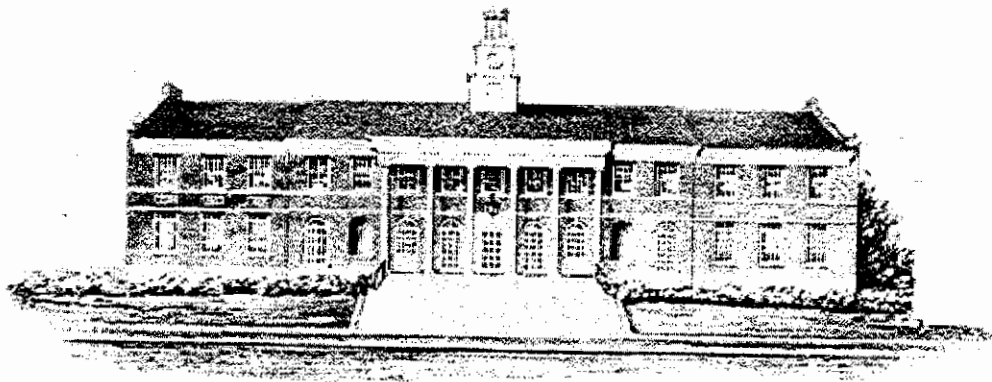


# **TOWNSHIP OF VERONA**

## **Essex County, N.J.**

# **STORMWATER POLLUTION PREVENTION PLAN**



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**James M. Helb, P.E./L.S./P.P.**  
**Township Engineer**  
**August 25, 2006**  
**Revised April 18, 2012**

## SPPP Form 2 - Public Notice

Municipality  
Information

Municipality: Township of Verona

County: Essex

NJPDES # : NJG0152897

PI ID #: 167074

Team Member/Title: Sue Neale, Verona Township Municipal Clerk

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

Date of Completion: July 6, 2005

Date of most recent update: April 17, 2012

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.), the Township of Verona provides public notice in a manner that complies with the requirements of that Act. Also, in regard to the passage of ordinances, the Township of Verona provides public notice in a manner that complies with the 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.), the Township of Verona complies with those requirements.*

# SPPP Form 3 – New Development and Redevelopment Program

Municipality  
Information

Municipality: Township of Verona

County: Essex County

NJPDES # : NJG0152897

PI ID #: 167074

Team Member/Title: James M. Helb, Verona Township Engineer

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

Date of Completion: November 15, 2005

Date of most recent update: April 17, 2012

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.

*Once approved, the ordinance, which will be administered by the Township Planning and Zoning Boards and the Code Enforcement Official, will control stormwater from non-residential development and redevelopment projects. Where it is necessary to implement the Municipal Stormwater Management Plan, the approved ordinance will also control aspects of residential development and redevelopment projects that are not subject to the Residential Site Improvement Standards.*

*For any BMP that is installed in order to comply with the requirements of the Township's post-construction program, the Township of Verona will ensure adequate long-term operation as well as preventative and corrective maintenance (including replacement) of BMP's. For BMP's on private property that the Township does not own, the Township of Verona intends to do this by adopting and enforcing a provision in the Municipal Stormwater Control Ordinance that requires the private entity to perform the operation and maintenance, with penalties if the private entity does not comply. If, for example, the private entity does not perform the required maintenance, the Township can perform the maintenance or hire a qualified professional to perform the maintenance and charge the private entity.*

*The Township of Verona will also enforce, through the Municipal Stormwater Control Ordinance, compliance with the design standard in Attachment C of our permit to control passage of solid and floatable materials through storm drain inlets. The Township of Verona expects that for most projects, such compliance will be achieved either by installation of the NJDOT bicycle safe grate and (if needed) a curb opening with a clear space no bigger than two inches across the smallest dimension or by conveying flows through a trash rack as described in the "Alternative Device Exemptions."*



# SPPP Form 3 – New Development and Redevelopment Program

<b>Municipality Information</b>	Municipality: <u>Township of Verona</u>	County: <u>Essex County</u>
	NJPDES # : <u>NJG0152897</u>	PI ID #: <u>167074</u>
	Team Member/Title: <u>James M. Helb, Verona Township Engineer</u>	
	Effective Date of Permit Authorization (EDPA): <u>April 1, 2004</u>	
	Date of Completion: <u>November 15, 2005</u>	
Date of most recent update: <u>April 17, 2012</u>		

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 the Township of Verona (including projects the Township constructs) we will do the following:*

*The Township is already insuring that all new residential development projects that are subject to the Residential Site Improvement Standards for stormwater management (including NJDEP Stormwater Management rules, N.J.A.C. 7:8, referenced in those standards) are in compliance with those standards. The Planning and Zoning Boards insure such compliance before issuing Preliminary and Final Subdivision or Site Plan approvals under the Municipal Land Use Law.*

*The Township of Verona will require any storm storm drain inlets that the Township installs to comply with the design standard in Attachment C of our permit. Once the Township's Municipal Stormwater Control Ordinance takes effect, the Township will ensure such operation and maintenance for any new development or redevelopment projects on Township property by complying with the maintenance requirements in that ordinance. In addition, any storm drain inlets the Township installs for such projects will comply with that ordinance's standard for such inlets.*

*The Township Planning Board and Municipal Attorney have reviewed the Sample Stormwater Management Plan and Model Stormwater Control Ordinance in the NJ Stormwater BMP Manual and the Township Engineering Department has drafted a Municipal Stormwater Management Plan and the Municipal Stormwater Control Ordinance, both similar to the sample and model. The plan has been adopted by the Township Planning Board and the ordinance will be adopted by the Township Council, by the deadlines specified in the permit and will be submitted to the Essex County Planning Agency for approval.*



# SPPP Form 4- Local Public Education Program

Municipality  
Information

Municipality: Township of Verona County Essex County

NJPDES # : NJG0152897 PI ID #: 167074

Team Member/Title: Noreen Jones, Verona Assistant Township Engineer

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

Date of Completion: July 7, 2005 Date of most recent update: April 17, 2012

## 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.

*For the annual distribution, the Township will mail the NJDEP brochure to the Township residents and businesses. The brochure will be distributed in January with the annual recycling brochure. Extra copies will be available at Town Hall the Township Library and the Township Engineer's Office.*

*The Township of Verona will conduct educational activities that total a minimum of 10 points annually in accordance with any activities on the following list:*

- 1. School Presentations - Present educational classes/assemblies to local elementary, middle, and/or high school classes. (1 point per visit/maximum of 5 points per year)*
- 2. Website - Maintain a stormwater related page on the municipal website and include a link to [www.cleanwater.nj.org](http://www.cleanwater.nj.org). (1 point)*
- 3. Stormwater Display - Present a stormwater related display and materials at any municipal event (e.g. Earth Day, town picnic) or maintain a display at the municipal building. (2 points)*
- 4. Giveaway - Distribute an item with a stormwater related message (e.g. refrigerator magnets, temporary tatoos, bookmarks, coloring books, and pens or pencils). Municipality must purchase a minimum number of the item equal to 10% of the municipal population. (2 points)*
- 5. Citizen Stormwater Advisory Committee - Establish a subcommittee to the Environmental Committee to identify, coordinate and implement stormwater related programs. (2 points)*
- 6. Utilize Department Materials - Use Department created stormwater education materials, which can be found on [www.cleanwater.nj.org](http://www.cleanwater.nj.org) to publish an ad in a newspaper that serves the municipality; broadcast a radio or television commercial on a local radio or municipal public service channel; produce a billboard or sign which can be displayed on a bus, bus stop shelter, or at a recreation field (outfield sign). (2 points each/maximum of 4 points per year)*

## SPPP Form 5 – Storm Drain Inlet Labeling

Municipality  
Information

Municipality: Township of Verona County Essex County

NJPDES # : NJG0152897 PI ID #: 167074

Team Member/Title: James M. Helb, Verona Township Engineer

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

Date of Completion: July 7, 2005 Date of most recent update: April 17, 2012

### 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.

*For the storm drain inlet labeling program, the Township coordinated with the Public Works Department. Labeling of the storm drain inlets is complete. During the annual catch basin cleaning program, the labels will be checked to ensure that they are still visible. If they are not visible or are missing, the label will be replaced.*

*All storm drain inlets that are along municipal streets with sidewalks and storm drain inlets within parking areas or maintenance yards that are operated by Verona Township are labeled.*

*The Township labeled the storm drain inlets using metal markers that read "No Dumping - Drains To River" and the inlet identification number.*

*During the annual catch basin cleaning program, the labels will be checked by the Public Works Employees to ensure that they are still visible. If they are not visible or are missing, the employees will ensure that the labels are replaced in a timely fashion.*



# SPPP Form 4- Local Public Education Program

Municipality  
Information

Municipality: Township of Verona County Essex County

NJPDES # : NJG0152897 PI ID #: 167074

Team Member/Title: Noreen Jones, Verona Assistant Township Engineer

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

Date of Completion: July 7, 2005 Date of most recent update: April 18, 2012

## 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.

7. Poster Contest - Organize a poster contest with a local school district. Poster themes shall have an appropriate stormwater message. Posters are to be displayed at buildings within the municipality such as town hall, library, or school. (2 points)

8. Stormwater Training for Elected Municipal Officials - Conduct a program for all elected municipal officials which educate them on the Stormwater Management Rules (N.J.A.C. 7:8). Tier A Permit and what steps the municipality has already taken to minimize stormwater pollution. (3 points)

9. Mural - Facilitate the planning and painting of a stormwater pollution themed mural at a local downtown/commercial area. (3 points)

10. Mailing - Distribute any of the Department's educational brochures, tip cards, or a municipally produced equivalent (e.g. calendar, recycling schedule), to every resident and business in the municipality. (3 points)

11. Partnership Agreement/Local Event - Identify and enter into a partnership agreement with a local group such as a watershed organization, Riverkeeper, school, youth/faith based group and/or other nonprofit to carry out a minimum of two (2) watershed stewardship/education activities (e.g. litter march, stream/beach cleanup). (3 points)

12. Ordinance Education - Distribute a letter from the mayor to every resident and business in the municipality highlighting the requirements and environmental benefits of the Pet Waste, Litter, Improper Disposal of Waste, Wildlife Feeding, Yard Waste, Illicit Connection, Refuse Container and Private Storm Drain Inlet Retrofitting Ordinances. This letter/article must also reference a page on the municipal website (if applicable) to which residents can go to read these ordinances. (5 points)

## SPPP Form 5 – Storm Drain Inlet Labeling

Municipality  
Information

Municipality: \_\_\_\_\_ County \_\_\_\_\_

NJPDES # : \_\_\_\_\_ PI ID #: \_\_\_\_\_

Team Member/Title: \_\_\_\_\_

Effective Date of Permit Authorization (EDPA): \_\_\_\_\_

Date of Completion: \_\_\_\_\_ Date of most recent update: \_\_\_\_\_

### 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.

## SPPP Form 6 – MS4 Outfall Pipe Mapping

Municipality  
Information

Municipality: Township of Verona County Essex County

NJPDES # : NJG0152897 PI ID #: 167074

Team Member/Title: James M. Helb, Verona Township Engineer

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

Date of Completion: November 15, 2005 Date of most recent update: April 18, 2012

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 Township of Verona is using a GPS mapping system, prepared by Hatch Mott MacDonald, to map the location of the end of all outfall pipes operated by the Township of Verona. The map has identified and mapped each outfall pipe that was located. Each outfall was investigated for any illicit connections.*

# SPPP Form 7 – Illicit Connection Elimination Program

Municipality  
Information

Municipality: Township of Verona County Essex County

NJPDES # : NJG0152897 PI ID #: 167074

Team Member/Title: James M. Helb, Verona Township Engineer

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

Date of Completion: July 8, 2005 Date of most recent update: April 18, 2012

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.

