A)	10.75	0.10	0.00	1.30	10.75	1.30	10.75	2.1	0.00	0.10	0.00	2.10	22.58		
22	BUSINESS DISTRICT (B-2)	8.08	0.10	0.00	1.30	8.08	1.30	8.08	2.1	0.00	0.10	0.00	2.10	16.97		
23	BUSINESS DISTRICT (B-3)	22.36	0.10	487.79	1.30	155.39	1.30	155.39	2.1	106.12	0.10	103.19	2.10	1,678.93		
TOTALS		2,879.33		487.79		920.43		920.43		106.12		103.19		1,678.93		

Table C-4a: Build Out Phosphorous Loadings

ID	HUC14 and Zone	Total Area (acres)		Municipal Park, Greenways, Recreation, Open Space Sites and Reservoir (acres)		Golf Courses (acres)		Monmouth County and State Preserved Farmland/Deed Restricted Farmland (acres)		Developed Area (acres)		Constrained Developable Area [Wetlands, Water, FEMA 100-yr Floodplains] (acres)		Unconstrained Developable Area Post Build-Out (acres)		TOTAL PHOSPHOROUS LOAD (lbs/yr)
		Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	Area (acres)	TP (lbs/ac/yr)	
02030104070060 - Yellow Brook (below Bucks Mill)																
24	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	812.46	0.10	90.35	0.00	0.00	1.30	0.00	1.30	646.58	0.6	30.21	0.10	45.32	0.60	427.19
25	VILLAGE RESIDENTIAL DISTRICT (A-3)	64.75	0.00	0.00	0.00	0.00	1.30	0.00	1.30	64.75	0.6	0.00	0.10	0.00	0.60	38.85
26	RURAL RESIDENTIAL DISTRICT (A-5)	97.02	0.00	0.00	0.00	0.00	1.30	0.00	1.30	97.02	0.6	0.00	0.10	0.00	0.60	58.21
27	AGRICULTURAL DISTRICT (AG)	842.29	6.32	160.49	1.30	96.59	1.30	388.36	1.30	388.36	0.6	21.05	0.10	189.49	0.60	671.64
28	BUSINESS DISTRICT (B-1)	31.61	0.00	0.00	0.00	0.00	1.30	0.00	1.30	31.61	2.1	0.00	0.10	0.00	2.10	66.38
29	MUNICIPAL PURPOSES DISTRICT (MP)	57.28	55.33	55.33	0.00	0.00	1.30	0.00	1.30	1.95	1.00	0.00	0.10	0.00	1.00	7.48
TOTALS		1,906.41	162.00	160.49	0.00	0.00	1.30	96.59	1.30	1,210.27	61.26	31.26	0.10	234.81	1.00	1,269.76
02030104070070 - Swimming River Reservoir/Slope Brook																
30	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	1,993.07	0.10	201.72	0.00	9.08	1.30	101.98	1.30	1,565.21	0.6	12.66	0.10	102.42	0.60	1,166.39
31	VILLAGE RESIDENTIAL DISTRICT (A-3)	47.26	0.00	0.00	0.00	0.00	1.30	0.00	1.30	41.33	0.6	0.00	0.10	5.83	0.60	28.36
32	AGRICULTURAL DISTRICT (AG)	1,879.92	282.78	95.64	1.30	416.40	1.30	530.62	1.30	530.62	0.6	57.45	0.10	517.03	0.60	1326.27
33	BUSINESS DISTRICTS (B-1)	19.43	0.00	0.00	0.00	0.00	1.30	0.00	1.30	9.84	2.1	0.00	0.10	9.49	2.10	40.80
34	LIGHT INDUSTRIAL DISTRICT (D)	16.17	0.00	0.00	0.00	0.00	1.30	0.00	1.30	19.17	0.00	0.00	0.10	0.00	0.60	0.00
TOTALS		3,568.85	464.60	104.72	0.00	0.00	1.30	618.38	1.30	2,165.27	70.11	70.11	0.10	634.87	0.60	3,561.82
02030104070080 - Pine Brook/Hockinson Brook																
35	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	267.49	0.10	27.14	0.00	0.00	1.30	0.00	1.30	107.41	0.6	10.30	0.10	122.64	0.60	141.77
36	AGRICULTURAL DISTRICT (AG)	2,065.48	287.57	244.26	1.30	235.97	1.30	866.86	1.30	866.86	0.6	202.92	0.10	227.90	0.60	810.09
37	AGRICULTURAL DISTRICT (AG) NWS EARLE	3,270.37	0.00	0.00	0.00	0.00	1.30	0.00	1.30	1.51	2.1	0.00	0.10	7.54	2.10	19.01
38	BUSINESS DISTRICT (B-1)	9.05	0.00	0.00	0.00	0.00	1.30	0.00	1.30	18.07	1.50	0.00	0.10	0.00	1.50	27.11
39	LIGHT INDUSTRIAL DISTRICT (D-1)	42.62	0.00	0.00	0.00	0.00	1.30	0.00	1.30	42.62	1.00	0.00	0.10	0.00	1.00	42.62
40	MUNICIPAL PURPOSES DISTRICT (MP)	5,873.08	314.74	244.73	0.00	0.00	1.30	236.37	1.30	1,338.47	0.6	213.22	0.10	353.06	0.60	1,040.59
TOTALS		10,528.09	596.31	516.13	0.00	0.00	1.30	1,081.65	1.30	3,200.62	10.10	326.24	0.20	1,617.61	0.60	8,910.48
02030104070100 - Portey Bk/Swimming River (below Swimming River Road)																
42	VILLAGE RESIDENTIAL DISTRICT (A-3)	35.84	0.00	0.00	0.00	0.00	1.30	0.00	1.30	25.73	0.6	0.00	0.10	10.11	0.60	21.50
TOTALS		35.84	0.00	0.00	0.00	0.00	1.30	0.00	1.30	25.73	0.6	0.00	0.10	10.11	0.60	21.50
02030104090040 - Shark River (above Ramsen Mill gauge)																
43	AGRICULTURAL DISTRICT (AG) NWS EARLE	309.40	0.00	0.00	0.00	0.00	1.30	0.00	1.30	158.83	1.50	0.00	0.10	0.00	1.50	238.25
44	LIGHT INDUSTRIAL DISTRICT (D-1)	158.83	0.00	0.00	0.00	0.00	1.30	0.00	1.30	158.83	1.50	0.00	0.10	0.00	1.50	238.25
TOTALS		468.23	0.00	0.00	0.00	0.00	1.30	0.00	1.30	317.66	3.00	0.00	0.20	0.00	3.00	476.50
02030104100060 - Mingamehane Brook (above Ashbury Ave)																
45	AGRICULTURAL DISTRICT (AG) NWS EARLE	546.65	0.00	0.00	0.00	0.00	1.30	0.00	1.30	0.00	0.00	0.00	0.10	0.00	0.00	0.00
TOTALS		546.65	0.00	0.00	0.00	0.00	1.30	0.00	1.30	0.00	0.00	0.00	0.10	0.00	0.00	0.00

Table C-4b: Build-Out Nitrogen Loadings

ID	HUC14 and Zone	Total Area (acres)	Municipal Park, Greenways, Recreation, Open Space Sites and Reservoir (acres)		Golf Courses (acres)		Monmouth County and State Preserved Farmland/Deed Restricted Farmland (acres)		Developed Area (acres)		Constrained Developable Area [Wetlands, Water, FEMA 100-yr Floodplains] (acres)		Unconstrained Developable Area Post Build-Out (acres)		TOTAL NITROGEN LOAD (lbs/yr)
			Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	
02030104070020 - Willow Brook															
2	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	693.67	64.89	3.00	0.00	10.00	12.14	10.00	537.00	5.0	36.63	3.00	43.01	5.00	3328.01
3	AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	28.82	0.00	3.00	0.00	10.00	0.00	10.00	23.81	5.0	0.00	3.00	5.01	5.00	144.1
4	AGRICULTURAL DISTRICT (AG)	141.66	13.34	3.00	0.00	10.00	90.22	10.00	38.10	5.0	0.00	3.00	0.00	5.00	1182.72
TOTALS		864.16	78.23		0.00		102.36		598.91		36.63		48.02		4,692.83
02030104070030 - Big Brook															
5	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	1,455.65	358.87	0.10	0.00	10.00	14.67	10.00	967.79	5.0	32.19	3.00	82.13	5.00	5628.762
6	AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	497.84	89.21	0.10	0.00	10.00	0.00	10.00	428.63	5.0	0.00	3.00	0.00	5.00	2150.071
7	RURAL AGRICULTURAL DISTRICT (A-5)	124.43	0.00	0.10	0.00	10.00	0.00	10.00	112.14	5.0	2.10	3.00	10.19	5.00	617.95
8	AGRICULTURAL DISTRICT (AG)	886.42	42.43	0.10	0.00	10.00	226.73	10.00	498.84	5.0	72.03	3.00	86.39	5.00	5113.783
TOTALS		2,944.33	470.51		0.20		241.40		1,937.47		106.32		178.71		13,410.67
02030104070040 - Yellow Brook (above Bucks Mill)															
9	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	612.29	79.07	3.00	16.89	10.00	0.00	10.00	488.25	5.0	0.00	3.00	28.08	5.00	2987.76
10	VILLAGE RESIDENTIAL DISTRICT (A-3)	48.66	0.00	3.00	0.00	10.00	0.00	10.00	48.66	5.0	0.00	3.00	0.00	5.00	243.30
11	MIXED HOUSING DISTRICT (A-4)	83.24	24.79	3.00	0.00	10.00	0.00	10.00	55.08	5.0	7.36	3.00	6.02	5.00	401.92
12	RURAL RESIDENTIAL DISTRICT (A-5)	13.86	0.00	3.00	0.00	10.00	0.00	10.00	13.86	5.0	0.00	3.00	0.00	5.00	69.40
13	RESIDENTIAL DISTRICT (A-6)	42.22	0.00	3.00	0.00	10.00	0.00	10.00	0.00	5.0	4.34	3.00	37.86	5.00	202.42
14	AGRICULTURAL DISTRICT (AG)	927.15	132.01	3.00	0.00	10.00	381.99	10.00	314.89	5.0	9.84	3.00	88.82	5.00	6262.00
TOTALS		1,737.44	256.36		18.89		381.99		920.67		21.64		160.80		10,164.80
02030104070050 - Mine Brook (Monmouth Co.)															
15	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	471.19	22.38	3.00	165.42	10.00	0.00	10.00	246.87	5.0	0.00	3.00	36.52	10.00	3320.89
16	VILLAGE RESIDENTIAL DISTRICT (A-3)	32.35	0.00	3.00	0.00	10.00	0.00	10.00	32.35	5.0	0.00	3.00	0.00	10.00	161.75
17	RURAL RESIDENTIAL DISTRICT (A-5)	101.51	0.00	3.00	0.00	10.00	0.00	10.00	101.51	5.0	0.00	3.00	0.00	10.00	507.55
18	AGRICULTURAL DISTRICT (AG)	989.20	0.00	3.00	322.37	10.00	125.38	10.00	410.04	5.0	105.12	3.00	28.28	10.00	7105.96
19	AGRICULTURAL DISTRICT (AG) NWS EARLE	815.12													
20	BUSINESS DISTRICT (B-1)	138.72	0.00	3.00	0.00	10.00	0.00	10.00	96.42	22.0	0.00	3.00	40.30	22.00	3007.84
21	BUSINESS DISTRICT (B-1A)	14.40	0.00	3.00	0.00	10.00	0.00	10.00	14.40	22.0	0.00	3.00	0.00	22.00	316.80
22	BUSINESS DISTRICT (B-2)	10.75	0.00	3.00	0.00	10.00	0.00	10.00	10.75	22.0	0.00	3.00	0.00	22.00	296.50
23	BUSINESS DISTRICT (B-3)	8.06	0.00	3.00	0.00	10.00	0.00	10.00	8.06	22.0	0.00	3.00	0.00	22.00	177.76
TOTALS		2,678.33	22.38		487.79		125.38		920.45		105.12		103.10		14,833.07

Table C-4b: Build-Out Nitrogen Loadings

ID	HUC14 and Zone	Total Area (acres)	Municipal Park, Greenways, Recreation, Open Space Sites and Reservoir (acres)		Golf Courses (acres)		Montmouth County and State Preserved Farmland/Deed Restricted Farmland (acres)		Developed Area (acres)		Constrained Developable Area [Wetlands, Water, FEMA 100-yr Floodplains] (acres)		Unconstrained Developable Area Post Build-Out (acres)		TOTAL NITROGEN LOAD (lbs/yr)
			Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	Area (acres)	TN (lbs/ac/yr)	
02030104070060 - Yellow Brook (below Bucks Mill)															
24	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	812.46	90.36	3.00	0.00	10.00	10.00	0.00	646.56	5.0	30.21	3.00	45.32	5.00	3821.17
25	VILLAGE RESIDENTIAL DISTRICT (A-3)	64.75	0.00	3.00	0.00	10.00	10.00	0.00	64.75	5.0	0.00	3.00	0.00	5.00	323.75
26	RURAL RESIDENTIAL DISTRICT (A-5)	97.02	0.00	3.00	0.00	10.00	10.00	0.00	97.02	5.0	0.00	3.00	0.00	5.00	485.10
27	AGRICULTURAL DISTRICT (AG)	842.28	6.32	3.00	160.49	10.00	98.58	10.00	388.36	5.0	21.05	3.00	189.49	5.00	5442.07
28	BUSINESS DISTRICT (B-1)	31.61	0.00	3.00	0.00	10.00	0.00	31.61	22.0	0.00	3.00	3.00	0.00	22.00	685.42
29	MUNICIPAL PURPOSES DISTRICT (MP)	57.28	55.33	3.00	0.00	10.00	0.00	1.95	1.95	10.00	0.00	3.00	0.00	10.00	185.49
TOTALS		1,905.41	152.00	180.48	180.48	10.00	95.58	1,210.27	51.26	70.11	234.87	10,965.00			
02030104070070 - Swimming River Reservoir/Slope Brook															
30	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	1,983.07	201.72	3.00	9.08	10.00	101.98	10.00	1,565.21	5.0	12.88	3.00	102.42	5.00	10091.89
31	VILLAGE RESIDENTIAL DISTRICT (A-3)	47.26	0.00	3.00	0.00	10.00	0.00	41.33	41.33	5.0	0.00	3.00	5.93	5.00	236.30
32	AGRICULTURAL DISTRICT (AG)	1,879.82	282.78	3.00	95.84	10.00	416.40	10.00	500.62	5.0	57.45	3.00	517.03	5.00	11319.34
33	BUSINESS DISTRICTS (B-1)	19.43	0.00	3.00	0.00	10.00	0.00	9.94	9.94	22.0	0.00	3.00	9.49	22.00	427.46
34	LIGHT INDUSTRIAL DISTRICT (I)	18.17	0.00	3.00	0.00	10.00	0.00	18.17	18.17	5.00	0.00	3.00	0.00	10.00	95.85
TOTALS		3,958.85	464.50	104.72	104.72	10.00	618.38	2,166.27	70.11	594.87	22,176.34				
02030104070080 - Pine Brook/Hockhockson Brook															
35	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	287.48	27.14	3.00	0.00	10.00	0.00	107.41	107.41	5.0	10.30	3.00	122.64	5.00	1282.57
36	AGRICULTURAL DISTRICT (AG)	2,065.48	287.57	3.00	244.26	10.00	235.87	10.00	866.86	5.00	202.92	3.00	227.90	5.00	11747.57
37	AGRICULTURAL DISTRICT (AG) NWS EARLE	3,270.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	BUSINESS DISTRICT (B-1)	9.05	0.00	3.00	0.00	10.00	0.00	1.51	1.51	22.0	0.00	3.00	7.54	22.00	189.10
39	LIGHT INDUSTRIAL DISTRICT (I-1)	18.07	0.00	3.00	0.00	10.00	0.00	18.07	18.07	16.00	0.00	3.00	0.00	16.00	286.12
40	MUNICIPAL PURPOSES DISTRICT (MP)	42.62	0.00	3.00	0.00	10.00	0.00	42.62	42.62	10.00	0.00	3.00	0.00	10.00	428.20
TOTALS		5,673.08	314.71	244.26	244.26	10.00	235.87	1,056.47	213.22	358.63	13,924.68				
02030104070100 - Porley Blk/Swimming River (below Swimming River Road)															
42	VILLAGE RESIDENTIAL DISTRICT (A-3)	35.84	0.00	3.00	0.00	10.00	0.00	25.73	25.73	5.0	0.00	3.00	10.11	5.00	179.20
TOTALS		35.84	0.00	0.00	0.00	10.00	0.00	25.73	25.73	0.00	0.00	0.00	10.11	5.00	179.20
02030104090040 - Shark River (above Remsen Mill gauge)															
43	AGRICULTURAL DISTRICT (AG) NWS EARLE	308.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	LIGHT INDUSTRIAL DISTRICT (I-1)	159.83	0.00	3.00	0.00	10.00	0.00	159.83	159.83	16.00	0.00	3.00	0.00	16.00	2541.28
TOTALS		468.23	0.00	0.00	0.00	10.00	0.00	159.83	159.83	0.00	0.00	0.00	0.00	16.00	2,541.28
02030104100060 - Mingsmahone Brook (above Asbury Ave)															
45	AGRICULTURAL DISTRICT (AG) NWS EARLE	546.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS		546.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table C-4c: Build-Out TSS Loadings

ID	HUC14 and Zone	Total Area (acres)		Municipal Park, Greenways, Recreation, Open Space Sites and Reservoir (acres)		Golf Courses (acres)		Monmouth County and State Preserved Farmland/Deed Restricted Farmland (acres)		Developed Area (acres)		Constrained Developable Area [Wetlands, Water, FEMA 100-yr Floodplains] (acres)		Unconstrained Developable Area Post Build-Out (acres)		TOTAL SUSPENDED SOLID LOAD (lbs/yr)
		Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	
02030104070020 - Willow Brook																
2	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	683.67	40.00	64.89	40.00	0.00	100.00	12.14	300.00	537.00	100.0	36.63	40.00	43.01	100.00	65703.8
3	AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	28.82	40.00	0.00	40.00	0.00	100.00	0.00	300.00	23.81	100.0	0.00	40.00	5.01	100.00	2882
4	AGRICULTURAL DISTRICT (AG)	141.86	40.00	13.34	40.00	0.00	100.00	90.22	300.00	38.10	100.0	0.00	40.00	0.00	100.00	31408.6
TOTALS		864.16		78.23		0.00		102.36		658.91		36.63		48.02		99,595.40
02030104070030 - Big Brook																
5	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	1,455.65	40.00	358.87	40.00	0.00	100.00	14.67	300.00	967.79	100.0	32.19	40.00	82.13	100.00	125035.5
6	AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	487.84	0.10	69.21	0.10	0.00	100.00	0.00	300.00	428.65	100.0	0.00	40.00	0.00	100.00	42869.921
7	RURAL AGRICULTURAL DISTRICT (A-5)	124.43	0.10	0.00	0.10	0.00	100.00	0.00	300.00	112.14	100.0	2.10	40.00	10.18	100.00	12317
8	AGRICULTURAL DISTRICT (AG)	866.42	0.10	42.43	0.10	0.00	100.00	228.73	300.00	438.84	100.0	72.03	40.00	86.36	100.00	123427.443
TOTALS		2,944.35		470.51		0.00		244.40		1,347.41		106.32		178.71		303,549.87
02030104070040 - Yellow Brook (above Bucks Mill)																
9	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	612.23	40.00	79.07	40.00	16.89	100.00	0.00	300.00	488.25	100.0	0.00	40.00	28.08	100.00	58484.80
10	VILLAGE RESIDENTIAL DISTRICT (A-3)	48.66	0.00	0.00	40.00	0.00	100.00	0.00	300.00	48.66	100.0	0.00	40.00	0.00	100.00	4866.00
11	MIXED HOUSING DISTRICT (A-4)	93.24	40.00	24.78	40.00	0.00	100.00	0.00	300.00	55.08	100.0	7.36	40.00	6.02	100.00	7395.60
12	RURAL RESIDENTIAL DISTRICT (A-5)	13.88	0.00	0.00	40.00	0.00	100.00	0.00	300.00	13.88	100.0	0.00	40.00	0.00	100.00	1388.00
13	RESIDENTIAL DISTRICT (A-6)	42.22	0.00	0.00	40.00	0.00	100.00	0.00	300.00	0.00	100.0	4.34	40.00	37.88	100.00	3981.60
14	AGRICULTURAL DISTRICT (AG)	927.15	40.00	132.01	40.00	0.00	100.00	381.99	300.00	314.69	100.0	8.84	40.00	88.82	100.00	160802.00
TOTALS		1,737.44		235.86		16.89		381.99		920.57		3.34		130.82		234,888.00
02030104070050 - Mine Brook (Monmouth Co.)																
15	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	471.19	40.00	22.38	40.00	165.42	100.00	0.00	300.00	246.87	100.0	0.00	40.00	36.52	100.00	45776.20
16	VILLAGE RESIDENTIAL DISTRICT (A-3)	32.35	0.00	0.00	40.00	0.00	100.00	0.00	300.00	32.35	100.0	0.00	40.00	0.00	100.00	3235.00
17	RURAL RESIDENTIAL DISTRICT (A-5)	101.51	0.00	0.00	40.00	0.00	100.00	0.00	300.00	101.51	100.0	0.00	40.00	0.00	100.00	10151.00
18	AGRICULTURAL DISTRICT (AG)	989.20	0.00	0.00	40.00	322.37	100.00	125.39	300.00	410.04	100.0	105.12	40.00	26.28	100.00	117891.13
19	AGRICULTURAL DISTRICT (AG) NWS EARLE	815.12														
20	BUSINESS DISTRICT (B-1)	136.72	0.00	0.00	40.00	0.00	100.00	0.00	300.00	96.42	200.0	0.00	40.00	40.30	200.00	27344.00
21	BUSINESS DISTRICT (B-1A)	14.40	0.00	0.00	40.00	0.00	100.00	0.00	300.00	14.40	200.0	0.00	40.00	0.00	200.00	2880.00
22	BUSINESS DISTRICT (B-2)	10.75	0.00	0.00	40.00	0.00	100.00	0.00	300.00	10.75	200.0	0.00	40.00	0.00	200.00	2150.00
23	BUSINESS DISTRICT (B-3)	8.08	0.00	0.00	40.00	0.00	100.00	0.00	300.00	8.08	200.0	0.00	40.00	0.00	200.00	1616.00
TOTALS		2,678.33		22.38		487.78		125.39		950.43		105.12		103.19		218,843.23

