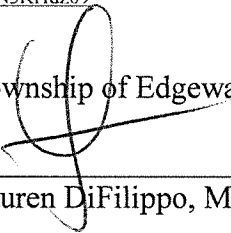


**TOWNSHIP OF EDGEWATER PARK
ORDINANCE NO. 2021-3**

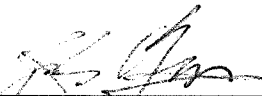
AN ORDINANCE AMENDING PART II, GENERAL LEGISLATION, SECTION 310, "LAND DEVELOPMENT AND ZONING," PART 5, "LAND DEVELOPMENT REGULATIONS," ARTICLE 28, "DRAINAGE" ARTICLE 58, "STORM DRAINAGE," AND SECTION 444, "STORMWATER CONTROL" OF THE CODE OF THE TOWNSHIP OF EDGEWATER PARK, COUNTY OF BURLINGTON, STATE OF NEW JERSEY, UPDATING AND AMENDING THE REQUIREMENTS FOR STORMWATER MANAGEMENT CONSISTENT WITH THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION UPDATED RULES (N.J.A.C. 7:8) ADOPTED ON MARCH 2, 2020, AND AS RECOMMENDED BY THE EDGEWATER PARK TOWNSHIP PLANNING BOARD

Notice is hereby given that the foregoing Ordinance No. 2021-03 to be introduced on first reading at a regular meeting of the Township Council of the Township of Edgewater Park, in the County of Burlington, State of New Jersey, held virtually on February 2, 2021 at 7 p.m. and will be considered for second reading and final passage at the regular meeting of said Township Council to be held virtually on the February 16, 2021 at 7 p.m. or as soon thereafter as this matter can be reached at which time all persons interested shall be given an opportunity to be heard concerning this ordinance. Copies will be made available at the Township Clerk's office in the Municipal Building, 400 Delanco Road, Edgewater Park, NJ 08010 to the members of the general public who shall request the same.

Topic: Township Committee Meeting
 Time: Feb 2, 2021 07:00 PM Eastern Time (US and Canada)
 Join Zoom Meeting
<https://zoom.us/j/92018844058?pwd=SjFveEg0WjhEa1JEQ1QwTUxJN3RHdz09>

Township of Edgewater Park


 Lauren DiFilippo, Mayor



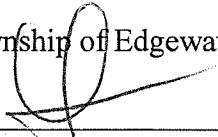
 Brandon L. Garcia, RMC,
 Township Clerk

Record Vote of the Township Committee on Introduction					
Committee Member	Yes	No	Abstain	Absent	Motioned By:
Mr. Johnson	✓				<i>JMB</i>
Ms. Scott	✓				
Mr. Trainor				✓	
Deputy Mayor Belgard	✓				
Mayor DiFilippo	✓				<i>LD</i>

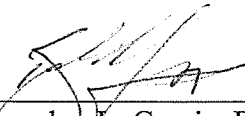
**TOWNSHIP OF EDGEWATER PARK
ORDINANCE NO. 2021-3**

Notice of Final Adoption:

Notice is hereby given that the foregoing ordinance was approved for final adoption by the Township Committee of the Township of Edgewater Park at a Regular Meeting held virtually.

Township of Edgewater Park


 Lauren DiFilippo, Mayor



 Brandon L. Garcia, RMC
 Township Clerk

1st Reading: February 2, 2021
 Publication:
 Amendment:
 Tabled:
 2nd Reading: February 16, 2021
 Publication:
 Adoption:

Record Vote of the Township Committee on Final Passage					
Committee Member	Yes	No	Abstain	Absent	Motioned By:
Mr. Johnson	✓				✓ / SE
Ms. Scott	✓				
Mr. Trainor	✓				
Deputy Mayor Belgard	✓				
Mayor DiFilippo	✓				LDF

§ 310-28-1 General standards.

Each applicant shall be required to provide for surface drainage within his project to ensure that it will not create a burden to the ultimate users of his tract or create an adverse off-tract effect. All streets shall be provided with catch basins and pipes where the same may be necessary for proper surface drainage. The requirement of this section may not be satisfied by the construction of ditches or dry wells only. The system shall be adequate to carry off or store the stormwater and natural drainage water which originates within the development boundaries and that which originates beyond the development boundaries and passes through the development calculated on the basis of maximum potential development as permitted under this chapter. No stormwater runoff or natural drainage water shall be so diverted as to overload existing drainage systems or create flooding or the need for additional drainage structures on other lands without proper and approved provisions being made for taking care of these conditions, even if the flooding or overloaded existing drainage systems existed prior to the applicant taking possession of said property subject to the approval of the Township or its designated representative.

§ 310-28-2 Time of concentration.

The time of concentration used in computing stormwater runoff shall be the time it takes for runoff to travel from the hydraulically most distant point of the watershed to the point of interest within a watershed.[ER11]

§ 310-28-3 Runoff computations.

- A. See § 444-5 for calculation of stormwater runoff. [ER12]

§ 310-28-4 Intensity.

The intensity of the stormwater shall be based on the following:

- A. N.J.A.C. 5:21-7.2(c)5.i for residential projects.
- B. As a minimum, a ten-year storm shall be used at low points with overland relief, or twenty-five-year storm where carried in a pipe;
- C. As a minimum, all box culvert designs shall be based on a twenty-five-year storm. The Rainfall-Intensity-Duration-Frequency Curve for Southern Region, Figure 10-C in the State of New Jersey Department of Transportation Roadway Design Manual, current edition, available here: <https://www.state.nj.us/transportation/eng/documents/RDM/>. Timeflows curves are also included in the figure for use in design;[ER13]
- D. Standard headwalls shall be installed on all pipes. Trash rack and/or bars shall be installed on all pipes equal to or greater than 24 inches in diameter or as directed by the Township or its designated representative.

§ 310-28-5 Pipeline design.

- A. Storm sewer pipelines shall be designated by the following method, and shall be based on the Manning Equation and shall utilize the following friction factors:

n = 0.015	Concrete pipe
n = 0.024	Corrugated metal pipe, 1/2 inch Corrugations, 25% paved
n = 0.021	Corrugated metal pipe, 1/2 inch Corrugations, 50% paved
n = 0.013	Corrugated metal pipe, 1/2 inch Corrugations, 100% paved

- B. The minimum allowable pipe size is 15 inches. Reinforced concrete Class III, Wall B, shall be used in pavement areas and wherever there is vehicular traffic, subject to the approval of the reviewing board engineer. Where the cover on the pipe will be less than two feet, reinforced concrete pipe of Class IV, Wall B, shall be used. No pipe shall have less than one foot of cover. Corrugated metal pipe may be used under certain conditions subject to the approval of the reviewing board engineer.**
- C. This method is based on the assumption that hydraulic gradient will match the inside top of the pipe when system is under maximum hydraulic load.**
- (1) For this method, head losses through manholes, inlets, etc., shall be ignored.**
 - (2) The minimum slope of any pipe shall be such that a minimum velocity of 2.5 fps shall be maintained when the pipe is flowing at 1/4 full.**
 - (3) When the pipe sizes change, the crowns of the pipes shall be matched.**
 - (4) Continuous profiles for each reach of pipe shall be plotted, along with the location of the hydraulic gradient, and the hydraulic information shall include the pipe size and type, the "n" factor, the slope of the hydraulic gradient, slope of the pipe, the design capacity, and the velocity at the design capacity.**
- D. Pipe and hydraulic grade line calculations shall be provided for all proposed pipe designs.**

§ 310-28-6 Inlet design.

- A. Stormwater inlets shall be equal to New Jersey State Highway Department inlet Type B. The maximum collecting capacities of the inlets shall be considered to be:**
- (1) When installed on streets where the grade is 0.75%: five cubic feet per second;**
 - (2) When installed on streets where the grade is 2.00%: 4.8 cubic feet per second;**
 - (3) When installed on streets where the grade is 3.00%: 4.6 cubic feet per second;**
 - (4) When installed on streets where the grade is 4.00%: 4.4 cubic feet per second;**
 - (5) When installed on streets where the grade is 5.00%: 4.2 cubic feet per second;**
 - (6) When installed on streets where the grade is 6.00%: four cubic feet per second.**
- B. Sufficient inlets shall be located and constructed so that the length of surface runoff will not contribute a runoff to the inlet exceeding the preceding designated collecting capacities. In no case shall the distance between inlets be greater than 400 feet.**
- C. The gutter grate of all inlets shall be set not more than two inches below the gutter grade. The surface of the paving adjacent to the inlets shall be constructed to bend into the lowered gutter grade at the inlet in such a manner that a sudden drop off or dip at the inlet will not be created. At such locations where drainage is entirely dependent on inlets, the collecting capacities of the inlets shall be designed for 1/2 the preceding considered capacities.**
- D. Where surface water is collected from two directions at one street corner, inlets shall be placed at, or near, the tangent points of both ends of the radius. The use of one inlet in the radius shall not be allowed.**

- E. Access manholes shall be spaced at four-hundred-foot intervals (maximum) through rights-of-way and at sewer junctions where there are no catch basins.

§ 310-28-7 Open channel design.

Open ditches or channels will not be permitted when the design capacity requires a fifteen-inch pipe or larger unless approved by the reviewing board engineer. Where permitted, open channel design should be based on the following hydraulic consideration:

- A. Manning's equation:

$n = 0.015$ - straight, trowel-finished concrete lined ditch

$n = 0.025$ - straight, unlined ditch

$n = 0.033$ - 0.15 fair to poor natural streams and watercourses

Allowable Velocity

Excavation Material

Velocity

See Table 11-1 for Allowable Velocity for Various Soil Textures in the Standards for Soil Erosion and Sediment Control in New Jersey available here: <https://www.nj.gov/agriculture/divisions/anr/ER14>

Concrete-lined ditch

15 fps

- B. Ample freeboard not less than one foot zero inches (1.0 ft) should be provided on all channels.
- C. The channel should be designed to conform wherever possible to the adjacent ground conditions. This means that it should not be projecting [ER15]above the surrounding ground.
- D. Continuous profiles for each reach of open channel shall be plotted along with adjacent average ground and the hydraulic information pertinent to each reach within the system. This information shall include the type of channel lining, the "n" factor, the width of the channel bottom, the side slopes, the water depth, the design capacity, and the velocity at the design capacity.
- E. Open channels shall have a maximum side slope of 3:1 and shall have adequate slope protection as required by Article 48, Soil Erosion and Sediment Control, of this chapter.

§ 310-28-8 Culverts.

All culverts shall be limited to a single opening; multiple pipes will not be permitted subject to the approval of the reviewing board engineer. The design of culverts shall be such as to minimize the probability of debris accumulations.

§ 310-28-9 Detention basin design.

Detention basins will be required in all major developments and site plans unless it has been demonstrated by the applicant that a detention basin is not required subject to the approval of the reviewing board engineer.

§ 310-28-10 Stormwater Management Best Management Practices (BMPs).

- A. Basins shall be designed in accordance with the New Jersey Stormwater Best Management Practices Manual (BMP Manual) available here: https://www.njstormwater.org/bmp_manual2.htm. Complete calculations for the basin(s) should be supplied at the time the preliminary plans are submitted. These calculations should include maps and runoff calculations prior to development, runoff after development, and complete calculations for design. All maps and calculations should be signed and sealed by a state licensed Engineer.
- B. Additionally, the following graphs shall be included for each proposed basin:
- (1) Depth in basin versus storage in basin;
 - (2) Depth in basin versus outflow from basin (graphs and tables); and

- (3) **Inflow to basin versus time and allowable outflow from basin versus time (on same graph).**
- C. **The design calculations should be based on time intervals of five to 10 minutes and indicate inflow, average inflow by time interval, outflow, average outflow by time interval, incremental change in storage, and height of water in pond.**
- D. **Basins, except wet ponds, shall be designed to completely empty after a rainstorm occurs within the timeframe outlined in the BMP Manual. Basins shall have provisions for an emergency overflow. In those instances where existing or proposed permanent ponds will be used as retention ponds, they must have a minimum depth and provide adequate freeboard to function as a wet pond as outlined in the BMP Manual. [ER16]**

§ 310-28-11 Grading.

For both major and minor developments, blocks and lots shall be graded to secure proper drainage away from all buildings and to prevent the collection of stormwater in pools and to avoid concentration of stormwater from each lot to adjacent lots. The minimum/maximum grading are as follows:

Lawn/grass areas	2.0% min.	33% max.
Grass swale	1.5% min.	33% max.
Sidewalk	1.0% min.	*4.9% max.
Driveways	1.0% min.	8.3% max.
Driveways (side-entry)	1.0% min.	5.0% max.

**Exceeding 5% slope would be considered a ramp by ADA guidelines, and the design would need to reflect this.*

§ 310-28-12 Flooding.

Land subject to periodic or occasional flooding shall not be designed for residential occupancy nor for any other purpose which may endanger life or property. Such land within a lot shall be considered for open spaces, yards, or other similar uses in accordance with State floodplain regulations.

