ORDINANCE NO. O-24-8
TOWNSHIP MEETING DATE: May 28, 2024

AN ORDINANCE AMENDING CHAPTER 190 (LAND USE), ARTICLE IX (IMPROVEMENT STANDARDS) SECTION 190-80 (STORMWATER MANAGEMENT) OF THE REVISED GENERAL ORDINANCES OF THE TOWNSHIP OF FREEHOLD, COUNTY OF MONMOUTH AND STATE OF NEW JERSEY

BE IT ORDAINED by the Township Committee of the Township of Freehold, County of Monmouth and State of New Jersey, as follows (additions are **bold underlined**, deletions are ~~**bold strikeouts**~~):

I

CHAPTER 190 (LAND USE) is hereby amended as follows:

Section 190-80 Stormwater Management

A. Scope and Purpose

(1) No change.

(2) No change.

(3) Applicability

(a) No change.

(b) No change.

(c) An application required by ordinance pursuant to subsection (A)(3)(a) above that has been submitted prior to June 12, 2024, shall be subject to the stormwater management requirements in effect on June 11, 2024.

(d) An application required by ordinance for approval pursuant to subsection (A)(3)(a) above that has been submitted on or after March 2, 2021, but prior to June 12, 2024, shall be subject to the stormwater management requirements in effect on June 11, 2024.

(e) Notwithstanding any rule to the contrary, a major development for any public roadway or railroad project conducted by a public transportation entity that has determined a preferred alternative or reached an equivalent milestone before July 17, 2023, shall be subject to the stormwater management requirements in effect prior to July 17, 2023.

(4) No change.

B. Definitions

PUBLIC ROADWAY OR RAILROAD
A pathway for use by motor vehicles or trains that is intended for public use and is constructed by, or on behalf of, a public transportation entity. A public roadway or railroad does not include a roadway or railroad constructed as part of a private development, regardless of whether the roadway or railroad is ultimately to be dedicated to and/or maintained by a governmental entity.

PUBLIC TRANSPORTATION ENTITY
A Federal, State, county, or municipal government, an independent State authority, or a statutorily authorized public-private partnership program pursuant to P.L. 2018, c. 90 (N.J.S.A. 40A:11-52 et seq.), that performs a public roadway or railroad project that includes new construction, expansion, reconstruction, or improvement of a public roadway or railroad.

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
Defined as the geographic application of the State Development and Redevelopment Plan's goals and statewide policies, and the official map of these goals and policies.

Note to codifier: Existing definitions remain as is.

C. General standards
No change.

D. Stormwater Management Requirements for Major Development

(1)-(4) No change.

(5) Tables 1 through 3 below summarize the ability of stormwater best management practices identified and described in the New Jersey Stormwater Best Management Practices Manual to satisfy the green infrastructure, groundwater recharge, stormwater runoff quality and stormwater runoff quantity standards specified in Subsection D (15), (16), (17) and (18). When designed in accordance with the most current version of the New Jersey Stormwater Best Management Practices 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 Best Management Practices 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: ~~http://www.nj.gov/dep/stormwater/bmp_manual2.htm~~ **https://dep.nj.gov/stormwater/bmp-manual/.**

(6)-(15) No change.

(16) Groundwater Recharge Standards

(a) No change.

(b) No change.

[1] No change.

[2] Demonstrate through hydrologic and hydraulic analysis that the increase of stormwater runoff volume from pre-construction to post-construction for the **projected** 2-year storm, **as defined and determined pursuant to Subsection (E)(4) of this ordinance,** is infiltrated.

(c) No change.

(d) The following types of stormwater shall not be recharged:

[1] Stormwater from areas of high pollutant loading. High pollutant loading areas are areas in industrial and commercial developments where solvents and/or petroleum products are loaded/unloaded, stored, or applied, areas where pesticides are loaded/unloaded or stored; areas where hazardous materials are expected to be present in greater than "reportable quantities" as defined by the United States Environmental Protection Agency (EPA) at 40 CFR 302.4; areas where recharge would be inconsistent with Department approved remedial action work plan **approved pursuant to the Administrative Requirements for the Remediation of Contaminated Sites rules, N.J.A.C. 7:26C, or Department** landfill closure plan**;** and areas with high risks for spills of toxic materials, such as gas stations and vehicle maintenance facilities.