Table C-4c: Build-Out TSS Loadings

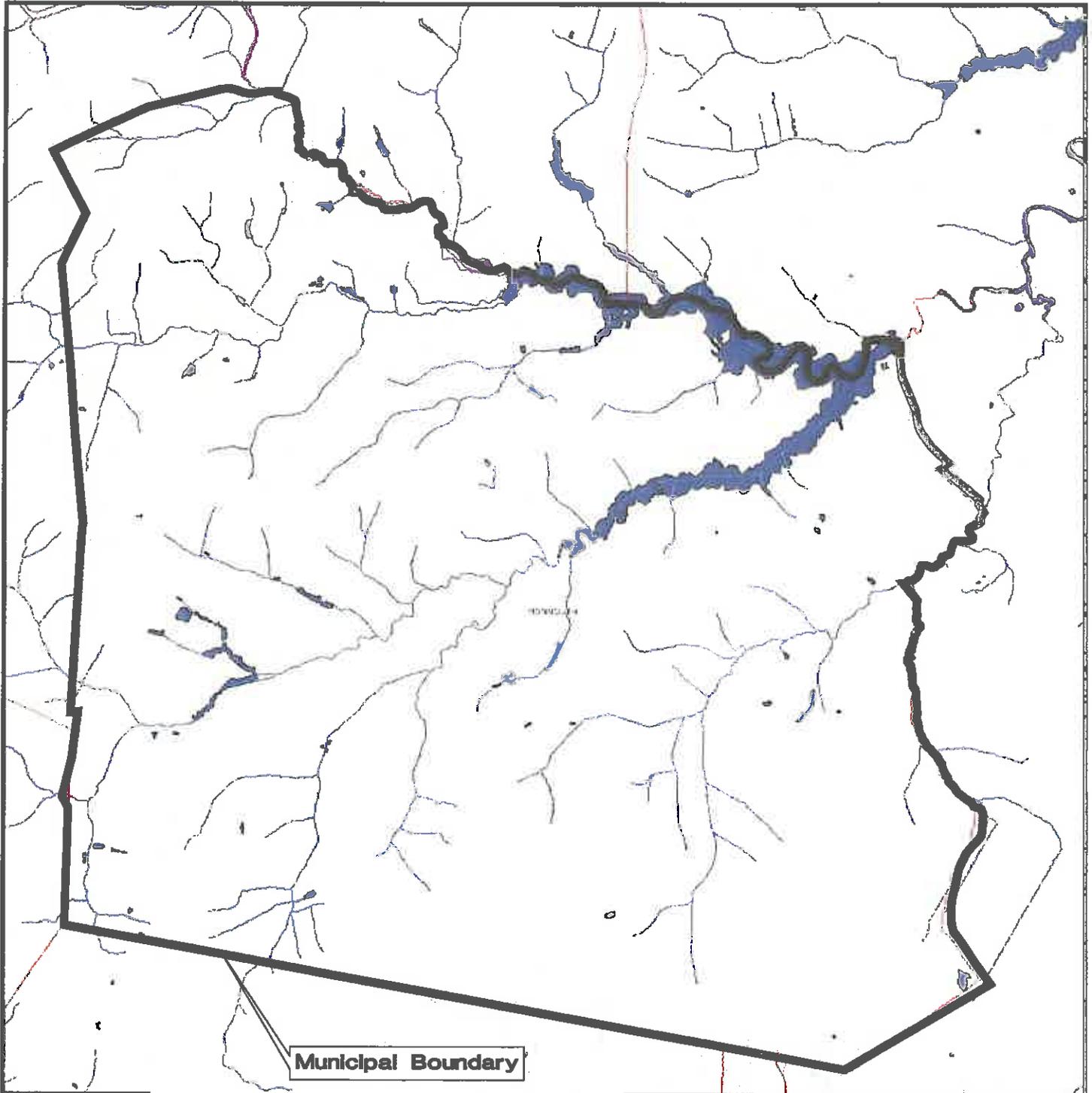
ID	HUC14 and Zone	Total Area (acres)		Municipal Park, Greenways, Recreation, Open Space Sites and Reservoir (acres)		Golf Courses (acres)		Monmouth County and State Preserved Farmland/Deed Restricted Farmland (acres)		Developed Area (acres)		Constrained Developable Area [Wetlands, Water, FEMA 100-yr Floodplains] (acres)		Unconstrained Developable Area Post Build-Out (acres)		TOTAL SUSPENDED SOLID LOAD (lbs/yr)
		Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	Area (acres)	TSS (lbs/ac/yr)	
02030104070060 - Yellow Brook (below Bucks Mill)																
24	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	812.48	90.35	40.00	0.00	100.00	0.00	300.00	0.00	646.58	100.0	40.00	45.32	100.00	74012.20	
25	VILLAGE RESIDENTIAL DISTRICT (A-3)	64.75	0.00	40.00	0.00	100.00	0.00	300.00	0.00	64.75	100.0	40.00	0.00	100.00	8475.00	
26	RURAL RESIDENTIAL DISTRICT (A-5)	97.02	0.00	40.00	0.00	100.00	0.00	300.00	0.00	97.02	100.0	40.00	0.00	100.00	9702.00	
27	AGRICULTURAL DISTRICT (AG)	842.29	6.32	40.00	160.49	100.00	96.58	300.00	368.36	368.36	100.0	40.00	189.49	100.00	101802.97	
28	BUSINESS DISTRICT (B-1)	31.61	0.00	40.00	0.00	100.00	0.00	300.00	31.61	31.61	200.0	40.00	0.00	200.00	6322.00	
29	MUNICIPAL PURPOSES DISTRICT (MP)	57.28	55.33	40.00	0.00	100.00	0.00	300.00	1.95	1.95	10.00	40.00	0.00	120.00	2232.70	
TOTALS		1,995.41	152.00		190.49		58.58		1,210.27		57.28		234.87		203,648.87	
02030104070070 - Swimming River Reservoir/Slope Brook																
30	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	1,993.07	201.72	40.00	9.08	100.00	101.98	300.00	1,565.21	100.0	12.66	40.00	102.42	100.00	208840.20	
31	VILLAGE RESIDENTIAL DISTRICT (A-3)	47.26	0.00	40.00	0.00	100.00	0.00	300.00	41.33	100.0	0.00	40.00	5.93	100.00	4726.00	
32	AGRICULTURAL DISTRICT (AG)	1,879.92	262.78	40.00	95.64	100.00	416.40	300.00	530.62	100.0	57.45	40.00	517.03	100.00	252058.20	
33	BUSINESS DISTRICTS (B-1)	18.43	0.00	40.00	0.00	100.00	0.00	300.00	9.94	200.0	0.00	40.00	9.49	200.00	3886.00	
34	LIGHT INDUSTRIAL DISTRICT (I)	18.17	0.00	40.00	0.00	100.00	0.00	300.00	19.17	100.00	0.00	40.00	0.00	200.00	1917.00	
TOTALS		3,968.85	264.50		104.72		518.38		2,166.37		70.11		634.87		469,437.40	
02030104070080 - Pine Brook/Hockhocken Brook																
35	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	267.49	27.14	40.00	0.00	100.00	0.00	300.00	107.41	100.0	10.30	40.00	122.64	100.00	24502.60	
36	AGRICULTURAL DISTRICT (AG)	2,065.48	287.57	40.00	244.26	100.00	235.97	300.00	866.86	100.0	202.92	40.00	227.90	100.00	224312.60	
37	AGRICULTURAL DISTRICT (AG) NWS EARLE	3,270.37	0.00	40.00	0.00	100.00	0.00	300.00	0.00	0.00	0.00	40.00	0.00	200.00	0.00	
38	BUSINESS DISTRICT (B-1)	9.05	0.00	40.00	0.00	100.00	0.00	300.00	1.51	200.0	0.00	40.00	7.54	200.00	1810.00	
39	LIGHT INDUSTRIAL DISTRICT (I-1)	18.07	0.00	40.00	0.00	100.00	0.00	300.00	18.07	200.00	0.00	40.00	0.00	200.00	3614.00	
40	MUNICIPAL PURPOSES DISTRICT (MP)	42.62	0.00	40.00	0.00	100.00	0.00	300.00	42.62	120.00	0.00	40.00	0.00	120.00	5114.40	
TOTALS		6,673.08	344.71		244.26		235.97		1,056.47		212.22		368.08		269,363.60	
02030104070100 - Porcy Bk/Swimming River (below Swimming River Road)																
42	VILLAGE RESIDENTIAL DISTRICT (A-3)	35.84	0.00	40.00	0.00	100.00	0.00	300.00	25.79	100.0	0.00	40.00	10.11	100.00	3684.00	
TOTALS		36.24	0.00		0.00		0.00		25.79		0.00		10.11		3,594.00	
02030104090040 - Shark River (above Remsen Mill gauge)																
43	AGRICULTURAL DISTRICT (AG) NWS EARLE	308.40	0.00	40.00	0.00	100.00	0.00	300.00	158.83	200.00	0.00	40.00	0.00	200.00	31766.00	
44	LIGHT INDUSTRIAL DISTRICT (I-1)	468.25	0.00	40.00	0.00	100.00	0.00	300.00	468.25	200.00	0.00	40.00	0.00	200.00	31,766.00	
TOTALS		776.65	0.00		0.00		0.00		627.08		0.00		0.00		63,532.00	
02030104100060 - Mingamahone Brook (above Asbury Ave)																
45	AGRICULTURAL DISTRICT (AG) NWS EARLE	546.65	0.00	40.00	0.00	100.00	0.00	300.00	310.00	200.00	0.00	40.00	0.00	200.00	5,922.00	
TOTALS		546.65	0.00		0.00		0.00		310.00		0.00		0.00		5,922.00	

Table C-5: NPS Load Summary

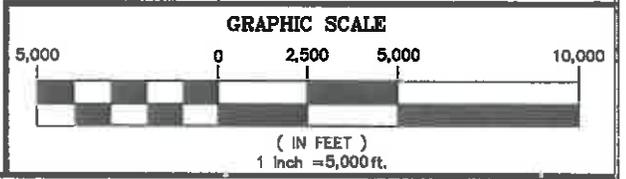
ID	HUC14 and Zone	Total Area (acres)	EXISTING TOTAL PHOSPHOROUS LOAD (lbs/yr)		BUILD-OUT TOTAL PHOSPHOROUS LOAD (lbs/yr)		CHANGE IN PHOSPHOROUS LOAD (lbs/yr)		EXISTING TOTAL NITROGEN LOAD (lbs/yr)		BUILD-OUT TOTAL NITROGEN LOAD (lbs/yr)		CHANGE IN NITROGEN LOAD (lbs/yr)		EXISTING TOTAL SUSPENDED SOIL LOAD (lbs/yr)		BUILD-OUT TOTAL SUSPENDED SOIL LOAD (lbs/yr)		CHANGE IN TOTAL SUSPENDED SOIL LOAD (lbs/yr)		EXISTING IMPERVIOUS COVERAGE (acres)		BUILD-OUT IMPERVIOUS COVERAGE (acres)		CHANGE IN IMPERVIOUS COVERAGE (acres)				
			Table C-3a	Table C-3a	Table C-3a	Table C-3a	Table C-3a	Table C-3a	Table C-3a	Table C-3a	Table C-3b	Table C-3b	Table C-3b	Table C-3b	Table C-3b	Table C-3c	Table C-3c	Table C-3c	Table C-3c	Table C-3c	Table C-3c	Table C-3c	Table C-1	Table C-1	Table C-1	Table C-1	Table C-1		
2	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	683.67	404.05	373.94	-30.11	3,326.01	3,641.06	-216.05	74,306.80	74,306.80	0.00	65,703.80	65,703.80	-8,602.00	125	136,002	10,002												
3	AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	28.82	20.80	17.29	-3.51	144.10	169.15	-25.05	3,894.00	3,894.00	0.00	2,802.00	2,802.00	-1,002.00	3.26	4,232	1,002												
4	AGRICULTURAL DISTRICT (AG)	141.66	141.46	141.46	0.00	1,132.72	1,132.72	0.00	31,405.60	31,405.60	0.00	31,405.60	31,405.60	0.00	4.25	4.25	0												
TOTALS		884.15	586.33	533.71	52.62	4,603.53	4,916.54	-313.01	109,506.40	109,506.40	0.00	99,915.40	99,915.40	-9,591.00	133.5	144,839	4,523.5												
5	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	1,455.65	745.82	688.13	-57.49	5,528.76	5,528.76	-410.95	141,461.50	141,461.50	0.00	125,035.50	125,035.50	-16,426.00	94.73	111,156	16,605.5												
6	AGRICULTURAL RESIDENTIAL DISTRICT (A-2)	487.84	284.10	284.10	0.00	2,150.07	2,150.07	0.00	42,866.92	42,866.92	0.00	42,866.92	42,866.92	0.00	84.57	84.57	0												
7	RURAL AGRICULTURAL DISTRICT (A-5)	124.43	80.74	73.61	-7.13	688.60	677.95	-10.65	14,936.00	14,936.00	0.00	12,317.00	12,317.00	-2,619.00	2.12	4,196	2,098												
8	AGRICULTURAL DISTRICT (AG)	868.42	681.81	621.93	-59.47	5,545.79	5,113.78	-431.95	140,705.44	123,427.44	-17,278.00	303,846.67	303,846.67	-100,000.00	7.36	16,078	6,839												
TOTALS		2,944.35	1,772.27	1,617.77	-154.50	14,318.62	14,318.62	0.00	329,981.57	329,981.57	0.00	281,945.91	281,945.91	-48,035.66	108.83	215,371	114,574.5												
9	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	612.29	359.32	359.32	0.00	3,128.18	3,128.18	-410.40	82,100.80	82,100.80	0.00	55,464.80	55,464.80	-26,636.00	101.24	106,866	5,391.2												
10	VILLAGE RESIDENTIAL DISTRICT (A-3)	48.06	28.20	28.20	0.00	243.90	243.90	0.00	4,666.00	4,666.00	0.00	4,666.00	4,666.00	0.00	15.32	15.32	0												
11	MIXED HOUSING DISTRICT (A-4)	83.24	44.09	44.09	0.00	432.02	432.02	-30.10	7,369.60	7,369.60	0.00	7,369.60	7,369.60	-1,204.00	24.1	26,508	2,408												
12	RURAL RESIDENTIAL DISTRICT (A-5)	13.88	8.33	8.33	0.00	88.40	88.40	0.00	1,388.00	1,388.00	0.00	1,388.00	1,388.00	0.00	3.12	3.12	0												
13	RESIDENTIAL DISTRICT (A-8)	42.23	48.67	48.67	0.00	381.80	381.80	0.00	11,536.60	11,536.60	0.00	3,941.80	3,941.80	-7,575.00	0	7,575	7,575												
14	AGRICULTURAL DISTRICT (AG)	827.15	614.78	614.78	0.00	6,705.10	6,282.00	-423.10	179,526.00	160,802.00	-18,724.00	193,343.83	193,343.83	-9,541.17	16.1	23,962	8,862												
TOTALS		1,527.44	1,036.46	1,036.46	0.00	10,981.78	10,981.78	0.00	285,517.00	285,517.00	0.00	234,866.08	234,866.08	-50,650.92	139.79	163,341	71,475.9												
15	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	471.16	412.86	387.32	-25.56	3,320.89	3,320.89	0.00	53,090.20	53,090.20	0.00	45,775.20	45,775.20	-7,315.00	51.26	58,554	7,304												
16	VILLAGE RESIDENTIAL DISTRICT (A-3)	32.35	18.41	18.41	0.00	161.75	161.75	0.00	3,235.00	3,235.00	0.00	3,235.00	3,235.00	0.00	10.1	10.1	0												
17	RURAL RESIDENTIAL DISTRICT (A-5)	101.61	60.81	60.81	0.00	507.85	507.85	0.00	10,151.00	10,151.00	0.00	10,151.00	10,151.00	0.00	21.5	21.5	0												
18	AGRICULTURAL DISTRICT (AG)	989.20	872.79	854.39	-18.40	7,106.98	7,106.98	0.00	122,847.13	117,691.13	-5,156.00	48.2	50,828	2,628															
19	AGRICULTURAL DISTRICT (AG) NWS EARLE	615.12	254.87	254.87	0.00	2,924.24	2,924.24	0.00	31,374.00	31,374.00	0.00	27,344.00	27,344.00	-4,030.00	52.1	72.25	20.15												
20	BUSINESS DISTRICT (B-1)	136.72	30.24	30.24	0.00	316.80	316.80	0.00	2,860.00	2,860.00	0.00	2,860.00	2,860.00	0.00	6.1	6.1	0												
21	BUSINESS DISTRICT (B-1A)	14.40	22.56	22.56	0.00	177.76	177.76	0.00	1,616.00	1,616.00	0.00	1,616.00	1,616.00	0.00	5.1	5.1	0												
22	BUSINESS DISTRICT (B-2)	10.75	16.97	16.97	0.00	14.35	14.35	0.00	327,433.33	327,433.33	0.00	327,433.33	327,433.33	0.00	206.65	206.65	0												
23	BUSINESS DISTRICT (B-3)	8.08	1,870.93	1,870.93	0.00	4,047.77	4,047.77	-228.80	83,076.20	83,076.20	0.00	74,012.20	74,012.20	-9,064.00	148.77994	157,77994	9,004												
TOTALS		2,679.33	1,880.63	1,880.63	0.00	14,335.47	14,335.47	0.00	327,433.33	327,433.33	0.00	210,543.83	210,543.83	-116,889.50	206.65	230.92	24.28												
24	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	612.46	458.82	427.19	-31.72	3,621.17	3,621.17	0.00	53,090.20	53,090.20	0.00	45,775.20	45,775.20	-7,315.00	51.26	58,554	7,304												
25	VILLAGE RESIDENTIAL DISTRICT (A-3)	64.75	38.65	38.65	0.00	323.75	323.75	0.00	6,475.00	6,475.00	0.00	6,475.00	6,475.00	0.00	13.9776	13.9776	0												
26	RURAL RESIDENTIAL DISTRICT (A-5)	97.02	58.21	58.21	0.00	495.10	495.10	0.00	9,702.00	9,702.00	0.00	9,702.00	9,702.00	0.00	8.21	8.21	0												
27	AGRICULTURAL DISTRICT (AG)	842.29	804.29	671.64	-132.64	6,388.52	6,388.52	0.00	139,800.87	139,800.87	0.00	101,802.87	101,802.87	-37,998.00	48.21	67,159	18,640												
28	BUSINESS DISTRICT (B-1)	31.61	66.38	66.38	0.00	685.42	685.42	0.00	6,322.00	6,322.00	0.00	6,322.00	6,322.00	0.00	10.81	10.81	0												
29	MUNICIPAL PURPOSES DISTRICT (MP)	37.28	7.48	7.48	0.00	185.48	185.48	0.00	2,332.70	2,332.70	0.00	2,332.70	2,332.70	0.00	18.52	18.52	0												
TOTALS		1,905.41	1,494.13	1,494.13	0.00	12,127.05	12,127.05	0.00	242,895.87	242,895.87	0.00	200,846.37	200,846.37	-42,049.50	246.87	274.13	27.26												
30	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	1,833.07	1,248.09	1,166.39	-81.70	10,623.88	10,623.88	-512.40	227,524.20	227,524.20	0.00	208,840.20	208,840.20	-18,684.00	326.57	348,094	20,454												
31	VILLAGE RESIDENTIAL DISTRICT (A-3)	47.26	32.51	28.36	-4.15	285.95	285.95	-28.65	5,912.00	5,912.00	0.00	4,726.00	4,726.00	-1,186.00	13.2	14,919	1,778												
32	AGRICULTURAL DISTRICT (AG)	1,978.62	1,696.19	1,526.27	-169.92	13,904.49	13,904.49	-2,698.15	385,464.20	385,464.20	0.00	352,056.20	352,056.20	-33,408.00	66.24	106,943	5,170												
33	BUSINESS DISTRICTS (B-1)	18.43	33.21	40.80	6.59	313.59	313.59	113.88	4,835.00	4,835.00	0.00	3,686.00	3,686.00	-1,149.00	5.21	9,955	4,745												
34	LIGHT INDUSTRIAL DISTRICT (D)	18.17	0.00	0.00	0.00	95.86	95.86	0.00	1,917.00	1,917.00	0.00	1,917.00	1,917.00	0.00	13.25	13.25	0												
TOTALS		3,938.55	2,994.56	2,864.82	-73.73	25,163.88	25,163.88	-1,136.34	595,662.43	595,662.43	0.00	538,427.40	538,427.40	-67,235.03	410.15	487,121	68,541.3												
35	AGRICULTURAL RESIDENTIAL DISTRICT (A-1)	267.49	227.62	141.77	-85.85	1,975.77	1,975.77	-613.20	49,030.60	49,030.60	0.00	24,602.60	24,602.60	-24,428.00	26.58	51,109	24,529												
36	AGRICULTURAL DISTRICT (AG)	2,065.48	986.62	610.09	-1,505.39	12,887.07	12,887.07	-1,136.50	269,802.60	269,802.60	0.00	224,312.60	224,312.60	-45,490.00	81.23	114,02	22,78												

