

I. HISTORY OF THE CLEAN WATER ACT AND PHASE II STORMWATER REGULATIONS

In 1948, the first comprehensive "water quality" law was signed into law by the President. Public Law 845 (P.L. 845) authorized the Surgeon General to prepare comprehensive programs for: eliminating or reducing the pollution of interstate waters and tributaries; and for improving the sanitary conditions of surface and underground waters. This statute also authorized the Federal Works Administrator to assist states, municipalities and interstate agencies in constructing treatment plants to prevent discharges of inadequately treated sewerage into other waters and tributaries. Since 1948, the original law has been repeatedly amended to authorize additional water quality programs, to impose standards and procedures governing allowable discharges and to provide funding for specific goals contained within the statute.

The 1972 amendments to the Federal Water Pollution Control Act, also known as The Clean Water Act or CWA, (P.L. 92-500) is the primary law governing water pollution and can be found in 33 U.S.C. 1251 et. seq.¹ The Act established seven goals:

- The elimination of releases of high amounts of toxic substances to water;
- Eliminating additional water pollution by 1985;
- Ensuring that surface waters would meet certain standards necessary for sports and recreation by 1983;
- Prohibiting the release of toxic amounts of pollutants;
- Development and implementation of area wide treatment management planning processes to control sources of pollutants;
- Control of non-point sources of pollution;
- Undertaking of major research, and a demonstration project, to eliminate pollution discharge into the waters of the United States.

This Act also significantly strengthened earlier legislation and was itself amended by the Clean Water Act of 1977 (P.L. 95-217) and the Water Quality Act of 1987 (P.L. 100-4).

Section 402 of the 1972 amendments established the National Pollution Discharge Elimination System (NPDES) to authorize the U.S. Environmental Protection Agency, (EPA), as well as state EPAs, to issue discharge permits in order to restore water quality and to address point source discharges. (A point source discharge is one from a man-made structure or conveyance, such as a pipe or drainage swale.)

¹ There can be considerable confusion in understanding the various references for a particular law or statute. When an Act of Congress is signed into law by the President, it is assigned a Public Law Number, e.g. P.L. 92-500. This law is then "codified" or placed within the United State Code, or U.S.C. which is in effect a book of statutes that contain all of the laws of the United States, organized by subject areas. Thus the Federal Water Pollution Control Amendments of 1972 is known as P.L. 92-500 and is codified in 33 U.S.C. 1251. The Codified US Codes are updated and published every six years. Further, many of the laws passed by Congress and signed into law; require US Government Agencies to develop rules and regulations to implement the provisions of the law. Such was the case with the Clean Water Act in 1972 that required EPA to develop the regulations necessary to carry out the NPDES program. These regulations are published in the Federal Register for public review and comment and eventually in their final form. These final regulations are then placed in the Consolidated Federal Regulations or CFR, which are organized by agency and function. Thus P.L. 92-500 is codified in 33 U.S.C. 1251 and the final regulations are in Title 40 CRF, Part 122. A similar system is followed on the state level. For example, the Massachusetts Wetlands Protection Act can be found in Mass General Law (MGL) Chapter 131 Section 40, (M.G.L. c131 §40) and the regulations promulgated by The Massachusetts Department of Environmental Protection, the agency charged with developing the regulations to implement the Law, can be found in the Consolidated Massachusetts Regulations (CMR) 310 CMR 10.00.

The regulations governing the NPDES program can be found in Title 40 CRF, Part 122. The 1977 amendments created, among other things, the development of the Best Management Practices (BMP) Program, and extended the CWA to cover stormwater discharges from municipal separate storm sewer systems (MS4s), as well as industrial sources, and established a requirement for development agreements to minimize duplications and delays in the issuance of permits.

In 1987, the Clean Water Act was amended, requiring a two-phase national program to address water pollution created from stormwater, and mandating that stormwater discharges from towns and cities be classified as point sources of pollution. Phase I regulations, released in 1990, addressed stormwater discharges in large and medium-sized municipalities and covered approximately 900 of the nation's largest cities.

Phase II of the stormwater program was published in the Federal Register on December 8, 1999. The Phase II regulations required operators of small municipal separate storm sewer systems (MS4s) located in urbanized areas and serving a population of fewer than 100,000, to obtain a National Pollution Discharge Elimination System or NPDES permit for their stormwater discharges. Within the Town of Tyngsborough, much of the land lies within the Boston urbanized area, and therefore this area is regulated as a small MS4 and must comply with Phase II regulations.