*During the initial mapping process, the Township's consultant physically inspected and photographed all outfall pipes.*

*The Township of Verona will investigate illicit connections through citizen complaints. The Department of Public Works has a phone number and an email address where citizens can phone in/send in complaints and concerns.*

*If the outfall pipe is found to have dry weather flow or evidence of an illicit connection, the Township will investigate. If the Township can identify the illegal connection and the connection is within the Township of Verona, the Township will cite the responsible party for being in violation of the Township's Illicit Connection Ordinance. The Township will direct the responsible party to eliminate the connection immediately. If after a thorough investigation, the Township can not identify the source of the illicit connection, the Township will compile a Closeout Investigation Report. If the illicit connection is found to be in another municipality, the Township of Verona will inform that municipality.*

# SPPP Form 8 – Illicit Connection Records

Municipality Information

Municipality: Township of Verona County Essex County

NJPDES # : NJG0152897 PI ID #: 167074

Team Member/Title: James M. Helb, Verona Township Engineer

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

Date of Completion: November 15, 2005 Date of most recent update: April 18, 2012

**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? \_\_\_\_\_

Number of outfalls found to have a dry weather flow? \_\_\_\_\_

Number of outfalls found to have an illicit connection? \_\_\_\_\_

How many illicit connections were eliminated? \_\_\_\_\_

Of the illicit connections found, how many remain? \_\_\_\_\_

**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? \_\_\_\_\_

Number of outfalls found to have a dry weather flow? \_\_\_\_\_

Number of outfalls found to have an illicit connection? \_\_\_\_\_

How many illicit connections were eliminated? \_\_\_\_\_

Of the illicit connections found, how many remain? \_\_\_\_\_

**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? \_\_\_\_\_

Number of outfalls found to have a dry weather flow? \_\_\_\_\_

Number of outfalls found to have an illicit connection? \_\_\_\_\_

How many illicit connections were eliminated? \_\_\_\_\_

Of the illicit connections found, how many remain? \_\_\_\_\_

**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? \_\_\_\_\_

Number of outfalls found to have a dry weather flow? \_\_\_\_\_

Number of outfalls found to have an illicit connection? \_\_\_\_\_

How many illicit connections were eliminated? \_\_\_\_\_

Of the illicit connections found, how many remain? \_\_\_\_\_

# SPPP Form 9 – Yard Waste Ordinance/Collection Program

Municipality  
Information

Municipality: Township of Verona County Essex County

NJPDES # : NJG0152897 PI ID #: 167074

Team Member/Title: Chuck Molinaro, Public Works Supervisor

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

Date of Completion: July 8, 2005 Date of most recent update: April 18, 2012

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 of Verona has considered the two options available and has decided to adopt and enforce an ordinance that prohibits placing non-containerized yard waste in the street.*

*The Township contracts with an outside agency, through a bidding process, to conduct weekly collection of yard waste in biodegradable bags, as approved by the Township Engineer from March 1 through December 31. Grass, leaves, yard waste consisting of hedge and brush clippings, weed and other vegetative waste materials, when packed in biodegradable bags or tied in bundles weighing less than fifty (50) pounds is picked up curbside on Wednesdays from March 1 to December 31 by the Garbage Collection Contractor. Residents are limited to four (4) bags or bundles per pick up which must be placed at the curb no later than 6:00 am on the day of collection or no earlier than 7:00 pm on the day before collection. During the months of April, May, October, November and December residents may bring their vegetative waste for composting to the terminus of Commerce Court on Wednesdays, Saturdays and Sundays. Gardeners servicing Verona residents are required to secure a permit from the Public Works Department before being allowed to dump yard waste at the Commerce Court site. The accumulated yard waste is mulched and removed in containers, by an outside contractor hired through a bidding process, twice a year. The yard waste collection schedule is contained in the annual Solid Waste Disposal and Recycling Procedure mailed to each resident in the Township and is also posted on the Township's website.*

*The Township of Verona has adopted and will enforce a yard waste ordinance (see SPPP Form 10) that will prohibit all yard wastes from being placed at the curb unless they are bagged in a biodegradable bag approved by the Township Engineer.*

# SPPP Form 10 - Ordinances

Municipality Information

Municipality: Township of Verona County Essex County

NJPDES # : NJG0152897 PI ID #: 167074

Team Member/Title: Paul Giblin, Township Attorney and James M. Helb, Verona Township Engineer

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

Date of Completion: November 21, 2005 Date of most recent update: August 25, 2006

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

Pet Waste adopted 11/21/05

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

Litter adopted 11/21/05

Improper Waste Disposal adopted 11/21/05

Wildlife Feeding adopted 11/21/05

Yard Waste adopted 11/21/05

Illicit Connections adopted 11/21/05

How will these ordinances be enforced?

*The ordinance will be enforced by the Police Department of the Township of Verona and/or other municipal officials of the Township of Verona. If someone is found to be in violation of the ordinance, they shall be required to pay a fine not to exceed \$250.00.*

# SPPP Form 11 – Storm Drain Inlet Retrofitting

Municipality Information

Municipality: Township of Verona County Essex County

NJPDES #: NJG0152897 PI ID #: 167074

Team Member/Title: James M. Helb, Township Engineer and Chuck Molinaro, Public Works Supervisor

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

Date of Completion: November 15, 2005 Date of most recent update: April 18, 2012

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

*For most projects the Township of Verona will use the NJDOT bicycle safe grates and, if needed, a curb opening with a clear space no larger 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>Stocker Road Reconstruction</i>	<i>11/04</i>	<i>11/04</i>	<i>4/05</i>	<i>4</i>	<i>0</i>
<i>Upland Way Reconstruction</i>	<i>11/04</i>	<i>11/04</i>	<i>4/05</i>	<i>9</i>	
<i>Manor Road Reconstruction</i>	<i>6/05</i>	<i>6/05</i>	<i>8/05</i>	<i>5</i>	
<i>Elmwood Road Reconstruction</i>	<i>7/05</i>	<i>7/05</i>	<i>9/05</i>	<i>3</i>	
<i>Overhill Road Reconstruction</i>	<i>7/05</i>	<i>7/05</i>	<i>9/05</i>	<i>2</i>	

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

*The Township of Verona does not operate any alternative devices within the Township. At this time the Township does not plan on installing any such devices for repaving, repairing, reconstruction or alteration projects. The Township also does not plan on claiming any historic place exemptions at this time.*



# SPPP Form 12 – Street Sweeping and Road Erosion Control Maintenance

Municipality  
Information

Municipality: Township of Verona County: Essex County

NJPDES # : NJG0152897 PI ID #: 167074

Team Member/Title: Chuck Molinaro, Public Works Supervisor

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

Date of Completion: July 12, 2005 Date of most recent update: April 18, 2012

## 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.)

*The Township of Verona has evaluated all of its streets to determine which areas will need to be swept monthly, weather permitting.*

*The Township of Verona will maintain its existing street sweeping program for all other streets (that are not required by the permit), which includes sweeping all streets at least 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)

*Since a majority of the municipally maintained roads in Verona Township are curbed, road erosion is not a major problem in the Township. However, the Township will use the Public Works Department and citizen complaints to monitor all the roads and streets for erosion problems during normal patrols. All identified road erosion problems will be reported to the Public Works Supervisor. Maintenance personnel will be assigned to the areas of concern and the areas identified to have road erosion problems will be repaired in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey.*

# SPPP Form 13 – Stormwater Facility Maintenance

Municipality  
Information

Municipality: Township of Verona County: Essex County

NJPDES # : NJG0152897 PI ID #: 167074

Team Member/Title: Chuck Molinaro, Public Works Supervisor

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

Date of Completion: July 12, 2005 Date of most recent update: April 18, 2012

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

*The annual catch basin cleaning is scheduled by street or by citizen complaint. When a catch basin is inspected a catch basin inspection/repair order form is filled out. The basin is cleaned and the forms are returned to the Supervisor of Public Works. If additional repairs need to be done, the repairs are scheduled. If extensive repairs are needed, a list is compiled. These repairs are done by an outside contractor, through a bidding process.*

*Areas where there are water ponding issues or excessive debris problems are inspected/cleaned more frequently, especially before a predicted storm.*

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.)

*Verona Township will implement a stormwater facility maintenance program to ensure that all stormwater facilities operated by the Township function properly. Verona Township operates the following:*

- catch basins
- storm drains

*These stormwater facilities will be inspected annually to ensure 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: Township of Verona County: Essex County

NJPDES # : NJG0152897 PI ID #: 167074

Team Member/Title: James M. Helb, Township Engineer and Chuck Molinaro, Public Works Supervisor

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

Date of Completion: July 12, 2005 Date of most recent update: \_\_\_\_\_

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 the Township does the illicit connection part of this program, it will check all 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.*

*The Township will follow each repair up with an annual inspection of the site to ensure that scouring has not resumed.*

*The Township will maintain a list of all sites with outfall pipe stream scouring, the date the Township plans on repairing the scouring and the method of repair. When repairs are completed the date will be noted on the form.*

# SPPP Form 15 – De-icing Material Storage

Municipality  
Information

Municipality: Township of Verona County Essex County

NJPDES # : NJG0152897 PI ID #: 167074

Team Member/Title: Chuck Molinaro, Public Works Supervisor

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

Date of Completion: August 10, 2005 Date of most recent update: April 17, 2012

## 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.

*The Township of Verona currently shares a permanent de-icing salt structure with Essex County. The structure is owned by Essex County and is located behind the county building located on Bloomfield Avenue in Verona.. At the completion of loading and unloading activities the site is inspected for spilled salt.*

# SPPP Form 67 – Standard Operating Procedures

Municipality Information

Municipality: Township of Verona County Essex County

NJPDES # : NJG 0152897 PI ID #: 167074

Team Member/Title: Chuck Molinaro, Public Works Supervisor

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

Date of Completion: November 18, 2005 Date of most recent update: April 17, 2012

BMP	Date SOP went into effect	Describe your inspection schedule
Fueling Operations (including the required practices listed in Attachment D of the permit)	11/2005	Verona Township has only one fueling location on Ozone Avenue, which will be inspected once a month.
Vehicle Maintenance (including the required practices listed in Attachment D of the permit)	11/2005	Monthly inspections will be performed to ensure that the SOP are being met.
Good Housekeeping Practices (including the required practices listed in Attachment D of the permit)	11/2005	Monthly inspections of all municipal maintenance yards will be performed.
Attach inventory list required by Attachment D of the permit.		

# **Township of Verona**

## **Standard Operating Procedure**

### **Good Housekeeping**

---

#### Township of Verona Good Housekeeping Goals

- Proper Recycling
- Proper Waste Disposal
- Pollution Prevention

**Introduction and Purpose**      This Standard Operating Procedure contains the basic practices of good housekeeping to be implemented at maintenance yards including maintenance activities at ancillary operations in the Township of Verona. The purpose of this SOP is to provide a set of guidelines for the employees of the Township of Verona for Good Housekeeping Practices at their maintenance yards including maintenance yards at ancillary operations.

**Scope**      This SOP applies to all maintenance yards including maintenance activities at ancillary operations in the Township of Verona.

**Standards and Specifications (General)**

1. All containers should be properly labeled and marked and the labels must remain clean and visible.
2. All containers must be kept in good condition and tightly closed when not in use.
3. When practical, chemicals, fluids and supplies should be kept indoors.
4. If containers are stored outside, they must be covered and placed on spill platforms.
5. Keep storage areas clean and well organized.
6. Spill kits and drip pans must be kept near any liquid transfer areas, protected from rainfall.
7. Absorbent spill clean-up materials must be available in maintenance areas and shall be disposed of properly after use.
8. Place trash, dirt and other debris in the dumpster.
9. Collect waste fluids in properly labeled containers and dispose of them properly.
10. Establish and maintain a recycling program by disposing papers, cans, bottles and trash in designated bins.

**Standards and Specifications (Salt and De-Icing Material Handling)**

1. During loading and unloading of salt and de-icing materials, prevent and/or minimize spills. If salt or de-icing materials are spilled, remove the materials using dry cleaning methods. All collected materials shall be either reused or properly discarded.
2. Sweeping should be conducted once a week to get rid of dirt and other debris. Sweeping should also be conducted immediately

following loading/unloading activities, when practical.

3. Minimize the tracking of materials from storage and loading/unloading areas.
4. Minimize the distance that salt and de-icing materials are transported during loading/unloading activities.
5. Any materials that are stored outside must be tarped when not actively being used.
6. If interim seasonal tarping is being implemented, de-icing materials may be stored outdoors only between October 15<sup>th</sup> through April 30<sup>th</sup>.

Spill Response  
And Reporting

1. Conduct clean up of any spill(s) immediately after discovery.
2. Spills are to be cleaned using dry cleaning methods only.
3. Contact the Township of Verona Spill Response Team at 973-857-4804 during business hours or the Police Department at 973-239-5000 after hours.

Maintenance  
And Inspection

1. Periodically check for leaks and damaged equipment and make repairs as necessary.
2. Perform monthly inspections of all (indoor and outdoor, if applicable) storage locations.

**TOWNSHIP OF VERONA**  
**STORM DRAIN INLET RETROFITTING**

**MAY 2006 TO DECEMBER 2011**

For these projects the Township of Verona used the NJDOT bicycle safe grates and a curb opening with a clear space no larger than two inches across the smallest dimension.