§ 310-28-13 Easements.

Where a minor or major development is traversed by a watercourse, surface or underground drainage system or stormwater BMP, channel or stream, there shall be provided and dedicated a drainage right-of-way easement meeting any minimum widths and locations shown on any adopted Official Map or Master Plan or as required under Article 29, Easements, of this chapter.

- A. **The approving board may require dedication of easements or deed restrictions along drainage ways, natural water courses, steep slopes and other unique botanical, historical, geological and paleontological areas located therein or adjacent to a proposed development. The easement or deed restriction shall be indicated on the plan and shall be marked on the land by concrete monuments at angle points and or property corners at sufficient locations to enable the dedicated area to be surveyed. In such cases, the approving Board shall consult with the Township Planner and Township Engineer in determining the required shape and size of the easement. The easement or deed restriction shall be in a form approved by the approving Board's Attorney and shall include provisions assuring the following:**
- (1) **Preservation of the channel and flood plain of the watercourse, including the right to clean, de-slug and all such work necessary to maintain the shape, slope and water flow of the watercourse.**
 - (2) **Prohibition of any removal of trees and other cleaning and grading not directly related to the preservation of the channel of a watercourse.**
 - (3) **Grant of a right to the Township to maintain or reconstruct any drainage facilities necessary for the health and safety of the public, if applicable.**
 - (4) **Right-of-entry to the Township to install and maintain any drainage facilities therein, if applicable.**

§ 310-28-14 Easements or rights-of-way required.

Easements or rights-of-way shall be required in accordance with Article 29 where storm drains are installed outside streets.

§ 310-58-1 Storm drainage pipelines.

A. Materials.

- (1) **Reinforced concrete pipe.** Reinforced concrete pipe shall conform to the requirements of the American Society for Testing Materials Specification C-76, as amended and revised to date. Reinforced concrete pipe shall be Class 3, Wall B, except that reinforced concrete pipe with less than two feet of cover shall be Class 4, Wall B.
- (2) **Corrugated metal pipe.** Corrugated metal pipe shall be permitted only by specific written approval of the Township Engineer.
 - (a) **Corrugated metal pipe and pipe arch shall conform to the requirements of the American Association of State Highway Officials specifications therefore, as amended and revised to date, and conform to the following gauge requirements:**

Diameter (inches)	Gauge	
	Aluminum	Corrugated Metal
15	14	16
18	12	16
21	12	16
24	12	14
30	12	14
36	10	12
42	10	12
48	10	10
54	8	10
60	8	8

- (b) **For pipe diameters in excess of 60 inches, the specific design shall be approved by the Township Engineer.**
- (c) **Corrugated metal pipe and pipe arch shall be in accordance with Article 909.02.06 and fully lined with asphalt material coated inside and outside in accordance with current American Association of State Highway Officials (AASHTO) M190 and/or American Society for Testing and Materials (ASTM) A849 Specifications, as applicable, and shall have asphalt material inverts. The asphalt material shall fill the valleys of the corrugations and cover the crests of the corrugations a minimum of one-eighth (1/8) inch. For round pipe, the invert material shall cover not less than 25% of the inside perimeter of the pipe, and for pipe arch, the invert material shall cover not less than 40% of the inside perimeter of the pipe.**
- (3) **Concrete:** minimum 4,000-psi concrete conforming to the requirements set forth elsewhere herein shall be used for the construction of concrete cradles and in making connections to existing drainage structures.
- (4) **High Density Polyethylene Pipe (HDPE).** Material in accordance with Article 909.02.02
- (5) **Plastic Drainage Pipe.** Material in accordance with Article 909.02.03.

B. Methods of construction shall be in accordance with Article 601.03 and as generally outlined below: Should a conflict arise between Article 601.03 and the construction outlined below, the contractor shall notify the Township Engineer in writing and request a determination.

- (1) **Excavation and backfill.** Excavation and backfill shall conform to the requirements for subsurface structure excavation. The contractor shall provide adequate equipment and so operate it as to maintain an essentially dry excavation, stable trench bottoms, suitable working conditions and protection from water damage throughout and until the completion of the work.
- (2) **Pipe shall be laid in straight lines between drainage structures except when otherwise specifically provided. When**

deviation from a straight line is permitted, the deflection of each joint shall not exceed the manufacturer's recommended maximum for the type of joint and size of pipe being installed. All pipe shall be laid to uniform grades.

Each section of pipe shall be solidly bedded in the trench bottom and shall be supported for its full length except where excess excavation has been made for joints. Before making each joint, the ends of the pipes and all joint members shall be thoroughly cleaned. All jointing shall be done in strict accordance with the manufacturer's recommendations. Joints of tongue and groove pipe shall be filled with mortar around their entire circumference. Mortar shall be 1:2 parts cement to sand.

- (a) No defective or leaking pipe, joints, connections, manholes, inlets or other parts of the work will be acceptable. All visible leakage of any description and no matter where located shall be corrected by the contractor in a manner satisfactory to the engineer.
- (b) Except when necessary to maintain a flow, storm drains shall not be placed in embankment until the embankment has been constructed and consolidated to proposed finished grade or subgrade, or to an elevation not less than three feet above the proposed top of pipe, whichever is lower. After an embankment has been so constructed, trenches for storm drainage shall be excavated as herein above specified.
- (3) Flushing of storm drains. The contractor shall flush such newly completed storm drains as designated by the engineer in order to remove any foreign matter which may have accumulated therein during construction. The contractor shall furnish all labor, material, equipment and water necessary for flushing and shall provide for the disposal of water used for flushing.
- (4) Existing pipes and structures. The locations of existing pipes and structures shown on the plans are approximate, and before construction the contractor shall determine the exact locations of all existing pipes and structures in the vicinity of the proposed work. Connections to existing pipes and structures shall be made in a manner satisfactory to the engineer.

§ 310-58-2 Underdrains.

- A. **Materials.** Materials for underdrains shall conform to the New Jersey Department of Transportation Standard Specifications, latest edition available here: <https://www.state.nj.us/transportation/eng/specs/> as designated below:
 - (1) Pipe and fittings: Article 909.02;
 - (2) Coarse aggregate (broken stone or washed gravel): Article 901.03;
 - (3) Cast-iron soil pipe for cleanout: Cast Iron Soil Pipe Institute Specifications 301 and/or ASTM A74-20;
 - (4) Mortar: one part cement to two parts sand.
- B. **Methods of construction.** All construction shall be governed by Article 601.03.04 of the New Jersey Department of Transportation Standard Specifications.

§ 310-58-3 Stormwater Management Best Management Practices (BMPs).

- A. **Materials.** Materials for retention basins shall conform to the New Jersey Department of Transportation Standard Specifications as designated below:
 - (1) Embankment. Material obtained from project excavation, free from weeds, roots, stumps, pavement, concrete or other debris;
 - (2) Sod: Articles 808.03.01 and 917.07;
 - (3) Concrete for drainage swale (if required): 4,000 psi at 28 days air-entrained concrete;
 - (4) Riprap: six-inch stone for relief swale and headwalls.
- B. **Methods of construction.** All construction shall be governed by the New Jersey Department of Transportation Standard Specifications except as otherwise permitted by the engineer.

§ 310-58-4 Manholes, inlets and catch basins.

A. Materials.

- (1) **Concrete. Concrete shall conform to the requirements specified elsewhere herein.**
- (2) **Concrete block, brick, clay or shale, mortar, and castings (gray iron) shall conform to the appropriate subsection(s) of Article 910 of the New Jersey Department of Transportation Standard Specifications, latest edition.**
- (3) **Ladderrungs. Article 909.03.6.**

B. Method of construction shall be in accordance with the applicable subsection(s) of Article 602.03 in the NJDOT Standard Specifications.

(a)

§ 310-58-5 Testing.

[Added 11-6-2001 by Ord. No. 21-2001]

In the case of a development storm sewer pipe system, which is to be dedicated to the Township, the developer shall:

- A. Employ a video inspection service to obtain closed circuit color television examination of interior of each and every pipe system and provide a color video record of the examination to the Township Engineer. The video inspection service provided and the format of the recording shall be as approved by the Township Engineer.**
- B. Prepare as-constructed plans and submit two sets to the administrative officer and send a copy to the Township Engineer.**

§ 444-1 Scope and purpose.

- A. **Policy statement.** Flood control, groundwater recharge, and pollutant reduction through the use of stormwater management measures, including green infrastructure Best Management Practices (GI BMPs) and nonstructural stormwater management strategies. GI BMPs and low-impact development (LID) should be utilized to meet the goal of maintaining natural hydrology to reduce stormwater runoff volume, reduce erosion, encourage infiltration and groundwater recharge, and reduce pollution. GI BMPs and LID should be developed based upon physical site conditions and the origin, nature, and the anticipated quantity, or amount, of potential pollutants. Multiple stormwater management BMPs may be necessary to achieve the established performance standards for water quality, quantity, and groundwater recharge.
- B. **Purpose.** It is the purpose of this chapter to establish minimum stormwater management requirements and controls for "major development," as defined in § 444-2.
- C. **Applicability.**
- (1) This chapter shall be applicable to the following major developments:
 - (a) Nonresidential major developments; and
 - (b) Aspects of residential major developments that are not preempted by the Residential Site Improvement Standards at N.J.A.C.5:21.
 - (2) This chapter shall also be applicable to all major developments undertaken by the Township of Edgewater Park~~[ER11]~~.
 - (3) Minor developments as defined in § 444-2, shall adhere to § 444-4.O, § 444-4.Q, and § 444-4.S under the following condition:
 - (a) Any subdivision or minor or major site plan approval, bulk (c) variances, pursuant to N.J.S.A. 40:55D-70c.~~[ER12]~~
- D. **Compatibility with other permit and ordinance requirements.** Development approvals issued for subdivisions and site plans pursuant to this chapter are to be considered an integral part of development approvals under the subdivision and site plan review process and do not relieve the applicant of the responsibility to secure required permits or approvals for activities regulated by any other applicable code, rule, act, or ordinance. In their interpretation and application, the provisions of this chapter shall be held to be the minimum requirements for the promotion of the public health, safety, and general welfare. This chapter is not intended to interfere with, abrogate, or annul any other ordinances, rule or regulation, statute, or other provision of law except that, where any provision of this chapter imposes restrictions different from those imposed by any other ordinance, rule or regulation, or other provision of law, the more restrictive provision(s) or higher standard(s) shall control.

§ 444-2 Definitions.

For the purpose of this chapter, 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. The definitions below are the same as or based on the corresponding definitions in the Stormwater Management Rules at N.J.A.C. 7:8-1.2, unless modified specifically for the Township of Edgewater Park:

CAFRA Centers, Cores or Nodes

Those areas with boundaries incorporated by reference or revised by the Department in accordance with N.J.A.C. 7:7-13.16.

CAFRA Planning Map

The map used by the Department to identify the location of Coastal Planning Areas, CAFRA centers, CAFRA cores, and CAFRA nodes. The CAFRA Planning Map is available on the Department's Geographic Information System (GIS).

Community basin

An infiltration system, sand filter designed to infiltrate, standard constructed wetland, or wet pond, established in accordance with N.J.A.C. 7:8-4.2(c)14, that is designed and constructed in accordance with the New Jersey Stormwater Best Management Practices Manual (BMP Manual), or an alternate design, approved in accordance with N.J.A.C. 7:8-5.2(g), for an infiltration system, sand filter designed to infiltrate, standard constructed wetland, or wet pond and that complies with the requirements of this chapter.

COMPACTION

The increase in soil bulk density.

Contributory Drainage Area

The area from which stormwater runoff drains to a stormwater management measure, not including the area of the stormwater management measure itself.

CORE

A pedestrian-oriented area of commercial and civic uses serving the surrounding municipality, generally including housing and access to public transportation.

COUNTY REVIEW AGENCY

An agency designated by the County Board of Commissioners to review municipal stormwater management plans and implementing ordinance(s). The county review agency may either be:

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

DEPARTMENT

The New Jersey Department of Environmental Protection.

DESIGN ENGINEER

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

DESIGNATED CENTER

A State Development and Redevelopment Plan Center as designated by the State Planning Commission, such as urban, regional, town, village, or hamlet.

DEVELOPMENT

The division of a parcel of land into two or more parcels, the construction, reconstruction, conversion, structural alteration, relocation or enlargement of any building or structure, any mining excavation or landfill, and any use or change in the use of any building or other structure, or land or extension of use of land, for which permission is required under the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq.

In the case of development of agricultural lands, "development" means: any activity that requires a state permit; any

activity reviewed by the County Agricultural Board (CAB) and the State Agricultural Development Committee (SADC), and municipal review of any activity not exempted by the Right-to-Farm Act, N.J.S.A. 4:1C-1 et seq.

DISTURBANCE

The placement or reconstruction of impervious surface or motor vehicle surface, or exposure and/or movement of soil or bedrock or clearing, cutting, or removing of vegetation. Milling and repaving is not considered disturbance for the purposes of this definition.