Table C-5: NPS Load Summary

ID	HUC14 and Zone	Total Area (acres)	EXISTING TOTAL PHOSPHOROUS LOAD [Table C-3a] (lbs/yr)	BUILD-OUT TOTAL PHOSPHOROUS LOAD [Table C-4a] (lbs/yr)	CHANGE IN PHOSPHOROUS LOAD (lbs/yr)	EXISTING TOTAL NITROGEN LOAD [Table C-3b] (lbs/yr)	BUILD-OUT TOTAL NITROGEN LOAD [Table C-4b] (lbs/yr)	CHANGE IN NITROGEN LOAD (lbs/yr)	EXISTING TOTAL SUSPENDED SOILD LOAD [Table C-3c] (lbs/yr)	BUILD-OUT TOTAL SUSPENDED SOILD LOAD [Table C-4c] (lbs/yr)	CHANGE IN TOTAL SUSPENDED SOLID LOAD (lbs/yr)	EXISTING IMPERVIOUS COVERAGE [Table C-1] (acres)	BUILD-OUT IMPERVIOUS COVERAGE [Table C-1] (acres)	CHANGE IN IMPERVIOUS COVERAGE (acres)
TOTALS		6,072.08	1,279,146	1,090,239	-188,907	16,698,78	11,964,69	-4,734,09	336,211,04	278,462,80	-58,748,24	5,291.14	5,291.14	0.00
42	VILLAGE RESIDENTIAL DISTRICT (A-3)	35.64	28.66	21.60	-7.06	229.75	179.20	-50.55	5,908.00	3,664.00	-2,244.00	4.29	4.29	0.00
TOTALS		35.64	28.66	21.60	-7.06	229.75	179.20	-50.55	5,908.00	3,664.00	-2,244.00	4.29	4.29	0.00
43	AGRICULTURAL DISTRICT (AG) NWS EARLE	309.40	238.26	238.26	0.00	2,541.28	2,541.28	0.00	31,786.00	31,786.00	0.00	5.63	5.63	0.00
44	LIGHT INDUSTRIAL DISTRICT (D-1)	154.03	333.25	333.25	0.00	2,541.28	2,541.28	0.00	31,786.00	31,786.00	0.00	5.63	5.63	0.00
TOTALS		463.23	571.51	571.51	0.00	5,082.56	5,082.56	0.00	63,572.00	63,572.00	0.00	11.26	11.26	0.00
45	AGRICULTURAL DISTRICT (AG) NWS EARLE	546.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS		546.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Municipal Boundary



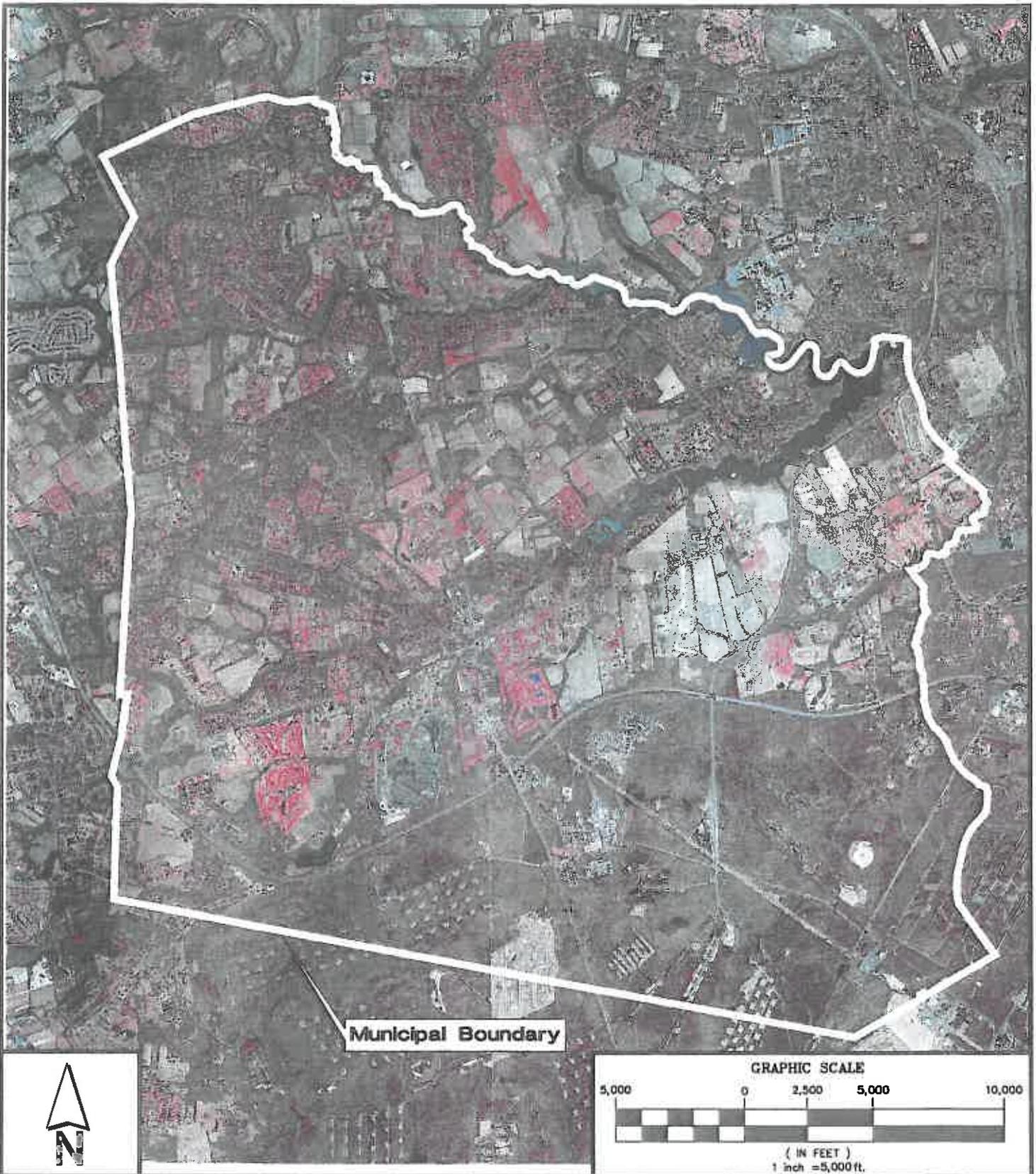
Images taken from NJDEP i-map website. All secondary images utilized have not been verified by the NJDEP.



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Figure C-2
Streams, Water Bodies & Category One Waters
Township of Colts Neck
Monmouth County, New Jersey

-  Municipalities
-  Category One Waters
-  Streams
-  Water Bodies
-  Sub-Watersheds (HUC14)

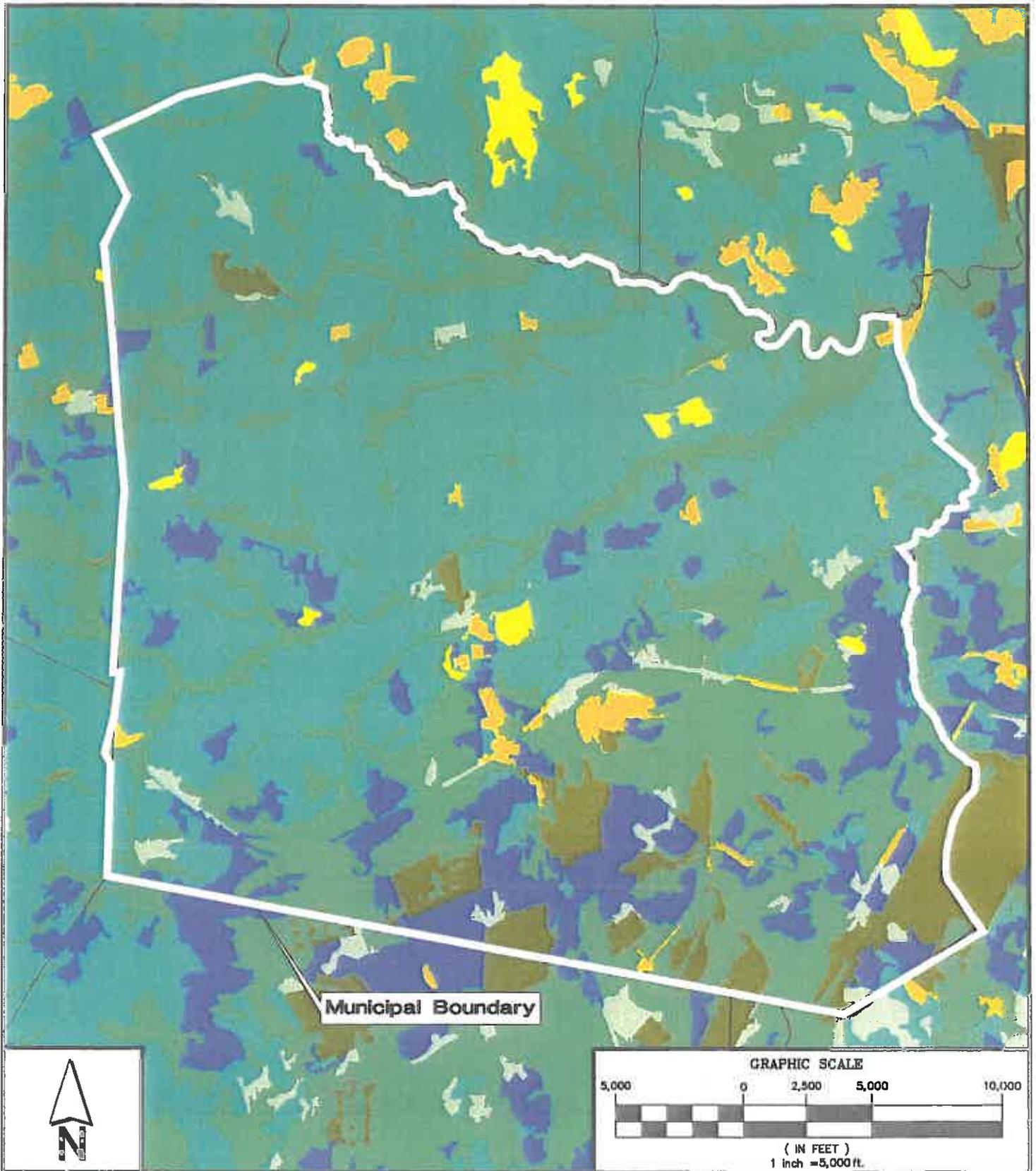


Images taken from NJDEP i-map website. All secondary images utilized have not been verified by the NJDEP.



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Figure C-3
Township Boundary on NJDEP Aerial Photo
Township of Colts Neck
Mormouth County, New Jersey



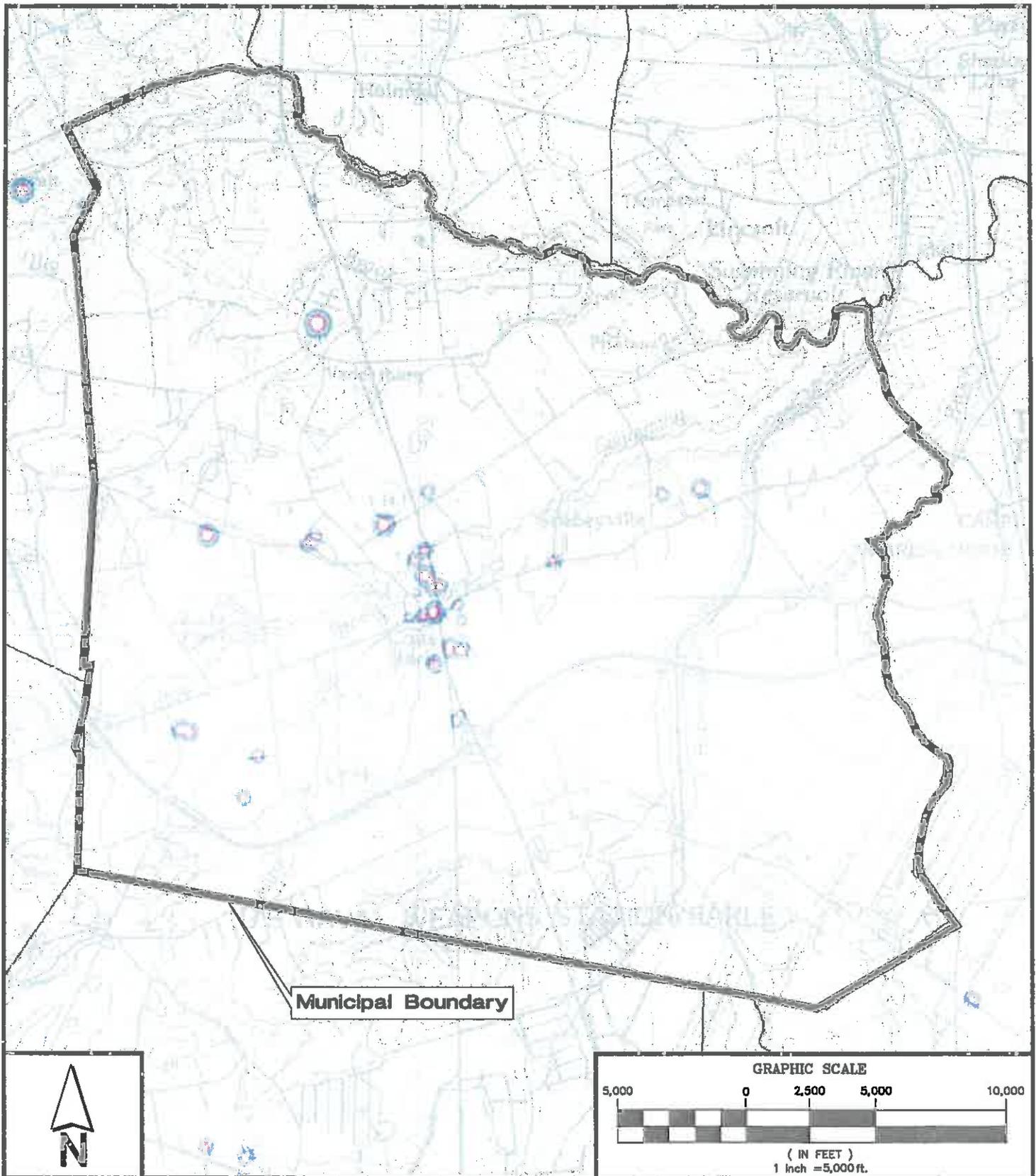
Images taken from NJDEP i-map website. All secondary images utilized have not been verified by the NJDEP.



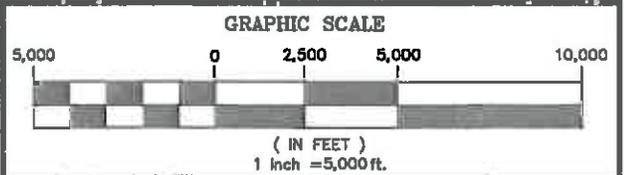
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Figure C-4
Groundwater Recharge Areas
Township of Colts Neck
Marmouth County, New Jersey





Municipal Boundary



Images taken from NJDEP i-map website. All secondary images utilized have not been verified by the NJDEP.



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Figure C-5
Well Head Protection Areas
 Township of Colts Neck
 Monmouth County, New Jersey

Well Head Protection Area
 (Community)

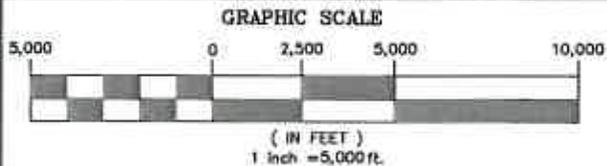
- Tier 1: 2-Year
- Tier 2: 5-Year
- Tier 3: 12-Year

Well Head Protection Area
 (Non-Community)

- Tier 1: 2-Year
- Tier 2: 5-Year
- Tier 3: 12-Year



Municipal Boundary



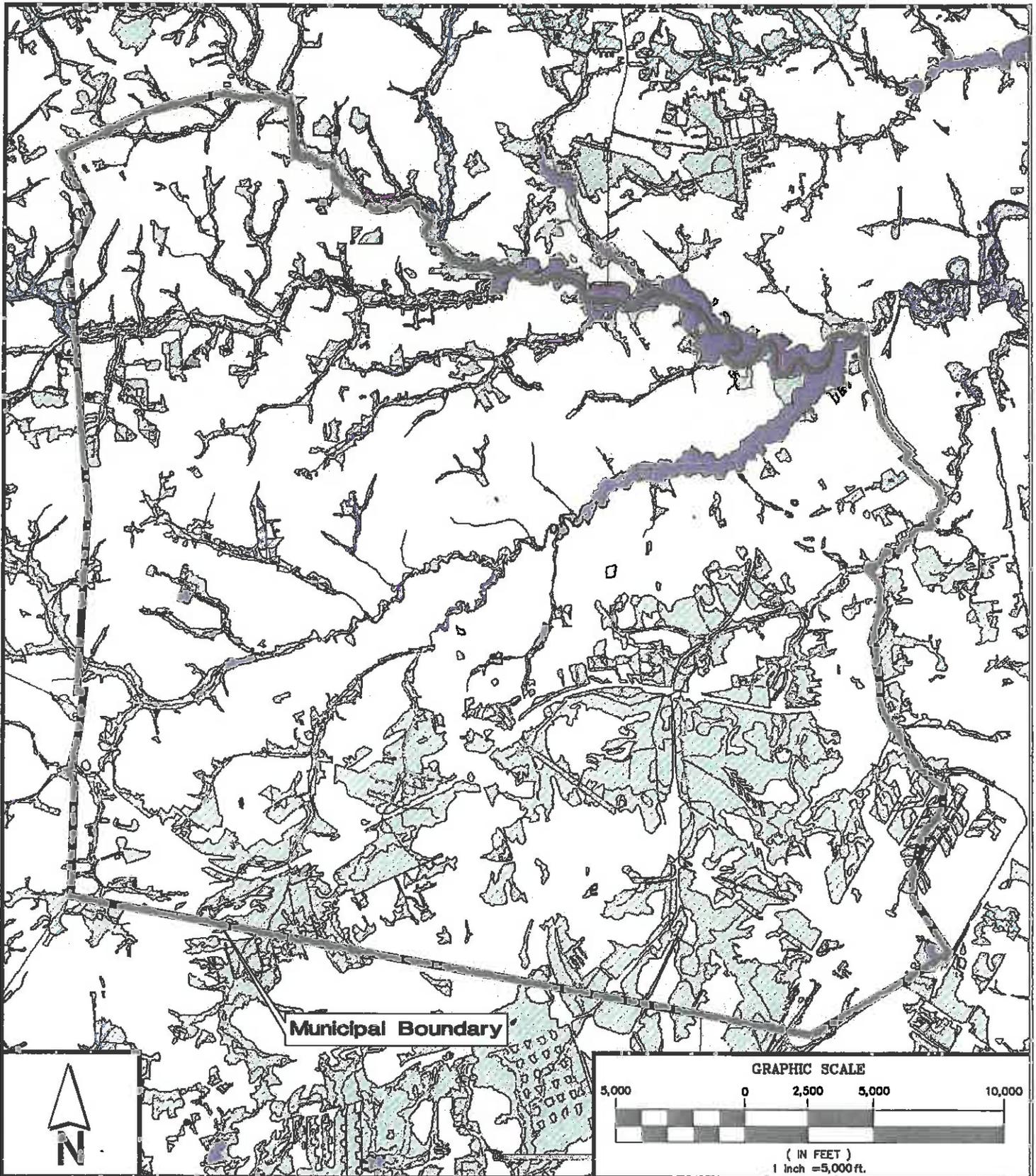
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Figure C-6
Sub-Watershed (HUC14's)
 Township of Colts Neck
 Monmouth County, New Jersey

 Sub-Watershed (HUC14) Boundary



Images taken from NJDEP i-map website. All secondary images utilized have not been verified by the NJDEP.



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Figure C-7
Wetlands
Township of Colts Neck
Monmouth County, New Jersey

- Category One Waters
- Streams
- Water Body
- Wetlands

ORDINANCE - 2006-7

AN ORDINANCE OF THE TOWNSHIP OF COLTS NECK IN THE COUNTY OF MONMOUTH AND THE STATE OF NEW JERSEY DELETING SECTION 102-54 "DRAINAGE" AND ESTABLISHING A NEW SECTION 46.42 "STORMWATER MANAGEMENT" IN ARTICLE VII, CHAPTER 102 DEVELOPMENT REGULATIONS OF THE CODE OF THE TOWNSHIP OF COLTS NECK

BE IT ORDAINED by the Township Committee of the Township of Colts Neck, County of Monmouth, State of New Jersey as follows: (additions to text indicated by underline; deletions to text indicated by ~~strikeout~~).

1. That Section 102-54 "Drainage" of Chapter 102 Development Regulations of the Code of the Township of Colts Neck be and hereby is deleted in its entirety and said Section shall be reserved for future use.
2. That Article VI "Zoning Requirements Common to All Districts of Chapter 102, Development Regulations is hereby amended and supplement to create new Section 102-46.4 entitled "Stormwater Management" as follows:

102-46.4 Stormwater Management

A. Scope and Purpose

1. Policy Statement

Flood control, ground water recharge and pollutant reduction through nonstructural or low impact techniques shall be explored before relying on structural BMP's. Structural BMP's should be integrated with nonstructural stormwater management strategies and proper maintenance plans. Nonstructural strategies include both environmentally sensitive site design and source controls that prevent pollutants from being placed on the site or from being exposed to stormwater. Source control plans should be developed based upon physical site conditions and the origin, nature and the anticipated quantity or amount of potential pollutants. Multiple stormwater management BMP's may be necessary to achieve the established performance standards for water quality, quantity and groundwater recharge.