<b><u>RECONSTRUCTION PROJECT NAME</u></b>	<b><u>DATE COMPLETED</u></b>	<b><u>NUMBER OF INLETS</u></b>
1. Birdseye Glen	May 15, 2006	7
2. Sylvan Road (Birdseye Glen to Valhalla Way)	May 15, 2006	2
3. Cumberland Road	Novemebr 10, 2006	23
4. Hillside Avenue (Forest Avenue to End)	Novemebr 17, 2006	14
5. Hill Street and Meadow Lane	December 29, 2006	9
6. Civic Center	April 30, 2007	8
7. Sampson Drive	2008	4
8. Woodland Avenue and Wildwood Terrace	2008	12
9. Hathaway Lane	2008	2
10. Fellswood Road	2008	1



11.	Old Farm Road	2008	1
12.	Derwent Avenue	2009	14
13.	Edgemere Road	2009	2
14.	Morningside Road – Section I	2009	16
15.	Oakridge Road	2009	23
16.	Beechwood Road	2009	3
17.	Personette Avenue	2009	5
18.	Gould Street	2009	3
19.	Midwood Avenue	2009	2
20.	Westland Road	2009	6
21.	Spruce Lane	2009	0
22.	Gordon Place	2009	4
23.	Valhalla Way	2009	4
24.	Gerdes Avenue	2009	17
25.	Fairway Avenue – Section I	2009	8
26.	Bloomfield Avenue (Fairview Ave to Linn Drive)	2009	6 (reconstruct only)
27.	Hillside Avenue and Forest Avenue	2010	42

28.	Mountainview Road and Randolph Place	2010	9
29.	Park Avenue	2010	10
30.	Wayland Drive and Winding Way	2010	8
31.	White Rock Road	2011	3
32.	Brookdale Avenue, Brookdale Court & Sunset Avenue	2011	14
33.	East and West Lincoln Avenue	2011	15
34.	Fairway Avenue – Section II	2011	24
35.	Fells Road and Vincent Place	2011	15
36.	Morningside Road – Section II	2011	10
37.	Church Street	2011	5

Tier A Municipal Stormwater Regulation Program

## Stormwater Pollution Prevention Team Members

Number of team members may vary.

Completed by: Noreen Jones

Title: Assistant Township Engineer

Date: April 17, 2012

Municipality: Township of Verona

County: Essex County

NJPDES #: NJG0152897

PI ID #: 167074

Stormwater Program Coordinator: James M. Helb

Title: Verona Township Engineer

Office Phone #: (973)857-4803

Emergency Phone #: (973)650-6910

Public Notice Coordinator: Sue Neale

Title: Verona Township Municipal Clerk

Office Phone #: (973)857-4771

Emergency Phone #: \_\_\_\_\_

Post-Construction Stormwater Management Coordinator: James M Helb

Title: Verona Township Engineer

Office Phone #: (973)857-4803

Emergency Phone #: \_\_\_\_\_

Local Public Education Coordinator: James M Helb

Title: Verona Township Engineer

Office Phone #: (973)857-4803

Emergency Phone #: \_\_\_\_\_

Ordinance Coordinator: Paul Giblin

Title: Township Attorney

Office Phone #: (201)262-9500

Emergency Phone #: \_\_\_\_\_

Public Works Coordinator: Chuck Molinaro

Title: Public Works Supervisor

Office Phone #: (973)857-4845

Emergency Phone #: (973)650-6908

Employee Training Coordinator: Noreen Jones

Title: Verona Assistant Township Engineer

Office Phone #: (973)857-4803

Emergency Phone #: \_\_\_\_\_

Other: Tom Jacobson

Title: Code Enforcement Officer

Office Phone #: (973)857-4836

Emergency Phone #: (973)650-6912

**Township of Verona**  
**Standard Operating Procedures**  
**Vehicle and Equipment List**

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Township of Verona  
Vehicles Located at Public Works Yard

MG72816	41	2007	1J8GR48K07C687869	JEEP
MG91034	44	2011	1FTBF3B63BEC06932	FORD
MG35119	43	1998	1GDM7C1J1WJ506196	GMC
MG55943	401	2003	1FTNF21L63EC73976	FORD
MG28460	45	1997	1FDXF70J6VVA42337	FORD
MG72819	46	2007	1HTWDAAR67J522107	INTERNATIONAL
MG47614	42	2001	1FDSF35L11ED78341	FORD
MG53814	49	2002	1FDWF37L92ED26536	FORD
MG86943	47	2010	1FLR1FE9A14032	FORD
MG70520	402	2006	1FDWF37Y56ED84418	FORD
MG28504	403	1997	1FDKF38G8VEA95410	FORD
MG66138	404	2006	1HTWDAAR26J236625	INTERNATIONAL
MG81027	405	2009	1FTWF316519EA15854	FORD
MG72778	406	2007	1HTWDAAR47J22106	INTERNATIONAL
MG81162	407	2009	1HTWDAARX9J124501	INTERNATIONAL
MG72762	408	2007	JCB42600E61231742	JCB
MG47613	40	2001	1FDWF37L51ED78342	FORD
MG91067	409	2012	1FTBF3B62CEA29839	FORD
MG9770	410	1994	A428116	FORD BACKHOE
MG70517	411	2006	1FTNF21566ED48438	FORD
MG81064	413	2009	1FTWF31559EA15839	FORD

**Township of Verona**  
**Standard Operating Procedures**  
**Vehicle and Equipment List**

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Township of Verona  
Equipment Located at Public Works Yard

MG15XH	1991	CD4039D103037	INGERSOLLRAND
MG34XE	1988	1120TR207JS060004	ASPLUNDH CHIPPER
MG35120	1983	4M 304DX	RED TRAILER MODEL# TA 612-4M
	2004	101061	BLACK RECREATION TRAILER
MG40655	2000	13ZSA1017Y1001585	PARKER TRAILER (PATCH)
MG55944	2003	SG012403TCMPRS612	TORO GROUNDMASTER
MG75907	2007	13ZLS091271004276	PARKER TRAILER (LANDSCAPE)
MG83522	2010	5N6200F29A1028124	BOX TRAILER
MG89631	2011	1B9UT2026BL667469	BELMONT TRAILER (B&G)
MG91035	2011	1F9P41624BM339070	HOT BOX 4 TONS - MODEL 4D1XID

# **Township of Verona**

## **Standard Operating Procedures**

### **Vehicle Maintenance**

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#### Township of Verona

#### Maintenance Yards

#### BMP Objectives

- Waste Management
- Spill Prevention, Containment and Countermeasures
- Pollution Control

Introduction and Purpose	This SOP contains the basic practices of vehicle maintenance to be implemented at all maintenance yards including maintenance activities at ancillary operations in the Township of Verona. The purpose of this SOP is to provide a set of guidelines for the Township of Verona vehicle maintenance yards including maintenance activities at ancillary operations.
Scope	This SOP applies to all maintenance yards including maintenance activities at ancillary operations within the Township of Verona.
Standards and Specifications	<ol style="list-style-type: none"><li>1. Perform all vehicle and equipment maintenance at an indoor location with a paved floor whenever possible.</li><li>2. When possible, perform all vehicle and equipment maintenance at an indoor location with a paved floor.</li><li>3. Always use drip pans.</li><li>4. Absorbent spill clean-up materials shall be available in maintenance areas and shall be disposed of properly after use.</li><li>5. Maintenance areas shall be protected from stormwater run-on and runoff, and whenever possible shall be located at least 50 feet downstream of drainage facilities and watercourses.</li><li>6. 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.</li><li>7. Do not dump or dispose oils, grease, fluids, and lubricants onto the ground.</li><li>8. Do not dump or dispose of batteries, used oils, antifreeze and other toxic fluids into a storm drain or watercourse.</li><li>9. Do not bury tires.</li><li>10. Collect waste fluids in properly labeled containers and dispose of properly.</li></ol>

Spill Response  
and Reporting

1. Provide spill containment dikes or secondary containment around stored oils and other fluid storage drum(s).
2. Conduct cleanups of any fuel spills immediately after discovery.
3. Spills are to be cleaned using dry cleaning methods only. Spills shall be cleaned up with a dry, absorbent material (e.g., kitty litter, sawdust, etc.) and the rest of the area is to be swept.
4. Collected waste is to be disposed of properly.
5. Contact the Township of Verona Spill Response Team at 973-857-4804 during business hours or the Police Department at 973-239-5000 after hours.

Maintenance  
and Inspection

1. Periodically check for leaks and damaged equipment and make repairs as necessary.

# **Township of Verona**

## **Standard Operating Procedures**

### **Vehicle and Equipment Fueling**

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#### Township of Verona

#### Fueling Operations Locations

Ozone Avenue Pump House

Introduction and Purpose	Vehicle and equipment fueling procedures and practices are designed to minimize surface or ground waters. Understanding the procedures for delivering fuel into vehicles, mobile fuel tanks, and storage tanks is critical for this purpose. Safety is always the priority.
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Scope	These procedures are to implemented at all locations with fueling, including mobile fueling operations.
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Standards and Specifications (for vehicle and equipment fueling)	<ol style="list-style-type: none"><li>1. Shut the engine off.</li><li>2. Ensure that the fuel is the proper type of fuel.</li><li>3. Absorbent spill clean-up materials and spill kits shall be available in fueling areas and on mobile fueling vehicles and shall be disposed of properly after use.</li><li>4. Nozzles used in vehicle and equipment fueling shall be equipped with an automatic shut-off to prevent overfill.</li><li>5. No "topping off" vehicles, mobile fuel tanks, and storage tanks.</li><li>6. Mobile fueling shall be minimized. Whenever practical, vehicles and equipment shall be transported to the designated fueling area in the maintenance yard.</li><li>7. 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.</li></ol>
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Standards and Specifications (for bulk fueling)	<ol style="list-style-type: none"><li>1. Drip pans or absorbent pads shall be used under all hose and pipe connections and other leak-prone areas during bulk transfer of fuels.</li><li>2. 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 inlets, all hose connection points associated with the transfer of fuel must be within the temporary berms during the loading/unloading of bulk fuels.</li></ol>
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3. Protect fueling areas with berms and/or dikes to prevent run-on, runoff and to contain spills.
4. A trained employee must always be present to supervise during bulk transfer.

#### Spill Response

1. Conduct cleanups of any fuel spills immediately after discovery.
2. Uncontained spills are to be cleaned using dry cleaning methods only. Spills shall be cleaned up with a dry, absorbent material (e.g. kitty litter, sawdust, etc.) and absorbent materials shall be swept up.
3. Collected waste is to be disposed of properly.
4. Contact the Township of Verona Spill Response Team at 973-857-4804 during business hours or the Police Department at 973-239-5000 after hours.

#### Maintenance and Inspection

1. Fueling areas and storage tanks shall be inspected monthly.
2. Keep an ample supply of spill cleanup material on the site.
3. Any equipment, tanks, pumps, piping and fuel dispensing equipment found to be leaking or in disrepair must be repaired or replaced.
4. The valve on the discharge pipe from the secondary containment area of the aboveground fuel storage tank at the Ozone Avenue Pump Station shall remain closed at all times except as described below. Visual inspections shall be performed before discharging stormwater through that valve to ensure that fuel in that tank has not come into contact with the stormwater to be discharged.

**Addendum #5**  
**Township of Verona Master Plan**  
Adopted

The following amendment to the Master Plan has been adopted by the Planning Board of the Township of Verona based upon a Public Hearing held on March 24, 2005. The amendment completely supercede the corresponding sections in the June 25, 1992 Master Plan.

**STORMWATER MANAGEMENT PLAN**

**TOWNSHIP OF VERONA**

**ESSEX COUNTY, NEW JERSEY**

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## **INTRODUCTION**

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

The final section includes mitigation strategy for when a developer applies for and is granted a variance from the design and performance standards. The mitigation section identifies specific stormwater management measures to lessen the impact of the proposed development.

## **GOALS**

The goals of this Municipal Stormwater Plan are to:

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

To achieve these goals, this plan outlines specific stormwater design and performance standards for new development. Additionally, the plan proposes stormwater management controls to address impacts from existing development. Preventative and corrective maintenance strategies are included in the plan to ensure long-term effectiveness of stormwater management facilities. The plan also outlines safety standards for stormwater infrastructure to be implemented to protect public safety.

## **STORMWATER DISCUSSION**

Land development can dramatically alter the hydrologic cycle (See Figure 1) of a site and ultimately an entire watershed. Prior to development, native vegetation can either directly intercept precipitation or draw that portion that has infiltrated into the ground and return it to the atmosphere through evapotranspiration. Development can remove this beneficial vegetation and replace it with lawn or impervious cover, reducing the site's evapotranspiration and infiltration rates. Clearing and grading a site can remove depressions that store rainfall. Construction activities may also impact 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 sewer can transport runoff more quickly than natural areas. This shortening of the transport or travel time quickens the rainfall-runoff response of the drainage area, causing flow in downstream waterways to peak faster and higher than natural conditions. These increases can create new 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 habitat from which some species cannot adapt.