II. SUMMARY OF THE TOWN OF TYNGSBOROUGH'S PHASE II PROGRAM THROUGH MARCH 2007

The Town of Tyngsborough submitted a Notice of Intent (NOI) in response to Federal Law, identifying 35 Best Management Practices (BMPs)² within the six categories outlined in the permit requirements: public outreach, public participation, illicit discharges, construction site runoff, post construction runoff and pollution prevention/good housekeeping. (These categories were finalized in the Federal Register in January 2000.)

Following the NOI filing, the Town was required to outline a process for developing the Stormwater Management Plan, or SWMP, and to implement the BMPs contained within the Plan. These BMPs included: the development of a method to regulate illicit connections and discharges to the storm sewer system, the mapping of the storm sewer system, and public outreach and education. The NOI was submitted in March 2003 and is valid for five years. A copy of the NOI and NPDES Permit is included in Appendix A.

² On their Stormwater Phase II website, DEP defines BMP as follows: " 'Best Management Practice' (BMP) is a vague term, broadly used to describe the most effective, feasible method that does the job. In the context of stormwater management, it is often used to mean a structure or technology use to manage or treat the water such as a hooded catch basin, detention basin or filter system. The term BMP is also used for behavioral practices such as timely cleaning of catch basins, . . . A BMP can even be restraint of a specific behavior such as minimizing the use of fertilizer or of road salt and sand."

The Town began to implement the outlined BMPs under the six broad categories set forth in the NPDES Permit. Included among the activities successfully completed in the first three years of the permit were the following:

- Purchase of a GPS unit to locate and map the storm sewer system structures;
- Development and distribution of a stormwater pamphlet with the annual tax bills;
- Development and distribution of a hazardous waste pamphlet by the Board of Health;
- Completion of spill prevention training for all employees;
- Completion of a hazardous materials release plan;
- A stormwater poster contest under the auspices of the Tyngsborough School Department;
- Stenciling over 260 catch basins with "Dump No Waste";
- Implementing a water quality monitoring program for Lake Mascuppic;
- Initiating an "Adopt-a-Stream" program;
- Initiating a systematic inspection of all priority outfalls in both wet and dry conditions;
- Implementing a 24 hour telephone line to the Board of Health for failed septic systems;
- Amending of the Conservation Commission and the Planning Board regulations to require compliance with MassDEP stormwater management standards and erosion control;
- Installation of spill kits in all municipal buildings;
- Completing HAZMAT 1 response awareness training for Fire, Highway, Police and Conservation Departments; and
- Implementing an annual street sweeping and catch basin cleaning program.

III. SUMMARY OF WORK COMPLETED UNDER THE NMCOG CONTRACT

On October 31, 2006, The Town of Tyngsborough contracted with the Northern Middlesex Council of Governments (NMCOG) to address the remaining requirements of the NPDES permit, including the development and completion of a Stormwater Management Plan (SWMP). The tasks outlined in the scope of work included:

- Preparing the Stormwater Management Plan;
- Locating and mapping the stormwater sewer system within the Town, including catch basins, culverts and outfalls;
- Development of a By-law for the Management of Stormwater and Illicit Connections and Illegal Discharges to the Storm Sewer System;
- Stenciling all catch basins to indicate that no pollutants may be dumped into the basins;
- Conducting a public hearing on the SWMP; and
- Developing amendments to existing regulations and/or drafting a new By-law to address stormwater pollution.

NMCOG also agreed to help the Town develop a Groundwater Protection By-law and prepare the Annual Report for 2006 for submission to DEP.

A. DEVELOPMENT OF THE STORMWATER MANAGEMENT PLAN

A Notice of Intent (NOI) was filed with DEP and EPA Region I, summarizing the BMPs that the Town agreed to implement. Upon approval, the Town was required to develop a SWMP and implement the BMPs contained within the Plan. As outlined above, these BMPs include the development of a method to regulate illicit connections and discharges to the stormwater sewer system, the mapping of the stormwater sewer system and public outreach and education.