2. Purpose

It is the purpose of this ordinance to establish minimum stormwater management requirements and controls for "major development" as defined in Section B.

3. Applicability

a. This ordinance shall be applicable to all site plans and subdivisions for the following major developments that require preliminary or final site plan or subdivision review:

1. Non-residential major developments; and

2. Aspects of residential major developments that are not pre-empted by the Residential Site Improvement Standards at N.J.A.C. 5:21.

b. This ordinance shall also be applicable to all major developments undertaken by the Township of Colts Neck.

4. Compatibility with Other Permit and Ordinance Requirements

Development approvals issued for subdivisions and site plans pursuant to this ordinance are to be considered an integral part of development approvals under the subdivision and site plan review process and do not relieve the applicant of the responsibility to secure required permits or approvals for activities that are regulated by any other applicable code, rule, act, or ordinance. In their interpretation and application, the provisions of this ordinance shall be held to be the minimum requirements for the promotion of the public health, safety, and general welfare. This ordinance is not intended to interfere with, abrogate, or annul any other ordinances, rules or regulations, statute, or other provision of law except that, where any provision of this ordinance imposes restrictions different from those imposed by any other ordinance, rule or regulation, or other provision of law, the more restrictive provisions or higher standards shall control.

B. Definitions

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the meaning they have in common usage and to give this ordinance its most reasonable application. The definitions below are the same as or based on the corresponding definitions in the Stormwater Management Rules at N.J.A.C. 7:8-1.2.

“Compaction” means the increase in soil bulk density.

“Core” means a pedestrian-oriented area of commercial and civic uses serving the surrounding municipality, generally including housing and access to public transportation.

“County review agency” means an agency designated by the County Board of Chosen Freeholders to review municipal stormwater management plans and implementing ordinance(s). The county review agency may either be:

A County planning agency; or

A county water resource association created under N.J.S.A. 58:16A-55.5, if the ordinance or resolution delegates authority to approve, conditionally approve, or disapprove municipal stormwater management plans and implementing ordinances.

“Department” means the New Jersey Department of Environmental Protection.

“Designated Center” means a State Development and Redevelopment Plan Center as designated by the State Planning Commission such as urban, regional, town, village or hamlet.

“Design engineer” means a person professionally qualified and duly licensed in New Jersey to perform engineering services that may include, but not necessarily be limited to, development of project requirements, creation and development of project design and preparation of drawings and specifications.

“Development” means the division of a parcel of land into two or more parcels, the construction, reconstruction, conversion, structural alteration, relocation or enlargement of any building or structure, and minimum excavation or landfill, and any use or change in the use of any building or other structure, or land or extension of use of land, by any person, for which permission is required under the Municipal Land Use Law, N.J.S.A. 40:55-D1 et seq. In the case of development of agricultural lands, development means; any activity that requires a State permit; any activity reviewed by the County Agricultural Board (CAB) and the State Agricultural Development Committee (SADC) and municipal review of any activity not exempted by the Right to Farm Act, N.J.S.A. 4:1C-1 et seq.

“Drainage area” means a geographic area within which stormwater, sediments, or dissolved materials drain to a particular receiving waterbody or to a particular point along a receiving waterbody.

“Environmentally critical areas” means an area or feature which is of significant environmental value, including but not limited to: stream corridors; natural heritage priority sites; habitat of endangered or threatened species; large areas of contiguous open space or upland forest; steep slopes; and well head protection and groundwater recharge areas. Habitats of endangered or threatened species are identified using the Department’s Landscape Project as approved by the Department’s Endangered and Nongame Species Program.

“Erosion” means the detachment and movement of soil or rock fragments by water, wind, ice or gravity.

“Impervious surface” means a surface that has been covered with a layer of material so that it is highly resistant to infiltration by water.

“Infiltration” is the process by which water seeps into the soil.

“Major development” means any ‘development’ that provides for ultimately disturbing one or more acres of land. Disturbance for the purpose of this rule is the placement of impervious surface or exposure and/or movement of soil or bedrock or clearing, cutting, or removing of vegetation.

“Municipality” means any city, borough, town, township or village.

“Node” means an area designated by the State Planning Commission concentrating facilities and activities which are not organized in a compact form.

“Nutrient” means a chemical element or compound, such as nitrogen or phosphorus, which is essential to and promotes the development of organisms.

“Person” means any individual, corporation, company, partnership, firm, association of Colts Neck Township or political subdivision of this State subject to municipal jurisdiction pursuant to the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq.

“Pollutant” means any dredge spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, refuse, oil, grease, sewage sludge, munitions, chemical wastes, biological materials, medical wastes, radioactive substance (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.), thermal waste, wrecked or discarded equipment, rock, sand, cellar dirt, industrial, municipal, agricultural, and construction waste or runoff, or other residue discharged directly or indirectly to the land, ground waters or surface waters of the State, or to a domestic treatment works. “Pollutant” includes both hazardous and nonhazardous pollutants.

Recharge” means the amount of water that infiltrates into the ground and is not evapotranspired.

“Sediment” means solid material, mineral or organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water or gravity as a product of erosion.

“Site” means the lot or lots upon which a major development is to occur or has occurred.

“Soil” means all unconsolidated mineral and organic material of any origin.

“State Development and Redevelopment Plan Metropolitan Planning Area (PA1)” means an area delineated on the State Plan Policy Map and adopted by the State Planning Commission that is intended to be the focus for much of the state’s future redevelopment and revitalization efforts.

“State Plan Policy Map” is defined as the geographic application of the State Development and Redevelopment Plan’s goals and statewide policies, and the official map of these goals and policies.

“Stormwater” means water resulting from precipitation (including rain and snow) that runs off the land’s surface, is transmitted to the subsurface, or is captured by separate storm sewers or other sewage or drainage facilities, or conveyed by snow removal equipment.

“Stormwater runoff” means water flow on the surface of the ground or in storm sewers, resulting from precipitation.

“Stormwater management basin” means an excavation or embankment and related areas designed to retain stormwater runoff. A stormwater management basin may either be normally dry (that is, a detention basin or infiltration basin), retain water in a permanent pool (a retention basin), or be planted mainly with wetland vegetation (most constructed stormwater wetlands).

“Stormwater management measure” means any structural or nonstructural strategy, practice, technology, process, program, or other method intended to control or reduce stormwater runoff

and associated pollutants, or to induce or control the infiltration or groundwater recharge of stormwater or to eliminate illicit or illegal non-stormwater discharges into stormwater conveyances.

“Waters of the State” means the ocean and its estuaries, all springs, streams, wetlands, and bodies of surface or ground water, whether natural or artificial, within the boundaries of the State of New Jersey or subject to its jurisdiction.

“Wetlands” or “wetland” means an area that is inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation.

C. General Standards

1. Design and Performance Standards for Stormwater Management Measures

- a. Stormwater management measures for major development shall be developed to meet the erosion control, groundwater recharge, stormwater runoff quantity, and stormwater runoff quality standards in Section D. To the maximum extent practicable, these standards shall be met by incorporating nonstructural stormwater management strategies into the design. If these strategies alone are not sufficient to meet these standards, structural stormwater management measures necessary to meet these standards shall be incorporated into the design.
- b. The standards in this ordinance apply only to new major development and are intended to minimize the impact of stormwater runoff on water quality and water quantity in receiving water bodies and maintain groundwater recharge. The standards do not apply to new major development to the extent that alternative design and performance standards are applicable under a regional stormwater management plan or Water Quality Management Plan adopted in accordance with Department rules.

Note: Alternative standards shall provide at least as much protection from stormwater-related loss of groundwater recharge, stormwater quantity and water quality impacts of major development projects as would be provided under the standards in N.J.A.C. 7:8-5.

D. Stormwater Management Requirements for Major Development

1. The development shall incorporate a maintenance plan for the stormwater management measures incorporated into the design of a major development in accordance with Section J.
2. Stormwater management measures shall avoid adverse impacts of concentrated flow on habitat for threatened and endangered species as documented in the Department’ Landscape Project or Natural Heritage Database established under N.J.S.A. 13:1B-15.147 through 15.150, particularly *Helonias bullata* (swamp pink) and/or *Clemmys muhlenbergi* (bog turtle).
3. The following linear development projects are exempt from the groundwater recharge, stormwater runoff quantity, and stormwater runoff quality requirements of Sections D6 and D7:

- a. The construction of an underground utility line provided that the disturbed areas are revegetated upon completion;
 - b. The construction of an above ground utility line provided that the existing conditions are maintained to the maximum extent practicable; and
 - c. The construction of a public pedestrian access, such as a sidewalk or trail with a maximum width of 14 feet, provided that the access is made of permeable material.
4. A waiver from strict compliance from the groundwater recharge, stormwater runoff quantity, and stormwater runoff quality requirements of Sections D6 and D7 may be obtained for the enlargement of an existing public roadway or railroad; or the construction or enlargement of a public pedestrian access, provided that the following conditions are met:
- a. The applicant demonstrates that there is a public need for the project that cannot be accomplished by any other means;
 - b. The applicant demonstrates through an alternatives analysis, that through the use of nonstructural and structural stormwater management strategies and measures, the option selected complies with the requirements of Sections D6 and D7 to the maximum extent practicable;
 - c. The applicant demonstrates that, in order to meet the requirements of Sections D6 and D7, existing structures currently in use, such as homes and buildings, would need to be condemned; and
 - d. The applicant demonstrates that it does not own or have other rights to areas, including the potential to obtain through condemnation lands not falling under 3C above within the upstream drainage area of the receiving stream, that would provide additional opportunities to mitigate the requirements of Sections D6 and D7 that were not achievable on-site.

5 Nonstructural Stormwater Management Strategies

- a. To the maximum extent practicable, the standards in Sections D6 and D7 shall be met by incorporating nonstructural stormwater management strategies set forth at Section D5 into the design. The applicant shall identify the nonstructural measures incorporated into the design of the project. If the applicant contends that it is not feasible for engineering, environmental, or safety reasons to incorporate any nonstructural stormwater management measures identified in Paragraph b. below into the design of a particular project, the applicant shall identify the strategy considered and provide a basis for the contention.
- b. Nonstructural stormwater management strategies incorporated into site design shall:
 - 1. Protect areas that provide water quality benefits or areas particularly susceptible to erosion and sediment loss;
 - 2. Minimize impervious surfaces and break up or disconnect the flow of runoff over impervious surfaces;
 - 3. Maximize the protection of natural drainage features and vegetation;
 - 4. Minimize the decrease in the "time of concentration" from pre-construction to post

construction. "Time of concentration" is defined as the time it takes for runoff to travel from the hydraulically most distant point of the watershed to the point of interest within a watershed;

5. Minimize land disturbance including clearing and grading;
 6. Minimize soil compaction;
 7. Provide low-maintenance landscaping that encourages retention and planting of native vegetation and minimizes the use of lawns, fertilizers and pesticides;
 8. Provide vegetated open-channel conveyance systems discharging into and through stable vegetated areas;
 9. Provide other source controls to prevent or minimize the use or exposure of pollutants at the site, in order to prevent or minimize the release of those pollutants into stormwater runoff. Such source controls include, but are not limited to:
 - (a) Site design features that help to prevent accumulation of trash and debris in drainage systems, including features that satisfy Section D5c below;
 - (b) Site design features that help to prevent discharge of trash and debris from drainage systems;
 - (c) Site design features that help to prevent and/or contain spills or other harmful accumulations of pollutants at industrial or commercial developments; and
 - (d) When establishing vegetation after land disturbance, applying fertilizer in accordance with the requirements established under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq., and implementing rules.
- c. Site design features identified under Section D5b9.(b) above shall comply with the following standard to control passage of solid and floatable materials through storm drain inlets. For purposes of this paragraph, "solid and floatable materials" means sediment, debris, trash, and other floating, suspended, or settleable solids. For exemptions to this standard see Section D5c3 below.
1. Design engineers shall use either of the following grates whenever they use a grate in pavement or another ground surface to collect stormwater from that surface into a storm drain or surface water body under that grate:
 - (a.) The New Jersey Department of Transportation (NJDOT) bicycle safe grate, which is described in Chapter 2.4 of the NJDOT Bicycle Compatible Roadways and Bikeways Planning and Design Guidelines (April 1996); or
 - (b.) A different grate, if each individual clear space in that grate has an area of no more than seven (7.0) square inches, or is no greater than 0.5 inches across the smallest dimension.

Examples of grates subject to this standard include grates in grate inlets, the grate portion (non-curb-opening portion) of combination inlets, grates on storm sewer manholes, ditch grates, trench grates, and grates of spacer bars in slotted drains. Examples of ground surfaces include surfaces of roads (including bridges), driveways, parking areas, bikeways, plazas, sidewalks, lawns, fields, open channels, and stormwater basin floors.
 2. Whenever design engineers use a curb-opening inlet, the clear space in that curb

opening (or each individual clear space, if the curb opening has two or more clear spaces) shall have an area of no more than seven (7.0) square inches, or be no greater than two (2.0) inches across the smallest dimension.

3. This standard does not apply:

- (a) Where the review agency determines that this standard would cause inadequate hydraulic performance that could not practicably be overcome by using additional or larger storm drain inlets that meet these standards;
- (b) Where flows from the water quality design storm as specified in Section D7a are conveyed through any device (e.g., end of pipe netting facility, manufactured treatment device, or a catch basin hood) that is designed, at a minimum, to prevent delivery of all solid and floatable materials that could not pass through one of the following:
 - (1) A rectangular space four and five-eighths inches long and one and one-half inches wide (this option does not apply for outfall netting facilities); or
 - (2) A bar screen having a bar spacing of 0.5 inches.
 - (3) Where flows are conveyed through a trash rack that has parallel bars with one-inch (1") spacing between the bars, to the elevation of the water quality design storm as specified in Section D7a; or
 - (4) Where the New Jersey Department of Environmental Protection determines, pursuant to the New Jersey Register of Historic Places Rules at N.J.A.C. 7:4-7.2(c), that action to meet this standard is an undertaking that constitutes an encroachment or will damage or destroy the New Jersey Register listed historic property.
- d. Any land area used as a nonstructural stormwater management measure to meet the performance standards in Sections D6 and D7 shall be dedicated to a government agency, subjected to a conservation restriction filed with the Monmouth County Clerk's office, or subject to an approved equivalent restriction that ensures that measure or an equivalent stormwater management measure approved by the reviewing agency is maintained in perpetuity.
- e. Guidance for nonstructural stormwater management strategies is available in the New Jersey Stormwater Best Management Practices Manual. The BMP Manual may be obtained from the address identified in Section G, or found on the Department's website at www.njstormwater.org.

6. Erosion Control, Groundwater Recharge and Runoff Quantity Standards

- a. This subsection contains minimum design and performance standards to control erosion, encourage and control infiltration and groundwater recharge, and control stormwater runoff quantity impacts of major development.
 - 1. The minimum design and performance standards for erosion control are those established under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq. and implementing rules.
 - 2. The minimum design and performance standards for groundwater recharge are as follows:

- (a.) The design engineer shall, using the assumptions and factors for stormwater runoff and groundwater recharge calculations at Section E, either:
- (1) Demonstrate through hydrologic and hydraulic analysis that the site and its stormwater management measures maintain 100 percent of the average annual pre-construction groundwater recharge volume for the site; or
 - (2) Demonstrate through hydrologic and hydraulic analysis that the increase of stormwater runoff volume from pre-construction to post-construction for the 2-year storm is infiltrated.
- (b.) This groundwater recharge requirement does not apply to projects subject to (3) below.
- (c) The following types of stormwater shall not be recharged:
- (1) Stormwater from areas of high pollutant loading. High pollutant loading areas are areas in industrial and commercial developments where solvents and/or petroleum products are loaded/unloaded, stored, or applied, areas where pesticides are loaded/unloaded or stored; areas where hazardous materials are expected to be present in greater than “reportable quantities” as defined by the United States Environmental Protection Agency (EPA) at 40 CFR 302.4; areas where recharge would be inconsistent with Department approved remedial action work plan or landfill closure plan and areas with high risks for spills of toxic materials, such as gas stations and vehicle maintenance facilities; and
 - (2) Industrial stormwater exposed to “source material.” “Source material” means any material(s) or machinery, located at an industrial facility, that is directly or indirectly related to process, manufacturing or other industrial activities, which could be a source of pollutants in any industrial stormwater discharge to groundwater. Source materials include, but are not limited to, raw materials; intermediate products; final products; waste materials; by-products; industrial machinery and fuels, and lubricants, solvents, and detergents that are related to processing, manufacturing, or other industrial activities that are exposed to stormwater.
- (d) The design engineer shall assess the hydraulic impact on the groundwater table and design the site so as to avoid adverse hydraulic impacts. Potential adverse hydraulic impacts include, but are not limited to, exacerbating a naturally or seasonally high water table so as to cause surficial ponding, flooding of basements, or interference with the proper operation of subsurface sewage disposal systems and other subsurface structures in the vicinity or downgradient of the groundwater recharge area.
3. In order to control stormwater runoff quantity impacts, the design engineer shall, using the assumptions and factors for stormwater runoff calculations at Section E, complete one of the following:
- (a) Demonstrate through hydrologic and hydraulic analysis that for stormwater leaving the site, post-construction runoff hydrographs for the two, 10, and 100-year storm events do not exceed, at any point in time, the pre-construction runoff hydrographs for the same storm events;

- (b) Demonstrate through hydrologic and hydraulic analysis that there is no increase, as compared to the pre-construction condition, in the peak runoff rates of stormwater leaving the site for the two, 10, and 100-year storm events and that the increased volume or change in timing of stormwater runoff will not increase flood damage at or downstream of the site. This analysis shall include the analysis of impacts of existing land uses and projected land uses assuming full development under existing zoning and land use ordinances in the drainage area;
 - (c) Design stormwater management measures so that the post-construction peak runoff rates for the 2, 10 and 100 year storm events are 50, 75 and 80 percent, respectively, of the pre-construction peak runoff rates. The percentages apply only to the post-construction stormwater runoff that is attributable to the portion of the site on which the proposed development or project is to be constructed. The percentages shall not be applied to post-construction stormwater runoff into tidal flood hazard areas if the increased volume of stormwater runoff will not increase flood damages below the point of discharge; or
 - (d) In tidal flood hazard areas, stormwater runoff quantity analysis in accordance with (1), (2) and (3) above shall only be applied if the increased volume of stormwater runoff could increase flood damages below the point of discharge.
- b. Any application for a new agricultural development that meets the definition of major development at Section B shall be submitted to the appropriate Soil Conservation District for review and approval in accordance with the requirements of this section and any applicable Soil Conservation District guidelines for stormwater runoff quantity and erosion control. For the purposes of this section, "agricultural development" means land uses normally associated with the production of food, fiber and livestock for sale. Such uses do not include the development of land for the processing or sale of food and the manufacturing of agriculturally related products.

7. Stormwater Runoff Quality Standards

- a. Stormwater management measures shall be designed to reduce the post-construction load of total suspended solids (TSS) in stormwater runoff by 80 percent of the anticipated load from the developed site, expressed as an annual average. Stormwater management measures shall only be required for water quality control if an additional 1/4 acre of impervious surface is being proposed on a development site. The requirement to reduce TSS does not apply to any stormwater runoff in a discharge regulated under a numeric effluent limitation for TSS imposed under the New Jersey Pollution Discharge Elimination System (NJPDES) rules, N.J.A.C. 7:14A, or in a discharge specifically exempt under a NJPDES permit from this requirement. The water quality design storm is 1.25 inches of rainfall in two hours. Water quality calculations shall take into account the distribution of rain from the water quality design storm, as reflected in Table 1. The calculation of the volume of runoff may take into account the implementation of non-structural and structural stormwater management measures.