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

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

## **BACKGROUND**

The Township encompasses a 2.77 square mile area in the northwestern portion of Essex County, New Jersey. Figure 3 depicts the Township boundary on the USGS quadrangle



map. The Township is an older established community with a majority of the applications for construction received involving redevelopment of existing properties. The Township does contain one large tract of undeveloped land in the northwest end of the Township, where it meets the borders of North Caldwell and Cedar Grove. This area is known as the Hilltop and also includes the area containing the Essex County Jail, which will also be redeveloped. The current plan for the portion of the Hilltop within the Township involves the construction of recreation fields by the Township, housing units constructed by a private developer and areas that are designated Green Acres which will be left in their natural state due to steep slopes and other environmental constraints. The population of the Township has remained relatively the same from 13,597 in 1990 to 13,533 in 2000. However, the demographics of the Township have changed over the years from a community containing a majority of retirees to a community of younger families. This has increased the need for affordable senior housing in the community. Redevelopment in the Township, which includes additional impervious areas, has most likely increased stormwater runoff volumes and pollutants loads to the waterways in the municipality. The majority of the Township is located within NJDEP Watershed Management Area 4, Lower Passaic and Saddle, while a portion in the northwest corner is located in NJDEP Watershed Management Area 6, Upper Passaic, Whippany and Rockaway. The existing waterways contained in the Township are illustrated in Figure 2.

The New Jersey Department of Environmental Protection (NJDEP) has established an Ambient Biomonitoring Network (AMNET) to document the health of the state's waterways. There are over 800 AMNET sites throughout the state of New Jersey. These sites are sampled for benthic macroinvertebrates by NJDEP on a five-year cycle. Streams are classified as a non-impaired, moderately impaired or severely impaired based on the AMNET data. The data is used to generate a New Jersey Impairment Score (NJIS), which is based on a number of biometrics related to benthic macroinvertebrate community dynamics.

A TMDL Total Maximum Daily Load is the amount of a pollutant that can be accepted by a waterbody without causing an exceedance of water quality standards or interfering with the ability to use a waterbody for one or more of its designated uses. The allowable load is allocated to the various sources of the pollutant, such as stormwater and wastewater discharges, which require NJDES 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 BMP's.

The New Jersey Integrated Water Quality Monitoring and Assessment Report (305(b) and 303(d)) (Integrated List) is required by the Federal Clean Water Act to be prepared biennially and is a valuable source of water quality information. The 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 TMDL's are needed.

The major river that flows through the Township is the Peckman River. Although there are no water quality or macroinvertebrate monitoring data for the river within Verona Township, there is an existing AMNET Station for the Peckman River downstream at McBride Avenue in West Paterson (Site ID#AN0275). The water quality data for this station lists impairment for macroinvertebrates. In addition to the AMNET data, the NJDEP along with other regulatory agencies collect water quality chemical data on the streams within the state. The data shows that the instream fecal coliform concentrations within the Peckman River at West Paterson (Site ID# 03189600) often exceed the state's criteria. This means that the river is impaired and that the NJDEP is required to develop a Total Maximum Daily Load (TMDL) for the pollutant. Fecal coliform management measures in the Township could include proper pet waste disposal as well as Canadian Geese control.

Verona Lake is a 13-acre lake, located within the Township, which drains into the Peckman River and is classified as FW2-NT. The lake was created in the early 1800's as a mill pond and has a north and a south basin. The watershed of Verona Lake is highly developed. Over the years, silt and nutrient laden stormwater runoff from residential sites, commercial sites and other recreational uses has resulted in excessive sediment and nutrient loading in the Lake. NJDEP also collects water quality chemical data on Verona Lake (Site ID Verona Lake). The data shows that the instream total phosphorus concentrations of Verona Lake frequently exceed the state's criteria, which results in the Lake being labeled impaired. As previously stated, this requires the NJDEP to develop a Total Maximum Load (TMDL) for the pollutant. According to the State of New Jersey's Proposed 2004 Integrated List of Waterbodies, a TMDL approved by the USEPA for fecal coliform has been approved for the Lake. The Township, through meetings with NJDEP, is in the process of developing strategies to comply with the TMDL of 98% nutrient removal.

In addition to water quality problems, the Township has exhibited water quantity problems including flooding, stream bank erosion and diminished base flow in its streams. During severe storm events, some undersized culverts do not have adequate capacity, thereby causing a backwater effect and flooding upstream.

These culverts were designed for much different hydrological conditions (i.e., less impervious area) than presently exist in the Township. As the imperviousness increased in the Township, the peak volumes of stream flows also increased. The increased amount of water resulted in stream bank erosion, which resulted in unstable areas at roadway/bridge crossings and degraded stream habitats. The high imperviousness of the Township has significantly decreased groundwater recharge, decreasing base flows in streams during dry weather periods. Lower base flows can have a negative impact on instream habitat during the summer months. As seen in Figure 4, there is no information available on groundwater recharge within the Township. Wellhead protection areas, also required as part of the MSWMP, are shown in Figure 5.





## **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 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 ordinance will be submitted to the county for review and approval within 24 months of the effective date of the Stormwater Management Rules.

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

## **PLAN CONSISTENCY**

The Township is not within a Regional Stormwater Management Planning Area. Therefore this plan does not need to be consistent with any Regional Stormwater Management Plans (RSWMPs). If any Regional Stormwater Management Plans are developed in the future, this Municipal Stormwater Management Plan will be updated to be consistent.

There is currently a TMDL in place for Verona Lake. The Township, through meetings with NJDEP, is in the process of developing strategies to comply with the TMDL of 98% nutrient removal.

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 areas. This Municipal Stormwater Management Plan will be updated to be consistent with any future updates to RSIS.

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

## **NONSTRUCTURAL STORMWATER MANAGEMENT STRATEGIES**

The Township has reviewed the Master Plan and Ordinances and has provided a list of the sections in the Township Land Use and Zoning Ordinances that can be modified to

incorporate nonstructural stormwater management strategies. These are the Ordinances identified for revision. Once the Ordinance texts are completed, they will be submitted to the county review agency for review and approval within 24 months of the effective date of the Stormwater Management Rules. A copy will be sent to the Department of Environmental Protection at the time of submission.

Chapter 150 of the Township Codes, entitled Zoning, was reviewed with regard to incorporating nonstructural stormwater management strategies. Several changes can be made to incorporate these strategies.

**Section 150-3B Definitions – Buffer Strip** is defined as “Land area made up of a dense planting of shrubs and trees, and which may include berms and/or fencing, the purpose of which is to visibly separate one use from another and to assist in shielding or blocking noise, lights or other nuisances.” Buffer strips are required in several sections of the regulations to separate nonresidential use from either a residential use or residential zoning district lines. The landscape requirements for the buffer strips do not recommend the use of native vegetation. The language of this section can be amended to require the use of native vegetation, which requires less fertilization and watering than non-native species. Additionally, language can be included to allow buffer strips to be used for stormwater management by disconnecting impervious surfaces and treating runoff from impervious surfaces.

**Section 150-12D(1)(a) Off-street parking – Access** requires all access drives to be paved. This section can be amended to allow the use of pervious paving materials to minimize stormwater runoff and promote groundwater recharge.

**Section 150-12E(1) Off-street parking – Standards for areas for three vehicles or more** requires parking areas for three or more vehicles to be paved. This section can be amended to allow the use of pervious paving materials to minimize stormwater runoff and promote groundwater recharge.

**Section 150-12E Off-street parking – Standards for areas for three vehicles or more** describes requirements for parking areas for three or more vehicles. Language can be added to allow for flush curb with curb stop or curbing with curb cuts to encourage developers to allow for the discharge of impervious areas into landscaped areas for stormwater management. Also, language can be added to allow for the use of natural vegetated swales for the water quality storm, with overflow for larger storm events into storm sewers.

Several changes can be made to Chapter 150 – “Zoning”. The Township has nine types of residential districts. Each district has a maximum improved lot coverage based on new site area, ranging from 35 percent in the R-1 District, which has a minimum lot area of 30,000 square feet for detached single family dwellings to 60 percent for the R-O District, which have a minimum lot area of 10,000 square feet. The Township has five nonresidential districts. Each of these districts has a maximum improved lot coverage based on new site area ranging from 65 percent in the C-2 District, which has a minimum

lot area of 15,000 square feet, to 100 percent in the CBD District, which does not have a minimum lot area. Although each zone has a maximum improved lot coverage based on new site area, the Township Code can be amended to remind developers that satisfying the maximum improved lot coverage does not relieve them of the responsibility for complying with the Stormwater Management Plan. The Township is evaluating the maximum improved lot coverage for each zone to determine whether a reduction in impervious cover is appropriate. The Township is also evaluating requiring a developer that is granted a variance to exceed the maximum improved lot coverage to mitigate the impact of the additional impervious coverage. The mitigation may address water quality, flooding and groundwater recharge.

An important nonstructural stormwater management component that is required in the Tier A Municipal Stormwater General Permit is local public education. The Township, as a Tier A municipality, is required to annually distribute educational information to residents and businesses explaining “the impact of their day-to-day activities on stormwater quality.” Topics include such things as proper use and disposal of fertilizers and pesticides, using native or well-adapted vegetation that requires little or no fertilization and properly disposing of pet waste, used motor oil and household hazardous wastes. The Division of Watershed Management, Office of Outreach and Education offers numerous materials and programs that can assist the Township in developing and implementing a Local Public Education program.

### **LAND USE/BUILD-OUT ANALYSIS**

The Township does contain one large tract of undeveloped land in the northwest corner of the Township, where it meets the borders of North Caldwell and Cedar Grove. This area is known as the Hilltop and includes the area that contains the abandoned Essex County Jail Women’s Detention Center. This area will be redeveloped into recreation facilities for the Township. Further up the hill a private developer plans to construct new residential dwelling units. The remaining areas are designated Green Acres and will be left in their natural state due to steep slopes and other environmental constraints. Since the developable area within the Township is less than one square mile, a Land Use/Build-out analysis is not required. See Figures 6, 7, 8 and 9.

### **MITIGATION PLANS**

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

#### **Mitigation Project Criteria**

1. The mitigation project must be implemented in the same drainage area as the proposed development. The project must provide additional groundwater recharge benefits or protection from stormwater runoff quality and quantity from previously developed

property that does not currently meet the design and performance standards outlined in the Municipal Stormwater Management Plan. The developer must ensure long-term maintenance of the project, including the maintenance requirements under Chapters 8 and 9 of the NJDEP Stormwater BMP Manual.

a. The applicant can select a project from the following categories listed to compensate for the deficit from the performance standards resulting from the proposed project. More detailed information on the projects can be obtained from the Township Engineer.

#### Groundwater Recharge

- Install infiltration basins
- Replace deteriorated pavement at select locations with permeable pavement

#### Water Quality

- Planting of additional native vegetation around Verona Lake in order to restrict access of Canadian geese
- Install streambank erosion controls at select locations along the Peckman River

#### Water Quantity

- Stream cleaning at select locations along the Peckman River to allow additional stormwater to pass