In the spring of 2007, the draft SWMP was finalized by NMCOG and presented to the Town for review and comment. Based on input received at a public hearing conducted by the Tyngsborough Board of Selectmen on September 10, 2007, the plan was modified and finalized, and adopted by the Town. A copy of the minutes of the public hearing can be found in Appendix B.

The SWMP was developed around the six Minimum Control Measures (MCMs) outlined in the NPDES Regulations:

- Public Education and Outreach regarding Stormwater Impacts;
- Public Participation and Involvement;
- Illicit Discharge Detection and Elimination;
- Construction Site Runoff Control;
- Post-construction Stormwater Management in New Development and Redevelopment;
- and
- Pollution Prevention/Good Housekeeping for Municipal Operations.

Each MCM has a general goal and a series of BMPs for achieving the goal, with a total of 35 BMPs identified for implementation. The complete SWMP, including the BMPs, can be found in Appendix C.

A municipality is considered to be in compliance with the Maximum Extent Practicable or MEP³ technical standard when the BMPs are approved by the NPDES permitting authority and implemented by the Town. The Town must implement each of the BMPs contained in the Notice of Intent (NOI) by March 2008, although EPA and DEP will allow adjustments to the NOI/SWMP, so the town may replace a failing program with an alternative program if necessary. The Town may be considered in violation of its NPDES Phase II permit if it fails to complete any of the BMPs. It is important to note that EPA requires each Phase II permittee to maintain the data, records, and other documents used to develop the SWMP.

³ By DEP definition, "extent practicable" means the applicant has made all reasonable efforts to meet the standards, including evaluation of alternative BMP designs and their locations. Maximum Extent Practicable consists of a SWMP that covers the 6 areas of work that the Federal EPA refers to as Minimum Control Measures.

B. MAPPING OF THE TOWN'S STORMWATER SYSTEM/STENCILING OF CATCH BASINS

Throughout the summer and fall of 2007, the field work necessary to develop the storm sewer system map required in the SWMP was completed. Using a Global Position System (GPS), over 3,900 drainage structures in the Town were located and subsequently mapped. While the structures were being located, "Dump No Waste" was stenciled adjacent to the catch basins within the public right-of-way or on other public property (e.g. the public schools). The final maps of the stormwater system are included in Appendix D of this report. Additional field work included an inventory, both GPS and photographic, as viewed from the Merrimack River, of those observable structures that empty directly into the River.

The final map was developed using data layers so that various attributes of the storm sewer system can be viewed independently and without some of the "clutter" of the main map. Among the layers included, are culverts, catch basins, and outfalls and spillways. Also shown are wetland features, an area of historic concern, roadways and contours. The following Tyngsborough Stormwater Management Maps, along with locational attribute tables for the mapped data, are included in Appendix D:

- Overview, showing all features and structures
- Catch Basins
- Culverts
- Drain Manholes
- Outfalls and Spillways
- Representative Areas of Concern

The Stormwater Management Plan maps graphically illustrate the location of all identified structures in the storm sewer system within Tyngsborough. Structures include catch basins, drainage manholes, culverts, outfalls⁴ and other miscellaneous structures such as drainage swales. The following points are germane to the maps:

- 3,910 structures were located via GPS technology; the specific numbers and types are broken down in the map legend of the Overview Map.
- Not all of the located structures are on town roads, within the town rights-of-way or on other municipal property. However, NMCOG located all that could be found and accessed, in an attempt to give the Town a more complete picture of the stormwater sewer system, as well as the stormwater drainage flows. It is important for the Town to understand how the entire system functions, since in many cases, the water entering the municipal system does not originate, or terminate, on public property. This can be illustrated on the macro scale by the large commercial structures on Middlesex Road and their associated parking areas. The roof and parking lot stormwater run-off originates on private property but will dramatically impact the municipal (and state) storm sewer systems. On the micro scale, this can be shown by small culverts, and/or swales that are found on private residential property, when these structures are used to channel stormwater from the public roads to a detention basin on private property. In light of this, it is important for the Town to determine if there are emergency access and maintenance agreements in place for those structures on private property.

⁴ Culverts are defined as pipes or other drainage structures which go completely under another structure, such as a roadway, allowing stormwater to flow from one side of the road to the other without impacting the road surface. Outfalls are defined as pipes or other man made conveyances that transport stormwater from one structure, such as a catch basin, to another location such as a detention basin or as structures that control and channel the release of stormwater from a detention basin.