[2] Industrial stormwater exposed to "source material." "Source material" means any material(s) or machinery, located at an industrial facility, that is directly or indirectly related to process, manufacturing or other industrial activities, which could be a source of pollutants in any industrial stormwater discharge to groundwater. Source materials include, but are not limited to, raw materials; intermediate products; final products; waste materials; by-products; industrial machinery and fuels, and lubricants, solvents, and detergents that are related to process, manufacturing, or other industrial activities that are exposed to stormwater.

(17) No change.

(18) Stormwater runoff quantity standards.

(a) No change.

(b) No change.

[1] Demonstrate through hydrologic and hydraulic analysis that for stormwater leaving the site, post-construction runoff hydrographs for the **current and projected** 2-, 10-, and 100-year storm events**, as defined and determined in Subsection (E)(3) and (4), respectively, of this ordinance,** 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 **current and projected** 2-, 10-, and 100-year storm events**, as defined and determined pursuant to Subsection (E)(3) and (4), respectively, of this ordinance,** 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;

[3] Design stormwater management measures so that the post-construction peak runoff rates for the **current and projected** 2-, 10-, and 100-year storm events, **as defined and determined in Subsection (E)(3) and (4), respectively, of this ordinance,** are 50, 75 and 80 percent, respectively, of the pre-construction peak runoff rates. The percentages apply only to the post-construction stormwater runoff that is attributable to the portion of the site on which the proposed development or project is to be constructed; or

[4] No change.

(c) No change.

E. Calculation of Stormwater Runoff and Groundwater Recharge

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

(a) The design engineer shall calculate runoff using ~~one of~~ the following ~~methods~~ **method**:

~~[1]~~ 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://directives.sc.egov.usda.gov/viewerFS.aspx?hid=21422 or at United States Department of Agriculture Natural Resources Conservation Service**, New Jersey State Office.**

~~[2] 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.~~

(b) For the purpose of calculating ~~runoff coefficients~~ **curve numbers** 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~~ **curve number**" applies to ~~both~~ the NRCS methodology above at Subsection **E(1)(a)** ~~E(1)(a)[1] and the Rational and Modified Rational Methods at Section E(1)(a)[2].~~ **A** ~~runoff coefficient~~ **curve number** or a groundwater recharge land cover for an existing condition may be used on all or a portion of the site if the design engineer verifies that the hydrologic condition has existed on the site or portion of the site for at least five years without interruption prior to the time of application. If more than one land cover ~~have~~ **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).

(c) No change.
(d) No change.
(e) No change.

(2) No change.

(3) The precipitation depths of the current two-, 10-, and 100-year storm events shall be determined by multiplying the values determined in accordance with items (a) and (b) below:

(a) The applicant shall utilize the National Oceanographic and Atmospheric Administration (NOAA), National Weather Service's Atlas 14 Point Precipitation Frequency Estimates: NJ, in accordance with the location(s) of the drainage area(s) of the site. This data is available at:

https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=nj; and

(b) The applicant shall utilize Table 5: Current Precipitation Adjustment Factors below, which sets forth the applicable multiplier for the drainage area(s) of the site, in accordance with the county or counties where the drainage area(s) of the site is located. Where the major development lies in more than one county, the precipitation values shall be adjusted according to the percentage of the drainage area in each county. Alternately, separate rainfall totals can be developed for each county using the values in the table below.