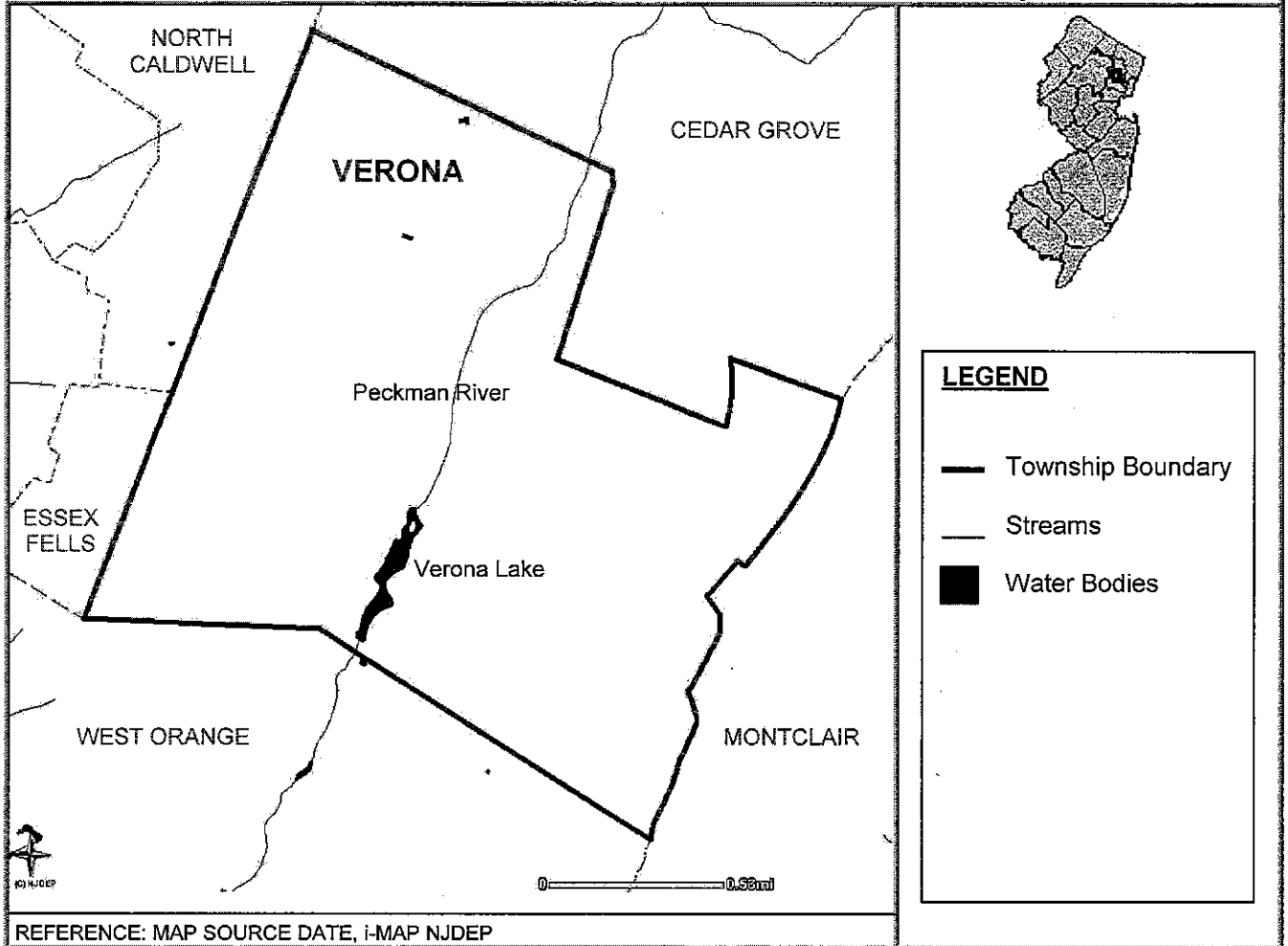
2. If a suitable site cannot be located in the same drainage area as the proposed development, as discussed in Option 1, the mitigation project may provide mitigation that is not equivalent to the impacts for which the variance or exemption is sought but that addresses the same issue. For example, if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

The Township may allow a developer to provide funding or partial funding to the municipality for an environmental enhancement project that has been identified in a Municipal Stormwater Management Plan or towards the development of a Regional Stormwater Management Plan. The funding must be equal to or greater than the cost to implement the mitigation outlined above, including cost associated with the long-term maintenance requirements of the mitigation measure.

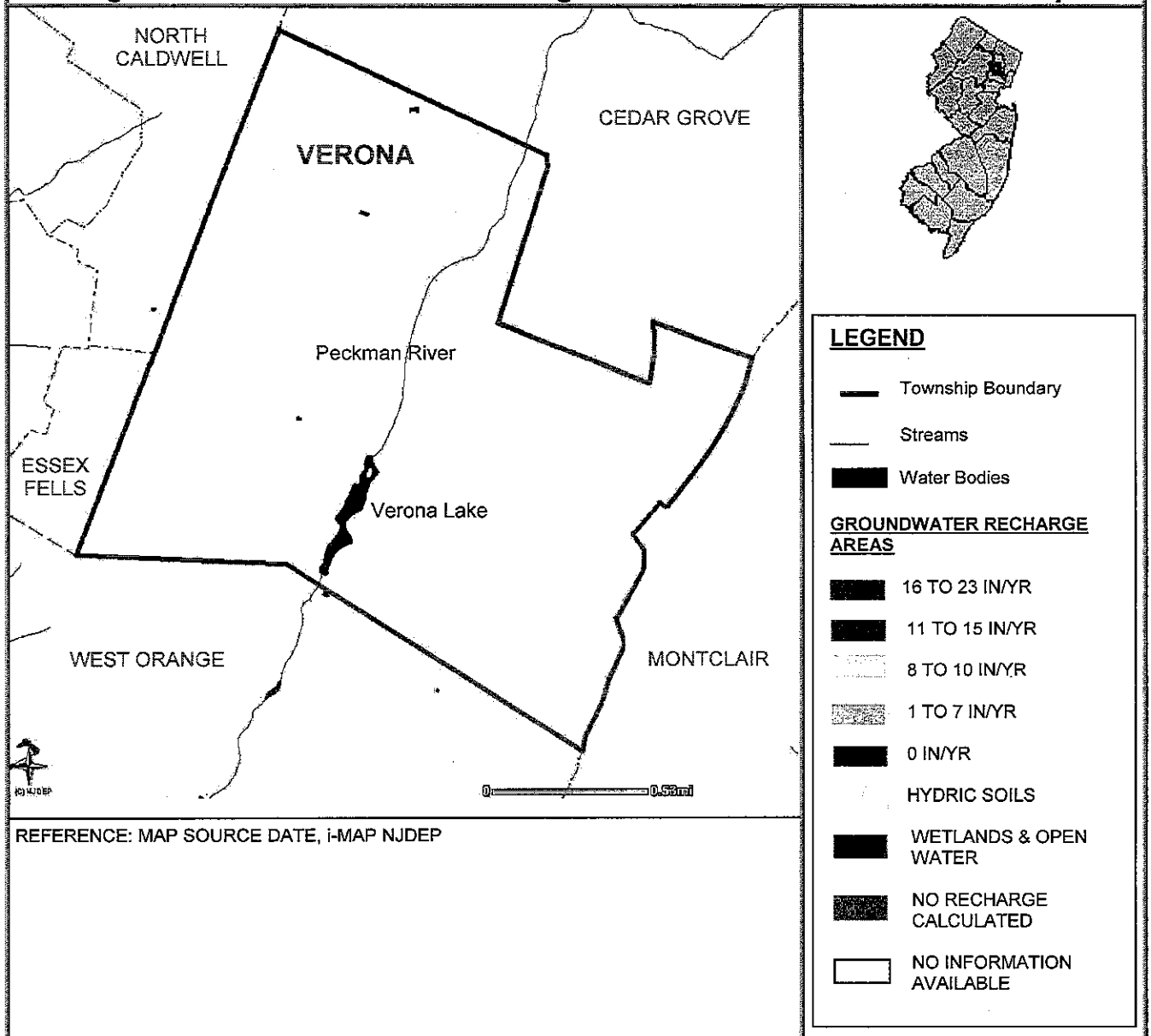


**FIGURE 1 – GROUNDWATER RECHARGE IN THE HYDROLOGIC CYCLE**

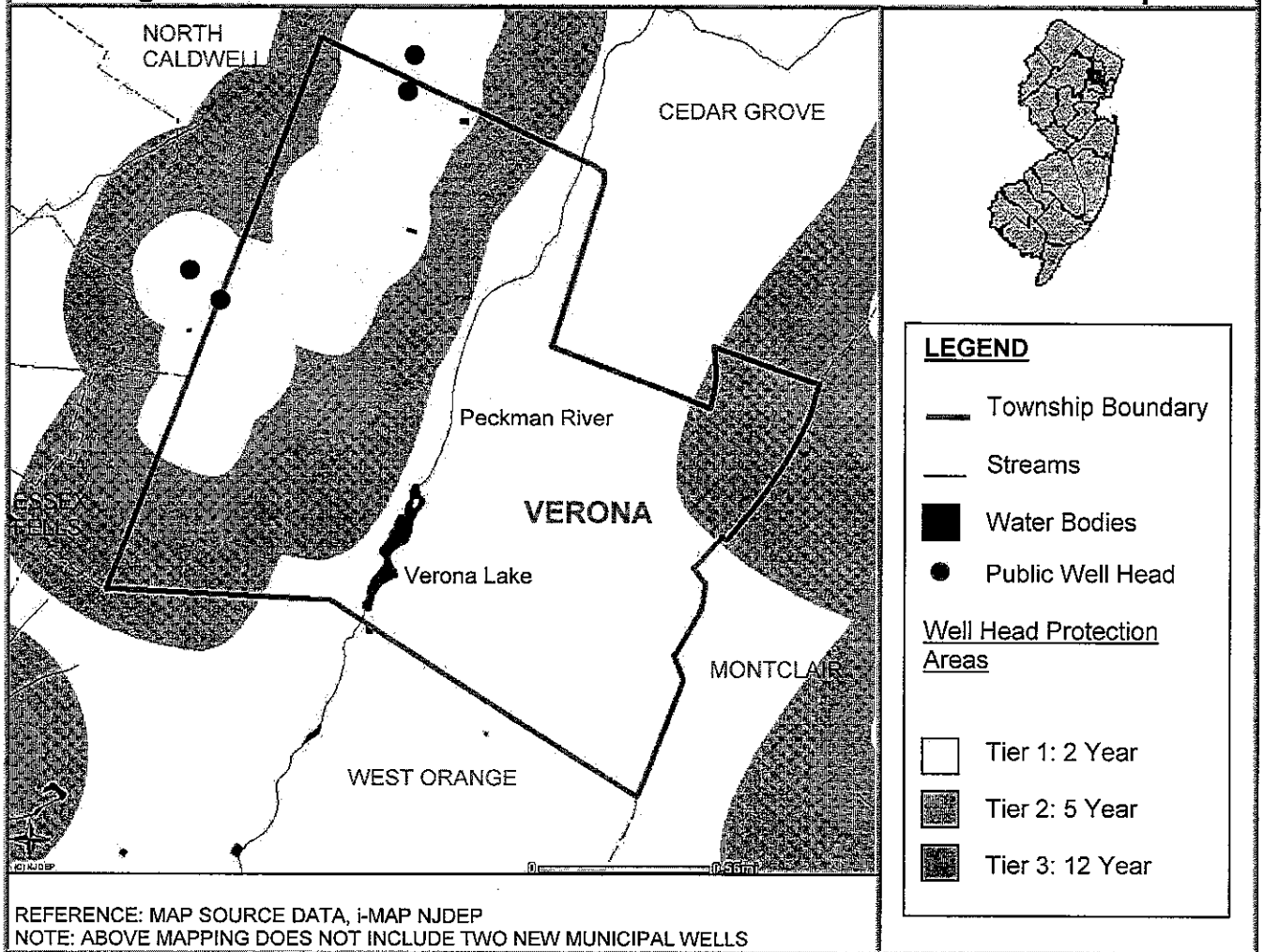
**Figure 2 - Waterways Within Verona Township**



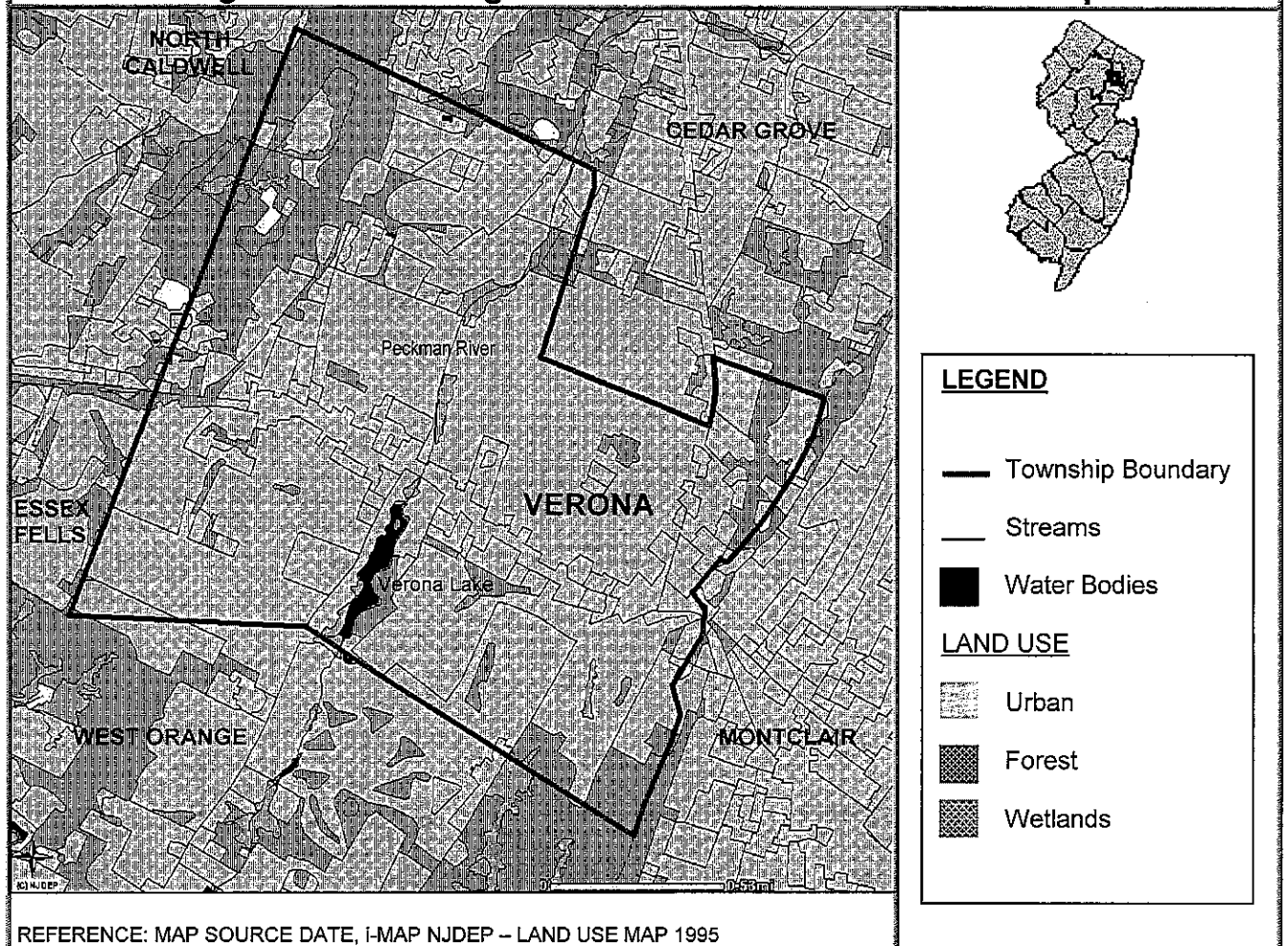
**Figure 4 – Groundwater Recharge Areas Within Verona Township**