- The overview map highlights the area around the old town hall as an "Area of Historic Concern". The old town hall is on the National Historic Register and the potential flood damage to structures on the National Historic Register must be evaluated under the Regulations. There does not appear to be any potential for flood damage to this building.
- Most of the culverts that run under the roads, and the outfalls for catch basins, were difficult to locate and some may be on private property. It is suspected that there are additional culverts and/or outfalls that could not be located.
- Many catch basins did not have observable outfalls. This may be due to a variety of factors including overgrown vegetation, outfalls have been buried by dirt and debris over time, or the basins were designed and function as dry wells. An example of a basin with no observable outfall is the single catch basin in the parking lot of the Tyngsborough Recreation Center on Westford Road. Many of the detention and retention basins were located on private property and thus were not located via GPS.

The stormwater maps are a tool that will allow the Town to undertake a variety of tasks, such as:

- Prioritizing the maintenance and/or replacement of those structures most critical for flood prevention and associated losses;
- Implementing a program to clean, repair and/or replace non-functioning structures;
- Implementing a program to clean, repair and/or replace structures that are a part of the overall storm sewer system but are on private property;
- Understanding the potential hazards to structures on the National Historic Register, e.g. the Old Town Hall.

The attribute tables provide the location of all of the structures shown on the maps. The information for these structures is given in terms of type, street location, elevation, and x-y coordinates.

All of the mapping, attribute and photographic information is also contained on the disk in Appendix D. In addition, all of the graphics and data can be viewed at the following website: 68.162.254.127/tyng.

It is recommended that as new development is constructed and new drainage structures added, the map be updated so that a visible and accurate understanding of the Town's stormwater system remains readily available.

C. DEVELOPMENT AND REVISIONS OF THE TOWN BY-LAWS AND REGULATIONS

The Town's regulations, including the Zoning By-law, subdivision and conservation regulations were reviewed by NMCOG, in coordination with the Town staff, with an eye toward developing the necessary revisions for the management of stormwater throughout the municipality. While this review was underway, the Town decided to develop a new by-law to address the stormwater issues vis-à-vis the amendment of a number of regulations and by-laws that were already in existence. As a result, a proposed "By-law for The Management of Stormwater and Illicit Connections, Obstructions and Illegal Discharges to the Storm Sewer System" was developed to meet the requirements of the listed BMPs under Minimum Control Measure 3: Illicit Discharge Detection and Elimination. The by-law gives the Town a comprehensive mechanism to regulate and enforce illicit discharges on a town-wide basis. The Conservation Commission is the regulatory and enforcement agency for this by-law. The Board of Selectmen held a public hearing on the proposed by-law on September 10, 2007 and the by-law was adopted by the Tyngsborough Town Meeting on October 9, 2007. As required, the by-law is currently under

review by the State Attorney General. A copy is included in Appendix E of this report, as are the minutes of the public hearing on the by-law held by the Board of Selectmen.

A draft Groundwater Protection By-Law has been completed and is under review by the Town. A draft copy is included in Appendix F of this report. The purpose of the Groundwater Protection By-law is four-fold: (1) Promote the health, safety, and general welfare of the community by ensuring an adequate quality and quantity of drinking water for the residents, institutions, and businesses of the Town, (2) Preserve and protect existing and potential sources of drinking water supplies; (3) Conserve the natural resources of Tyngsborough, and (4) Prevent temporary and permanent contamination of the environment.

The proposed by-law complies with the requirements of DEP's Wellhead Protection Regulations found in 310 CMR 22.21(2).

D. FIELD OBSERVATIONS

While undertaking the field work for the storm sewer system mapping, a number of conditions and issues were observed and have been brought to the attention of the town via a photographic sampling of potential flooding, erosion and drainage issues. These observations are enumerated here for the Town's use and the photographs are included in Appendix G of this report:

- The vast majority of the culverts and many of the outfalls are full, or partially full, of debris and sediment and do not appear to be able to function as designed. Among the locations where "non-functioning" culverts were found are: the end of Westland, Cedar Lane, Apollo Dr., at Cummings & Kendall, Willowdale and Sherburne, Locust & Kendall, Lawndale & Coburn, Sequoia & Willowdale, most culverts along Groton Rd. and Dunstable Rd. north of Westford Rd. All field notes can be made available for additional clarification.
- At Willowdale and Sequoia, on the south side of Willowdale, there is considerable erosion that will eventually lead to slope deterioration and undermining of the roadway unless addressed.
- There are a number of catch basins that are not functioning because they are completely full of sediment and debris. This issue should be addressed during the annual cleaning program.
- The drainage structures on Route 3 and the associated ramps were not located or stenciled due to safety concerns. However, given the recent reconstruction of Rt. 3, they should be in good shape. Unfortunately, there are no "as-builts" available from MassHighway
- Flooding in the vicinity of the Old Town Hall should not pose a threat to the building which is on the National Historical Register. This area is highlighted on the map.
- There is considerable erosion along the culverts and outfalls on the west side of Pawtucket Blvd. along the River; this is especially noticeable at the structures in the vicinity of the Tyngsborough Country Club where the headwall is in danger of failing. This maintenance is the responsibility of MassHighway as the roadway is state owned.
- Tyng's Island was not surveyed since it is private property and all of the drainage structures will empty directly into the River.
- The 48" metal culvert under Sherburne Avenue at Greater Lowell Regional Tech Vocational High School is severely clogged with debris at the upstream inlet. Given the amount of water this culvert is designed to handle, this is a potentially significant problem area.

- There are a couple of locations where large box culverts are on private property and are under driveways (e.g. 125 Frost). These structures were not GPS located, but should they fail for any reason there could be significant flooding issues.
- Some of the located structures are on the town lines, or may be just outside of the town boundaries, e.g. culverts on Pawtucket Blvd. at the Lowell line. However, the structures are placed on the map since their failure could have significant consequences for Tyngsborough.
- One of the more interesting and unique situations was found on Patricia Drive. In two places on this road there were seven (7) catch basins, four on one side and three on the other. However, instead of running one after another adjacent to the curb, the basins were one after another running from the curb to the center line of the pavement. This was not found in any other location in the town, and in fact, it does not appear to be found anywhere else in the region.
- At the Tyngsborough Elementary School, the following should be noted:
 - The 36" RCP culvert under the access road to the school is free flowing on the downstream side but $\frac{3}{4}$ full on the upstream side.
 - The catch basin opposite the second detention pond on the access road is loose and the pavement around it deteriorated.

Many of the issues and problem areas identified can be addressed as part of a systematic and routine maintenance program. However, for those structures that are not within the Town's right-of-way, and for which an easement for access and/or maintenance does not exist, permission of the property owner(s) will need to be obtained. For those structures that are under the jurisdiction of the State, such as those on and adjacent to Pawtucket Blvd., it is suggested that the town send a letter to the MassHighway District Office pointing out the need for maintenance.

It is very important to remember that all of the drainage structures in the stormwater system were not located. This was due to a variety of factors including private property rights, overgrown vegetation and steep slopes. Some culverts/outfalls, for instance, were clearly visible on private property, and if they are blocked or in some other way not functioning properly, it will impact the municipal system, but permission to enter the property could not be obtained. A good example can be found at the intersection of Coburn Road and Lawndale Road. As stated earlier, the town should make sure it has emergency access to the detention basins throughout the town. These structures, and their associated inlets and outfalls, perform critically important stormwater management functions and must be maintained to assure proper operation.

The map entitled "Tyngsborough Stormwater Management Representative Areas of Concern" depicts areas that are in need of immediate investigation due to erosion or structure failure. It is not an all inclusive inventory but rather is a representative sampling of conditions that could negatively impact stormwater management in town if not addressed. The pictures on this map correspond to the larger photographs found in Appendix G.

IV. IMPLEMENTATION OF THE STORMWATER MANAGEMENT PLAN

The Town has undertaken significant steps to implement the Stormwater Management Plan and therefore meet the requirements of the original permit. Among the accomplishments that have been realized are:

- The development and adoption by the Town Meeting of a "By-law for The Management of Stormwater and Illicit Connections, Obstructions and Illegal Discharges to the Storm Sewer System". This meets the requirements of Minimum Control Measure 3 "Illicit discharge Detection and Elimination", and more specifically, BMP 3.18: Monitor Illicit Discharges in Sanitary and Storm Sewer Systems". This By-law also addresses components of Minimum Control Measures 4 and 5, "Construction Site Stormwater Runoff Control" and "Post Construction Stormwater Management in New Development and Redevelopment", respectively.
- This report completes BMP 3.13: the "Mapping of Outfalls and Receiving Waters" and the primary goal of Minimum Control Measure 3, to "Create a Storm Sewer System Map showing all outfalls and receiving waters".
- The stenciling of the public catch basins throughout the town completes BMP 1.7 under Minimum Control Measure 1 "Public Education and Outreach on Stormwater Impacts".
- The development of a draft Groundwater Protection By-law, to be finalized and adopted by the Town Meeting.