Table 1: Water Quality Design Storm Distribution			
Time (Minutes)	Cumulative Rainfall (inches)	Time (Minutes)	Cumulative Rainfall (inches)

0	0.0000	65	.08917
5	0.0083	70	0.9917
10	0.0166	75	1.0500
15	0.0250	80	1.0840
20	0.0500	85	1.1170
25	0.0750	90	1.1500
30	0.1000	95	1.1750
35	0.1330	100	1.2000
40	0.1660	105	1.2250
45	0.2000	110	1.2334
50	0.2583	115	1.2417
55	0.3583	120	1.2500
60	0.6250		

b. For purposes of TSS reduction calculations, Table 2 below presents the presumed removal rates for certain BMPs designed in accordance with the New Jersey Stormwater Best Management Practices Manual. The BMP Manual may be obtained from the address identified in Section 7, or found on the Department’s website at www.njstormwater.org. The BMP Manual and other sources of technical guidance are listed in Section G. TSS reduction shall be calculated based on the removal rates for the BMPs in Table 2 below. Alternative removal rates and methods of calculating removal rates may be used if the design engineer provides documentation demonstrating the capability of these alternative rates and methods to the review agency. A copy of any approved alternative rate or method of calculating the removal rate shall be provided to the Department at the following address: Division of Watershed Management, New Jersey Department of Environmental Protection, PO Box 418 Trenton, New Jersey, 08625-0418.

c. If more than one BMP in series is necessary to achieve the required 80 percent TSS reduction for a site, the applicant shall utilize the following formula to calculate TSS reduction:

$$R = A + B - (AXB)/100$$

Where

R = total TSS percent load removal from application of both BMPs, and

A = the TSS percent removal rate applicable to the first BMP

B = the TSS percent removal rate applicable to the second BMP

Table 2: TSS Removal Rates for BMP’s

Best Management Practice	TSS Percent Removal Rate
Bioretention Systems	90
Constructed Stormwater Wetland	90
Extended Detention Basin	40-60
Infiltration Structure	80
Manufactured Treatment Device	See Section 6.C
Sand Filter	80
Vegetative Filter Strip	60-80
Wet Pond	50-90

- d. If there is more than one onsite drainage area, the 80 percent TSS removal rate shall apply to each drainage area, unless the runoff from the subareas converge on site in which case the removal rate can be demonstrated through a calculation using a weighted average.
- e. Stormwater management measures shall also be designed to reduce, to the maximum extent feasible, the post-construction nutrient load of the anticipated load from the developed site in stormwater runoff generated from the water quality design storm. In achieving reduction of nutrients to the maximum extent feasible, the design of the site shall include nonstructural strategies and structural measures that optimize nutrient removal while still achieving the performance standards in Sections D6 and D7.
- f. Additional information and examples are contained in the New Jersey Stormwater Best Management Practices Manual, which may be obtained from the address identified in Section G.
- g. In accordance with the definition of FW1 at N.J.A.C. 7:9B-1.4, stormwater management measures shall be designed to prevent any increase in stormwater runoff to waters classified as FW1.
- h. Special water resource protection areas shall be established along all waters designated Category One at N.J.A.C. 7:9B, and perennial or intermittent streams that drain into or upstream of the Category One waters as shown on the USGS Quadrangle Maps or in the County Soil Surveys, within the associated HUC14 drainage area. These areas shall be established for the protection of water quality, aesthetic value, exceptional ecological significance, exceptional recreational significance, exceptional water supply significance, and exceptional fisheries significance of those established Category One waters. These areas shall be designated and protected as follows:
1. The applicant shall preserve and maintain a special water resource protection area in accordance with one of the following:
 - (a) A 300-foot special water resource protection area shall be provided on each side of the waterway, measured perpendicular to the waterway from the top of the bank outwards or from the centerline of the waterway where the bank is not defined, consisting of existing vegetation or vegetation allowed to follow natural succession.

- (b) Encroachment within the designated special water resource protection area under Subsection (a) above shall only be allowed where previous development or disturbance has occurred (for example, active agricultural use, parking area or maintained lawn area). The encroachment shall only be allowed where applicant demonstrates that the functional value and overall condition of the special water resource protection area will be maintained to the maximum extent practicable. In no case shall the remaining special water resource protection area be reduced to less than 150 feet as measured perpendicular to the top of bank of the waterway or centerline of the waterway where the bank is undefined. All encroachments proposed under this subparagraph shall be subject to review and approval by the Department.
2. All stormwater shall be discharged outside of and flow through the special water resource protection area and shall comply with the Standard for Off-Site Stability in the "Standards For Soil Erosion and Sediment Control in New Jersey," established under the Soil Erosion and Sediment Control Act , N.J.S.A. 4:24-39 et seq.
 3. If stormwater discharged outside of and flowing through the special water resource protection area cannot comply with the Standard For Off-Site Stability in the "Standards for Soil Erosion and Sediment Control in New Jersey," established under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq., then the stabilization measures in accordance with the requirements of the above standards may be placed within the special water resource protection area, provided that:
 - (a) Stabilization measures shall not be placed within 150 feet of the Category One waterway;
 - (b) Stormwater associated with discharges allowed by this section shall achieve a 95 percent TSS post-construction removal rate;
 - (c) Temperature shall be addressed to ensure no impact on the receiving waterway;
 - (d) The encroachment shall only be allowed where the applicant demonstrates that the functional value and overall condition of the special water resource protection area will be maintained to the maximum extent practicable;
 - (e) A conceptual project design meeting shall be held with the appropriate Department staff and Soil Conservation District staff to identify necessary stabilization measures; and
 - (f) All encroachments proposed under this section shall be subject to review and approval by the Department of Environmental Protection.
 4. A stream corridor protection plan may be developed by a regional stormwater management planning committee as an element of a regional stormwater management plan, or by a municipality through an adopted municipal stormwater management plan. If a stream corridor protection plan for a waterway subject to Section D7(h) has been approved by the Department of Environmental Protection, then the provisions of the plan shall be the applicable special water resource protection area requirements for that waterway. A stream corridor protection plan for a waterway subject to D7(h) shall maintain or enhance the current functional value and overall condition of the special water resource protection area as defined in D7h1a above. In no case shall a stream corridor protection plan allow the reduction of the Special Water Resource Protection Area to less than 150 feet as

measured perpendicular to the waterway subject to this subsection.

5. Paragraph 7h does not apply to the construction of one individual single family dwelling that is not part of a larger development on a lot receiving preliminary or final subdivision approval on or before February 2, 2004 , provided that the construction begins on or before February 2, 2009.

E. Calculation of Stormwater Runoff and Groundwater Recharge

1. Stormwater runoff shall be calculated in accordance with the following:

a. The design engineer shall calculate runoff using one of the following methods:

1. The USDA Natural Resources Conservation Service (NRCS) methodology, including the NRCS Runoff Equation and Dimensionless Unit Hydrograph, as described in the NRCS National Engineering Handbook Section 4 – Hydrology and Technical Release 55 – Urban Hydrology for Small Watersheds; or
2. The Rational Method for peak flow and the Modified Rational Method for hydrograph computations.

b. For the purpose of calculating runoff coefficients and groundwater recharge, there is a presumption that the pre-construction condition of a site or portion thereof is a wooded land use with good hydrologic condition. The term “runoff coefficient” applies to both the NRCS methodology of Section E1a1 and the Rational and Modified Rational Methods at Section E1a2. A runoff coefficient or a groundwater recharge land cover for an existing condition may be used on all or a portion of the site if the design engineer verifies that the hydrologic condition has existed on the site or portion of the site for at least five years without interruption prior to the time of application. If more than one land cover have existed on the site during the five years immediately prior to the time of application, the land cover with the lowest runoff potential shall be used for the computations. In addition, there is the presumption that the site is in good hydrologic condition (if the land use type is pasture, lawn, or park), with good cover (if the land use type is woods), or with good hydrologic condition and conservation treatment (if the land use type is cultivation).

c. In computing pre-construction stormwater runoff, the design engineer shall account for all significant land features and structures, such as ponds, wetlands, depressions, hedgerows, or culverts, that may reduce pre-construction stormwater runoff rates and volumes.

d. In computing stormwater runoff from all design storms, the design engineer shall consider the relative stormwater runoff rates and/or volumes of pervious and impervious surfaces separately to accurately compute the rates and volume of stormwater runoff from the site. To calculate runoff from unconnected impervious cover, urban impervious area modifications as described in the NRCS Technical Release 55 – Urban Hydrology for Small Watersheds and other methods may be employed.

e. If the invert of the outlet structure of a stormwater management measure is below the flood hazard design flood elevation as defined at N.J.A.C. 7:13, the design engineer shall take into account the effects of tailwater in the design of structural stormwater management measures.

2. Groundwater recharge may be calculated in accordance with the following:

- a. The New Jersey Geological Survey Report GSR-32 A Method for Evaluating Ground-Water Recharge Areas in New Jersey, incorporated herein by reference as amended and supplemented. Information regarding the methodology is available from the New Jersey Stormwater Best Management Practices Manual; at <http://www.state.nj.us/dep/njgs/>; or at New Jersey Geological Survey, 29 Arctic Parkway, P.O. Box 427 Trenton, New Jersey 08625-0427; (609) 984-6587.

F. Standards for Structural Stormwater Management Measures

1. Standards for structural stormwater management measures are as follows:

- a. Structural stormwater management measures shall be designed to take into account the existing site conditions, including, for example, environmentally critical areas, wetlands; flood-prone areas; slopes; depth to seasonal high water table; soil type, permeability and texture; drainage area and drainage patterns; and the presence of solution-prone carbonate rocks (limestone).
- b. Structural stormwater management measures shall be designed to minimize maintenance, facilitate maintenance and repairs, and ensure proper functioning. Trash racks shall be installed at the intake to the outlet structure as appropriate, and shall have parallel bars with one-inch (1") spacing between the bars to the elevation of the water quality design storm. For elevations higher than the water quality design storm, the parallel bars at the outlet structure shall be spaced no greater than one-third (1/3) the width of the diameter of the orifice or one-third (1/3) the width of the weir, with a minimum spacing between bars of one-inch and a maximum spacing between bars of six inches. In addition, the design of trash racks must comply with the requirements of Section H4.
- c. Structural stormwater management measures shall be designed, constructed, and installed to be strong, durable, and corrosion resistant. Measures that are consistent with the relevant portions of the Residential Site Improvement Standards at N.J.A.C. 5:21-7.3, 7.4, and 7.5 shall be deemed to meet this requirement.
- d. At the intake to the outlet from the stormwater management basin, the orifice size shall be a minimum of two and one-half inches in diameter.
- e. Stormwater management basins shall be designed to meet the minimum safety standards for stormwater management basins at Section H.

2. Stormwater management measure guidelines are available in the New Jersey Stormwater Best Management Practices Manual. Other stormwater management measures may be utilized provided the design engineer demonstrates that the proposed measure and its design will accomplish the required water quantity, groundwater recharge and water quality design and performance standards established by Section D of this ordinance.

3. Manufactured treatment devices may be used to meet the requirements of Section D of this ordinance, provided the pollutant removal rates are verified by the New Jersey Corporation for Advanced Technology and certified by the Department.

G. Sources for Technical Guidance

1. Technical guidance for stormwater management measures can be found in the documents listed at a and b below, which are available from Maps and Publications, New Jersey Department of Environmental Protection, 428 East State Street, P.O. Box 420, Trenton, New Jersey, 08625; telephone (609) 777-1038.
 - a Guidelines for stormwater management measures are contained in the New Jersey Stormwater Best Management Practices Manual, as amended. Information is provided on stormwater management measures such as: bioretention systems, constructed stormwater wetlands, dry wells, extended detention basins, infiltration structures, manufactured treatment devices, pervious paving, sand filters, vegetative filter strips, and wet ponds.
 - b The New Jersey Department of Environmental Protection Stormwater Management Facilities Maintenance Manual, as amended.
2. Additional technical guidance for stormwater management measures can be obtained from the following:
 - a The "Standards for Soil Erosion and Sediment Control in New Jersey" promulgated by the State Soil Conservation Committee and incorporated into N.J.A.C. 2:90. Copies of these standards may be obtained by contacting the State Soil Conservation Committee or any of the Soil Conservation Districts listed in N.J.A.C. 2:90-1.3(a)4. The location, address, and telephone number of each Soil Conservation District may be obtained from the State Soil Conservation Committee, P.O. Box 330, Trenton, New Jersey 08625; (609) 292-5540;
 - b The Rutgers Cooperative Extension Service, 732-932-9306; and
 - c The Soil Conservation Districts listed in N.J.A.C. 2:90-1.3(a)4. The location, address, and telephone number of each Soil Conservation District may be obtained from the State Soil Conservation Committee, P.O. Box 330, Trenton, New Jersey, 08625, (609)-292-5540.

H. Safety Standards for Stormwater Management Basins

1. This section sets forth requirements to protect public safety through the proper design and operation of stormwater management basins. This section applies to any new stormwater management basin.

Note: The provisions of this section are not intended to preempt more stringent municipal or county safety requirements for new or existing stormwater management basins. Municipal and county stormwater management plans and ordinances may, pursuant to their authority, require existing stormwater management basins to be retrofitted to meet one or more of the safety standards in Sections H2a, H2b, and H2c for trash racks, overflow grates, and escape provisions at outlet structures.

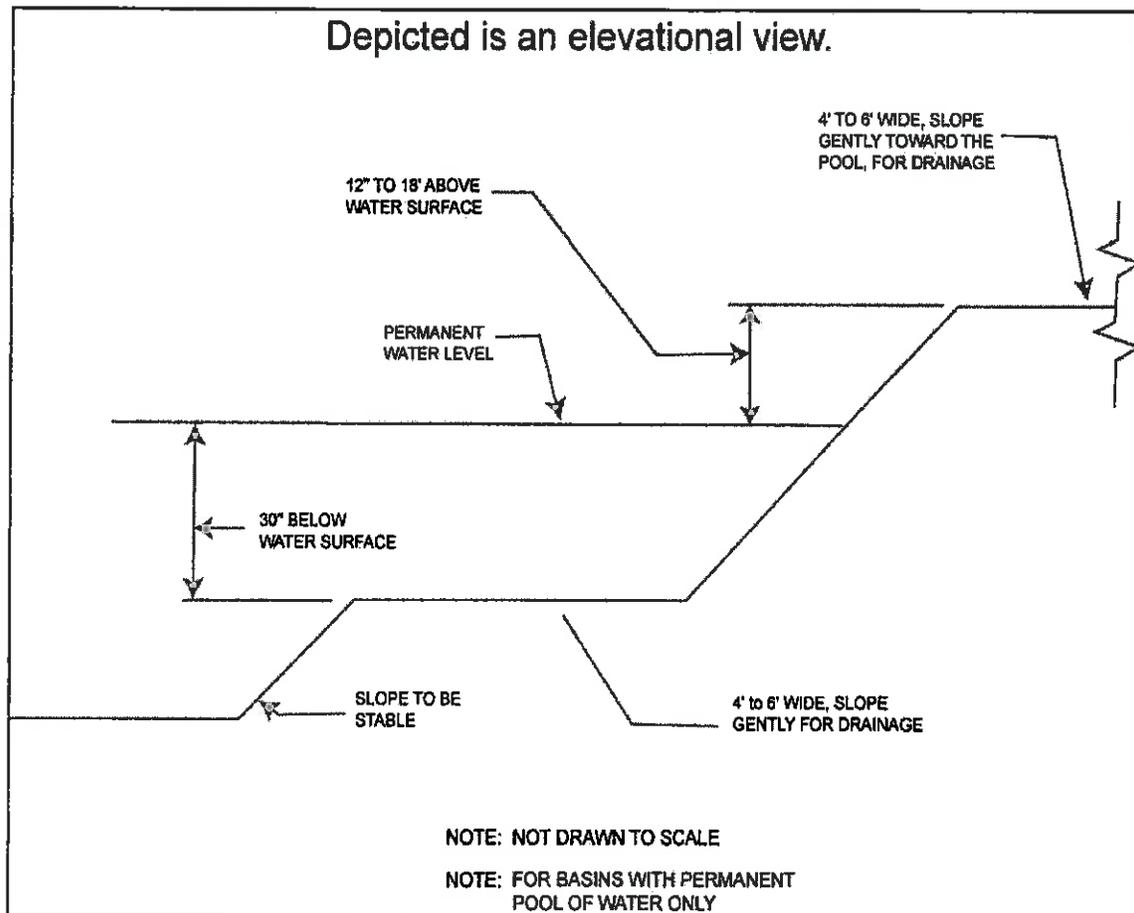
2. Requirements for Trash Racks, Overflow Grates and Escape Provisions

- a A trash rack is a device designed to catch trash and debris and prevent the clogging of outlet structures. Trash racks shall be installed at the intake to the outlet from the

stormwater management basin to ensure proper functioning of the basin outlets in accordance with the following:

1. The trash rack shall have parallel bars, with no greater than six inch spacing between the bars.
 2. The trash rack shall be designed so as not to adversely affect the hydraulic performance of the outlet pipe or structure.
 3. The average velocity of flow through a clean trash rack is not to exceed 2.5 feet per second under the full range of stage and discharge. Velocity is to be computed on the basis of the net area of opening through the rack.
 4. The trash rack shall be constructed and installed to be rigid, durable, and corrosion resistant, and shall be designed to withstand a perpendicular live loading of 300 lbs./ft sq.
- b. An overflow grate is designed to prevent obstruction of the overflow structure. If an outlet structure has an overflow grate, such grate shall meet the following requirements:
1. The overflow grate shall be secured to the outlet structure but removable for emergencies and maintenance.
 2. The overflow grate spacing shall be no less than two inches across the smallest dimension.
 3. The overflow grate shall be constructed and installed to be rigid, durable, and corrosion resistant, and shall be designed to withstand a perpendicular live loading of 300 lbs./ft sq.
- c. For purposes of this paragraph 3, escape provisions means the permanent installation of ladders, steps, rungs, or other features that provide easily accessible means of egress from stormwater management basins. Stormwater management basins shall include escape provisions as follows:
1. If a stormwater management basin has an outlet structure, escape provisions shall be incorporated in or on the structure. With the prior approval of the reviewing agency identified in Section H3 a free-standing outlet structure may be exempted from this requirement.
 2. Safety ledges shall be constructed on the slopes of all new stormwater management basins having a permanent pool of water deeper than two and one-half feet. Such safety ledges shall be comprised of two steps. Each step shall be four to six feet in width. One step shall be located approximately two and one-half feet below the permanent water surface, and the second step shall be located one to one and one-half feet above the permanent water surface. See Section H4 for an illustration of safety ledges in a stormwater management basin.
 3. In new stormwater management basins, the maximum interior slope for an earthen dam, embankment, or berm shall not be steeper than 3 horizontal to 1 vertical.
3. Variance or Exemption from Safety Standards
- a. A variance or exemption from the safety standards for stormwater management basins may be granted only upon a written finding by the appropriate reviewing agency (municipality, county or Department) that the variance or exemption will not constitute a threat to public safety.

4. Illustration of Safety Ledges in a New Stormwater Management Basin



I. Requirements for a Site Development Stormwater Plan

1. Submission of Site Development Stormwater Plan

- a. Whenever an applicant seeks municipal approval of a development subject to this ordinance, the applicant shall submit all of the required components of the Checklist for the Site Development Stormwater Plan at Section I3 below as part of the submission of the applicant's application for subdivision or site plan approval.
- b. The applicant shall demonstrate that the project meets the standards set forth in this ordinance.
- c. The applicant shall submit three copies of the materials listed in the checklist for site development stormwater plans in accordance with Section I3 of this ordinance.

2. Site Development Stormwater Plan Approval

The applicant's Site Development project shall be reviewed as a part of the subdivision or site plan review process by the Approving Authority from which municipal approval is sought. That municipal Approving Authority shall consult the engineer retained by the Planning and/or Zoning Board (as appropriate) to determine if all of the checklist requirements have

been satisfied and to determine if the project meets the standards set forth in this ordinance.

3. Checklist Requirements

The following information shall be required:

a. Topographic Base Map

The reviewing engineer may require upstream tributary drainage system information as necessary. It is recommended that the topographic base map of the site be submitted which extends a minimum of 200 feet beyond the limits of the proposed development, at a scale of 1"=200' or greater, showing 2-foot contour intervals. The map as appropriate may indicate the following: existing surface water drainage, shorelines, steep slopes, soils, erodible soils, perennial or intermittent streams that drain into or upstream of the Category One waters, wetlands and flood plains along with their appropriate buffer strips, marshlands and other wetlands, pervious or vegetative surfaces, existing man-made structures, roads, bearing and distances of property lines, and significant natural and manmade features not otherwise shown.

b. Environmental Site Analysis

A written and graphic description of the natural and man-made features of the site and its environs. This description should include a discussion of soil conditions, slopes, wetlands, waterways and vegetation on the site. Particular attention should be given to unique, unusual, or environmentally sensitive features and to those that provide particular opportunities or constraints for development.

c. Project Description and Site Plan(s)

A map (or maps) at the scale of the topographical base map indicating the location of existing and proposed buildings, roads, parking areas, utilities, structural facilities for stormwater management and sediment control, and other permanent structures. The map(s) shall also clearly show areas where alterations occur in the natural terrain and cover, including lawns and other landscaping, and seasonal high ground water elevations. A written description of the site plan and justification of proposed changes in natural conditions may also be provided.

d. Land Use Planning and Source Control Plan

This plan shall provide a demonstration of how the goals and standards of Sections C through F are being met. The focus of this plan shall be to describe how the site is being developed to meet the objective of controlling groundwater recharge, stormwater quality and stormwater quantity problems at the source by land management and source controls whenever possible.

e. Stormwater Management Facilities Map

The following information, illustrated on a map of the same scale as the topographic base map, shall be included:

1. Total area to be paved or built upon, proposed surface contours, land area to be occupied by the stormwater management facilities and the type of vegetation thereon, and details of the proposed plan to control and dispose of stormwater.
2. Details of all stormwater management facility designs, both during and after construction, including discharge provisions, discharge capacity for each outlet at

different levels of detention and emergency spillway provisions with maximum discharge capacity of each spillway.

f. Calculations

1. Comprehensive hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in Section D of this ordinance.
2. When the proposed stormwater management control measures (e.g., infiltration basins) depends on the hydrologic properties of soils, then a soils report shall be submitted. The soils report shall be based on onsite boring logs or soil pit profiles. The number and location of required soil borings or soil pits shall be determined based on what is needed to determine the suitability and distribution of soils present at the location of the control measure.

g. Maintenance and Repair Plan

The design and planning of the stormwater management facility shall meet the maintenance requirements of Section J.

h. Waiver from Submission Requirements

The municipal official or board reviewing an application under this ordinance may, in consultation with the municipal engineer, waive submission of any of the requirements in Sections I3a through I3f of this ordinance when it can be demonstrated that the information requested is impossible to obtain or it would create a hardship on the applicant to obtain and its absence will not materially affect the review process.

J. Maintenance and Repair

1. Applicability

1. Projects subject to review as in Section A3 of this ordinance shall comply with the requirements of Sections J2 and J3.