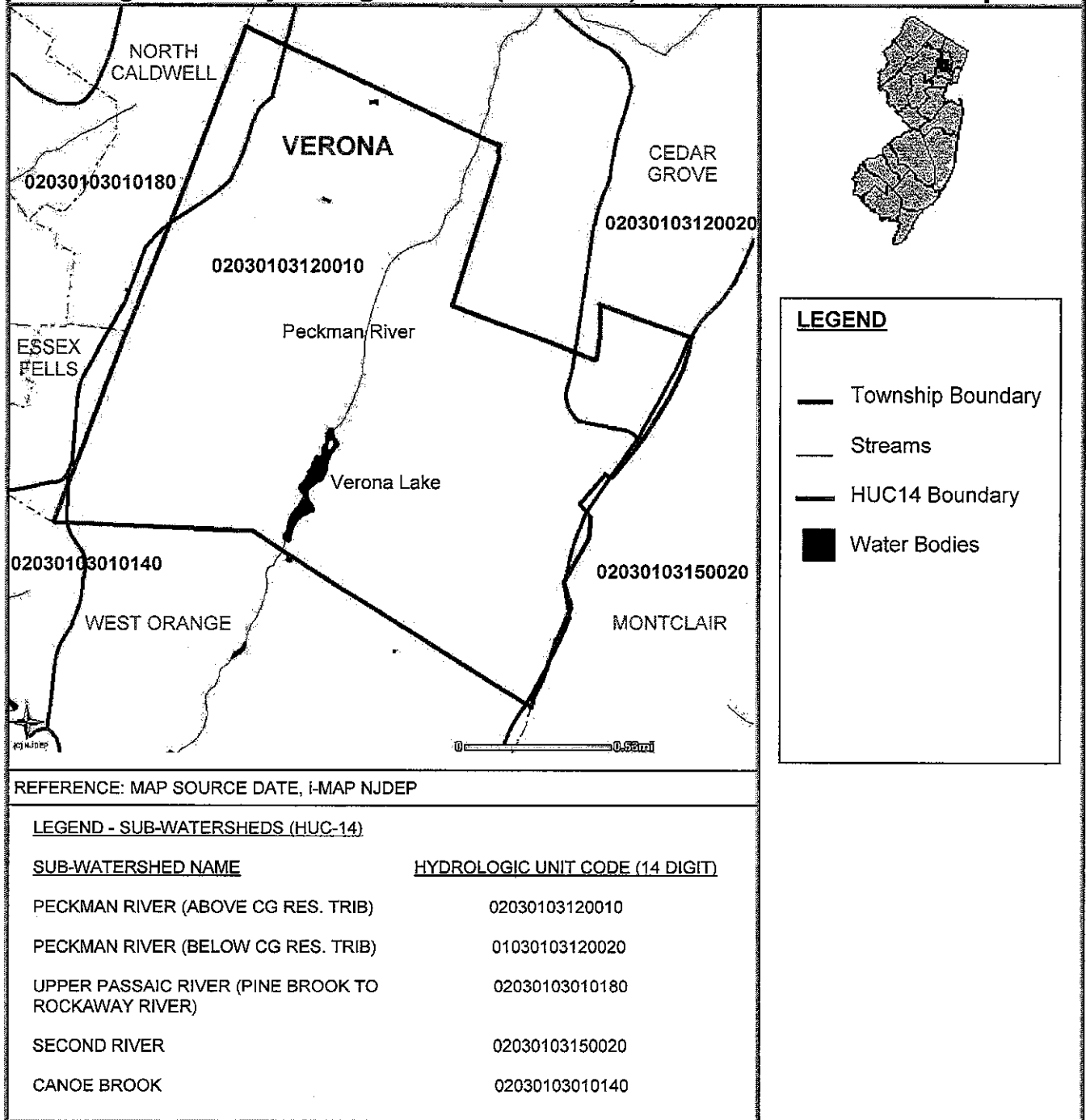
**Figure 5 – Well Head Protection Areas Within Verona Township**



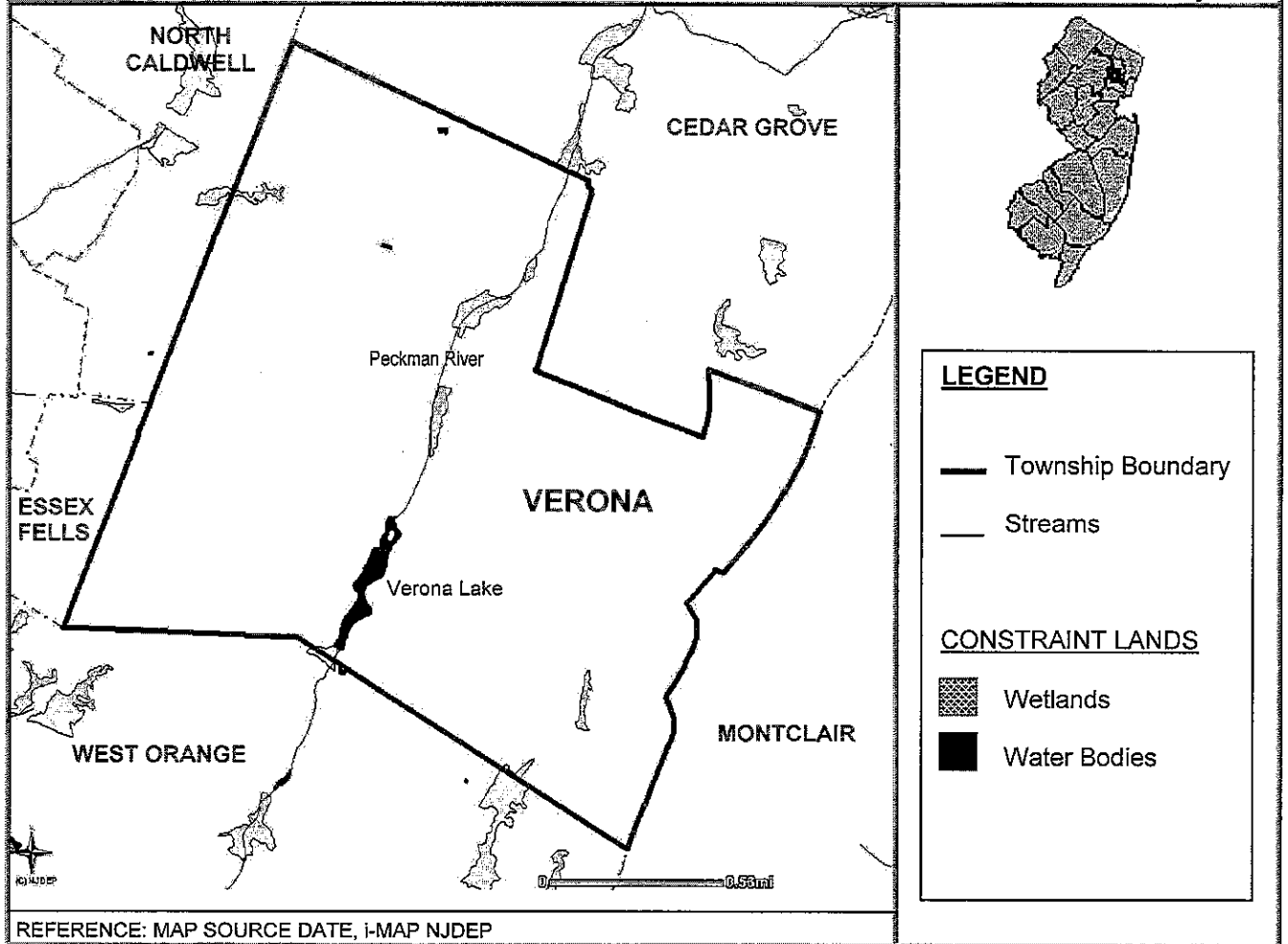
**Figure 6 – Existing Land Use Within Verona Township**



**Figure 7 – Hydrologic Units (HUC14's) Within Verona Township**



**Figure 9 – Wetlands and Water Land Uses Within Verona Township**



**ORDINANCE #23-05**

**AN ORDINANCE TO SUPPLEMENT THE CODE OF THE TOWNSHIP OF  
VERONA BY ADDING CHAPTER 123-1 ET SEQ ENTITLED MUNICIPAL  
STORMWATER MANAGEMENT**

**BE IT ORDAINED** by the Mayor and Council of the Township of Verona, County of Essex and State of New Jersey, that those portions of the aforesaid Municipal Ordinances as set forth below are hereby supplemented as follows:

**SECTION 123-1.1** Purposes

- A. An ordinance to prohibit the spilling, dumping or disposal of materials other than stormwater to the municipal separate storm sewer system (MS4) operated by the Township of Verona so as to protect public health, safety and welfare, and to prescribe penalties for the failure to comply.
- B. An Ordinance to prohibit illicit connections to the municipal separate sewer system(s) operated by the Township of Verona, so as to protect public health, safety and welfare, and to prescribe penalties for the failure to comply.
- C. An Ordinance to establish requirements for the proper handling of litter, yard waste and pet solid waste in the Township of Verona, so as to protect public health, safety and welfare and to prescribe penalties for the failure to comply.
- D. An Ordinance to prohibit the feeding of unconfined wildlife in any Township owned park in Verona or on any other property owned



or operated by the Township of Verona so as to protect public health, safety and welfare, and to prescribe penalties for failure to comply.

**SECTION 123-1.2** Definitions:

For the purpose of this Ordinance, the following terms, phrases, words and their derivations shall have the meanings stated herein unless their use in the text of this Chapter clearly demonstrates a different meaning. When not inconsistent with the context, words used in the present tense include the future, words used in the plural number include the singular number and words used in the singular number include the plural number. The word “shall” is always mandatory and not merely directory.

- A. Containerized – means the placement of yard waste in a bio-degradable bag as approved by the Township Engineer, such as to prevent the yard waste from spilling or blowing out into the street and coming into contact with stormwater.
- B. Domestic sewage – waste and wastewater from humans or household operations.
- C. Feed – to give, place, expose, deposit, distribute or scatter any edible material with the intention of feeding, attracting or enticing wildlife. Feeding does not include baiting in the legal taking of fish and/or game.
- D. Illicit connection – any physical or non-physical connection that discharges domestic sewage, non-contact cooling water, process wastewater, or other industrial

waste (other than storm water) to the municipal separate storm sewer system operated by the Township of Verona, unless that discharge is authorized under a NJPDES permit other than the Tier A Municipal Stormwater General Permit (NJPDES Permit Number NJ0141852). Non-physical connections may include, but are not limited to leaks, flows, or overflows into the municipal separate storm sewer system.