DRAINAGE AREA

A geographic area within which stormwater, sediments, or dissolved materials drain to a particular receiving water body or to a particular point along a receiving water body.

EMPOWERMENT NEIGHBORHOOD

Neighborhood(s) designated by the Urban Coordinating Council "in consultation and conjunction with" the New Jersey Redevelopment Authority pursuant to N.J.S.A. 55:19-69.

ENVIRONMENTALLY CONSTRAINED AREA

The following areas where the physical alteration of the land is in some way restricted, either through regulation, easement, deed restriction or ownership such as: wetlands, floodplains, threatened and endangered species sites or designated habitats, and parks and preserves. Habitats of endangered or threatened species are identified using the Department's Landscape Project as approved by the Department's Endangered and Nongame Species Program.

ENVIRONMENTALLY CRITICAL AREAS

An area or feature which is of significant environmental value, including but not limited to: stream corridors; natural heritage priority sites, habitats of endangered or threatened species; large areas of contiguous open space or upland forest; steep slopes; and well head protection and groundwater recharge areas. Habitats of endangered or threatened species are identified using the Department's landscape project as approved by the Department's Endangered and Nongame Species Program.

EROSION

The detachment and movement of soil or rock fragments by water, wind, ice or gravity.

GREEN INFRASTRUCTURE

A stormwater management measure that manages stormwater close to its source by:

- 1. Treating stormwater runoff through infiltration into subsoil; or**
- 2. Treating stormwater runoff through filtration by vegetation or soil; or**
- 3. Storing stormwater runoff for reuse.**

HUC 14 or "hydrologic unit code 14"

An area within which water drains to a particular receiving surface water body, also known as a sub watershed, which is identified by a 14-digit hydrologic unit boundary designation, delineated within New Jersey by the United States Geological Survey.

IMPERVIOUS SURFACE

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

INFILTRATION

The process by which water seeps into the soil from precipitation.

LEAD PLANNING AGENCY

One or more public entities having stormwater management planning authority designated by the regional stormwater management planning committee pursuant to N.J.A.C. 7:8-3.2, that serves as the primary representative of the committee.

MAJOR DEVELOPMENT[ER13]

An individual "development," as well as multiple developments that individually or collectively result in:

- 1. The disturbance of one or more acres of land since February 2, 2004;**
- 2. The creation of one-quarter acre or more of "regulated impervious surface" since February 2, 2004;**
- 3. The creation of one-quarter acre or more of "regulated motor vehicle surface" since March 2, 2021; or**
- 4. A combination of 2 and 3 above that totals an area of one-quarter acre or more. The same surface shall not be counted twice when determining if the combination area equals one-quarter acre or more.**

Major development includes all developments that are part of a common plan of development or sale (for example, phased residential development) that collectively or individually meet any one or more of paragraphs 1,2,3, or 4 above. Projects undertaken by any governmental agency that otherwise meet the definition of "Major Development" but which do not require approval under the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq., are also considered "major development."

MINOR DEVELOPMENT

All development other than Major Development.[ER14]

MOTOR VEHICLE

Land vehicles propelled other than by muscular power, such as automobiles, motorcycles, autocycles, and low speed vehicles. For the purposes of this definition, motor vehicle does not include farm equipment, snowmobiles, all-terrain vehicles, motorized wheelchairs, go-carts, gas buggies, golf carts, ski-slope grooming machines, or vehicles that run only on rails or tracks.

MOTOR VEHICLE SURFACE

Any pervious or impervious surface that is intended to be used by "motor vehicles" and/or aircraft, and is directly exposed to precipitation including, but not limited to, driveways, parking areas, parking garages, roads, racetracks, and runways.

MUNICIPALITY

The Township of Edgewater Park.

NEW JERSEY STORMWATER BEST MANAGEMENT PRACTICES (BMP) MANUAL OR BMP MANUAL

The manual maintained by the Department providing, in part, design specifications, removal rates, calculation methods, and soil testing procedures approved by the Department as being capable of contributing to the achievement of the stormwater management standards specified in this chapter. The BMP Manual is periodically amended by the Department as necessary to provide design specifications on additional BMPs and new information on already included practices reflecting the best available current information regarding the particular practice and the Department's determination as to the ability of that BMP to contribute to compliance with the standards contained in this chapter. Alternative stormwater management measures, removal rates, or calculation methods may be utilized, subject to any limitations specified in this chapter, provided the design engineer demonstrates to the Township, in accordance with § 444-4.F and N.J.A.C. 7:8-5.2(g), that the proposed measure and its design will contribute to achievement of the design and performance standards established by this chapter.

The latest BMP Manual is available here: https://www.njstormwater.org/bmp_manual2.htm.

NODE

An area designated by the State Planning Commission concentrating facilities and activities which are not organized in a compact form.

NUTRIENT

A chemical element or compound, such as nitrogen or phosphorus, which is essential to and promotes the development of organisms.

PERSON

Any individual, corporation, company, partnership, firm, association, political subdivision of this state and any state, interstate or Federal agency.

POLLUTANT

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

RECHARGE

The amount of water from precipitation that infiltrates into the ground and is not evapotranspired.

REGULATED IMPERVIOUS SURFACE

Any of the following, alone or in combination:

1. A net increase of impervious surface;
2. The total area of impervious surface collected by a new stormwater conveyance system (for the purpose of this definition, a "new stormwater conveyance system" is a stormwater conveyance system that is constructed where one did not exist immediately prior to its construction or an existing system for which a new discharge location is created);
3. The total area of impervious surface proposed to be newly collected by an existing stormwater conveyance system; and/or
4. The total area of impervious surface collected by an existing stormwater conveyance system where the capacity of that conveyance system is increased.

"Regulated motor vehicle surface" means any of the following, alone or in combination:

1. The total area of motor vehicle surface that is currently receiving water;
2. A net increase in motor vehicle surface; and/or quality treatment either by vegetation or soil, by an existing stormwater management measure, or by treatment at a wastewater treatment plant, where the water quality treatment will be modified or removed.

SEDIMENT

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

SITE

The lot or lots upon which a major development is to occur or has occurred.

SOIL

All unconsolidated mineral and organic material of any origin.

STATE DEVELOPMENT AND REDEVELOPMENT PLAN METROPOLITAN PLANNING AREA (PA1)

An area delineated on the State Plan Policy Map and adopted by the State Planning Commission that is intended to be the focus for much of the state's future redevelopment and revitalization efforts.

STATE PLAN POLICY MAP

The geographic application of the State Development and Redevelopment Plan's goals and statewide policies, and the Official Map of these goals and policies.

STORMWATER

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

STORMWATER MANAGEMENT BASIN/BMP

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

STORMWATER MANAGEMENT MEASURE

Any practice, technology, process, program, or other method intended to control or reduce stormwater runoff and associated pollutants, or to induce or control the infiltration or groundwater recharge of stormwater or to eliminate illicit or illegal non-stormwater discharges into stormwater conveyances.

STORMWATER RUNOFF

Water flow on the surface of the ground or in storm sewers, resulting from precipitation.

STORMWATER MANAGEMENT PLANNING AGENCY

A public body authorized by legislation to prepare stormwater management plans.

STORMWATER MANAGEMENT PLANNING AREA

The geographic area for which a stormwater management planning agency is authorized to prepare stormwater management plans, or a specific portion of that area identified in a stormwater management plan prepared by that agency.

TIDAL FLOOD HAZARD AREA

A flood hazard area in which the flood elevation resulting from the two-, 10-, or 100-year storm, as applicable, is governed by tidal flooding from the Atlantic Ocean. Flooding in a tidal flood hazard area may be contributed to, or influenced by, stormwater runoff from inland areas, but the depth of flooding generated by the tidal rise and fall of the Atlantic Ocean is greater than flooding from any fluvial sources. In some situations, depending upon the extent of the storm surge from a particular storm event, a flood hazard area may be tidal in the 100-year storm, but fluvial in more frequent storm events.

URBAN COORDINATING COUNCIL EMPOWERMENT NEIGHBORHOOD

A neighborhood given priority access to state resources through the New Jersey Redevelopment Authority.

URBAN ENTERPRISE ZONES

A zone designated by the New Jersey Enterprise Zone Authority pursuant to the New Jersey Urban Enterprise Zones Act, N.J.S.A. 52:27H-60 et seq.

URBAN REDEVELOPMENT AREA

Previously developed portions of areas:

- A. **Delineated on the State Plan Policy Map (SPPM) as the Metropolitan Planning Area (PA1);**
- B. **Designated centers, cores or nodes;**
- C. **Designated as CAFRA centers, cores or nodes;**
- D. **Designated as Urban Enterprise Zones; and**
- E. **Designated as Urban Coordinating Council Empowerment Neighborhoods.**

WATER CONTROL STRUCTURE

A structure within, or adjacent to, a water, which intentionally or coincidentally alters the hydraulic capacity, the flood elevation resulting from the two-, 10-, or 100-year storm, flood hazard area limit, and/or floodway limit of the water. Examples of a water control structure may include a bridge, culvert, dam, embankment, ford (if above grade), retaining wall, and weir.

WATERS OF THE STATE

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

WETLANDS or WETLAND

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

§ 444-3 Design and performance standards for stormwater management measures.

- A. **Stormwater management measures for major development shall be designed to meet the erosion control, groundwater recharge, stormwater runoff quantity control, and stormwater runoff quality treatment as follows:**
 - (1) **The minimum standards for erosion control are those established under the Soil and Sediment Control Act, N.J.S.A. 4:24-39 et seq., and implementing rules at N.J.A.C. 2:90.**
 - (2) **The minimum standards for groundwater recharge, stormwater quality, and stormwater runoff quantity shall be met by incorporating green infrastructure.**

[ERIS]

- B. **The standards in this chapter apply only to new major development and are intended to minimize the impact of stormwater runoff on water quality and water quantity in receiving water bodies and maintain groundwater recharge. The standards do not apply to new major development to the extent that alternative design and performance standards are applicable under a regional stormwater management plan or Water Quality Management Plan adopted in accordance with Department rules. The stormwater management requirements within this chapter, as they relate to major development supersede other design requirements stipulated in the Township Code, including but not limited to the following sections:**

(1) **Chapter 310, Land Development and Zoning.**

(2) **Chapter 310, Land Development and Zoning, Article 28, Drainage.**

§ 444-4 Stormwater management requirements for major development.

- A. **The development shall incorporate a maintenance plan for the stormwater management measures incorporated into the design of a major development in accordance with § 444-10.**
- B. **Stormwater management measures shall avoid adverse impacts of concentrated flow on habitat for threatened and endangered species as documented in the Department's Landscape Project or Natural Heritage Database established under N.J.S.A. 13:1B-15.147 through 15.150, particularly *Helonias bullata* (swamp pink) and/or *Clemmys muhlenbergi* (bog turtle).**

- C. The following linear development projects are exempt from the groundwater recharge, stormwater runoff quantity, and stormwater runoff quality requirements of § 444-4.F and G:**
- (1) The construction of an underground utility line provided that the disturbed areas are revegetated upon completion; and**
 - (2) The construction of an aboveground utility line, provided that the existing conditions are maintained to the maximum extent practicable; and**
 - (3) The construction of a public pedestrian access, such as a sidewalk or trail with a maximum width of 14 feet, provided that the access is made of permeable material.**
- D. A waiver from strict compliance from the green infrastructure, groundwater recharge, stormwater runoff quantity, and stormwater runoff quality requirements of § 444-4.F and G may be obtained for the enlargement of an existing public roadway or railroad; or the construction or enlargement of a public pedestrian access, provided that the following conditions are met:**
- (1) The applicant demonstrates that there is a public need for the project that cannot be accomplished by any other means; and**
 - (2) The applicant demonstrates through an alternatives analysis, that through the use of stormwater management measures, the option selected complies with the requirements of § 444-4.F and G to the maximum extent practicable; and**
 - (3) The applicant demonstrates that, in order to meet the requirements of § 444-4.F and G existing structures currently in use, such as homes and buildings, would need to be condemned; and**
 - (4) The applicant demonstrates that it does not own or have other rights to areas, including the potential to obtain through condemnation lands not falling under § 444-4.D(3) above within the upstream drainage area of the receiving stream, that would provide additional opportunities to mitigate the requirements of § 444-4.F and G that were not achievable on-site.**
- E. Tables 1 through 3 below summarize the ability of stormwater BMPs identified and described in the New Jersey Stormwater BMP Manual to satisfy the green infrastructure, groundwater recharge, stormwater runoff quality and stormwater runoff quantity standards specified in § 444-4.O, R(1)(b), R(1)(c), and S. When designed in accordance with the most current version of the New Jersey Stormwater BMP Manual, the stormwater management measures found at N.J.A.C. 7:8-5.2 (f) Tables 5-1, 5-2 and 5-3 and listed below in Tables 1, 2 and 3 are presumed to be capable of providing stormwater controls for the design and performance standards as outlined in the tables below. Upon amendments of the New Jersey Stormwater BMPs to reflect additions or deletions of BMPs meeting these standards, or changes in the presumed performance of BMPs designed in accordance with the New Jersey Stormwater BMP Manual, the Department shall publish in the New Jersey Registers a notice of administrative change revising the applicable table. The most current version of the BMP Manual can be found on the Department's website at:**

https://njstormwater.org/bmp_manual2.htm

- F. **Where the BMP tables in the NJ Stormwater Management Rule are different due to updates or amendments with the tables in this chapter the BMP Tables in the Stormwater Management rule at N.J.A.C. 7:8-5.2(f) shall take precedence.**