2. General Maintenance

- a. The design engineer shall prepare a maintenance plan for the stormwater management measures incorporated into the design of a major development.
- b. The maintenance plan shall contain specific preventative maintenance tasks and schedules; cost estimates, including estimated cost of sediment, debris, or trash removal; and the name, address, and telephone number of the person or persons responsible for preventative and corrective maintenance (including replacement). Maintenance guidelines for stormwater management measures are available in the New Jersey Stormwater Best Management Practices Manual. If the maintenance plan identifies a person other than the developer (for example, a public agency or homeowners' association) as having the responsibility for maintenance, the plan shall include documentation of such person's agreement to assume this responsibility, or of the developer's obligation to dedicate a stormwater management facility to such person under an applicable ordinance or regulation.
- c. Responsibility for maintenance shall not be assigned or transferred to the owner or tenant of an individual property in a residential development or project, unless such

owner or tenant owns or leases the entire residential development or project.

- d. If the person responsible for maintenance identified under Section J2c above is not a public agency, the maintenance plan and any future revisions based on Section J2g below shall be recorded upon the deed of record for each property on which the maintenance described in the maintenance plan must be undertaken.
- e. Preventative and corrective maintenance shall be performed to maintain the function of the stormwater management measure, including repairs or replacement to the structure; removal of sediment, debris, or trash; restoration of eroded areas; snow and ice removal; fence repair or replacement; restoration of vegetation; and repair or replacement of nonvegetated linings.
- f. The person responsible for maintenance identified under Section J2b above shall maintain a detailed log of all preventative and corrective maintenance for the structural stormwater management measures incorporated into the design of the development, including a record of all inspections and copies of all maintenance-related work orders.
- g. The person responsible for maintenance identified under Section J2b above shall evaluate the effectiveness of the maintenance plan at least once per year and adjust the plan and the deed as needed.
- h. The person responsible for maintenance identified under Section J2b above shall retain and make available, upon request by any public entity with administrative, health, environmental, or safety authority over the site, the maintenance plan and the documentation required by Sections J2f and j2g above.
- i. The requirements of Sections J2c and J2d do not apply to stormwater management facilities that are dedicated to and accepted by the municipality or another governmental agency.

(Note: It may be appropriate to delete requirements in the maintenance and repair plan that are not applicable if the ordinance requires the facility to be dedicated to the municipality. If the municipality does not want to take this responsibility, the ordinance should require the posting of a two year maintenance guarantee in accordance with N.J.S.A. 40:55D-53. Guidelines for developing a maintenance and inspection program are provided in the New Jersey Stormwater Best Management Practices Manual and the NJDEP Ocean County Demonstration Study, Stormwater Management Facilities Maintenance Manual, dated June 1989 available from the NJDEP, Watershed Management Program.)

- j. In the event that the stormwater management facility becomes a danger to public safety or public health, or if it is in need of maintenance or repair, the municipality shall so notify the responsible person in writing. Upon receipt of that notice, the responsible person shall have fourteen (14) days to effect maintenance and repair of the facility in a manner that is approved by the municipal engineer or his designee. The municipality, in its discretion, may extend the time allowed for effecting maintenance and repair for good cause. If the responsible person fails or refuses to perform such maintenance and repair, the municipality or County may immediately proceed to do so and shall bill the cost thereof to the responsible person.
3. Nothing in this section shall preclude the municipality in which the major development is located from requiring the posting of a performance or maintenance guarantee in accordance with N.J.S.A. 40:55D-53.

K. Penalties

Any person who erects, constructs, alters, repairs, converts, maintains, or uses any building, structure or land in violation of this ordinance shall be subject to a fine not exceeding \$1,000 or community service not exceeding ten days or any combination thereof.

L. Effective Date

This ordinance shall take effect immediately upon the approval by the county review agency, or sixty (60) days from the receipt of the ordinance by the county review agency if the county review agency should fail to act.

3. That Section 102-69 "Public Use, Service Areas and Easements" of Chapter 102 Development Regulation" is hereby amended and supplemented in the following part only.

§ 102-69. Public use, service areas and easements.

- A. In large scale developments, easements along rear property lines or elsewhere for utility installation may be required. Such easements shall be at least ~~at~~ 25 feet wide and located in consultation with the companies or Township departments and authorities concerned and, to the fullest extent possible, centered on or adjacent to rear or side lot lines. ~~Easement dedication shall be expressed on the plat in accordance with the provisions of §102-54, Drainage. Where a minor or major subdivision or site plan is traversed by a watercourse, surface or underground drainageway system, channel or stream, there shall be provided and dedicated a drainage right-of-way easement to the Township conforming substantially with the lines of such watercourse or drainage system and such further width or construction or both as will be adequate to accommodate expected stormwater runoff in the future based upon reasonable growth potential in the Township and, in addition thereto, a minimum of 15 feet beyond the drainage pipe or bank top on at least one side for access to the drainage system and a minimum of five feet on the other side and, in any event, meeting any minimum widths and locations shown on the adopted Official Map or Master Plan. The purpose of this easement is to protect the integrity and usefulness of the drainage system and to provide access for Township employees or its agents and their vehicles to alter, rebuild, replace, clean, inspect and maintain the drainage structures and system.~~

Such easement dedication shall be expressed on the plat as follows: "Drainage and Utility Right-of-Way easement granted to the Township of Colts Neck for the purpose provided for and expressed in Chapter 102, Development Regulations, of the Code of the Township of Colts Neck." No relocation, construction or reconstruction shall take place within the area of the easement, nor shall any structure be located within such area, nor shall any action be taken which may alter or impair the effectiveness of present or future drainage facilities or the purpose of the easement or cause soil erosion without prior approving authority or the Township Engineer's written approval. The Township shall not be liable for replacing any trees or shrubs, pavement or other improvements destroyed or damaged as a result of carrying out the purpose of the easement.

4. Severability

If the provisions of any section, subsection, paragraph, subdivision, or clause of this ordinance shall be judged invalid by a court of competent jurisdiction, such order of judgment shall not affect or invalidate the remainder of any section, subsection, paragraph, subdivision, or clause of this ordinance.

5. Repealer

The remainder of all other sections and subsections of the aforementioned ordinance not specifically amended by this ordinance shall remain in full force and effect.

6. Inconsistent ordinance.

All ordinances or parts thereof inconsistent with the provisions of this ordinance are hereby repealed as to such inconsistency.

I hereby certify the foregoing to be a true copy of an Ordinance adopted by the Township Committee of the Township of Colts Neck on the 26th day of April, 2006

Kenneth F. Florek, Mayor

Robert Bowden, Township Clerk

ORDINANCE READING	DATE
1ST READING BY TITLE:	March 29, 2006
2ND READING BY TITLE:	April 26, 2006

COLTS NECK TOWNSHIP COMMITTEE					
RECORD OF VOTE	MAYOR FLOREK	DEPUTY MAYOR STUART	BURRY	HENNESSY	FORESTER
<i>Motion To Approve</i>					
<i>Motion Seconded</i>					
<i>Approve</i>					
<i>Opposed</i>					
<i>Not Voting/Recuse</i>					
<i>Absent/Excused</i>					

ORDINANCE - 2006-18

AN ORDINANCE OF THE TOWNSHIP OF COLTS NECK IN THE COUNTY OF MONMOUTH AND THE STATE OF NEW JERSEY AMENDING SECTION 46.4 "STORMWATER MANAGEMENT" IN ARTICLE VII, CHAPTER 102 OF THE CODE OF THE TOWNSHIP OF COLTS NECK

WHEREAS, NJAC 7:8-5C requires Tier A municipalities to adopt minimum Stormwater management measures for major developments; and

WHEREAS, the Township Committee adopted on April 26, 2006 Ordinance 2006-7 Establishing New Section 46.4 Stormwater Management in Article VII, Chapter 102 of the Code of the Township of Colts Neck, and

WHEREAS, Colts Neck's Stormwater Management Ordinance was submitted to the Monmouth County Planning Board for review and approval in accordance with NJAC 7:8-4.4, and

WHEREAS, on June 19, 2006 the Monmouth County Planning Board conditionally approved Colts Neck's Stormwater Control Ordinance by Resolution No. 06-32, and

WHEREAS, the following amendments have been prepared to address the County's Conditional Approval of the Stormwater Management Ordinance and the comments contained in the Stormwater Technical Advisory Committee's synopsis dated June 1, 2006.

NOW, THEREFORE, BE IT ORDAINED by the Township Committee of the Township of Colts Neck, County of Monmouth, State of New Jersey as follows: (additions to text indicated by underline; deletions to text indicated by ~~strikeout~~).

1. That Section 102-46.4C "General Standards" of Chapter 102 Development Regulations is hereby amended in the following parts only.

C. General Standards

1. Design and Performance Standards for Stormwater Management Measures

- a. Stormwater management measures for major development shall be developed to meet the erosion control, groundwater recharge, stormwater runoff quantity, and stormwater runoff quality standards in Section D. To the maximum extent practicable, these standards shall be met by incorporating nonstructural stormwater management strategies into the design. If these strategies alone are not sufficient to meet these standards, structural stormwater management measures necessary to meet these standards shall be incorporated into the design.
- b. The standards in this ordinance apply only to new major development and are intended to minimize the impact of stormwater runoff on water quality and water quantity in receiving water bodies and maintain groundwater recharge. The standards do not apply to new major development to the extent that alternative design and performance standards are applicable under a regional stormwater management plan or Water Quality Management Plan adopted in accordance with Department rules.

~~Note: Alternative standards shall provide at least as much protection from stormwater-related loss of groundwater recharge, stormwater quantity and water quality impacts of major development projects as would be provided under the standards in N.J.A.C. 7:8-5.~~

2. That Section 102-46.4D6a2b of Chapter 102 Development Regulations is hereby amended in the following parts only.
 - (b) This groundwater recharge requirement does not apply to projects subject to ~~D(6)(a)[3]~~ [c] below.
3. That Section 102-46.4H “Safety Standards for Stormwater Management Basins” of Chapter 102 Development Regulations is hereby amended in the following parts only.

H. Safety Standards for Stormwater Management Basins

1. This section sets forth requirements to protect public safety through the proper design and operation of stormwater management basins. This section applies to any new stormwater management basin.

~~Note: The provisions of this section are not intended to preempt more stringent municipal or county safety requirements for new or existing stormwater management basins. Municipal and county stormwater management plans and ordinances may, pursuant to their authority, require existing stormwater management basins to be retrofitted to meet one or more of the safety standards in Sections H2a, H2b, and H2c for trash racks, overflow grates, and escape provisions at outlet structures.~~

4. That Section 102-46.4J2i General Maintenance of Chapter 102 Development Regulations is hereby amended in the following parts only.
 - i. The requirements of Sections J2c and J2d do not apply to stormwater management facilities that are dedicated to and accepted by the municipality or another governmental agency.

~~(Note: It may be appropriate to delete requirements in the maintenance and repair plan that are not applicable if the ordinance requires the facility to be dedicated to the municipality. If the municipality does not want to take this responsibility, the ordinance should require the posting of a two year maintenance guarantee in accordance with N.J.S.A. 40:55D-53. Guidelines for developing a maintenance and inspection program are provided in the New Jersey Stormwater Best Management Practices Manual and the NJDEP Ocean County Demonstration Study, Stormwater Management Facilities Maintenance Manual, dated June 1989 available from the NJDEP, Watershed Management Program.)~~

5. Severability

If the provisions of any section, subsection, paragraph, subdivision, or clause of this ordinance shall be judged invalid by a court of competent jurisdiction, such order of judgment shall not affect or invalidate the remainder of any section, subsection, paragraph, subdivision, or clause of this ordinance.

6. Repealer

The remainder of all other sections and subsections of the aforementioned ordinance not specifically amended by this ordinance shall remain in full force and effect.

7. Inconsistent ordinance.

All ordinances or parts thereof inconsistent with the provisions of this ordinance are hereby repealed as to such inconsistency.

I hereby certify the foregoing to be a true copy of an Ordinance adopted by the Township Committee of the Township of Colts Neck on the 27th day of September, 2006

Kenneth F. Florek, Mayor

Robert Bowden, Township Clerk

ORDINANCE READING	DATE
1 ST READING BY TITLE:	September 6, 2006
2 ND READING BY TITLE:	September 27, 2006

COLTS NECK TOWNSHIP COMMITTEE					
RECORD OF VOTE	MAYOR FLOREK	DEPUTY MAYOR STUART	BURRY	HENNESSY	FORESTER
<i>Motion To Approve</i>			X		
<i>Motion Seconded</i>		X			
<i>Approve</i>	X	X	X	X	
<i>Opposed</i>					
<i>Not Voting/Recuse</i>					
<i>Absent/Excused</i>					X

Tier A Municipal Stormwater Regulation Program

Stormwater Pollution Prevention Team Members

Number of team members may vary.

Completed by: Glenn Gerken, P.E.

Title: Colts Neck Township Municipal Consultant

Date: January 31, 2005

Municipality: Colts Neck Township

County: Monmouth

NJPDES #: NJGNJG0151564

PI ID #: 172078

Stormwater Program Coordinator: Robert Bowden

Title: Colts Neck Township Administrator

Office Phone #: 732-462-5470 ext 107

Emergency Phone #: 908-334-9203

Public Notice Coordinator: Robert Bowden

Title: Colts Neck Township Municipal Clerk

Office Phone #: 732-462-5470 ext 107

Emergency Phone #: _____

Post-Construction Stormwater Management Coordinator: Timothy Anfuso

Title: Township Planning/Zoning Officer

Office Phone #: 732-409-7135

Emergency Phone #: _____

Local Public Education Coordinator: Robert Bowden

Title: Municipal Administrator

Office Phone #: 732-462-5470 ext 107

Emergency Phone #: _____

Ordinance Coordinator: Robert Bowden

Title: Municipal Administrator

Office Phone #: 732-462-5470 ext 107

Emergency Phone #: _____

Public Works Coordinator: Edward Thompson

Title: Director of Public Works

Office Phone #: 732-462-7998

Emergency Phone #: _____

Employee Training Coordinator: Robert Bowden

Title: Municipal Administrator

Office Phone #: 732-462-5470 ext 107

Emergency Phone #: _____

Other: Richard Galinski

Title: Code Enforcement Officer

Office Phone #: 732-462-7548

Emergency Phone #: _____

SPPP Form 2 - Public Notice

Municipality
Information

Municipality: Colts Neck Township

County: Monmouth County

NJPDES # : NJGNJG0151564

PI ID #: 172078

Team Member/Title: Glenn Gerken, Colts Neck Township Municipal Engineer

Effective Date of Permit Authorization (EDPA): April 1, 2004

Date of Completion: January 31, 2005 Date of most recent update: 4/1/2009

Briefly outline the principal ways in which you comply with applicable State and local public notice requirements when providing for public participation in the development and implementation of your stormwater program.

For meetings where public notice is required under the Open Public Meetings Act ("Sunshine Law," N.J.S.A. 10:4-6 et seq.), Colts Neck Township provides public notice in a manner that complies with the requirements of that Act. Also, in regard to the passage or ordinances, Colts Neck Township provides public notice in a manner that complies with requirements of N.J.S.A. 40:49-1 et seq. In addition, for municipal actions (e.g., adoption of the municipal stormwater management plan) subject to public notice requirements in the Municipal Land Use Law (N.J.S.A. 40:55D-1 et seq.), Colts Neck Township complies with those requirements.

SPPP Form 3 – New Development and Redevelopment Program

Municipality Information

Municipality: Colts Neck

County: Monmouth

NJPDES # : NJG0151564

PI ID #: 172078

Team Member/Title: Timothy Anfuso, Township Planner

Effective Date of Permit Authorization (EDPA): April 1, 2004

Date of Completion: 1/31/2005

Date of most recent update: 4/1/2009

Describe in general terms your post-construction stormwater management in new development and redevelopment program (post-construction program), and how it complies with the Tier A Permit minimum standard. This description must address compliance with the Residential Site Improvement Standards for stormwater management; ensuring adequate long-term operation and maintenance of BMPs (including BMPs on property that you own or operate); design of storm drain inlets (including inlets that you install); and preparation, adoption, approval, and implementation of a municipal stormwater management plan and municipal stormwater control ordinance(s). Attach additional pages as necessary. Some additional specific information (mainly about that plan and ordinance(s)) will be provided in your annual reports.

To control stormwater from new development and redevelopment projects throughout Township (including projects we operate) we will do the following:

We are already ensuring that all new residential development and redevelopment projects that are subject to the Residential Site Improvement Standards for stormwater management (including the NJDEP Stormwater Management rules, N.J.A.C. 7:8, referenced in those standards) are in compliance with those standards. Our planning and zoning boards ensure such compliance before issuing preliminary or final subdivision or site plan approvals under the Municipal Land Use Law.

Colts Neck Township has not constructed any new development or redevelopment projects on Township property. If we decide to construct such a project, we will ensure adequate long term operation and maintenance of BMP's for that project by requiring a project maintenance plan and by requiring and funding the implementation of that plan. We will also require any storm drain inlets that we install to comply with the design standard in Attachment C of our permit. We will ensure such operation and maintenance for any new development or redevelopment projects on our property by complying with the maintenance requirements in that manual.

The Planning Board adopted the Stormwater Management Plan Element of the Master Plan on March 11, 2008. The Governing Body adopted the State's model stormwater on September 27, 2006. The documents were approved by the Monmouth County Planning Board on March 14, 2008. These documents are administer by the Planning and Zoning Board's, Township Engineer, Township Planner, DPW and Code Enforcement Officer to ensure that all residential and nonresidential developments comply with the Township's Stormwater Management Plan.

For any BMP that is installed in order to comply with the requirements of our post-construction program. Colts Neck will ensure adequate long term operation as well as preventative and corrective maintenance.

SPPP Form 4- Local Public Education Program

Municipality
Information

Municipality: Colts Neck Township County Monmouth

NJPDES # : 0151564 PI ID #: 172078

Team Member/Title: Timothy Anfuso, Township Planner

Effective Date of Permit Authorization (EDPA): 4/1/2004

Date of Completion: January 31, 2005 Date of most recent update: April 1, 2009

Local Public Education Program

Describe your Local Public Education Program. Be specific on how you will distribute your educational information, and how you will conduct your annual event. Attach additional pages with the date(s) of your annual mailing and the date and location of your annual event.

Colts Neck Local Public Education Program is in compliance with Attachment E of our Tier A NJPDES permit. The Township will conduct the following educational activities that total a minimum of ten points.

Clean Communities will host Earth Day school presentations in the Township elementary and middle schools. In the past the presentation included programs such as "It's All in a Drop" and "Our Planet Earth" (1 point per visit)

Clean Communities will host the annual 4th grade poster contest in which students illustrate some aspect of the harm that litter does to the environment and the steps people can take to recycle and cleanup litter. Clean Communities supplies all materials for the contest. The winners are displayed at Town Hall for a week. (2 points)

Clean Communities will continue to sponsor 4th grade litter and recycling cleanup marches. The entire 4th grade participates in cleaning and recycling their school ground from September through June, once a month. Clean Communities donates \$900 in October and the students use the money to purchase food for the needy (3 points per cleanup).

The Township will distribute DEP educational brochures. Tip cards act a part of its annual recycling news letter (3 points).

SPPP Form 5 – Storm Drain Inlet Labeling

Municipality
Information

Municipality: Colts Neck Township County Monmouth

NJPDES # : NJG0151564 PI ID #: 172078

Team Member/Title: Township Anfuso

Effective Date of Permit Authorization (EDPA): 4/1/2009

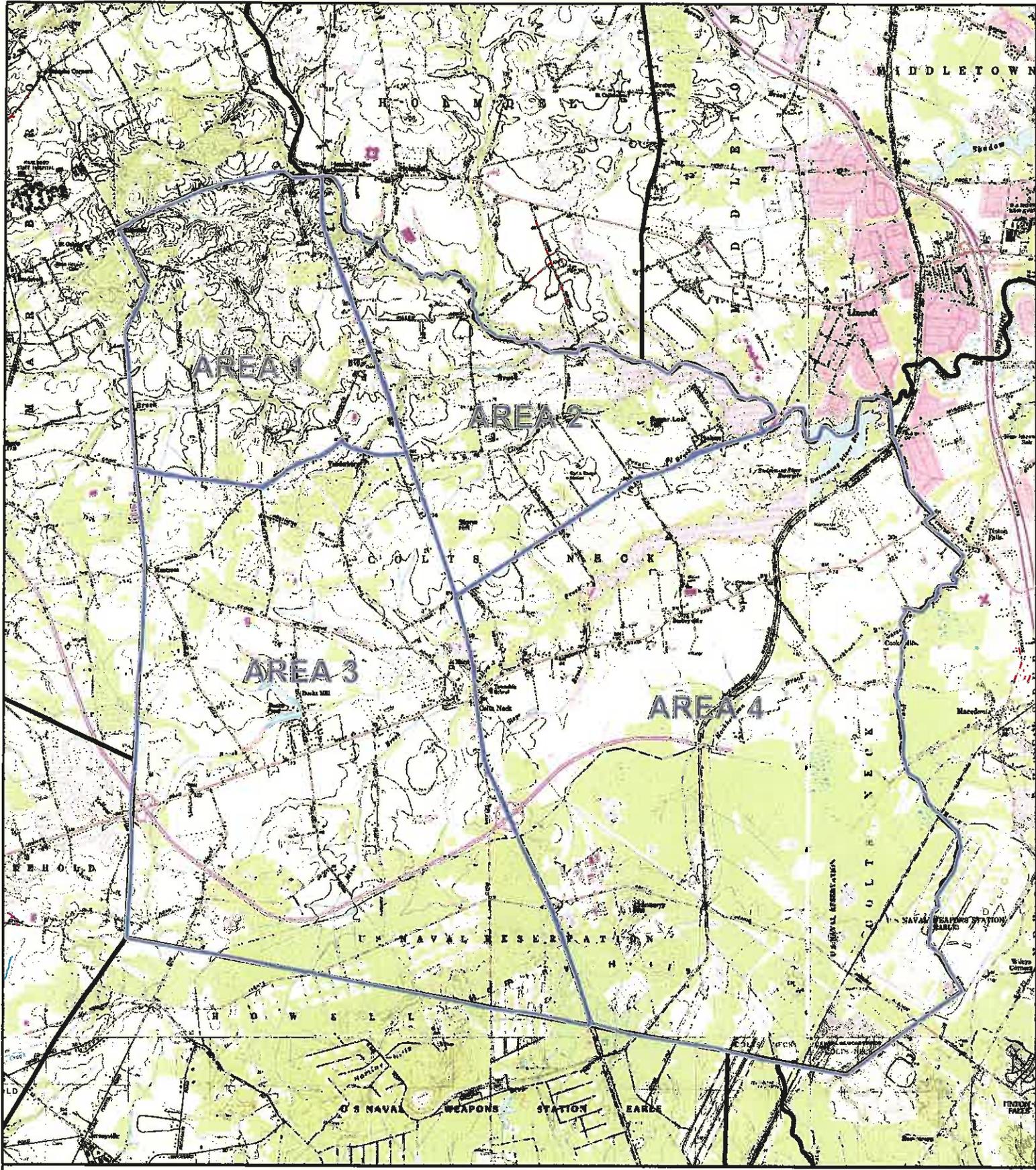
Date of Completion: January 31, 2005 Date of most recent update: April 1, 2009

Storm Drain Inlet Labeling

Describe your storm drain inlet labeling program, including your labeling schedule, the details of your long-term maintenance plan, and plans on coordinating with watershed groups or other volunteer organizations.