Table 5: Current Precipitation Adjustment Factors

County	Current Precipitation Adjustment Factors		
	2-year Design Storm	10-year Design Storm	100-year Design Storm
Atlantic	1.01	1.02	1.03
Bergen	1.01	1.03	1.06
Burlington	0.99	1.01	1.04
Camden	1.03	1.04	1.05
Cape May	1.03	1.03	1.04
Cumberland	1.03	1.03	1.01
Essex	1.01	1.03	1.06
Gloucester	1.05	1.06	1.06
Hudson	1.03	1.05	1.09
Hunterdon	1.02	1.05	1.13
Mercer	1.01	1.02	1.04
Middlesex	1.00	1.01	1.03
Monmouth	1.00	1.01	1.02
Morris	1.01	1.03	1.06
Ocean	1.00	1.01	1.03
Passaic	1.00	1.02	1.05
Salem	1.02	1.03	1.03
Somerset	1.00	1.03	1.09
Sussex	1.03	1.04	1.07
Union	1.01	1.03	1.06
Warren	1.02	1.07	1.15

(4) Table 6: Future Precipitation Change Factors provided below sets forth the change factors to be used in determining the projected two-, 10-, and 100-year storm events for use in this chapter, which are organized alphabetically by county. The precipitation depth of the projected two-, 10-, and 100-year storm events of a site shall be determined by multiplying the precipitation depth of the two-, 10-, and 100-year storm events determined from the National Weather Service's Atlas 14 Point Precipitation Frequency Estimates pursuant to (c)1 above, by the change factor in the table below, in accordance with the county or counties where the drainage area(s) of the site is located. Where the major development and/or its drainage area lies in more than one county, the precipitation values shall be adjusted according to the percentage of the drainage

area in each county. Alternately, separate rainfall totals can be developed for each county using the values in the table below.

Table 6: Future Precipitation Change Factors

	Future Precipitation Change Factors		
	2-year Design Storm	10-year Design Storm	10-year Design Storm
Atlantic	1.22	1.24	1.39
Bergen	1.20	1.23	1.37
Burlington	1.17	1.18	1.32
Camden	1.18	1.22	1.39
Cape May	1.21	1.24	1.32
Cumberland	1.20	1.21	1.39
Essex	1.19	1.22	1.33
Gloucester	1.19	1.23	1.41
Hudson	1.19	1.19	1.23
Hunterdon	1.19	1.23	1.42
Mercer	1.16	1.17	1.36
Middlesex	1.19	1.21	1.33
Monmouth	1.19	1.19	1.26
Morris	1.23	1.28	1.46
Ocean	1.18	1.19	1.24
Passaic	1.21	1.27	1.50
Salem	1.20	1.23	1.32
Somerset	1.19	1.24	1.48
Sussex	1.24	1.29	1.50
Union	1.20	1.23	1.35
Warren	1.20	1.25	1.37

F. Sources for Technical Guidance

(1) 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**~~ **https://dep.nj.gov/stormwater/bmp-manual/.**

(a) No change.

(b) Additional maintenance guidance is available on the Department's website at: ~~**https://www.njstormwater.org/maintenance_guidance.htm**~~ **https://dep.nj.gov/stormwater/maintenance-guidance/.**

(2) 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.**~~

The Division of Watershed Protection and Restoration, New Jersey Department of Environmental Protection, Mail Code 501-02A, PO Box 420, Trenton, New Jersey 08625-0420.

G. Solids and floatable materials control standards
No change.

H. Safety Standards for Stormwater Management Basins

(1) No change.
(2) No change.

(3) Requirements for trash racks, overflow grates and escape provisions
(a) No change.
(b) No change.
[1] No change.
[2] The overflow grate spacing shall be no ~~**less**~~ **greater** than two inches across the smallest dimension.
[3] No change.
(c) No change.
(4) No change.
(5) No change.

I. Requirements for a site development stormwater plan
No change.

J. Maintenance and repair
No change.

II

All Ordinances and parts of Ordinances inconsistent herewith are hereby repealed.

III

If any section, subparagraph, sentence, clause or phrase of this Ordinance shall be held to be invalid, such decision shall not invalidate the remaining portion of this Ordinance.

IV

This Ordinance shall take effect upon adoption and publication according to law.