Table 1				
Green Infrastructure BMPs for Groundwater Recharge, Stormwater Runoff Quality, and/or Stormwater Runoff Quantity				
<u>Best Management Practice</u>	<u>Stormwater Runoff Quality TSS Removal Rate (percent)</u>	<u>Stormwater Runoff Quantity</u>	<u>Groundwater Recharge</u>	<u>Minimum Separation from Seasonal High Water Table (feet)</u>
<u>Cistern</u>	<u>0</u>	<u>Yes</u>	<u>No</u>	<u>--</u>
<u>Dry Well^(a)</u>	<u>0</u>	<u>No</u>	<u>Yes</u>	<u>2</u>
<u>Grass Swale</u>	<u>50 or less</u>	<u>No</u>	<u>No</u>	<u>2^(e)</u> <u>1^(f)</u>
<u>Green Roof</u>	<u>0</u>	<u>Yes</u>	<u>No</u>	<u>--</u>
<u>Manufactured Treatment Device^{(a) (g)}</u>	<u>50 or 80</u>	<u>No</u>	<u>No</u>	<u>Dependent upon the device</u>
<u>Pervious Paving System^(a)</u>	<u>80</u>	<u>Yes</u>	<u>Yes^(b)</u> <u>No^(c)</u>	<u>2^(b)</u> <u>1^(c)</u>
<u>Small-Scale Bioretention Basin^(a)</u>	<u>80 or 90</u>	<u>Yes</u>	<u>Yes^(b)</u> <u>No^(c)</u>	<u>2^(b)</u> <u>1^(c)</u>
<u>Small-Scale Infiltration Basin^(a)</u>	<u>80</u>	<u>Yes</u>	<u>Yes</u>	<u>2</u>
<u>Small-Scale Sand Filter</u>	<u>80</u>	<u>Yes</u>	<u>Yes</u>	<u>2</u>
<u>Vegetative Filter Strip</u>	<u>60-80</u>	<u>No</u>	<u>No</u>	<u>--</u>

(Notes corresponding to annotations ^(a) through ^(g) are found under Table 3)

Table 2
Green Infrastructure BMPs for Stormwater Runoff Quantity
(or for Groundwater Recharge and/or Stormwater Runoff Quality
with a Waiver or Variance from N.J.A.C. 7:8-5.3)

<u>Best Management Practice</u>	<u>Stormwater Runoff Quality TSS Removal Rate (percent)</u>	<u>Stormwater Runoff Quantity</u>	<u>Groundwater Recharge</u>	<u>Minimum Separation from Seasonal High Water Table (feet)</u>
<u>Bioretention System</u>	<u>80 or 90</u>	<u>Yes</u>	<u>Yes^(b)</u> <u>No^(c)</u>	<u>2^(b)</u> <u>1^(c)</u>
<u>Infiltration Basin</u>	<u>80</u>	<u>Yes</u>	<u>Yes</u>	<u>2</u>
<u>Sand Filter^(b)</u>	<u>80</u>	<u>Yes</u>	<u>Yes</u>	<u>2</u>
<u>Standard Constructed Wetland</u>	<u>90</u>	<u>Yes</u>	<u>No</u>	<u>N/A</u>
<u>Wet Pond^(d)</u>	<u>50-90</u>	<u>Yes</u>	<u>No</u>	<u>N/A</u>

(Notes corresponding to annotations ^(b) through ^(d) are found under Table 3)

Table 3				
BMPs for Groundwater Recharge, Stormwater Runoff Quality, and/or				
Stormwater Runoff Quantity				
only with a Waiver or Variance from N.J.A.C. 7:8-5.3				
<u>Best Management Practice</u>	<u>Stormwater Runoff Quality TSS Removal Rate (percent)</u>	<u>Stormwater Runoff Quantity</u>	<u>Groundwater Recharge</u>	<u>Minimum Separation from Seasonal High Water Table (feet)</u>
<u>Blue Roof</u>	<u>0</u>	<u>Yes</u>	<u>No</u>	<u>N/A</u>
<u>Extended Detention Basin</u>	<u>40-60</u>	<u>Yes</u>	<u>No</u>	<u>1</u>
<u>Manufactured Treatment Device^(h)</u>	<u>50 or 80</u>	<u>No</u>	<u>No</u>	<u>Dependent upon the device</u>
<u>Sand Filter^(c)</u>	<u>80</u>	<u>Yes</u>	<u>No</u>	<u>1</u>
<u>Subsurface Gravel Wetland</u>	<u>90</u>	<u>No</u>	<u>No</u>	<u>1</u>
<u>Wet Pond</u>	<u>50-90</u>	<u>Yes</u>	<u>No</u>	<u>N/A</u>

Notes to Tables 1, 2, and 3:

- (a) subject to the applicable contributory drainage area limitation specified at § 444-4.0.2;
- (b) designed to infiltrate into the subsoil;
- (c) designed with underdrains;
- (d) designed to maintain at least a 10-foot-wide area of native vegetation along at least 50 percent of the shoreline and to include a stormwater runoff retention component designed to capture stormwater runoff for beneficial reuse, such as irrigation;
- (e) designed with a slope of less than two percent;
- (f) designed with a slope of equal to or greater than two percent;
- (g) manufactured treatment devices that meet the definition of green infrastructure at § 444-2;
- (h) manufactured treatment devices that do not meet the definition of green infrastructure at § 444-2.

G. An alternative stormwater management measure, alternative removal rate, and/or alternative method to calculate the removal rate may be used if the design engineer demonstrates the capability of the proposed alternative stormwater management measure and/or the validity of the alternative rate or method to the Township. A copy of any approved alternative stormwater management measure, alternative removal rate, and/or alternative method to calculate the removal rate shall be provided to the Department in accordance with § 444-7.B. Alternative stormwater management measures may be used to satisfy the requirements at § 444-4.0 only if the measures meet the definition of green infrastructure at § 444-2. Alternative stormwater management measures that function in a similar manner to a BMP listed at § 444-4.0.2 are subject to the contributory drainage area limitation specified at § 444-4.0.2 for that similarly functioning BMP. Alternative stormwater management measures approved in accordance with this subsection that do not function in a similar manner to any BMP listed at § 444-4.0.2 shall have a contributory drainage area less than or equal to 2.5 acres, except for alternative stormwater management measures that function similarly to cisterns, grass swales, green roofs, standard constructed wetlands, vegetative filter strips, and wet ponds, which are not subject to a contributory drainage area limitation. Alternative measures that function similarly to standard constructed wetlands or wet ponds shall not be used for compliance with the stormwater runoff

quality standard unless a variance in accordance with N.J.A.C. 7:8-4.6 or a waiver from strict compliance in accordance with § 444-4.D is granted from § 444-4.O.

- H. **Whenever the stormwater management design includes one or more BMPs that will infiltrate stormwater into subsoil, the design engineer shall assess the hydraulic impact on the groundwater table and design the site, so as to avoid adverse hydraulic impacts. Potential adverse hydraulic impacts include, but are not limited to, exacerbating a naturally or seasonally high water table, so as to cause surficial ponding, flooding of basements, or interference with the proper operation of subsurface sewage disposal systems or other subsurface structures within the zone of influence of the groundwater mound, or interference with the proper functioning of the stormwater management measure itself.**
- I. **Design standards for stormwater management measures shall be in conformance with § 444-6.**
- J. **Manufactured treatment devices may be used to meet the requirements of this subchapter, provided the pollutant removal rates are verified by the New Jersey Corporation for Advanced Technology and certified by the Department. Manufactured treatment devices that do not meet the definition of green infrastructure at § 444-2 may be used only under the circumstances described at § 444-4.O.4.**
- K. **Any application for a new agricultural development that meets the definition of major development at § 444-2 shall be submitted to the Soil Conservation District for review and approval in accordance with the requirements at § 444-4.O, R, and S and any applicable Soil Conservation District guidelines for stormwater runoff quantity and erosion control. For purposes of this subsection, "agricultural development" means land uses normally associated with the production of food, fiber, and livestock for sale. Such uses do not include the development of land for the processing or sale of food and the manufacture of agriculturally related products.**
- L. **If there is more than one drainage area, the groundwater recharge, stormwater runoff quality, and stormwater runoff quantity standards at § 444-4.R and S shall be met in each drainage area, unless the runoff from the drainage areas converge onsite and no adverse environmental impact would occur as a result of compliance with any one or more of the individual standards being determined utilizing a weighted average of the results achieved for that individual standard across the affected drainage areas.**
- M. **Any stormwater management measure authorized under the municipal stormwater management plan or ordinance shall be reflected in a recorded deed notice recorded in the Burlington County Clerk's office. A form of deed notice shall be submitted to the Township for approval prior to filing. The deed notice shall contain a description of the stormwater management measure(s) used to meet the green infrastructure, groundwater recharge, stormwater runoff quality, and stormwater runoff quantity standards at § 444-4.O, R, and S and shall identify the location of the stormwater management measure(s) in NAD 1983 State Plane New Jersey FIPS 2900 US Feet or Latitude and Longitude in decimal degrees. The deed notice shall also reference the maintenance plan required to be recorded upon the deed pursuant to § 444-10.B.(5). Prior to the commencement of construction, proof that the above required deed notice has been filed shall be submitted to the Township. Proof that the required information has been recorded on the deed shall be in the form of either a copy of the complete recorded document or a receipt from the clerk or other proof of recordation provided by the recording office. However, if the initial proof provided to the Township is not a copy of the complete recorded document, a copy of the complete recorded document shall be provided to the Township within 180 calendar days of the authorization granted by the Township.**
- N. **A stormwater management measure approved under the municipal stormwater management plan or ordinance may be altered or replaced with the approval of the Township, if the Township determines that the proposed alteration or replacement meets the design and performance standards pursuant to § 444-4 of**

this chapter and provides the same level of stormwater management as the previously approved stormwater management measure that is being altered or replaced. If an alteration or replacement is approved, a revised deed notice shall be submitted to the Township for approval and subsequently recorded with the Burlington County Clerk's office and shall contain a description and location of the stormwater management measure, as well as reference to the maintenance plan, in accordance with § 444-4.M above. Prior to the commencement of construction, proof that the above required deed notice has been filed shall be submitted to the Township in accordance with § 444-4.M above.

0. Green Infrastructure Standards

- 1. This subsection specifies the types of green infrastructure BMPs that may be used to satisfy the groundwater recharge, stormwater runoff quality, and stormwater runoff quantity standards.**
- 2. To satisfy the groundwater recharge and stormwater runoff quality standards at § 444-4.R and S, the design engineer shall utilize green infrastructure BMPs identified in Table 1 at § 444-4.F. and/or an alternative stormwater management measure approved in accordance with § 444-4.G. The following green infrastructure BMPs are subject to the following maximum contributory drainage area limitations:**

<u>Best Management Practice</u>	<u>Maximum Contributory Drainage Area</u>
<u>Dry Well</u>	<u>1 acre</u>
<u>Manufactured Treatment Device</u>	<u>2.5 acres</u>
<u>Pervious Pavement Systems</u>	<u>Area of additional inflow cannot exceed three times the area occupied by the BMP</u>
<u>Small-scale Bioretention</u>	<u>2.5 acres</u>
<u>Small-scale Infiltration Basin</u>	<u>2.5 acres</u>
<u>Small-scale Sand Filter</u>	<u>2.5 acres</u>

- 3. To satisfy the stormwater runoff quantity standards at § 444-4.R.(1)(c), the design engineer shall utilize BMPs from Table 1 or from Table 2 and/or an alternative stormwater management measure approved in accordance with § 444-4.G.**
- 4. If a variance in accordance with N.J.A.C. 7:8-4.6 or a waiver from strict compliance in accordance with § 444-4.D is granted from the requirements of this subsection, then BMPs from Table 1, 2, or 3, and/or an alternative stormwater management measure approved in accordance with § 444-4.G may be used to meet the groundwater recharge, stormwater runoff quality, and stormwater runoff quantity standards at § 444-4.R and S.**

P. For separate or combined storm sewer improvement projects, such as sewer separation, undertaken by a

government agency or public utility (for example, a sewerage company), the requirements of this subsection shall only apply to areas owned in fee simple by the government agency or utility, and areas within a right-of-way or easement held or controlled by the government agency or utility; the entity shall not be required to obtain additional property or property rights to fully satisfy the requirements of this subsection. Regardless of the amount of area of a separate or combined storm sewer improvement project subject to the green infrastructure requirements of this subsection, each project shall fully comply with the applicable groundwater recharge, stormwater runoff quality control, and stormwater runoff quantity standards at § 444-4.R and S, unless the project is granted a waiver from strict compliance in accordance with § 444-4.D[ER16]