The Township has completed labeling all 1,340 of its storm drain inlets. The labeling was performed by Clean Communities and Public Works who used plastic labels that were applied using adhesive.

During our annual catch basin cleaning program Public Works employees will inspect the labels to ensure they are still visible and if they are not, they will be immediately replaced.



Data Type	Source	Relevant Time Period
USGS Quadrangles		Feb-Apr 2002
Municipal Boundary	NJDEP	1989

Outfall Mapping & Inlet Labeling Schedule

Township of Colts Neck Monmouth County, New Jersey

This map was developed using Geographic Information System digital data developed under the auspices of the Department of Environmental Protection. Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not State-authorized.

SPPP Form 6 – MS4 Outfall Pipe Mapping

Municipality
Information

Municipality: Colts Neck Township County Monmouth County

NJPDES # : NJG0151564 PI ID #: 172078

Team Member/Title: Glenn Gerken, Colts Neck Township Municipal Engineer

Effective Date of Permit Authorization (EDPA): 4/1/2004

Date of Completion: January 31, 2005 Date of most recent update: 4/1/2009

Explain how you will prepare your map (include its type and scale, and the schedule for the mapping process). Who will prepare your map (e.g., municipal employees, a consultant, etc.)?

The Colts Neck Township Public Works Department (or a designee) will use a GPS Unit to map out the location of the end of all outfall pipes operated by Colts Neck Township. They will identify, GPS, map and investigate (see Illicit Connection Elimination Program and Outfall Pipe Stream Scouring Remediation Program) each outfall pipe that is located. Colts Neck Township has been divided into four area; Area 1 is the area west of Route 34 and north of Crine Road, Area 2 is the area east of Route 34 and north of Phalanx Road, Area 3 is west of Route 34 and south of Crine Road and Area 4 is east of Route 34 and south of Phalanx Road. Areas 1 and 2 will be mapped by April 2007 and Areas 3 and 4 will be mapped by April 2009.

Once all outfall pipe locations are identified, a map will be developed displaying these outfall pipe locations, with an alphanumeric identifier at a scale of 1 inch = 100 feet. Swimming River and all other waterbodies receiving outfall pipe discharges will also be identified on the map.

The Township of Colts Neck will not map any outfall locations within U.S. Naval Weapons Station Earle.

SPPP Form 7 – Illicit Connection Elimination Program

Municipality Information

Municipality: Colts Neck Township County Monmouth County

NJPDES # : NJG0151564 PI ID #: 172078

Team Member/Title: Timothy Anfuso, Township Planner

Effective Date of Permit Authorization (EDPA): 4/1/2004

Date of Completion: January 31, 2005 Date of most recent update: April 1, 2009

Describe your Illicit Connection Elimination Program, and explain how you plan on responding to complaints and/or reports of illicit connections (e.g., hotlines, etc.). Attach additional pages as necessary.

Colts Neck procedures for detecting, investigating and eliminating illicit connections shall comply with Attachment B of our Tier A Municipal NJPDES permit.

The Township of Colts Neck has only a small area of the Township served by sanitary sewer. We will conduct an initial physical inspection of all of our outfall pipes during the mapping process. We will use the DEP Illicit Connection Inspection Report Form to conduct these inspections, and each of these forms will be kept with our SPPP records. Outfall pipes that are found to have a dry weather flow or evidence of an intermittent non-stormwater flow will be rechecked again to locate the illicit connection. If we are able to locate the illicit connection (and the connection is within Colts Neck Township) we will cite the responsible party for being in violation of our Illicit Connection Ordinance, and we will have the connection eliminate immediately. If, after the appropriate amount of investigation, we are unable to locate the source of the illicit connection, we will submit the Closeout Investigation Form with our Annual Inspection and Recertification. If an illicit connection is found to originate from another public entity, Colts Neck Township will report the illicit connection to the Department.

The Township of Colts Neck will not be involved with any illicit connections in the land area of US Naval Weapon Station Earle.

Reporting of illicit connections can also be made to the Public Works Department.

SPPP Form 8 – Illicit Connection Records

Municipality Information

Municipality: Colts Neck Township County Monmouth County

NJPDES # : NJG0151564 PI ID #: 172078

Team Member/Title: Timothy Anfuso, Colts Neck Township Planner

Effective Date of Permit Authorization (EDPA): 4/1/2004

Date of Completion: January 31, 2005 Date of most recent update: _____

Prior to May 2, 2006

Note: Attach a copy of each illicit connection report form for outfalls found to have a dry weather flow.

Total number of inspections performed this year? 0

Number of outfalls found to have a dry weather flow? 0

Number of outfalls found to have an illicit connection? 0

How many illicit connections were eliminated? N/A

Of the illicit connections found, how many remain? N/A

May 2, 2006 – May 1, 2007

Note: Attach a copy of each illicit connection report form for outfalls found to have a dry weather flow.

Total number of inspections performed this year? 0

Number of outfalls found to have a dry weather flow? 0

Number of outfalls found to have an illicit connection? 0

How many illicit connections were eliminated? N/A

Of the illicit connections found, how many remain? N/A

May 2, 2007 – May 1, 2008

Note: Attach a copy of each illicit connection report form for outfalls found to have a dry weather flow.

Total number of inspections performed this year? 0

Number of outfalls found to have a dry weather flow? 0

Number of outfalls found to have an illicit connection? 0

How many illicit connections were eliminated? N/A

Of the illicit connections found, how many remain? N/A

May 2, 2008 – May 1, 2009

Note: Attach a copy of each illicit connection report form for outfalls found to have a dry weather flow.

Total number of inspections performed this year? 0

Number of outfalls found to have a dry weather flow? 0

Number of outfalls found to have an illicit connection? 0

How many illicit connections were eliminated? N/A

Of the illicit connections found, how many remain? N/A

SPPP Form 9 – Yard Waste Ordinance/Collection Program

Municipality
Information

Municipality: Colts Neck Township County Monmouth County

NJPDES # : NJG0151564 PI ID #: 172078

Team Member/Title: Timothy Anfuso, Township Planner

Effective Date of Permit Authorization (EDPA): 4/1/2004

Date of Completion: January 31, 2005 Date of most recent update: 4/1/2009

Please describe your yard waste collection program. Be sure to include the collection schedule and how you will notify the residents and businesses of this schedule. Attach additional pages as necessary.

The Township collects leaves during the Fall (October, November and December) each year. The Township is divided into four sections for pick up. The schedule is posted on the Township's website. The Township also picks up brush once per month for six months. Our collection schedule is posted on our Township website at <http://www.colts-neck.nj.us>.

Colts Neck Township also adopted and is enforcing a yard waste ordinance (see SPPP /form10) that prohibits all yard wastes from being placed at the curb or along the street more than seven days prior to our scheduled collections, unless they are bagged or otherwise containerized. The ordinance also prohibits the placing of yard waste closer than 10' from any storm sewer inlet along the street, unless they are bagged or otherwise containerized.

SPPP Form 10 - Ordinances

Municipality
Information

Municipality: Colts Neck Township County Monmouth County

NJPDES # : NJG0151564 PI ID #: 172078

Team Member/Title: Glenn Gerken, Colts Neck Township Municipal Engineer

Effective Date of Permit Authorization (EDPA): 4/1/2004

Date of Completion: January 31, 2005 Date of most recent update: _____

For each ordinance, give the date of adoption. If not adopted, explain the development status:

Pet Waste December 5, 2005

Are information sheets regarding pet waste distributed with pet licenses? Y () N ()

Litter December 5, 2005

Improper Waste Disposal December 5, 2005

Wildlife Feeding December 5, 2005

Yard Waste December 5, 2005

Illicit Connections December 5, 2005

How will these ordinances be enforced?

Our Code Enforcement Officer and local Police Officers will enforce these ordinances. If someone is found to be in violation of any ordinance they will be issued a written warning for the first time offense and penalties will be issued for subsequent offenses.

SPPP Form 11 – Storm Drain Inlet Retrofitting

Municipality Information

Municipality: Colts Neck Township County Monmouth

NJPDES # : NJG0151564 PI ID #: 172078

Team Member/Title: Glenn Gerken, Colts Neck Township

Effective Date of Permit Authorization (EDPA): 4/1/2004

Date of Completion: January 31, 2005 Date of most recent update: _____

What type of storm drain inlet design will generally be used for retrofitting?

For most projects Colts Neck Township will use the NJDOT bicycle safe grate style (if needed) a curb opening with a clear space no bigger than two inches across the smallest dimension.

Repaving, repairing, reconstruction or alteration project name	Projected start date	Start date	Date of completion	# of storm drain inlets	# of storm drains w/ hydraulic exemptions
<i>Heyers Mill Road</i>					
<i>Conover Road South</i>					
<i>Mulberry Lane</i>					
<i>Northpoint Drive</i>					

Are you claiming any alternative device exemptions or historic place exemptions for any of the above projects? Please explain:

No alternative device exemptions apply to any of the projects above.

SPPP Form 12 – Street Sweeping and Road Erosion Control Maintenance

Municipality Information

Municipality: Colts Neck Township County: Monmouth County

NJPDES # : NJG0151564 PI ID #: 172078

Team Member/Title: Glenn Gerken, Colts Neck Township Municipal Engineer

Effective Date of Permit Authorization (EDPA): 4/1/2004

Date of Completion: January 31, 2005 Date of most recent update: _____

Street Sweeping

Please describe the street sweeping schedule that you will maintain.

(NOTE: Attach a street sweeping log containing the following information: date and area swept, # of miles swept and the total amount of materials collected.)

Colts Neck Township has evaluated all of its streets to determine which areas will need to be swept monthly. The streets required to be swept monthly are Professional Circle, Merchants Way and Artisan Place.

The Township intends on maintaining its existing streete sweeping program for all other streets (that are not required by the permit), which includes sweeping all streets once a year.

Road Erosion Control Maintenance

Describe your Road Erosion Control Maintenance Program, including inspection schedules. A list of all sites of roadside erosion and the repair technique(s) you will be using for each site should be attached to this form.

(NOTE: Attach a road erosion control maintenance log containing the following information: location, repairs, date)

Colts Neck Township will use the Public Works Department to monitor all their roads and streets for erosion problems during normal patrols. All identified road erosion problems will be reported to Edward Thompson, Director of Public Works. During quarterly SPPP Team meetings, identified areas of erosion will be discussed and repairs prioritized. All maintenance personnel will then be assigned to the areas of concern, and the area identified to have road erosion problems will be repaired in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey. All maintenance personnel will maintain an inspection log, and Edward Thompson will maintain a list of all repairs and the dates completed. The status of the Road Erosion Control Maintenance Program will be included in the Annual Report and Recertification.

SPPP Form 13 – Stormwater Facility Maintenance

Municipality
Information

Municipality: Colts neck Township County: Monmouth County

NJPDES # :NJG0151564 PI ID #: 172078

Team Member/Title: Glenn Gerken, Colts Neck Township Municipal Engineer

Effective Date of Permit Authorization (EDPA): 4/1/2004

Date of Completion: January 31, 2005 Date of most recent update: _____

Please describe your annual catch basin cleaning program and schedule. Attach a map/diagram or additional pages as necessary.

Colts Neck Township will implemetn an annual catch basin cleaning program to maintain catch basin function and efficiency. All catch basins will be inspected once each year. If, at the time of inspection, no sediment, trsh or debris is observed in the catch'asin, then that catch basin will not be cleaned. All catch basins will be inspected yearlty, even if they were found to be "clean" the previous year. At the time of cleaning, the catch basins will also be inspected for property function. Maintenance will be scheduled for those catch basins that are in disrepair. The annual catch basin cleaning program will begin in April of 2005.

Please describe your stormwater facility maintenance program for cleaning and maintenance of all stormwater facilities operated by the municipality. Attach additional pages as necessary.

(NOTE: Attach a maintenance log containing information on any repairs/maintenance performed on stormwater facilities to ensure their proper function and operation.)

Colts Neck Township will implement a stormwater facility maintenance program to ensure that all stormwater facilities operated by the Township function properly. This does not include any facilities located within U.S. Naval Weapons Station Earle.

The stormwater facilities will be inspected annually by the Public Works Department to insure that they are functioning properly. In high risk areas, preventative maintenance will be performed on all stormwater facilities to ensure that they do not begin to fail.

SPPP Form 14 - Outfall Pipe Stream Scouring Remediation

Municipality
Information

Municipality: Colts Neck Township County: Monmouth County

NJPDES # : NJG0151564 PI ID #: 172078

Team Member/Title: Timothy Anfuso, Township Planner

Effective Date of Permit Authorization (EDPA): 4/1/2004

Date of Completion: January 31, 2005 Date of most recent update: April 1, 2009

Describe your stormwater outfall pipe scouring detection, remediation and maintenance program to detect and control active, localized stream and stream bank scouring. Attach additional pages as necessary.

(NOTE: Attach a prioritized list of sites observed to have outfall pipe stream and stream bank scouring, date of anticipated repair, method of repair and date of completion.)

When we are doing the illicit connection part of this program, we will be checking all of our outfall pipes for signs of scouring. all sites will be placed on a prioritized list and repairs will be made in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey. In addition, repairs that do not need NJDEP permits for those repairs may be done first. We will follow each repair up with an annual inspection of the site to ensure that scouring has not resumed.

SPPP Form 15 – De-icing Material Storage

Municipality
Information

Municipality: Colts Neck Township County Monmouth County

NJPDES # : NJG0151564 PI ID #: 172078

Team Member/Title: Glenn Gerken, Colts Neck Township Municipal Engineer

Effective Date of Permit Authorization (EDPA): 4/1/2004

Date of Completion: January 31, 2005 Date of most recent update: April 1, 2009

De-icing Material Storage

Describe how you currently store your municipality's de-icing materials, and describe your inspection schedule for the storage area. If your current storage practices do not meet the de-icing material storage SBR describe your construction schedule and your seasonal tarping interim measures. If you plan on sharing a storage structure, please include its location, as well as a complete list of all concerned public entities. If you store sand outdoors, describe how it meets the minimum standard.

Colts neck Township currently stores its de-icing salt under cover at its maintenance yards located on Public Works Way off of Route 34. In addition, at the completion of loading and unloading activities we shall inspect for spiled salt.

SPPP Form 16 – Standard Operating Procedures

Municipality Information

Municipality: Colts Neck Township County Monmouth County
 NJPDES #: NJG0151564 PI ID #: 172078
 Team Member/Title: Glenn Gerken, Colts Neck Township Municipal Engineer
 Effective Date of Permit Authorization (EDPA): 4/1/2004
 Date of Completion: January 31, 2005 Date of most recent update: April 1, 2009

BMP	Date SOP went into effect	Describe your inspection schedule
Fueling Operations (including the required practices listed in Attachment D of the permit)		<i>The Public Works facility is the only fueling location within the Township, which will be inspected once a month.</i> <i>We will also perform visual inspections before</i>
Vehicle Maintenance (including the required practices listed in Attachment D of the permit)		<i>Monthly inspections will be held to ensure that the SOP is being met.</i>
Good Housekeeping Practices (including the required practices listed in Attachment D of the permit) Attach inventory list required by Attachment D of the permit.		<i>Monthly inspections of all municipal maintenance yards and ancillary operations will be held.</i>

SPPP Form 17 – Employee Training

Municipality
Information

Municipality: Colts Neck County Monmouth

NJPDES # : NJG0151564 PI ID #: _____

Team Member/Title: Timothy Anfuso, Township Planner

Effective Date of Permit Authorization (EDPA): 4/1/2004

Date of Completion: January 31, 2005 Date of most recent update: April 1, 2009

Describe your employee training program. For each required topic, list the employees that will receive training on that topic, and the date the training will be held. Attach additional pages as necessary.

Each year all Public Works employees receive training through the DEP computer generated training program. A link to the Municipal Employee Training Video is found at www.state.nj.us/dep/dwg/tier_a_guidance.htm. At the time of this writing the following training videos were listed on the web page:

Post Construction Stormwater Management

Local Public Education

Improper Disposal of Waste

Solid and Floatable Controls

Maintenance Yard Operations

SPPP Signature Page

Municipality
Information

Municipality: Colts Neck Township County: Monmouth

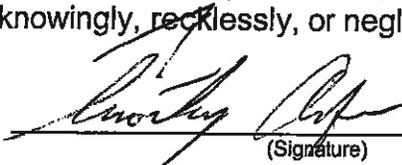
NJPDES # : NJG0151564 PI ID #: 172078

Team Member/Title: Timothy Anfuso, Township Planner

Effective Date of Permit Authorization (EDPA): April 1, 2004

Date of Completion: January 31, 2005 Date of most recent update: April 1, 2009

"I certify that this SPPP includes all of the information and items identified in Attachment A of the Tier A Municipal Stormwater General Permit. All attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for purposely, knowingly, recklessly, or negligently submitting false information."



(Signature)

4/14/09
(Date)

Timothy Anfuso
(Print Name)

Township Planner
(Title)

(NOTE: A new SPPP signature page should be attached each time the SPPP is updated or modified, excluding data entries. Previous SPPP signature pages shall be retained as part of the SPPP.)

Attachment D

REQUIRED PRACTICES FOR FUELING OPERATIONS, VEHICLE MAINTENANCE, AND GOOD HOUSEKEEPING SBRs

A. The following BMPs must be implemented at maintenance yards including maintenance activities at ancillary operations (for example, impound yards, solid waste transfer stations, mobile fueling), where applicable, operated by Tier A Municipalities:

1. Inventory Requirements for Municipal Maintenance Yard Operations (including Ancillary Operations)

a. Tier A Municipalities shall include for municipal maintenance yard operations an inventory that includes the following:

i. A list to be made part of the SPPP of general categories of all materials or machinery located at the municipal maintenance yard, which could be a source of pollutants in a stormwater discharge. The materials in question include, but are not limited to: raw materials; intermediate products; final products; waste materials; by-products; machinery and fuels; and lubricants, solvents, and detergents that are related to the municipal maintenance yard operations or ancillary operations. Materials or machinery that are not exposed to stormwater or that are not located at the municipal maintenance yard or related to its operations do not need to be included.

2. Fueling

- a. No topping off vehicles, mobile fuel tanks, and storage tanks. Drip pans must be used under all hose and pipe connections and other leak-prone areas during bulk transfer of fuels.
- b. Block storm sewer inlets, or contain tank trucks used for bulk transfer, with temporary berms or temporary absorbent booms during the transfer process. If temporary berms are being used instead of blocking the storm sewer inlets, all hose connection points associated with the transfer of fuel must be within the temporary berms during the loading/unloading of bulk fuels. A trained employee must always be present to supervise during bulk fuel transfer.
- c. Clearly post, in a prominent area of the facility, instructions for safe operation of fueling equipment, and appropriate contact information for the person(s) responsible for spill response.
- d. Any equipment, tanks, pumps, piping and fuel dispensing equipment found to be leaking or in disrepair must immediately be repaired or replaced.

3. Vehicle Maintenance

- a. Perform all vehicle and equipment maintenance at an indoor location with a paved floor whenever possible. For projects that must be performed outdoors that last more than one day, portable tents or covers must be placed over the equipment being serviced when not being worked on, and drip pans must be used.

4. General Good Housekeeping

- a. Properly mark or label all containers. Labels must be kept clean and visible. All containers must be kept in good condition and tightly closed when not in use. When practical, containers must be stored indoors. If indoor storage is not practical, containers may be stored outside as long as they are covered and placed on spill platforms. An area that is graded and/or bermed that prevents run-through of stormwater may be used in place of spill platforms. Outdoor storage locations must be regularly maintained.
- b. Conduct cleanups of any spills or liquids or dry materials immediately after discovery. Clean all maintenance areas with dry cleaning methods only. Spills shall be cleaned up with a dry, absorbent material (i.e., kitty litter, sawdust, etc.) and the rest of the area is to be swept. Collected waste is to be disposed of properly. Clean-up materials, spill kits and drip pans must be kept near any liquid transfer areas, protected from rainfall.