Many of the requirements of the BMPs in the SWMP are on-going activities involving monitoring, investigation and enforcement of stormwater related issues and thus the "implementation" is a continuing activity.

The following BMP's still remain outstanding:

- BMP 2.9: Create a Stormwater Advisory Committee
- BMP 2.10: Develop a Volunteer Water Quality Monitoring Program
- BMP 2.11: Volunteer Stream Clean-up Days
- BMP 6.34: Develop Alternatives for Salt Sensitive Areas

The Board of Selectmen and the Conservation Commission should work collaboratively to establish the Stormwater Advisory Committee. Alternatively, the Town may opt to amend the SWMP. However, if any of the BMPs are changed, the NOI for the NPDES permit must also be amended. It is suggested that the Town work with the Merrimack River Watershed Council regarding volunteer water quality monitoring. The Watershed Council recently applied for 604(b) monies from DEP to conduct extensive water quality monitoring along the Merrimack River from the New Hampshire State Line to the Atlantic Ocean. If funded, the program will utilize an extensive network of volunteers for the water sampling efforts. NMCOG is a project collaborator within the Watershed Council's funding application. The Watershed Council may also be able to provide volunteers for stream clean-up projects.

It is suggested that the Tyngsborough Highway Department contact the Town of Westford's Highway Department regarding de-icing alternatives for salt sensitive areas. The Town of Westford currently utilizes an alternative de-icing agent that is environmentally friendly and is pleased with the effectiveness of the substance.

V. IMPLICATIONS OF DEP'S REVISED STORMWATER REGULATIONS

In January 2008, new stormwater regulations were adopted by MassDEP. These regulations amended 314 CMR 9.00, the Water Quality Certification Regulations, and 310 CMR 10.00, the Wetlands Regulations. Both of these regulations required compliance with DEP's stormwater policy. The amendments incorporate the Policy into the regulations and thus eliminate the need for a formal Policy from the Department. The Water Quality Certification permit is issued by the State and thus the changes will not impact any local regulations or By-laws.

The changes to the Massachusetts Wetland Regulations (specifically sections 310 CMR 10.02 and 10.04, 10.05 and 10.58) will have an impact on any wetlands permit issued by the Tyngsborough Conservation Commission. In addition to incorporating the stormwater management standards into the regulations in section 310 CMR 10.05(6)(k)-(q), the changes encompass the following:

- Clarifies which activities are NOT subject to regulations under the Wetlands Protection Act;
- Adds and clarifies a number of definitions used in the regulations including the definitions of illicit discharge, order, maintenance of a stormwater management system, redevelopment, stormwater management system and stormwater best management practice;
- Caps the fee for an ANRAD at \$2,000;
- Clarifies procedures and requirements for abutter notifications;
- Adds the regulatory citation for the designation of "densely populated area"; and
- Encourages the use of Low Impact Development Best Management Practices by making it easier or maintain, operate and modify said practices under certain conditions.⁵

In light of these changes, the two major implications for the Town are: (1) the Tyngsborough Conservation Commission members and Administrator will need to familiarize themselves with the new requirements and (2) the local Wetlands By-law and Regulations will have to be reviewed to make sure there are no conflicts with the amendments. Any such conflicts will have to be resolved. For example, the local regulations will no longer be able to reference DEP's Stormwater Policy, but they will have to incorporate the stormwater regulations themselves or make reference to the appropriate sections of 310 CMR 10.04 and 10.05.

⁵ There are three conditions attached to this change: (1) the management system does not require the filing of a Notice of Intent or NOI; (2) the stormwater management system does not create additional wetlands or buffer area; and (3) review of the proposed stormwater management system shall be limited to maintenance of the stormwater functions of the system, compliance with the stormwater management standards and compliance with the performance standards that would apply in the absence of the stormwater management system.