Q. Nonstructural stormwater management strategies.[ER17]

- (1) **To the maximum extent practicable, the standards in § 444-4.R and S shall be met by incorporating nonstructural stormwater management strategies set forth at § 444-4.Q into the design. The applicant shall identify the nonstructural measures incorporated into the design of the project. If the applicant contends that it is not feasible for engineering, environmental, or safety reasons to incorporate any nonstructural stormwater management measures identified in § 444-4. Q.(2) below into the design of a particular project, the applicant shall identify the strategy considered and provide a basis for the contention.**
- (2) **Nonstructural stormwater management strategies incorporated into site design shall:**
 - (a) **Protect areas that provide water quality benefits or areas particularly susceptible to erosion and sediment loss;**
 - (b) **Minimize impervious surfaces and breakup or disconnect the flow of runoff over impervious surfaces;**
 - (c) **Maximize the protection of natural drainage features and vegetation;**
 - (d) **Minimize the decrease in the time of concentration from preconstruction to post construction. "Time of concentration" is defined as the time it takes for runoff to travel from the hydraulically most distant point of the watershed to the point of interest within a watershed;**
 - (e) **Minimize land disturbance including clearing and grading;**
 - (f) **Minimize soil compaction;**
 - (g) **Provide low-maintenance landscaping that encourages retention and planting of native vegetation and minimizes the use of lawns, fertilizers and pesticides;**
 - (h) **Provide vegetated open-channel conveyance systems discharging into and through stable vegetated areas;**

(i) **Provide other source controls to prevent or minimize the use or exposure of pollutants at the site, in order to prevent or minimize the release of those pollutants into stormwater runoff. Such source controls include, but are not limited to:**

- [1] **Site design features that help to prevent accumulation of trash and debris in drainage systems, including features that satisfy § 444-4.Q.(3) below;**
- [2] **Site design features that help to prevent discharge of trash and debris from drainage systems;**
- [3] **Site design features that help to prevent and/or contain spills or other harmful accumulations of pollutants at industrial or commercial developments; and**
- [4] **When establishing vegetation after land disturbance, applying fertilizer in accordance with the requirements established under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq., and implementing rules.**

(3) **Site design features identified under § 444-4.Q.(2)(i)[2] above, or alternative designs in accordance with § 444-4.G above, to prevent discharge of trash and debris from drainage systems 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 § 444-4.Q.(3)(c) below.**

(a) **Grates.**

- [1] **Design engineers shall use one of the following grates whenever they use a grate in pavement or another ground surface to collect stormwater from that surface into a storm drain or surface water body under that grate:**
 - [a] **The New Jersey Department of Transportation (NJDOT) bicycle safe grate, which is described in Chapter 2.4 of the NJDOT Bicycle Compatible Roadways and Bikeways Planning and Design Guidelines; 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 inch 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 system floors used to collect stormwater from the surface into a storm drain or surface water body.

- [c] **For curb-opening inlets, including curb-opening inlets in combination inlets, 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.**

(b) **This standard does not apply:**

- [1] **Where each individual clear space in the curb opening in existing curb-opening inlet does not have an area of more than nine (9.0) square inches;**
- [2] **Where the Township agrees that the standards would cause inadequate hydraulic performance that could not practicably be overcome by using additional or larger storm drain inlets;**
- [3] **Where flows from the water quality design storm as specified in N.J.A.C. 7:8 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 (4 5/8) inches long and one and one-half (1 1/2) inches wide**

(this option does not apply for outfall netting facilities); or

[b] A bar screen having a bar spacing of 0.5 inch.

Note that these exemptions do not authorize any infringement of requirements in the Residential Site Improvement Standards for bicycle safe grates in new residential development (N.J.A.C. 5:21-4.18(b)2 and 7.4(b1)).

- [4] **Where flows are conveyed through a trash rack that has parallel bars with one (1) inch spacing between the bars, to the elevation of the water quality design storm as specified in N.J.A.C. 7:8; or**
- [5] **Where the New Jersey Department of Environmental Protection determines, pursuant to the New Jersey Register of Historic Places Rules at N.J.A.C. 7:4-7.2(c), that action to meet this standard is an undertaking that constitutes an encroachment or will damage or destroy the New Jersey Register listed historic property.**

- (4) **Any land area used as a nonstructural stormwater management measure to meet the performance standards in § 444-4.F and G shall be dedicated to a government agency, subjected to a conservation restriction filed with the appropriate County Clerk's office, or subject to an approved equivalent restriction that ensures that measure or an equivalent stormwater management measure approved by the reviewing agency is maintained in perpetuity.**
- (5) **Guidance for nonstructural stormwater management strategies is available in the New Jersey Stormwater BMP Manual. The BMP Manual may be obtained from the address identified in § 444-7, or found on the Department's website at www.njstormwater.org.**

R. Erosion control, groundwater recharge and runoff quantity standards.

- (1) **This subsection contains minimum design and performance standards to control erosion, encourage and control infiltration and groundwater recharge, and control stormwater runoff quantity impacts of major development.**
 - (a) **The minimum design and performance standards for erosion control are those established under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq. and implementing rules.**
 - (b) **The minimum design and performance standards for groundwater recharge are as follows:**
 - [1] **The design engineer shall, using the assumptions and factors for stormwater runoff and groundwater recharge calculations at § 444-5, either:**
 - [a] **Demonstrate through hydrologic and hydraulic analysis that the site and its stormwater management measures maintain 100% of the average annual preconstruction groundwater recharge volume for the site; or**
 - [b] **Demonstrate through hydrologic and hydraulic analysis that the increase of stormwater runoff volume from preconstruction to postconstruction for the two-year (2year) storm is infiltrated.**
 - [2] **This groundwater recharge requirement does not apply to projects within the "urban redevelopment area," or to projects subject to § 444-4. R. (1)(b)[3] below.**
 - [3] **The following types of stormwater shall not be recharged:**
 - [a] **Stormwater from areas of high pollutant loading. High pollutant loading areas are areas in industrial and commercial developments where solvents and/or petroleum products are loaded/unloaded, stored, or applied, areas where pesticides are loaded/unloaded or stored; areas where hazardous materials are expected to be present in greater than "reportable quantities" as defined by the United States Environmental Protection Agency (EPA) at 40 CFR 302.4; areas where recharge would be inconsistent with Department approved remedial action work plan or landfill closure plan and areas with high risks for spills of toxic materials, such as gas stations and vehicle maintenance facilities; and**
 - [b] **Industrial stormwater exposed to source material. "Source material" means any material(s) or machinery, located at an industrial facility, that is directly or indirectly related to process, manufacturing or other industrial activities, which could be a source of pollutants in any industrial stormwater discharge to groundwater. Source materials include, but are not limited to, raw materials; intermediate products; final products; waste materials; by-products; industrial machinery and fuels, and lubricants, solvents, and detergents that are related to process, manufacturing, or other industrial activities that are exposed to stormwater.**

[4] The design engineer shall assess the hydraulic impact on the groundwater table and design the site so as to avoid adverse hydraulic impacts. Potential adverse hydraulic impacts include, but are not limited to, exacerbating a naturally or seasonally high water table so as to cause surficial ponding, flooding of basements, or interference with the proper operation of subsurface sewage disposal systems and other subsurface structures in the vicinity or downgradient of the groundwater recharge area.

(c) In order to control stormwater runoff quantity impacts, the design engineer shall, using the assumptions and factors for stormwater runoff calculations at § 444-5, complete one of the following:

[1] Demonstrate through hydrologic and hydraulic analysis that for stormwater leaving the site, post-construction runoff hydrographs for the two-, ten-, and one-hundred-year storm events do not exceed, at any point in time, the pre-construction runoff hydrographs for the same storm events;

[2] Demonstrate through hydrologic and hydraulic analysis that there is no increase, as compared to the pre-construction condition, in the peak runoff rates of stormwater leaving the site for the two-, ten-, and one-hundred-year storm events and that the increased volume or change in timing of stormwater runoff will not increase flood damage at or downstream of the site. This analysis shall include the analysis of impacts of existing land uses and projected land uses assuming full development under existing zoning and land use ordinances in the drainage area; or

[3] Design stormwater management measures so that the post-construction peak runoff rates for the two-, ten-, and one-hundred-year storm events are 50%, 75% and 80%, respectively, of the pre-construction peak runoff rates. The percentages apply only to the post-construction stormwater runoff that is attributable to the portion of the site on which the proposed development or project is to be constructed; or

[4] In tidal flood hazard areas, stormwater runoff quantity analysis in accordance with § 444-4.R.(1)(c)[1], [2] and [3] above is required unless the design engineer demonstrates through hydrologic and hydraulic analysis that the increased volume, change in timing, or increased rate of the stormwater runoff, or any combination of the three will not result in additional flood damage below the point of discharge of the major development. No analysis is required if the stormwater is discharged directly into any ocean, bay, inlet, or the reach of any watercourse between its confluence with an ocean, bay, or inlet and downstream of the first water control structure.

(d) The stormwater runoff quantity standards shall be applied at the site's boundary to each abutting lot, roadway, watercourse, or receiving storm sewer system. This does not relieve the designer of accommodating offsite runoff, but that offsite runoff does not have to comply with the runoff quantity standards in this chapter.[ER18]

S. [ER19] Stormwater runoff quality standards.

(1) This subsection contains the minimum design and performance standards to control stormwater runoff quality impacts of major development. Stormwater runoff quality standards are applicable when the major development results in an increase of one-quarter acre or more of regulated motor vehicle surface.

(2) Stormwater management measures shall be designed to reduce the post-construction load of total suspended solids (TSS) in stormwater runoff generated from the water quality design storm as follows:

(a) Eighty percent (80%) of the anticipated load, expressed as an annual average shall be achieved for the stormwater runoff from the net increase of motor vehicle surface.

(b) For redevelopment of existing impervious surfaces with regulated motor vehicle surface, the minimum required TSS removal rate is the greater of the TSS removal rate of the existing stormwater treatment system or 50% TSS removal rate.[ER110]

(3) The requirement to reduce TSS does not apply to any stormwater runoff in a discharge regulated under a numeric effluent limitation for TSS imposed under the New Jersey Pollution Discharge Elimination System (NJPDES) rules, N.J.A.C. 7:14A, or in a discharge specifically exempt under a NJPDES permit from this requirement.

Every major development, including any that discharge into a combined sewer system, shall comply with 2 above, unless the major development is itself subject to a NJPDES permit with a numeric effluent limitation for TSS or the NJPDES permit to which the major development is subject exempts the development from a numeric effluent limitation for TSS.

- (4) The water quality design storm is 1.25 inches of rainfall in two hours. Water quality calculations shall take into account the distribution of rain from the water quality design storm, as reflected in Table 4 below. The calculation of the volume of runoff may take into account the implementation of stormwater management measures.