- E. Immediate – shall mean that the pet solid waste is removed at once, without delay.
- F. Industrial Waste – non-domestic waste including but not limited to those pollutants regulated under Section 307(a), (b) or (c) of the Federal Clean Water Act (33 U.S.C. 131(a), (b) or (c)).
- G. Litter – any unused or unconsumed substance or waste material which has been discarded, whether made of aluminum, glass, plastic, rubber, paper or other natural or synthetic material, or any combination thereof, including but not limited to, any bottle, jar or can, or any top, cap or detachable tab of any bottle, jar or can, any unlighted cigarette, cigar, match or any flaming or glowing material or any garbage, trash, refuse, debris, rubbish, grass clippings or other lawn or garden waste, newspapers,

magazines, glass, metal, plastic or paper containers or other packaging or construction material but does not include the waste of the primary process of mining or other extraction processes, logging, saw milling, farming or manufacturing.

- H. Litter Receptacle – a container suitable for the depositing of litter.
- I. Municipal Separate Storm Sewer System (MS4) – a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains) that is owned or operated by the Township of Verona or other public body and is designed and used for collecting and conveying stormwater.
- J. NJPDES Permit – a permit issued by the New Jersey Department of Environmental Protection to implement the New Jersey Pollutant Discharge Elimination System (NJPDES) Rules at N.J.A.C. 7:14A
- K. Non-contact cooling water – water used to reduce temperature for the purpose of cooling. Such waters do not come into direct contact with any raw material, intermediate product (other than heat) or finished product. Non-contact cooling water may however contain

algacides, or biocides to control fouling of equipment such as heat exchangers, and/or corrosion inhibitors.

L. Owner/Keeper – any person who shall possess, maintain, house or harbor any pet or otherwise have custody of any pet, whether or not the owner of such pet.

M. Person – any individual, corporation, company, partnership, firm, association or political subdivision of this State subject to municipal jurisdiction.

N. Pet – domesticated animal (other than a disability assistance animal) kept for amusement or companionship.

O. Pet solid waste – waste matter expelled from the bowels of the pet, excrement.

P. Process wastewater – any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by product or waste product. Process wastewater includes, but is not limited to, leachate and cooling water other than non-contacting cooling water.

Q. Proper disposal – placement in a designated waste receptacle, or other suitable container, and discarded in a refuse container which is regularly emptied by the Township or some other refuse collector; or disposal into a

system designated to convey domestic sewage for proper treatment and disposal.

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

S. Street – means any street, avenue, boulevard, road, parkway, viaduct, drive or other way, which is an existing State, County or Municipal roadway, and includes the land between the street lines, whether improved or unimproved, and may comprise pavement, shoulders, gutters, curbs, sidewalks, parking areas, and other areas within the street lines.

T. Wildlife – all animals that are neither human nor domesticated.

U. Yard Waste – means leaves and grass clippings.

**SECTION 123-1.3** Prohibited Conduct:

A. The spilling, dumping or disposal of materials other than stormwater to the municipal separate storm sewer system operated by the Township of Verona is prohibited. The spilling, dumping or disposal of materials other than stormwater in such a manner as to cause the discharge of pollutants to the municipal

separate storm sewer system is also prohibited unless same is qualified by one of the following exceptions:

1. Waterline flushing and discharges from potable water sources.
2. Uncontaminated ground water (e.g. infiltration, crawl space or basement sump pumps, foundation and footing drains, rising ground waters).
3. Air conditioning condensate (excluding contact and non-contact cooling water).
4. Irrigation water (including landscape and lawn watering runoff).
5. Flows from springs riparian habitats and wetlands. Water reservoir discharges and diverted stream flows.
6. Residential car washing and residential swimming pool discharges.
7. Sidewalk, driveway and street wash water.
8. Flows from fire fighting activities.
9. Flows from rinsing of the following equipment with clean water:
  - a. Beach maintenance equipment immediately following their use for their intended purposes; and
  - b. Equipment used in the application of salt and de-icing materials immediately following salt and de-icing material applications. Prior to rinsing with clean water, all residual salt and de-icing materials must be removed from equipment and vehicles to the maximum extent practicable using dry cleaning methods (e.g. shoveling and sweeping).

Recovered materials are to be returned to storage for reuse or properly discarded.

- c. Rinsing of equipment, as noted in the above situation is limited to exterior, undercarriage and exposed parts and does not apply to engines or other enclosed machinery.

B. No person shall discharge or cause to be discharged through an illicit connection to the municipal separate storm sewer system operated by the Township of Verona any domestic sewage, non-contact cooling water, process wastewater, or other industrial waste water (other than stormwater).

C. The owner or occupant of any property, or any employee or contractor of such owner or occupant engaged to provide lawn care or landscaping services, shall not sweep, rake, blow or otherwise place yard waste, unless the yard waste is containerized, in the street. If yard waste that is not containerized is placed in the street, the party responsible for placement of yard waste must remove the yard waste from the street or said party shall be deemed in violation of this Ordinance.

- D.
  - 1. It shall be unlawful for any person to throw, drop, discard or otherwise place any litter of any nature upon public or private property other than in a litter receptacle, or having done so, to allow such litter to remain.
  - 2. Whenever any litter is thrown or discarded or allowed to fall from a vehicle or boat in violation of this Ordinance, the operator or owner, or both, of the motor vehicle or boat shall also be deemed to have violated this Ordinance.

3. All pet owners and keepers are required to immediately and properly dispose of their pet's solid waste deposited on any property, public or private, not owned or possessed by that person unless the owner or keeper of the animal requires the use of a disability assistance animal and such animal is being used for that purpose.

E. No person shall feed, in any Township owned park or on any other property owned or operated by the Township of Verona, any wildlife, excluding confined wildlife (for example, wildlife confined in zoos, parks or rehabilitation centers, or unconfined wildlife at environmental education centers).

**SECTION 123-1.5** Enforcement

This Ordinance shall be enforced by the Police Department of the Township of Verona and/or other municipal officials of the Township of Verona.

**PENALTIES.** Violations of this Ordinance shall be punishable by a fine not to exceed two hundred fifty (\$250.00) dollars.

**SEVERABILITY.** All provisions of this Ordinance are severable. If for any reason, any provision of this Ordinance is held to be invalid, the validity of the remainder of the Ordinance shall not be affected.

**EFFECTIVE DATE.** This Ordinance shall become effective upon final approval and publication, pursuant to law.





## **Section I: Purpose**

An ordinance requiring the retrofitting of existing storm drain inlets which are in direct contact with repaving, repairing, reconstruction, or resurfacing or alterations of facilities on private property, to prevent the discharge of solids and floatables (such as plastic bottles, cans, food wrappers and other litter) to the municipal separate storm sewer system operated by the Township of Verona so as to protect public health, safety and welfare, and to prescribe penalties for the failure to comply.

## **Section II: Definitions**

For the purpose of this ordinance, the following terms, phrases, words and their derivations shall have the meanings stated herein unless their use in the text of this Chapter clearly demonstrates a different meaning. When not inconsistent with the context, words used in the present tense include the future, words used in the plural number include the singular number, and words used in the singular number include the plural number. The word "shall" is always mandatory and not merely directory.

- a. Municipal separate storm sewer system (MS4) – a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains) that is owned or operated by the Township of Verona or other public body and is designed and used for collecting and conveying stormwater.
- b. Person – any individual, corporation, company, partnership, firm, association or political subdivision of this State subject to municipal jurisdiction.
- c. Storm drain inlet – an opening in a storm drain used to collect stormwater runoff and includes, but is not limited to, a grate inlet, curb-opening inlet, slotted inlet and combination inlet.
- d. Waters of the State – means the ocean and its estuaries, all springs, streams 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.

## **Section III Prohibited Conduct**

No Person in control of private property (except a residential lot with one single family house) shall authorize the repaving, repairing (excluding the repair of individual potholes), resurfacing (including top coating or chip sealing with asphalt emulsion or a thin base of hot bitumen), reconstructing or altering any surface that is in direct contact with an existing storm drain inlet on that property unless the storm drain inlet either:

- 1. Already meets the design standard below to control passage of solid and floatable materials; or

2. Is retrofitted or replaced to meet the standard in Section IV below prior to the completion of the project.

#### **Section IV Design Standard**

Storm drain inlets identified in Section III 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 IV.3 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 grates, 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 Township Engineer agrees that this standard would cause inadequate hydraulic performance that could not practically be overcome by using additional or larger storm drain inlets that meet these standards;
  - b. Where flows 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:

- a) 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
- b) A bar screen having a bar spacing of 0.5 inches.
- c. Where flows are conveyed through a trash rack that has parallel bars with one-inch (1") spacing between the bars; or
- d. 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©, 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.

### **Section V Enforcement**

This ordinance shall be enforced by the Township Construction Code Official and/or any other Township Official of the Township of Verona.

### **Section VI Penalties**

Any person(s) who is found to be in violation of the provisions of this ordinance shall be subject to a fine not to exceed \$500.00 for each storm drain inlet that is not retrofitted to meet the design standard.

### **Section VII Severability**

Each section, subsection, sentence, clause and phrase of this Ordinance is declared to be an independent section, subsection, sentence, clause and phrase, and the finding or holding of any such portion of this Ordinance to be unconstitutional, void, or ineffective for any cause, or reason, shall not affect any other portion of this Ordinance.

### **Section VIII Effective Date**

This Ordinance shall be in full force and effect from and after its adoption and any publication as may be required by law.

## **An Ordinance to Regulate the Outdoor Application of Fertilizer in the Township of Verona**

**WHEREAS**, the New Jersey Department of Environmental Protection (NJDEP) has mandated that all municipalities affected by the TMDL for the "Non-tidal Passaic River Basin addressing phosphorus impairments" adopt an ordinance regulating the application of fertilizer as an additional measure of the Municipal Stormwater Permit.

**NOW THEREFORE BE IT ORDAINED**, by the Mayor and Township Council of the Township of Verona, in the County of Essex, as follows:

### **Section I: Purpose**

The purpose of this ordinance is to regulate the outdoor application of fertilizer so as to reduce the overall amount of excess nutrients entering waterways, thereby helping to protect and improve surface water quality. This ordinance does not apply to fertilizer application on commercial farms.

### **Section II: Basis and Background**

Elevated levels of nutrients, particularly phosphorus, in surface water bodies can result in excessive and accelerated growth of algae and aquatic plants (eutrophication). Excessive plant growth can result in diurnal variations and extremes in dissolved oxygen and pH, which, in turn, can be detrimental to aquatic life. As algae and plant materials die off, the decay process creates a further demand on dissolved oxygen levels. The presence of excessive plant matter can also restrict use of the affected water for recreation and water supply.

While healthy vegetated areas are protective of water quality by stabilizing soil and filtering precipitation, when fertilizers are applied to the land surface improperly or in excess of the needs of target vegetation, nutrients can be transported by means of stormwater to nearby waterways, contributing to the problematic growth of excessive aquatic vegetation. Most soils of New Jersey contain sufficient amounts of phosphorus to support adequate root growth for established turf. Over time, it is necessary to replenish available phosphorus, but generally not at the levels commonly applied. Other target vegetation, such as vegetable gardens and agricultural/horticultural plantings, will have greater need for phosphorus application, as will the repair or establishment of new lawns or cover vegetation. A soils test and fertilizer application recommendation geared to the soil and planting type is the best means to determine the amount of nutrients to apply. Timing and placement of fertilizer application is also critical to avoid transport of nutrients to waterways through stormwater runoff. Fertilizer applied immediately prior to runoff-producing rainfall, outside the growing season or to impervious surfaces is most likely to be carried away by means of runoff without accomplishing the desired objective of supporting target vegetation growth. Therefore, the management of the type, amount and techniques for fertilizer application is necessary as one tool to protect water resources.

This ordinance does not apply to application of fertilizer on commercial farms, but improper application of fertilizer on farms would be problematic as well. Stewardship on the part of commercial farmers is needed to address this potential source of excess nutrient load to water bodies. Commercial farmers are expected to implement best management practices in accordance with conservation management plans or resource conservation plans developed for the farm by the Natural Resource Conservation Service and approved by the Soil Conservation District Board.

### **Section III Definitions**

For the purpose of this ordinance, the following terms, phrases, words, and their derivations shall have the meanings stated herein unless their use in the text of this Ordinance clearly demonstrates a different meaning. When not inconsistent with the context, words used in the present tense include the future, words used in the plural number include the singular number, and words used in the singular number include the plural number. The word "shall" is always mandatory and not merely directory.