5. Good Housekeeping Practices for Salt and De-icing Material Handling

- a. The SPPP for De-icing Material Storage shall include the following required practices to ensure that Municipal Maintenance Yard Operations prevent or minimize the exposure of salt and de-icing materials to stormwater runoff from storage, loading and unloading areas and activities:
 - i. Prevent and/or minimize the spillage of salt and de-icing materials during loading and unloading activities.
 - ii. At the completion of loading and unloading activities, spilled salt and de-icing materials shall be removed using dry cleaning methods and either reused or properly discarded.
 - iii. Sweeping by hand or mechanical means of storage and loading/unloading areas shall be done on a regular basis. More frequent sweeping is required following loading/unloading activities. Sweeping shall also be conducted immediately following, as practicable, loading/unloading activities.
 - iv. Tracking of materials from storage and loading/unloading areas shall be minimized.
 - v. Minimize the distance salt and de-icing materials are transported during loading/unloading activities.
- b. Interim Seasonal Tarping - All Tier A Municipalities must tarp all de-icing materials until a permanent structure is built. Interim storage measures must include, but are not limited to the following:
 - i. Tarping materials that are not actively being used.
 - ii. The storage of de-icing materials (salt and de-icing products) outside is limited to October 15th through April 30th. All salt and de-icing materials must be removed from the site prior to May 1st and may not be stored outside again until October 15th.
 - iii. The implementing of a regular inspection, sweeping and housekeeping program to ensure that the material is maintained and stored in a proper manner.

6. Inspections

a. Inspections of all Municipal Maintenance Yard Operations shall be conducted regularly.

b. Discharge of Stormwater from Secondary Containment

i. The discharge pipe/outfall from a secondary containment area must have a valve and the valve must remain closed at all times except as described below. A municipality may discharge stormwater that accumulated in the secondary containment area if a visual inspection is performed to ensure that the contents of aboveground storage tank have not come in contact with the stormwater to be discharged. Visual inspections are only effective when dealing with materials that can be observed, like petroleum. If the contents of the tank are not visible in stormwater, the municipality must rely on previous tank inspections to determine with some degree of certainty that the tank has not leaked. If the municipality cannot make a determination with reasonable certainty that the stormwater in the secondary containment area is uncontaminated by the contents of the tank, then the stormwater shall be hauled for proper disposal.

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Municipality
Information

Municipality: Colts Neck Township County Monmouth County

NJPDES # : NJGNJG0151564 PI ID #: 172078

Team Member: _____

Date January 31, 2005

Effective Date of Permit Authorization (EDPA): April 1, 2004

Stormwater Pollution Prevention Plan

Have you prepared a Stormwater Pollution Prevention Plan that describes your Stormwater Program?
Y () N ()

Does the SPPP include all of the information and items required by the permit (including Attachment A)?
Y () N ()

Is the SPPP signed and dated? Y () N () Date SPPP signed: _____

Is the SPPP retained by your Municipal Stormwater Program Coordinator? Y () N ()

Was the SPPP amended since the last annual report? Y () N ()

If so, in general terms, what was amended?

Public Notice

Are you complying with applicable State and local public notice requirements when providing for public participation in the development and implementation of your stormwater program?
Y () N ()

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Information

Municipality: Colts Neck Township County Monmouth County

NJPDES # : NJGNJG0151564 PI ID #: 172078

Team Member: _____

Date January 31, 2005 Effective Date of Permit Authorization (EDPA): _____

Post-Construction Stormwater Management in New Development and Redevelopment

Are you ensuring that any residential development and redevelopment projects that are subject to the Residential Site Improvement Standards for stormwater management comply with those standards?

Y () N ()

Are you ensuring adequate long-term operation and maintenance of BMPs on property that you own or operate? Y () N ()

For storm drain inlets that you install, are you complying with the standards set forth in Attachment C of the permit to control passage of solid and floatable materials? Y () N ()

Have you forwarded a copy of the proposed municipal stormwater management plan required by the permit to the county planning board at least 20 days prior to the date of your public hearing on that plan? Y () N ()

Date forwarded: _____

[for purposes of this annual report, "municipal stormwater management plan" means a new municipal stormwater management plan, as well as amendments to an existing municipal stormwater management plan]

Have you adopted a municipal stormwater management plan in accordance with N.J.A.C. 7:8-4? Y () N ()

Date adopted: _____

Status of this plan (if not adopted):

Have you transmitted, within 30 days after adoption, a copy of your adopted municipal stormwater management plan to the county planning board for its information and files? Y () N ()

Date transmitted: _____

Have you forwarded a copy of the proposed municipal stormwater control ordinance(s) required by the permit to the county planning board at least 10 days prior to the date of your public hearing on the ordinance(s)? Y () N ()

Date forwarded: _____

Have you adopted a municipal stormwater control ordinance(s) in accordance with N.J.A.C. 7:8-4?
Y () N ()

Date adopted: _____

Status of this ordinance(s) (if not adopted):

Have you submitted your adopted municipal stormwater management plan and stormwater control ordinance(s) to the appropriate county review agency for approval? Y () N ()

Date submitted: _____

Are your adopted municipal stormwater management plan and stormwater control ordinance(s) approved and in effect? Y () N ()

Effective date: _____

Ordinance number(s): _____

Status of adopted plan and ordinance(s) (if not in effect):

Have you:

Placed your approved municipal stormwater management plan and stormwater control ordinance(s) on your website, and notified the Department, the Soil Conservation District and State Soil Conservation Committee? Y () N () N/A ()

Date you notified the Department: _____

OR

Submitted your approved municipal stormwater management plan and stormwater control ordinance(s) to the Department, and provided notice to the Soil Conservation District and State Soil Conservation Committee? Y () N () N/A ()

Date submitted to the Department: _____

Are you enforcing your approved municipal stormwater control ordinance(s)? Y () N ()

Have you granted any variances or exemptions from the design and performance standards for stormwater management measures set forth in your approved municipal stormwater management plan and stormwater control ordinance(s)? Y () N ()

If yes, does your approved municipal stormwater management plan include a mitigation plan in accordance with N.J.A.C. 7:8-4.2(c)11? Y () N ()

Did you submit a written report to the county review agency and the Department describing the variance or exemption and the required mitigation? Y () N ()

Date(s) report(s) submitted to the Department: _____

For storm drain inlets not installed by you, are you enforcing compliance with the standards set forth in Attachment C of the permit to control passage of solid and floatable materials? Y () N ()

If yes, specify whether such compliance is enforced through your stormwater control ordinance(s) or through a separate ordinance (and provide the separate ordinance number):

Are you ensuring adequate long-term operation and maintenance of BMPs on property that you do not own or operate? Y () N ()

If yes, briefly indicate how this being accomplished (e.g., ordinance requiring operation and maintenance by private entity; operation and maintenance by you or other governmental entity):

Have you reexamined your approved municipal stormwater management plan at each reexamination of your master plan in accordance with N.J.A.C. 7:8-4? Y () N ()

Date reexamination report adopted: _____

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Municipality: Colts Neck Township County: Monmouth County

NJPDES # : NJG NJG0151564 PI ID #: 172078

Team Member: _____

Date January 31, 2005 Effective Date of Permit Authorization (EDPA): April 1, 2004

Local Public Education

Local Public Education Program

Have you developed a Local Public Education Program? Y () N ()

Date development of program completed: _____

Date of Annual Distribution of Educational Brochure: _____

Method of Distribution:

Date of Annual Event: _____

Description of Event:

Storm Drain Inlet Labeling

Have you established a storm drain inlet labeling program? Y () N ()

Have you divided your municipality into two sectors for the purpose of storm drain inlet labeling?
Y () N ()

If "yes," indicate the number of sectors labeled to date: 0 1 2

If "no," please check approximate percentage of storm drain inlets labeled to date:

25% 50% 75% 100% other (specify) _____%

Have you developed a long term maintenance plan for the storm drain inlet labels? Y () N ()

Are you implementing your long-term maintenance plan? Y () N ()

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Team Member: _____

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Improper Disposal of Waste

Have you adopted and are you enforcing a:

Pet Waste Ordinance Y () N () Date adopted: _____

Litter Ordinance Y () N () N/A () Date adopted: _____

State Litter Statute Y () N () N/A ()

Improper Disposal of Waste Ordinance Y () N () Date adopted: _____

Wildlife Feeding Ordinance Y () N () Date adopted: _____

Containerized Yard Waste Ordinance Y () N () N/A () Date adopted: _____

Yard Waste Collection Program Ordinance Y () N () N/A ()
Date adopted: _____

Illicit Connection Ordinance Y () N () Date adopted: _____

Status of these ordinances (if not adopted):

Method(s) of enforcement (e.g., summons, warnings, additional signs, etc.):

Are you distributing the Pet Waste Information Sheets with pet licenses? Y () N ()

Yard Waste Collection Program

Have you developed a yard waste collection program? Y () N () N/A ()

Collection Dates:

October _____ November _____ December _____ Spring Cleanup _____

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Illicit Connection Elimination and MS4 Outfall Pipe Mapping

Outfall Pipe Mapping

Number of sectors with MS4 outfall pipes mapped to date (please check): 0 1 2

Date first sector completed: _____ Date second sector completed: _____

Illicit Connection Elimination Program

Have you developed an Illicit Connection Elimination program? Y () N ()

Date development of program completed: _____

Have you begun the initial physical inspection of all outfall pipes using the Department's Illicit Connection Inspection Report form? Y () N ()

Number of outfalls physically inspected since May 2nd of previous year: _____

Number of outfalls found to have dry weather flows during that period: _____

Number of outfalls found to have an illicit connection during that period: _____

Number of illicit connections found during that period: _____

Number of illicit connections eliminated during that period: _____

(For any outfalls found to have dry weather flows, a copy of the inspection report shall be submitted with this Annual Report and Certification.)

Provide the following information for each outfall found to have an illicit connection since May 2nd of previous year.

Outfall Identifier	Source of Illicit Connection	Date Eliminated

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Street Sweeping Program

Have you developed a Street Sweeping Program? Y () N ()

Were all required streets swept? Y () N ()

Did you sweep more than the required streets? Y () N ()

What was the total number of miles swept? _____ miles.

Please list the total amount of materials collected for each month since May 2nd of previous year:

May _____

June _____

July _____

August _____

September _____

October _____

November _____

December _____

January _____

February _____

March _____

April _____

If street sweeping was not completed for any of these months, please explain:

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Team Member: _____

Date: _____ Effective Date of Permit Authorization (EDPA): April 1, 2004

Stormwater Facility Maintenance

Have you developed a Stormwater Facility Maintenance Program? Y () N ()

Date development of program completed: _____

Catch Basins:

Total number of catch basins that you operate: _____

Were all catch basins inspected and/or cleaned? Y () N ()

Total number of catch basins cleaned: _____

Amount of materials removed from catch basins, if available: _____ SELECT UNIT

Other Stormwater Facilities:

Were all stormwater facilities (e.g., detention basins, filter strips, riparian buffers, infiltration trenches, sand filters, constructed wetlands, wet basins, bioretention systems, low flow bypasses, and stormwater conveyances) that you operate inspected? Y () N ()

Were any found to be in need of cleaning or repair in order to function properly? Y () N ()

Was the cleaning performed? Y () N () Were repairs made? Y () N ()

Describe repair(s) or schedule for repair(s). Attach additional pages as necessary.

Road Erosion Control Maintenance

Have you developed a Roadside Erosion Control Program? Y () N ()

Date development of program completed: _____

Were any areas of road erosion identified? Y () N ()

Attach a sheet identifying the locations of road erosion and whether repairs have been made.

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NJPDES # : NJGNJG0151564 PI ID #: 172078

Team Member: _____

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De-icing Material and Sand Storage

Are you currently using an existing permanent structure for de-icing material storage?

Y () N () N/A ()

If a permanent structure is not yet built, is seasonal tarping being used? Y () N () N/A ()

If you answered N/A to the above questions, please explain:

If sand is being stored outside, is it set back 50 feet from storm sewer inlets, ditches or other stormwater conveyance channels, and surface water bodies? Y () N () N/A ()

Fueling Operations

Are you implementing Standard Operating Procedures for vehicle fueling and receiving of bulk fuel deliveries at maintenance yard operations? Y () N () Date SOP in effect: _____

Vehicle Maintenance

Are you implementing Standard Operating Procedures for vehicle maintenance and repair activities at maintenance yard operations? Y () N () Date SOP in effect: _____

Good Housekeeping Practices

Are you implementing Good Housekeeping Practices for all materials or machinery listed in the Inventory Requirements for Municipal Maintenance Yard Operations (including maintenance activities and ancillary operations)? Y () N () Date practices are in effect: _____

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Date: ____ Effective Date of Permit Authorization (EDPA): April 1, 2004

Sharing of Responsibilities

For each of the following, indicate if you are relying on another entity to satisfy all or part of any permit requirements. For those you checked "yes," please give additional information on or with the appropriate Annual Report and Certification form (attach sheet if needed).

Statewide Basic Requirement	Relying on another entity?	
	"yes"	"no"
Public Notice	<input type="checkbox"/>	<input type="checkbox"/>
Ensure compliance with RSIS for stormwater management	<input type="checkbox"/>	<input type="checkbox"/>
Municipal stormwater management plan	<input type="checkbox"/>	<input type="checkbox"/>
Municipal stormwater control ordinance	<input type="checkbox"/>	<input type="checkbox"/>
Long term operation and maintenance of BMPs (post-construction)	<input type="checkbox"/>	<input type="checkbox"/>
Storm drain inlet design standard (post-construction)	<input type="checkbox"/>	<input type="checkbox"/>
Local Public Education Program	<input type="checkbox"/>	<input type="checkbox"/>
Storm Drain Inlet Labeling Program	<input type="checkbox"/>	<input type="checkbox"/>
Pet waste ordinance	<input type="checkbox"/>	<input type="checkbox"/>
Litter ordinance	<input type="checkbox"/>	<input type="checkbox"/>
Improper disposal of waste ordinance	<input type="checkbox"/>	<input type="checkbox"/>
Wildlife feeding ordinance	<input type="checkbox"/>	<input type="checkbox"/>
Yard waste collection program (including ordinance)	<input type="checkbox"/>	<input type="checkbox"/>
Outfall pipe mapping	<input type="checkbox"/>	<input type="checkbox"/>
Illicit connection ordinance	<input type="checkbox"/>	<input type="checkbox"/>
Illicit connection elimination program	<input type="checkbox"/>	<input type="checkbox"/>
Street sweeping	<input type="checkbox"/>	<input type="checkbox"/>
Storm drain inlet retrofitting	<input type="checkbox"/>	<input type="checkbox"/>
Maintenance of municipally operated stormwater facilities	<input type="checkbox"/>	<input type="checkbox"/>
Road erosion control	<input type="checkbox"/>	<input type="checkbox"/>
Outfall pipe stream scouring	<input type="checkbox"/>	<input type="checkbox"/>
De-icing and sand storage	<input type="checkbox"/>	<input type="checkbox"/>
Fueling operations	<input type="checkbox"/>	<input type="checkbox"/>
Vehicle maintenance	<input type="checkbox"/>	<input type="checkbox"/>
Good housekeeping	<input type="checkbox"/>	<input type="checkbox"/>
Employee Training	<input type="checkbox"/>	<input type="checkbox"/>

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Municipality: Colts Neck County: Monmouth

NJPDES # : NJGNJG0151564 PI ID #: 172078

Team Member: _____

Date: _____ Effective Date of Permit Authorization (EDPA): April 1, 2004

Incidents of Noncompliance

For any incidents of noncompliance, identify the steps being taken to remedy the noncompliance and to prevent such incidents from recurring.

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Team Member: _____

Date _____ Effective Date of Permit Authorization (EDPA): April 1, 2004

Annual Certification

"I certify under penalty of law that this Annual Report and Certification and all attached documents were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate this information. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering this information, the information in this Annual Report and Certification and all attached documents is, to the best of my knowledge and belief, true, accurate and complete.

"I certify that the municipality is in compliance with its stormwater program, Stormwater Pollution Prevention Plan (SPPP) and the NJPDES Tier A Municipal Stormwater General Permit No. NJ0141852 except for any incidents of noncompliance which are identified herein. For any incidents of noncompliance, the Annual Report identifies the steps being taken to remedy the noncompliance and to prevent such incidents from recurring.

"I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for purposely, knowingly, recklessly, or negligently submitting false information."

Signature _____ Date _____

Print or Type Name _____

Print or Type Title _____

WHO MUST SIGN?

Either a principal executive officer or a ranking elected official; or duly authorized representative.

A principal executive officer or ranking elected official of the municipality may assign his or her signatory authority for this Certification to a duly authorized representative, which is a named individual or a title of a position having overall responsibility for the operation of municipal stormwater facilities or municipal environmental matters, by submitting a letter to the Bureau of Permit Management stating said authority and naming the individual or position. The duly authorized representative is the Municipal Stormwater Program Coordinator only if the Coordinator has overall responsibility for the operation of municipal stormwater facilities or municipal environmental matters.

Illicit Connection Inspection Report Form

Municipality
Information

Municipality: Colts Neck County Monmouth

NJPDES # : NJG0151564 PI ID #: 172078

Team Member: _____

Date _____ Effective Date of Permit Authorization (EDPA): April 1, 2004

Outfall #: _____ Location: _____

Receiving Waterbody: _____

1. Is there a dry weather flow? Y () N ()
2. If "YES", what is the outfall flow estimate? _____ gpm
(flow sample should be kept for further testing, and this form will need to be submitted with the Annual Report and Certification)
3. Are there any indications of an intermittent flow? Y () N ()
4. If you answered "NO" to BOTH questions #1 and #3, there is probably not an illicit connection and you can skip to question #7.
(NOTE: This form **does not** need to be submitted to the Department, but should be kept with your SPPP.)

If you answered "YES" to either question, please continue on to question #5.

(NOTE: This form will need to be submitted to the Department with the Annual Report and Certification.)

5. PHYSICAL OBSERVATIONS:

- (a) ODOR: none _____
- (b) COLOR: none _____
- (c) TURBIDITY: none _____
- (d) FLOATABLES: none _____
- (e) DEPOSITS/STAINS: none _____
- (f) VEGETATION CONDITIONS: normal _____
- (g) DAMAGE TO OUTFALL STRUCTURES:
IDENTIFY STRUCTURE: _____
DAMAGE: none _____

6. ANALYSES OF OUTFALL FLOW SAMPLE:

* field calibrate instruments in accordance with manufacturer's instructions prior to testing.

- (a) DETERGENTS: _____ mg/L

(if sample is greater than 0.06 mg/L, the sample is contaminated with detergents [which may be from sanitary wastewater or other sources]. Further testing is required and this outfall should be given the highest priority.)

(if the sample is not greater than 0.06 mg/L and it does not show physical characteristics of sanitary wastewater [e.g., odor, floatables, and/or color] it is unlikely that it is from sanitary wastewater sources, yet there may still be an illicit connection of industrial wastewater, rinse water, backwash or cooling water. Skip to question #6c.)

(b) **AMMONIA (as N) TO POTASSIUM RATIO:** _____

(if the Ammonia to Potassium Ratio is greater than 0.6:1, then it is likely that the pollutant is sanitary sewage)

(if the Ammonia to Potassium Ratio is less than or equal to 0.6:1, then the pollutant is from another wastewater source.)

(c) **FLUORIDE:** _____ mg/L

(if the fluoride levels are between 1.0 and 2.5 mg/L, then the flow is most likely from fluoride treated potable water.)

(if the sample tests below a detection limit of 0.1 mg/L for fluoride, it is likely to be from groundwater infiltration, springs or streams. In some cases, however, it is possible that the discharge could originate from an onsite well used for industrial cooling water, which will test non-detect for both detergents and fluoride. To differentiate between these cooling water discharges and groundwater infiltration, you will have to rely on temperature.)

(d) **TEMPERATURE:** _____ °F

(if the temperature of the sample is over 70°F, it is most likely cooling water)

(if the temperature of the sample is under 70°F, it is most likely from ground water infiltration)

7. Is there a suspected illicit connection? Y () N ()

If "YES", what is the suspected source? _____

If "NO", skip to signature block on the bottom of this form.

8. Has the investigation of the suspected illicit connection been completed?

Y () N ()

If "YES", proceed to question #9.

If "NO", skip to signature block on the bottom of this form.

9. Was the source of the illicit connection found? Y () N ()

If "YES", identify the source. _____

What plan of action will follow to eliminate the illicit connection?

Resolution:

If "NO", complete the Closeout Investigation Form and attach it to this Illicit Connection Inspection Report Form.

Inspector's Name: _____

Title: _____

Signature: _____

Date: _____

If there is a dry weather flow or evidence of an intermittent flow, be sure to include this form with your Annual Report and Certification.

If there is not a dry weather flow or evidence of an intermittent flow, this form should be retained with your SPPP.

Closeout Investigation Form

Municipality
Information

Municipality: Colts Neck County Monmouth

NJPDES # : **NJG**NJG0151564 PI ID #: 172078

Team Member / Title: _____

Outfall #: _____ Location: _____

Receiving Waterbody: _____

Basis for Submittal:

- () A non-stormwater discharge was found, but no source was located within six months.
- () An intermittent non-stormwater discharge was observed, and three unsuccessful investigations were conducted to investigate the discharge while it was flowing.

Describe each phase of your investigation, including dates. Attach additional pages as necessary:

Inspector's Name: _____

Title: _____

Signature: _____

Date: _____

Complete and attach this form to the appropriate Illicit Connection Inspection Report Form and submit with the Annual Report and Certification.