Table 4 – Water Quality Design Storm Distribution

Time (Minutes)	Cumulative Rainfall (Inches)	Time (Minutes)	Cumulative Rainfall (Inches)	Time (Minutes)	Cumulative Rainfall (Inches)
1	0.00166	41	0.1728	81	1.0906
2	0.00332	42	0.1796	82	1.0972
3	0.00498	43	0.1864	83	1.1038
4	0.00664	44	0.1932	84	1.1104
5	0.00830	45	0.2000	85	1.1170
6	0.00996	46	0.2117	86	1.1236
7	0.01162	47	0.2233	87	1.1302
8	0.01328	48	0.2350	88	1.1368
9	0.01494	49	0.2466	89	1.1434
10	0.01660	50	0.2583	90	1.1500
11	0.01828	51	0.2783	91	1.1550
12	0.01996	52	0.2983	92	1.1600
13	0.02164	53	0.3183	93	1.1650
14	0.02332	54	0.3383	94	1.1700
15	0.02500	55	0.3583	95	1.1750
16	0.03000	56	0.4116	96	1.1800
17	0.03500	57	0.4650	97	1.1850
18	0.04000	58	0.5183	98	1.1900
19	0.04500	59	0.5717	99	1.1950
20	0.05000	60	0.6250	100	1.2000
21	0.05500	61	0.6783	101	1.2050
22	0.06000	62	0.7317	102	1.2100
23	0.06500	63	0.7850	103	1.2150
24	0.07000	64	0.8384	104	1.2200
25	0.07500	65	0.8917	105	1.2250
26	0.08000	66	0.9117	106	1.2267
27	0.08500	67	0.9317	107	1.2284
28	0.09000	68	0.9517	108	1.2300
29	0.09500	69	0.9717	109	1.2317
30	0.10000	70	0.9917	110	1.2334
31	0.10660	71	1.0034	111	1.2351
32	0.11320	72	1.0150	112	1.2367
33	0.11980	73	1.0267	113	1.2384
34	0.12640	74	1.0383	114	1.2400
35	0.13300	75	1.0500	115	1.2417
36	0.13960	76	1.0568	116	1.2434
37	0.14620	77	1.0636	117	1.2450
38	0.15280	78	1.0704	118	1.2467
39	0.15940	79	1.0772	119	1.2483
40	0.16600	80	1.0840	120	1.2500

- (5) **If more than one BMP in series is necessary to achieve the required 80% TSS reduction for a site, the applicant shall utilize the following formula to calculate TSS reduction:**

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

Where:

- R = Total TSS percent load removal from application of both BMPs**
A = The TSS percent removal rate applicable to the first BMP (see Tables 1-3)
B = The TSS percent removal rate applicable to the second BMP (see Tables 1-3)

- (6) **[ER111] Stormwater management measures shall also be designed to reduce, to the maximum extent feasible, the postconstruction nutrient load of the anticipated load from the developed site in stormwater runoff generated from the water quality design storm. In achieving reduction of nutrients to the maximum extent feasible, the design of the site shall include GI BMPs that optimize nutrient removal while still achieving the performance standards in § 444-4.F and G.**
- (7) **Additional information and examples are contained in the New Jersey Stormwater BMP Manual, which may be obtained from https://www.njstormwater.org/bmp_manual2.htm.**
- (8) **In accordance with the definition of FW1 at N.J.A.C. 7:9B-1.4, stormwater management measures shall be designed to prevent any increase in stormwater runoff to waters classified as FW1.**

- (9) **The Flood Hazard Area Control Act Rules at N.J.A.C. 7:13-4.1(c)1 establish 300-foot riparian zones along Category One waters, as designated in the Surface Water Quality Standards at N.J.A.C. 7:9B, and certain upstream tributaries to Category One waters. A person shall not undertake a major development that is located within or discharges into a 300-foot riparian zone without prior authorization from the Department under N.J.A.C. 7:13.**
- (10) **Pursuant to the Flood Hazard Area Control Act Rules at N.J.A.C. 7:13-11.2(j)3.i, runoff from the water quality design storm that is discharged within a 300-foot riparian zone shall be treated in accordance with this subsection to reduce the post-construction load of total suspended solids by 95 percent of the anticipated load from the developed site, expressed as an annual average.**
- (11) **These stormwater runoff quality standards do not apply to the construction of one individual single-family dwelling, provided that it is not part of a larger development or subdivision that has received preliminary or final site plan approval prior to December 3, 2018, and that the motor vehicle surfaces are made of permeable material(s) such as gravel, dirt, and/or shells.**

[ERI12][ERI13]

§ 444-5 Calculation of stormwater runoff and groundwater recharge.

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

- (1) **The design engineer shall calculate runoff using one of the following methods:**
 - (a) **The USDA Natural Resources Conservation Service (NRCS) methodology, including the NRCS Runoff Equation and Dimensionless Unit Hydrograph, as described in Chapters 7, 9, 10, 15, and 16 Part 630, Hydrology National Engineering Handbook, incorporated herein by reference as amended and supplemented. This methodology is additionally described in Technical Release 55 – Urban Hydrology for Small Watersheds (TR-55), dated June 1986, incorporated herein by reference as amended and supplemented. Information regarding the methodology is available from the Natural Resources Conservation Service website at: https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1044171.pdf or at United States Department of Agriculture Natural Resources Conservation Service, 220 Davison Avenue, Somerset, New Jersey 08873; or**
 - (b) **The Rational Method for peak flow and the Modified Rational Method for hydrograph computations. The rational and modified rational methods are described in "Appendix A-9 Modified Rational Method" in the Standards for Soil Erosion and Sediment Control in New Jersey, January 2014. This document is available from the State Soil Conservation Committee or any of the Soil Conservation Districts listed at N.J.A.C. 2:90-1.3(a)3. The location, address, and telephone number for each Soil Conservation District is available from the State Soil Conservation Committee, PO Box 330, Trenton, New Jersey 08625. The document is also available at: <http://www.nj.gov/agriculture/divisions/anr/pdf/2014NJSoilErosionControlStandardsComplete.pdf>.**
 - (c) **The New Jersey Department of Agriculture State Soil Conservation Committee Technical Bulletin 2018-4 effective September 2018 available at:**

<https://www.nj.gov/agriculture/divisions/anr/pdf/DelmarvaBulletin.pdf>[ERI14]

- (2) **For the purpose of calculating runoff coefficients and groundwater recharge, there is a presumption that the pre-construction condition of a site or portion thereof is a wooded land use with good hydrologic condition. The term "runoff coefficient" applies to both the NRCS methodology at § 444-5.A.(1)(a) and the Rational and Modified Rational Methods at § 444-5.A.(1)(b). A runoff coefficient or a groundwater recharge land cover for an existing condition may be used on all or a portion of the site if the design engineer verifies that the hydrologic condition has existed on the site or portion of the site for at least five years without interruption prior to the time of application. If more than one land cover has existed on the site during the five years immediately prior to the time of application, the land cover with the lowest runoff potential shall be used for the computations. In addition, there is the presumption that the site is in good hydrologic condition (if the land use type is pasture, lawn, or park), with good cover (if the land use type is woods), or with good hydrologic condition and conservation treatment (if the land use type is cultivation).**

- (3) **In computing pre-construction stormwater runoff, the design engineer shall account for all significant land features and structures, such as ponds, wetlands, depressions, hedgerows, or culverts, that may reduce preconstruction stormwater runoff rates and volumes.**
- (4) **In computing stormwater runoff from all design storms, the design engineer shall consider the relative stormwater runoff rates and/or volumes of pervious and impervious surfaces separately to accurately compute the rates and volume of stormwater runoff from the site. To calculate runoff from unconnected impervious cover, urban impervious area modifications as described in the NRCS Technical Release 55 — Urban Hydrology for Small Watersheds or other methods may be employed.**
- (5) **If the invert of the outlet structure of a stormwater management measure is below the flood hazard design flood elevation as defined at N.J.A.C. 7:13, the design engineer shall take into account the effects of tail water in the design of structural stormwater management measures.**

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

- (1) **The New Jersey Geological Survey Report GSR-32 A Method for Evaluating Groundwater Recharge Areas in New Jersey, incorporated herein by reference as amended and supplemented. Information regarding the methodology is available from the New Jersey Stormwater BMP Manual; at <https://www.nj.gov/dep/njgs/pricelst/greport/gsr32.pdf> or at New Jersey Geological Survey, 29 Arctic Parkway, P.O. Box 420, Mail Code 29-01, Trenton, New Jersey 08625-0420.**

§ 444-6 Standards for structural stormwater management measures.

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

- (1) **Structural stormwater management measures shall be designed to take into account the existing site conditions, including, but not limited to, environmentally critical areas; wetlands; flood-prone areas; slopes; depth to seasonal high water table; soil type, permeability and texture; drainage area and drainage patterns; and the presence of solution-prone carbonate rocks (limestone).**
- (2) **Structural stormwater management measures shall be designed to minimize maintenance, facilitate maintenance and repairs, and ensure proper functioning. Trash racks shall be installed at the intake to the outlet structure as appropriate, and shall have parallel bars with one-inch spacing between the bars to the elevation of the water quality design storm. For elevations higher than the water quality design storm, the parallel bars at the outlet structure shall be spaced no greater than 1/3 the width of the diameter of the orifice or 1/3 the width of the weir, with a minimum spacing between bars of one inch and a maximum spacing between bars of six inches. In addition, the design of trash racks must comply with the requirements of § 444-8.C.**
- (3) **Structural stormwater management measures shall be designed, constructed, and installed to be strong, durable, and corrosion resistant. Measures that are consistent with the relevant portions of the Residential Site Improvement Standards at N.J.A.C. 5:21-7.3, 7.4, and 7.5 shall be deemed to meet this requirement.**
- (4) **The size of the orifice at the intake to the outlet from the stormwater management basin/BMP shall be a minimum of 2 1/2 inches in diameter.**
- (5) **Stormwater management basins/BMPs shall be designed to meet the minimum safety standards for stormwater management basins/BMPs at § 444-8.**
- (6) **Infiltration BMPs should incorporate a mechanism to enable the basin/BMP to be fully drawn down by non-mechanical means for emergencies and maintenance. Where this is not possible due to geometry, the designer should propose an alternate design for approval by the Township.**
- (7) **If underground infiltration/storage is proposed, filters and other means of discouraging debris from entering the underground system is required prior to entry to the underground system.**
 - (a) **Some ideas include a combination of the following:**
 - (i) **Flexstorm, Gratemaster, or Stormsack inlet filters, or Trash Guard Plus (or equal)**
 - (ii) **Downspout Filter(s) (prior to entering downspout or prior to entering ground)**
 - (iii) **Gutter guards[ER115]**

[ER116][ER117]

§ 444-7 Sources for technical guidance.

A. Technical guidance for stormwater management measures can be found in the documents listed below, which are available to download from the Department's website at: http://www.nj.gov/dep/stormwater/bmp_manual2.htm.

- (1) **Guidelines for stormwater management measures are contained in the New Jersey Stormwater BMP Manual, as amended and supplemented. Information is provided on stormwater management measures such as, but not limited to, those listed in Tables 1, 2, and 3.**
- (2) **Additional maintenance guidance is available on the Department's website at: https://www.njstormwater.org/maintenance_guidance.htm.**

B. Submissions required for review by the Department should be mailed to:

**The Division of Water Quality
New Jersey Department of Environmental Protection
Mail Code 401-02B
PO Box 420
Trenton, New Jersey 08625-0420**

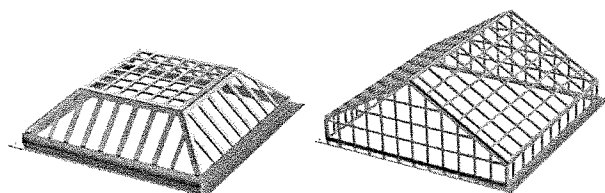
- C. **Additional technical guidance for stormwater management measures can be obtained from the following:[ER118]**
- (1) **The "Standards for Soil Erosion and Sediment Control in New Jersey" promulgated by the State Soil Conservation Committee and incorporated into N.J.A.C. 2:90**

is available here: <https://www.nj.gov/agriculture/divisions/anr/nrc/njerosion.html>;

- (2) The Rutgers Cooperative Extension Service, (732) 932-9306 and Water Resources Program: Rain Garden Information Center (<http://water.rutgers.edu/>); and
- (3) The Soil Conservation Districts listed in N.J.A.C. 2:90-1.3(a)4. The location, address, and telephone number of each Soil Conservation District may be obtained from <https://www.nj.gov/agriculture/divisions/anr/nrc/conservdistricts.html>.

§ 444-8 Safety standards for stormwater management basins/BMPs.

- A. This section sets forth requirements to protect public safety through the proper design and operation of stormwater management BMPs. This section applies to any new stormwater management BMP.
- B. The provisions of this section are not intended to preempt more stringent municipal or county safety requirements for new or existing stormwater management BMPs. Municipal and county stormwater management plans and ordinances may, pursuant to their authority, require existing stormwater management BMPs to be retrofitted to meet one or more of the safety standards in § 444-8.C.(1), C.(2), and C.(3) for trash racks, overflow grates, and escape provisions at outlet structures.
- C. Requirements for trash racks, overflow grates and escape provisions.
 - (1) A trash rack is a device designed to catch trash and debris and prevent the clogging of outlet structures. Trash racks shall be installed at the intake to the outlet from the stormwater management BMP to ensure proper functioning of the BMP outlets in accordance with the following:
 - (a) The trash rack shall have parallel bars, with no greater than six-inch spacing between the bars;
 - (b) The trash rack shall be designed so as not to adversely affect the hydraulic performance of the outlet pipe or structure;
 - (c) The average velocity of flow through a clean trash rack is not to exceed 2.5 feet per second under the full range of stage and discharge. Velocity is to be computed on the basis of the net area of opening through the rack; and
 - (d) The trash rack shall be constructed and installed to be rigid, durable, and corrosion resistant material, and shall be designed to withstand a perpendicular live loading of 300 pounds per square foot.
 - (e) The design engineer shall consider shapes and location of trash racks that are lower maintenance and do not impact the functionality of the outlet structure. For example, vertical trash racks or small trash racks in the vicinity of an orifice or weir tend to become obstructed. Sloped trash racks are shown:



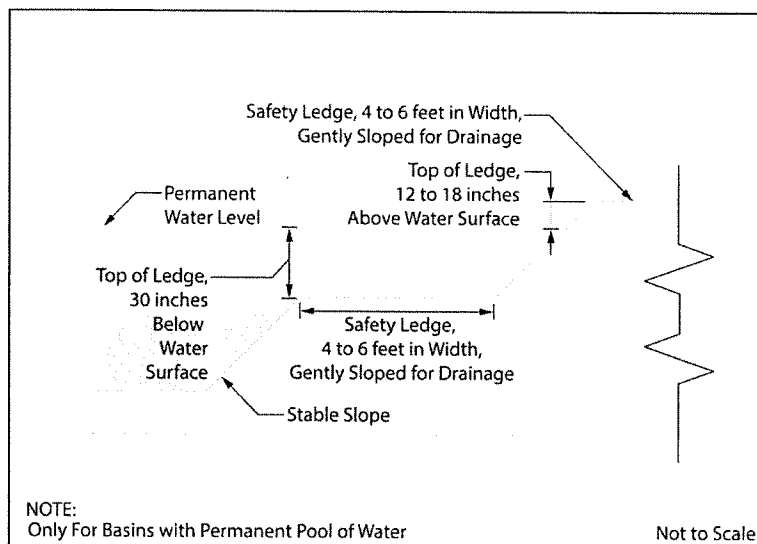
[ERI19]

- (2) An overflow grate is designed to prevent obstruction of the overflow structure. If an outlet structure has an overflow grate, such grate shall meet the following requirements:
 - (a) The overflow grate shall be secured to the outlet structure but be easily removable for emergencies and maintenance.
 - (b) The overflow grate spacing shall be no less than two inches across the smallest dimension.
 - (c) The overflow grate shall be constructed and installed to be rigid, durable, and corrosion resistant, and shall be

designed to withstand a perpendicular live loading of 300 pounds per square foot.