- a. Buffer – the land area, 25 feet in width, adjacent to any water body.
- b. Commercial farm – a farm management unit producing agricultural or horticultural products worth \$2500 or more annually.
- c. Fertilizer – means a fertilizer material, mixed fertilizer or any other substance containing one or more recognized plant nutrients, which is used for its plant nutrient content, which is designed for use or claimed to have value in promoting plant growth and which is sold, offered for sale, or intended for sale.
- d. Impervious Surface – a surface that has been covered with a layer of material so that it is highly resistant to infiltration by water. This term shall be used to include any highway, street, sidewalk, parking lot, driveway, or other material that prevents infiltration of water into the soil.
- e. Person – any individual, corporation, company, partnership, firm, association, or political subdivision of this State subject to municipal jurisdiction.
- f. Phosphorus Fertilizer – any fertilizer that contains phosphorus, expressed as P2O5, with a guaranteed analysis of greater than zero; except that it shall not be considered to include animal (including human) or vegetable manures, agricultural liming materials, or wood ashes that have not been amended to increase their nutrient content.
- g. Soils Test – a technical analysis of soil conducted by an accredited soil-testing laboratory following the protocol for such a test established by Rutgers Cooperative Research and Extension.
- h. Water Body – a surface water feature, such as a lake, river, stream, creek, pond, lagoon, bay estuary.

### **Section IV Prohibited Conduct**

No person may do any of the following:

- a. Apply fertilizer when runoff producing rainfall is occurring or predicted and/or when soils are saturated and a potential for fertilizer movement off-site exists.
- b. Apply fertilizer to an impervious surface. Fertilizer inadvertently applied to an impervious surface must be swept or blown back into the target surface or returned to either its original or another appropriate container for reuse.
- c. Apply fertilizer within the buffer of any water body.
- d. Apply fertilizer more than fifteen (15) days prior to the start of or at any time after the end of the recognized growing season from March 1 to November 15.

## **Section V Phosphorus Fertilizer Application**

No person shall do the following:

- a. Apply phosphorus fertilizer in outdoor areas except as demonstrated to be needed for the specific soils and target vegetation in accordance with a soils test and the associated annual fertilizer recommendation issued by Rutgers Cooperative Research and Extension.
- b. Exceptions
  - 1. Application of phosphorus fertilizer needed for
    - a) Establishing vegetation for the first time, such as after land disturbance, provided the application is 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;
    - b) Re-established or repairing a turf area.  
Establishing or repairing a turf area in accordance with good soil practices.
  - 2. Application of phosphorus fertilizer that delivers liquid or granular fertilizer under the soils surface, directly to the feeder roots.
  - 3. Application of phosphorus fertilizer to residential container plantings, flowerbeds, or vegetable gardens.

## **Section VI Enforcement**

This ordinance shall be enforced by the Township Construction Code Official and/or any other Township Employees designated by the Township Manager.

## **Section VII Violation and Penalties**

Any person(s) found to be in violation of the provisions of this ordinance shall be subject to a fine not to exceed \$25.00.

**Section VIII Severability**

Each section, subsection, sentence, clause and phrase of this Ordinance is declared to be an independent section, subsection, sentence, clause and phrase, and the finding or holding of any such portion of this Ordinance to be unconstitutional, void, or ineffective for any cause, or reason, shall not affect any other portion of this Ordinance.

**Section IX** This Ordinance shall take effect upon final passage and publication in accordance with law.



## **Section I: Purpose**

An ordinance requiring dumpsters and other refuse containers that are outdoors or exposed to stormwater to be covered at all times and prohibits the spilling, dumping, leaking or otherwise discharge of liquids, semi-liquids or solids from the containers to the municipal separate storm water system(s) operated by the Township of Verona and/or the waters of the State so as to protect public health, safety and welfare, and to prescribe penalties for the failure to comply.

## **Section II: Definitions**

For the purpose of this ordinance, the following terms, phrases, words and their derivations shall have the meanings stated herein unless their use in the text of this Chapter clearly demonstrates a different meaning. When not inconsistent with the context, words used in the present tense include the future, words used in the plural number include the singular number, and words used in the singular number include the plural number. The word "shall" is always mandatory and not merely directory.

- a. Municipal separate storm sewer system (MS4) – a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains) that is owned or operated by the Township of Verona or other public body and is designed and used for collecting and conveying stormwater.
- b. Person – any individual, corporation, company, partnership, firm, association or political subdivision of this State subject to municipal jurisdiction.
- c. Refuse Container – any waste container that a person controls whether owned, leased or operated, including dumpsters, trash cans, garbage pails and plastic trash bags.
- d. Stormwater – means water resulting from precipitation (including rain and snow) that runs off the land's surface, is transmitted to the subsurface, is captured by separate storm sewers or other sewerage or drainage facilities, or is conveyed by snow removal equipment.
- e. Waters of the State – means the ocean and its estuaries, all springs, streams 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.

## **Section III Prohibited Conduct**

No Person who controls, whether owned, leased, or operated, a refuse container or dumpster must ensure that such container or dumpster does not leak or otherwise discharge liquids, semi-liquids or solids to the municipal separate storm sewer system(s) operated by the Township of Verona.

#### **Section IV Exceptions to Prohibition**

- a. Permitted temporary demolition containers
- b. Litter receptacles (other than dumpsters or other bulk containers)
- c. Individual homeowner trash and recycling containers
- d. Refuse containers at facilities authorized to discharge stormwater under a valid NJPDES permit
- e. Large bulky items (e.g., furniture, bound carpet and padding, white goods placed curbside for pickup)

#### **Section V Enforcement**

This ordinance shall be enforced by the Township Construction Code Official or any other Township Official of the Township of Verona.

#### **Section VI Penalties**

Any person(s) who is found to be in violation of the provisions of this ordinance shall be subject to a fine not to exceed \$500.00.

#### **Section VII Severability**

Each section, subsection, sentence, clause and phrase of this Ordinance is declared to be an independent section, subsection, sentence, clause and phrase, and the finding or holding of any such portion of this Ordinance to be unconstitutional, void, or ineffective for any cause, or reason, shall not affect any other portion of this Ordinance.

#### **Section VIII Effective Date**

This Ordinance shall be in full force and effect from and after its adoption and any publication as may be required by law.

# Pet Waste Pollutes Our Waters

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## *What You Can Do To Help Protect Our Water*

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Clean and plentiful water is important to our families, our environment, our economy and our quality of life.

Did you know that animal waste from pets can pollute our waters? When left on the ground, pet waste is washed by rain and melting snow and ice into storm drains that carry it to our rivers, lakes, the ocean and drinking water.

Animal waste contains a high concentration of nutrients as well as bacteria and disease-causing microorganisms that can cause problems.

### **What you can do**

Pet owners or anyone who takes your pet for walks must properly dispose of the waste by picking it up, wrapping it and either placing it in the trash or flushing it unwrapped down the toilet.

Your municipality is required to adopt and enforce local pet-waste laws. At a minimum, your community must require that pet owners or their keepers **immediately** and **properly** dispose of their pet's solid waste deposited on **any public or private property not owned or possessed by that person**. People with assistance animals such as Seeing Eye dogs are exempt.

Make sure you know what your municipality requires – and follow it.

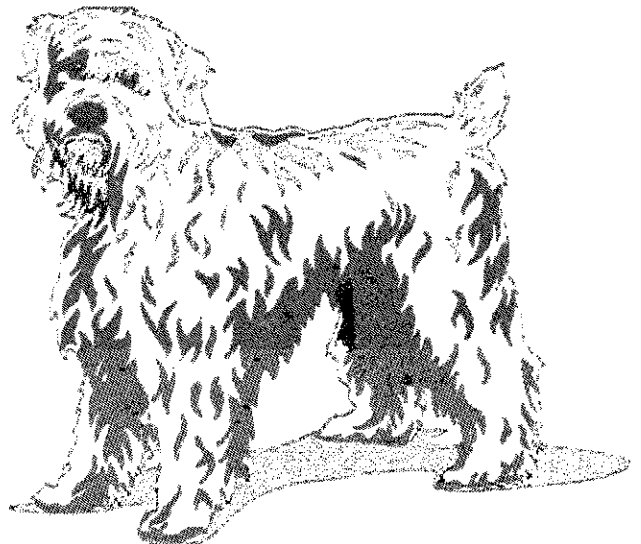
Thank you for doing your part to keep New Jersey's waters clean.

#### **For more information, please contact the following:**

New Jersey Department of Environmental Protection  
Division of Water Quality  
Bureau of Nonpoint Pollution Control  
Municipal Stormwater Regulation Program  
(609) 633-7021

Visit [www.njstormwater.org](http://www.njstormwater.org) or [www.nonpointsource.org](http://www.nonpointsource.org)

Additional information is also available at U. S.  
Environmental Protection Agency Web sites  
[www.epa.gov/npdes/stormwater](http://www.epa.gov/npdes/stormwater) or [www.epa.gov/nps](http://www.epa.gov/nps)



Jon S. Corzine, Governor  
Lisa P. Jackson, Commissioner



# Solutions to Stormwater Pollution

## *Easy Things You Can Do Every Day To Protect Our Water*

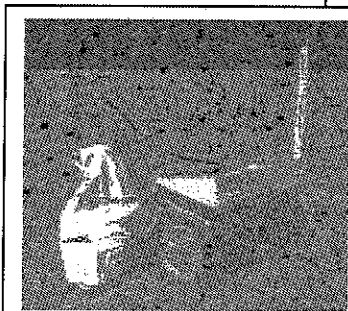
### **A Guide to Healthy Habits for Cleaner Water**

**P**ollution on streets, parking lots and lawns is washed by rain into storm drains, then directly to our drinking water supplies and the ocean and lakes our children play in. Fertilizer, oil, pesticides, detergents, pet waste, grass clippings: You name it and it ends up in our water.

Stormwater pollution is one of New Jersey's greatest threats to clean and plentiful water, and that's why we're all doing something about it.

By sharing the responsibility and making small, easy changes in our daily lives, we can keep common pollutants out of stormwater. It all adds up to cleaner water, and it saves the high cost of cleaning up once it's dirty.

As part of New Jersey's initiative to keep our water clean and plentiful and to meet federal requirements, many municipalities and other public agencies including colleges and military bases must adopt ordinances or other rules prohibiting various activities that contribute to stormwater pollution. Breaking these rules can result in fines or other penalties.



**As a resident, business, or other member of the New Jersey community, it is important to know these easy things you can do every day to protect our water.**

### **Limit your use of fertilizers and pesticides**

- Do a soil test to see if you need a fertilizer.
- Do not apply fertilizers if heavy rain is predicted.
- Look into alternatives for pesticides.
- Maintain a small lawn and keep the rest of your property or yard in a natural state with trees and other native vegetation that requires little or no fertilizer.
- If you use fertilizers and pesticides, follow the instructions on the label on how to correctly apply it.



Make sure you properly store or discard any unused portions.

### **Properly use and dispose of hazardous products**

- Hazardous products include some household or commercial cleaning products, lawn and garden care products, motor oil, antifreeze, and paints.
- Do not pour any hazardous products down a storm drain because storm drains are usually connected to local waterbodies and the water is not treated.

- If you have hazardous products in your home or workplace, make sure you store or dispose of them properly. Read the label for guidance.

- Use natural or less toxic alternatives when possible.

- Recycle used motor oil.

- Contact your municipality, county or facility management office for the locations of hazardous-waste disposal facilities.



## Keep pollution out of storm drains

- Municipalities and many other public agencies are required to mark certain storm drain inlets with messages reminding people that storm drains are connected to local waterbodies.

- Do not let sewage or other wastes flow into a stormwater system.

## Clean up after your pet

- Many municipalities and public agencies must enact and enforce local pet-waste rules.

- An example is requiring pet owners or their keepers to pick up and properly dispose of pet waste dropped on public or other people's property.

- Make sure you know your town's or agency's requirements and comply with them. It's the law. And remember to:

- Use newspaper, bags or pooper-scoopers to pick up wastes.

- Dispose of the wrapped pet waste in the trash or unwrapped in a toilet.

- Never discard pet waste in a storm drain.



## Don't litter

- Place litter in trash receptacles.

- Recycle. Recycle. Recycle.

- Participate in community cleanups.

## Dispose of yard waste properly

- Keep leaves and grass out of storm drains.

- If your municipality or agency has yard waste collection rules, follow them.

- Use leaves and grass clippings as a resource for compost.

- Use a mulching mower that recycles grass clippings into the lawn.



## Don't feed wildlife

- Do not feed wildlife, such as ducks and geese, in public areas.

- Many municipalities and other public agencies must enact and enforce a rule that prohibits wildlife feeding in these areas.

## Contact information

For more information on stormwater related topics, visit [www.njstormwater.org](http://www.njstormwater.org) or [www.nonpointsource.org](http://www.nonpointsource.org)

Additional information is also available at U. S. Environmental Protection Agency Web sites [www.epa.gov/npdes/stormwater](http://www.epa.gov/npdes/stormwater) or [www.epa.gov/nps](http://www.epa.gov/nps)

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