- (d) **The overflow grate shall be installed a minimum of 3 inches above the maximum design storm so as not to impede flow for routings and allow for construction tolerances. If the grate location cannot be raised 3 inches above the maximum design water elevation or is being used as an emergency spillway, no grate should be specified, and a sloped trash rack shall be specified instead.**[ER120]
- (3) **Stormwater management BMPs shall include escape provisions as follows:**
- (a) **If a stormwater management BMP has an outlet structure, escape provisions shall be incorporated in or on the structure. Escape provisions include the installation of permanent ladders, steps, rungs, or other features that provide easily accessible means of egress from stormwater management BMPs. With the prior approval of the Township pursuant to § 444-8.C a freestanding outlet structure may be exempted from this requirement.**
 - (b) **Safety ledges shall be constructed on the slopes of all new stormwater management BMPs having a permanent pool of water deeper than 2 1/2 feet. Such safety ledges shall be comprised of two steps. Each step shall be four feet to six feet in width. One step shall be located approximately 2 1/2 feet below the permanent water surface, and the second step shall be located one foot to 1 1/2 feet above the permanent water surface. See § 444-8.D for an illustration of safety ledges in a stormwater management basin/BMP.**
 - (c) **In new stormwater management BMPs, the maximum interior slope for an earthen dam, embankment, or berm shall not be steeper than three horizontal to one vertical.**

- D. **Variance or exemption from safety standards. A variance or exemption from the safety standards for stormwater management BMPs may be granted only upon a written finding by the Township that the variance or exemption will not constitute a threat to public safety.**
- E. **Safety Ledge Illustration. Elevation view – Basin/BMP Safety Ledge Configuration**



- F. **An access road capable of supporting a maintenance vehicle should be specified for every surface basin/BMP.**
[ERI21]

§ 444-9 Requirements for site development stormwater plan.

- A. **Submission of site development stormwater plan.**
- (1) **Whenever an applicant seeks municipal approval of a development subject to this chapter, the applicant shall submit all of the required components of the Checklist for the Site Development Stormwater Plan at § 444-9.C below as part of the submission of the application for approval.**
 - (2) **The applicant shall demonstrate that the project meets the standards set forth in this chapter.**
 - (3) **The applicant shall submit 19[ERI22] copies and electronic files in portable document format (PDF) of the materials listed in the checklist for site development stormwater plans in accordance with § 444-9.C of this chapter.**
- B. **Site development stormwater plan approval. The applicant's site development project shall be reviewed as a part of the review process by the municipal board or official from which municipal approval is sought. That municipal board or official shall consult the Township's review engineer to determine if all of the checklist requirements have been satisfied and to determine if the project meets the standards set forth in this chapter.**
[Amended at time of adoption of Code (see Ch. 1, General Provisions, Art. III)]
- C. **Checklist requirements. The following information shall be required:**
- (1) **Topographic base map. The reviewing engineer may require upstream tributary drainage system information as necessary. It is recommended that the topographic base map of the site be submitted which extends a minimum of 200 feet beyond the limits of the proposed development, at a scale of one inch equals 200 feet or greater, showing two-foot contour intervals. The map, as appropriate, may indicate the following: existing surface water drainage, shorelines, steep slopes, soils, erodible soils, perennial or intermittent streams that drain into or upstream of the Category One waters, wetlands and floodplains along with their appropriate buffer strips, marshlands and other wetlands, pervious or vegetative surfaces, existing man-made structures, roads, bearing and distances of property lines, and significant natural and man-made features not otherwise shown.**
 - (2) **Environmental site analysis. A written and graphic description of the natural and man-made features of the site and its surroundings should be submitted. This description should include a discussion of soil conditions, slopes, wetlands,**

waterways and vegetation

on the site. Particular attention should be given to unique, unusual, or environmentally sensitive features and to those that provide particular opportunities or constraints for development.

- (3) **Project description and site plan(s).** A map (or maps) at the scale of the topographical base map indicating the location of existing and proposed buildings, roads, parking areas, utilities, structural facilities for stormwater management and sediment control, and other permanent structures. The map(s) shall also clearly show areas where alterations occur in the natural terrain and cover, including lawns and other landscaping, and seasonal high groundwater elevations. A written description of the site plan and justification of proposed changes in natural conditions may also be provided.
- (4) **Land use planning and source control plan.** This plan shall provide a demonstration of how the goals and standards of § 444-3 through 444-6 are being met. The focus of this plan shall be to describe how the site is being developed to meet the objective of controlling groundwater recharge, stormwater quality and stormwater quantity problems at the source by land management and source controls whenever possible.
- (5) **Stormwater management facilities map.** The following information, illustrated on a map of the same scale as the topographic base map, shall be included:
 - (a) **Total area to be disturbed, paved or built upon, proposed surface contours, land area to be occupied by the stormwater management facilities and the type of vegetation thereon, and details of the proposed plan to control and dispose of stormwater.**
 - (b) **Details of all stormwater management facility designs, during and after construction, including discharge provisions, discharge capacity for each outlet at different levels of detention and emergency spillway provisions with maximum discharge capacity of each spillway.**
- (6) **Calculations.**
 - (a) **Comprehensive hydrologic and hydraulic design calculations for the predevelopment and post-development conditions for the design storms specified in § 444-4 of this chapter.**
 - (b) **When the proposed stormwater management control measures depend on the hydrologic properties of soils or require certain separation from the seasonal high water table, then a soils report shall be submitted. The soils report shall be based on on-site boring logs or soil pit profiles. The number and location of required soil borings or soil pits shall be determined based on what is needed to determine the suitability and distribution of soils present at the location of the control measure. Soil testing criteria is currently outlined in Chapter 12 of the NJ BMP Manual available here: https://www.njstormwater.org/bmp_manual/NJ_SWMP_12.pdf. [ERI23]**
 - (c) **Emergency spillways, where required, shall be designed to safely convey the calculated basin/BMP inflow resulting from a 100-year frequency storm. The minimum elevation of the top of the basin/BMP berm shall be 1 foot or greater than the water surface elevation in the emergency spillway when runoff from the 100-year frequency storm passes over the emergency spillway. Potential settlement shall be considered in this design. In those cases where the construction of an emergency spillway is not physically possible, and the stormwater management basin/BMP is not equipped with an outlet structure that is designed to function as the principal spillway, the basin/BMP shall be designed to store the volume of runoff generated by back-to-back 100-year frequency design storms. [ERI24]**
- (7) **Maintenance and repair plan.** The design and planning of the stormwater management facility shall meet the maintenance requirements of § 444-10.
- (8) **Waiver from submission requirements.** The municipal official or board reviewing an application under this chapter may, in consultation with the Township's review engineer, waive submission of any of the requirements in § 444-9.C.(1) through (6) of this chapter when it can be demonstrated that the information requested is impossible to obtain or it would create a hardship on the applicant to obtain and its absence will not materially affect the review process.

D. Construction Requirements. The construction requirements outlined in the NJ BMP Manual for each stormwater

management BMP shall be incorporated and supplemented as follows:

- (1) Where "engineer" is stated in § 444-9.D, it is meant to be the design engineer, licensed engineer working on behalf of the applicant/owner/contractor, or his/her/their designated representative(s) as appropriate.
- (2) The extents and depth of soil replacement areas, if required, are subject to the direction and approval of the engineer based upon site conditions encountered during excavation.
- (3) It is expected that, to the maximum extent practicable, the engineer will be providing guidance to the contractor for the entire duration of the stormwater BMP construction. The engineer will be onsite or available for the construction of the stormwater management BMP from excavation through to seeding and slope stabilization.
- (4) Where proprietary systems are installed, a representative from the manufacturer shall be available during the installation of the system.
 - (a) For example, an ACF representative should be available for the placement of geotextile, initial installation of Stormtech chambers, stone placement around chambers, and geotextile wrapping of bed to ensure it was performed properly.
- (5) The engineer shall be onsite to inspect and certify, at a minimum, the following, as applicable: extents and depth of soil replacement areas, placement of geotextile, inspection and approval of K-4 soil replacement material, basin bottom elevation, K-5 sand material, and in-place depths of both soil replacement material and K-5 sand.
- (6) It is the contractor's responsibility to coordinate the anticipated schedule with the engineer in advance of any activities the engineer must certify prior to continuing construction activities.
- (7) The engineer shall provide a certification stating that, while they were onsite on (dates) and (times), all construction was performed in accordance with the design plans. This certification shall be in addition to the post-construction requirements in §444-9.E.^[ER125]

E. Post-Construction Requirements.

- (1) An as-built survey shall be prepared by a licensed land surveyor.
- (2) Post-construction permeability testing in accordance with the NJ BMP Manual shall be performed for all applicable stormwater management BMPs.
- (3) As-built routings shall be prepared by a licensed engineer for each as-built stormwater BMP.
- (4) A statement should be prepared by a licensed engineer that the as-built permeability and/or as-built routings comply with the design and state regulations. Otherwise:
 - (a) If the as-built routings exceed the allowable and/or permeability testing shows a longer drain time than allowed in the BMP Manual, corrective action must be outlined and submitted to the Township or review board Engineer, as applicable.
 - (b) All corrections or remedial actions deemed by the Township to be necessary due to the failure to comply with the standards established by the design, this ordinance, and/or any reasons of public health or safety shall be completed by the applicant. The applicant shall pay all costs associated with such reviews and site visits.^[ER126]

§ 444-10 Maintenance and repair.

- A. **Applicability.** Projects subject to review as in § 444-1.C of this chapter shall comply with the requirements of § 444-10.B and
- C.

B. General maintenance.

- (1) The design engineer shall prepare a maintenance plan for the stormwater management measures incorporated into the design of a major development.**
- (2) The maintenance plan shall contain specific preventative maintenance tasks and schedules; cost estimates, including estimated cost of sediment, debris, or trash removal; and the name, address, and telephone number of the person or persons responsible for preventative and corrective maintenance (including replacement). The plan shall contain information on BMP location, design, ownership, maintenance tasks and frequencies, and other details as specified in Chapter 8 of the NJ BMP Manual, as well as the tasks specific to the type of BMP, as described in the applicable chapter containing design specifics.**
- (3) If the maintenance plan identifies a person other than the property owner (for example, a developer, a public agency or homeowners' association) as having the responsibility for maintenance, the plan shall include documentation of such person's agreement to assume this responsibility, or of the owner's obligation to dedicate a stormwater management facility to such person under an applicable ordinance or regulation.**
- (4) Responsibility for maintenance shall not be assigned or transferred to the owner or tenant of an individual property in a residential development or project, unless such owner or tenant owns or leases the entire residential development or project. The individual property owner may be assigned incidental tasks, such as weeding of a green infrastructure BMP, provided the individual agrees to assume these tasks; however the individual cannot be legally responsible for all of the maintenance required.**
- (5) If the party responsible for maintenance identified under § 444-10.B.(2) above is not a public agency, the maintenance plan and any future revisions based on § 444-10.B.(7) below shall be recorded upon the deed of record for each property on which the maintenance described in the maintenance plan must be undertaken.**
- (6) Preventative and corrective maintenance shall be performed to maintain the functional parameters (storage volume, infiltration rates, inflow/outflow capacity, etc.) of the stormwater management measure, including, but not limited to, repairs or replacement to the structure; removal of sediment, debris, unwanted vegetation, or trash; restoration of eroded areas; snow and ice removal; fence repair or replacement; restoration of vegetation; and repair or replacement of non-vegetated linings.**
- (7) The party responsible for maintenance identified under § 444-10.B.(2) above shall perform all of the following requirements:**
 - a) maintain a detailed log of all preventative and corrective maintenance for the structural stormwater management measures incorporated into the design of the development, including a record of all inspections and copies of all maintenance-related work orders; and**
 - b) evaluate the effectiveness of the maintenance plan at least once per year and adjust the plan and the deed as needed; and**
 - c) submit inspection and maintenance logs to the Township by December 31 annually for any stormwater measure or BMP in accordance with the NJPDES requirements of N.J.A.C. 7:14A; and [ERI27]**
 - d) retain and make available, upon request by any public entity with administrative, health, environmental, or safety authority over the site, the maintenance plan and the documentation required by § 444-10.B.(6) and (7) above.**
 - e)**
- (8) The requirements of § 444-10.B.(3) and (4) do not apply to stormwater management facilities that are dedicated to and accepted by the Township or another governmental agency, subject to all applicable municipal stormwater general permit conditions, as issued by the Department.**
- (9) The stormwater management maintenance plan and any future revisions shall be recorded upon the deed of record for the property. This deed restriction shall be forwarded to the Township Engineer and**

Solicitor for review and approval.

- (c) **The deed restriction shall provide that in the event that the responsible party fails in its maintenance obligation, the Township has the right, but not the responsibility, to enter upon the property to perform the necessary maintenance at the responsible party's expense.**[ER128]
- (10) **In the event that the stormwater management facility becomes a danger to public safety or public health in the opinion of the Township, or if it is in need of maintenance or repair, the Township shall so notify the responsible party in writing. Upon receipt of that notice, the responsible party shall have 14 days to effect maintenance and repair of the facility in a manner that is approved by the Township engineer or his designee. The Township, in its discretion, may extend the time allowed for effecting maintenance and repair for good cause. If the responsible party fails or refuses to perform such maintenance and repair, the Township or County may immediately proceed to do so and shall bill the cost thereof to the responsible party. Nonpayment of such bill may result in a lien on the property.**
- C. **Nothing in this section shall preclude the Township in which the major development is located from requiring the posting of a performance or maintenance guarantee in accordance with N.J.S.A. 40:55D-53.**

§ 444-11 Violations and penalties.

- A. **Any person who erects, constructs, alters, repairs, converts, maintains, or uses any building, structure or land in violation of this chapter shall be subject to the penalty in Chapter 1, Article II, General Penalty, of the Code of the Township of Edgewater Park.**
[Amended at time of adoption of Code (see Ch. 1, General Provisions, Art. III)]
- B. **Each continuing violation of this chapter shall constitute a separate offense.**

§444-12 Effective date.

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

§ 444-13 Severability.

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

§ 448-1 Purpose.

The purpose of this article is to prohibit illicit connections to the municipal separate storm sewer system(s) operated by the Township of Edgewater Park, so as to protect public health, safety and welfare, and to prescribe penalties for the failure to comply.

§ 448-2 Definitions; word usage.

For the purpose of this article, the following terms, phrases, words, and their derivations shall have the meanings stated herein unless their use in the text of this article 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. The definitions below are the same as or based on corresponding definitions in the New Jersey Pollutant Discharge Elimination System (NJPDES) rules at N.J.A.C. 7:14A-1.2.

DOMESTIC SEWAGE

Waste and wastewater from humans or household operations.

ILLICIT CONNECTION

Any physical or nonphysical connection that discharges domestic sewage, noncontact cooling water, process wastewater, or other industrial waste (other than stormwater) to the municipal separate storm sewer system operated by the Township of Edgewater Park, unless that discharge is authorized under a NJPDES permit other than the Tier A Municipal Stormwater General Permit (NJPDES Permit No. NJ0141852). Nonphysical connections may include, but are not limited to, leaks, flows, or overflows into the municipal separate storm sewer system.

INDUSTRIAL WASTE

Nondomestic 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. § 1317(a), (b), or (c)].

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)

As defined in N.J.A.C. 7:14A-1.2 but is summarized as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is owned or operated by the Township of Edgewater Park or other public body, and is designed and used for collecting and conveying stormwater.

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.

NONCONTACT 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. Noncontact cooling water may, however, contain algacides or biocides to control fouling of equipment such as heat exchangers and/or corrosion inhibitors.

PERSON

Any individual, corporation, company, partnership, firm, association, political subdivision of this state and any state, interstate or Federal agency.

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 noncontact cooling water.

STORMWATER

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

§ 448-3 Prohibited conduct.

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 Edgewater Park any domestic sewage, noncontact cooling water, process wastewater, or other industrial waste (other than stormwater).

§ 448-4 Enforcement.

This article shall be enforced by officials of the Township of Edgewater Park, including but not limited to, the Police Department, Inspections Department, and/or Local Board of Health.

§ 448-5 Violations and penalties.

A. Any person violating any of the provisions of this article or part thereof shall, upon conviction, be subject to the penalty in Chapter 1, Article II, General Penalty, of the Code of the Township of Edgewater Park.

[Amended at time of adoption of Code (see Ch. 1, General Provisions, Art. III)]

B. Each continuing violation of this article shall constitute a separate offense.

§ 448-6 Severability.

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

§ 448-7 Purpose.

The purpose of this article is 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 Edgewater Park, so as to protect public health, safety and welfare, and to prescribe penalties for the failure to comply.

§ 448-8 Definitions; word usage.

For the purpose of this article, the following terms, phrases, words, and their derivations shall have the meanings stated herein unless their use in the text of this article 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.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)

As defined in N.J.A.C. 7:14A-1.2 but is summarized as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is owned or operated by the Township of Edgewater Park or other public body, and is designed and used for collecting and conveying stormwater.

PERSON

Any individual, corporation, company, partnership, firm, association, political subdivision of this state and any state, interstate or Federal agency.

STORMWATER

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

§ 448-9 Prohibited conduct.

The spilling, dumping, or disposal of materials other than stormwater to the municipal separate storm sewer system operated by Township of Edgewater Park 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.

§ 448-10 Exceptions to prohibition.

- A. **Waterline flushing and discharges from potable water sources.**
- B. **Uncontaminated groundwater (e.g., infiltration, crawl space or basement sump pumps, foundation or footing drains, or rising groundwaters).**
- C. **Air-conditioning condensate (excluding contact and noncontact cooling water).**
- D. **Irrigation water (including landscape and lawn-watering runoff).**
- E. **Flows from springs, riparian habitats and wetlands, water reservoir discharges and diverted stream flows.**
- F. **Residential car-washing water and residential swimming pool discharges.**
- G. **Sidewalk, driveway and street wash water.**
- H. **Flows from firefighting activities.**
- I. **Flows from rinsing of the following equipment with clean water:**
 - (1) **Beach maintenance equipment immediately following its use for its intended purpose; and**

- (2) **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.**
- (3) **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.**

§ 448-11 Enforcement.

This article shall be enforced by officials of the Township of Edgewater Park, including but not limited to, the Police Department, Inspections Department, and/or Local Board of Health.

§ 448-12 Violations and penalties.

- A. **Any person violating any of the provisions of this article or part thereof shall, upon conviction, be subject to the penalty in Chapter 1, Article II, General Penalty, of the Code of the Township of Edgewater Park.**
[Amended at time of adoption of Code (see Ch. 1, General Provisions, Art. III)]
- B. **Each continuing violation of this article shall constitute a separate offense.**

§ 448-13 Severability.

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

§ 448-14 Purpose.

The purpose of this article is to require dumpsters and other refuse containers that are outdoors or exposed to stormwater to be covered at all times and prohibit the spilling, dumping, leaking, or otherwise discharge of liquids, semiliquids or solids from the containers to the municipal separate storm sewer system operated by the Township of Edgewater Park or other public body 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.

§ 448-15 Definitions; word usage.

For the purpose of this article, the following terms, phrases, words, and their derivations shall have the meanings stated herein unless their use in the text of this article 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.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)

As defined in N.J.A.C. 7:14A-1.2 but is summarized as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is owned or operated by the Township of Edgewater Park or other public body, and is designed and used for collecting and conveying stormwater.

PERSON

Any individual, corporation, company, partnership, firm, association, political subdivision of this state and any state, interstate or Federal agency.

REFUSE CONTAINER

Any waste container that a person controls, whether owned, leased, or operated, including dumpsters, trash cans, garbage pails, and plastic trash bags.

STORMWATER

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

WATERS OF THE STATE

The ocean and its estuaries, all springs, streams, wetlands and bodies of surface water or groundwater, whether natural or artificial, within the boundaries of the State of New Jersey or subject to its jurisdiction.

§ 448-16 Prohibited conduct.

- A. Any person who controls, whether owned, leased, or operated, a refuse container or dumpster must ensure that such container or dumpster is covered at all times and shall prevent refuse from spilling out or overflowing.
- B. Any person who owns, leases or otherwise uses a refuse container or dumpster must ensure that such container or dumpster does not leak or otherwise discharge liquids, semiliquids or solids to the municipal separate storm sewer system operated by the Township of Edgewater Park or other public body and/or the waters of the state.

§ 448-17 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).

§ 448-18 Enforcement.

This article shall be enforced by the Police Department and/or the Code Enforcement Officer of the Township of Edgewater Park.

§ 448-19 Violations and penalties.

Any person(s) who is found to be in violation of the provisions of this article shall be subject to penalties as set forth in Chapter 444, Stormwater Control, § 444-11, Violations and penalties, of the Code of the Township of Edgewater Park.

§ 448-20 Severability.

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

§ 448-21 Purpose.

The purpose of this article is to require 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 (except a residential lot with one single-family house) and 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 Edgewater Park, so as to protect public health, safety and welfare, and to prescribe penalties for the failure to comply.

§ 448-22 Definitions.

For the purpose of this article, the following terms, phrases, words, and their derivations shall have the meanings stated herein unless their use in the text of this article 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.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)

As defined in N.J.A.C. 7:14A-1.2 but is summarized as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is owned or operated by the Township of Edgewater Park or other public body, and is designed and used for collecting and conveying stormwater.

PERSON

Any individual, corporation, company, partnership, firm, association, political subdivision of this state and any state, interstate or Federal agency.

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.

WATERS OF THE STATE

The ocean and its estuaries, all springs, streams, wetlands and bodies of surface water or groundwater, whether natural or artificial, within the boundaries of the State of New Jersey or subject to its jurisdiction.

§ 448-23 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 of any surface that is in direct contact with an existing storm drain inlet on that property unless the storm drain inlet either:

- A. **Already meets the design standard below to control passage of solid and floatable materials; or**
- B. **Is retrofitted or replaced to meet the standard in § 448-24 below prior to the completion of the project.**

§ 448-24 Design standard.

Storm drain inlets identified in § 448-23 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 § 448-24C below.

- A. **Design engineers shall use one 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:**
 - (1) **Grates.**
 - (a) **The New Jersey Department of Transportation (NJDOT) bicycle-safe grate, which is described in Chapter 2.4 of the NJDOT Bicycle Compatible Roadways and Bikeways Planning and Design Guidelines (latest edition available here: <https://www.state.nj.us/transportation/about/publicat/>); or**

- (b) A different grate, if each individual clear space in that grate has an area of no more than 7.0 square inches, or is no greater than 0.5 inch 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 system floors used to collect stormwater from the surface into a storm drain or surface water body.

- (c) For curb-opening inlets, including curb-opening inlets in combination inlets, 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.

B. This standard does not apply:

- (1) Where each individual clear space in the curb opening in existing curb-opening inlet does not have an area of more than nine (9.0) square inches;
- (2) Where the Township agrees that the standards would cause inadequate hydraulic performance that could not practicably be overcome by using additional or larger storm drain inlets;
- (3) Where flows from the water quality design storm as specified in N.J.A.C. 7:8 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 (4.625) inches long and one and one-half (1.5) inches wide (this option does not apply for outfall netting facilities); or
 - (b) A bar screen having a bar spacing of 0.5 inch.

Note that these exemptions do not authorize any infringement of requirements in the Residential Site Improvement Standards for bicycle safe grates in new residential development (N.J.A.C. 5:21-4.18(b)2 and 7.4(b)1).

- (4) Where flows are conveyed through a trash rack that has parallel bars with one-inch (1 inch) spacing between the bars, to the elevation of the Water Quality Design Storm as specified in N.J.A.C. 7:8; or
- (5) Where the New Jersey Department of Environmental Protection determines, pursuant to the New Jersey Register of Historic Places Rules at N.J.A.C. 7:4-7.2(c), that action to meet this standard is an undertaking that constitutes an encroachment or will damage or destroy the New Jersey Register-listed historic property.

§ 448-25 Enforcement.

This article shall be enforced by the Police Department and/or Code Enforcement Officer of the Township of Edgewater Park.

§ 448-26 Violations and penalties.

Any person(s) who is found to be in violation of the provisions of this article shall be subject to penalties as set forth in Chapter 444, Stormwater Control, § 444-11, Violations and penalties, for each storm drain inlet that is not retrofitted to meet the design standard.

§ 448-27 Severability.

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