

**ORDINANCE 326-24**

**AN ORDINANCE OF THE TOWNSHIP OF UPPER FREEHOLD AMENDING CHAPTER 35 LAND USE REGULATIONS, SECTION 35-521 STORMWATER CONTROL OF THE MUNICIPAL CODE OF THE TOWNSHIP OF UPPER FREEHOLD.**

**BE IT HEREBY ORDAINED** by the Township Committee of the Township of Upper Freehold that Chapter 35, Section 35-521 Stormwater Control of the Municipal Code of the Township of Upper Freehold is hereby amended as follows:

**SECTION 1.** Chapter 35, Section 35-521 Stormwater Control is amended as follows:

**§ 35-521. STORMWATER CONTROL.**

**§ 35-521.1. Scope and purpose.**

- A. Policy statement. Flood control, groundwater recharge, and pollutant reduction shall be achieved 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. The purpose of this section is to establish minimum stormwater management requirements and controls for "major development," as defined below in § 35-521.2 and to:
  - 1. Establish standards and regulation for the management and discharge of stormwater runoff from land development projects and other construction activities;
  - 2. Reduce artificially induced flood damage to public health, life and property;
  - 3. Minimize increased stormwater runoff rates and volumes;
  - 4. Minimize the deterioration of existing water courses, culverts, bridges, dams and other structures that would result from increased rates of stormwater runoff;
  - 5. Induce water recharge into the ground wherever suitable infiltration, soil permeability, and favorable geological conditions exist;
  - 6. Prevent an increase in nonpoint source pollution;
  - 7. Maintain the integrity and stability of stream channels for their biological functions, as well as for drainage, the conveyance of floodwater, and other purposes;

C. Applicability.

1. This section 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 section shall also be applicable to all major developments undertaken by the Township of Upper Freehold, Monmouth County, New Jersey.
3. This section shall also be applicable, where expressly provided herein, to existing residential and nonresidential stormwater management facilities.
4. An application required by ordinance pursuant to (c)1 above that has been submitted prior to {adoption date of this ordinance}, shall be subject to the stormwater management requirements in effect on {1 day prior to the adoption date of this ordinance}.
5. An application required by ordinance for approval pursuant to (c)1 above that has been submitted on or after March 2, 2021, but prior to {adoption date of this ordinance}, shall be subject to the stormwater management requirements in effect on {1 day prior to the adoption date of this ordinance}.
6. 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.

D. Compatibility with other permit and ordinance requirements. Development approvals issued pursuant to this section are to be considered an integral part of development approvals 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 section shall be held to be the minimum requirements for the promotion of the public health, safety, and general welfare. This section 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 section imposes restrictions different from those imposed by any other ordinance, rule or regulation, or other provision of law, the more restrictive provisions or higher standards shall control.

**§ 35-521.2. Definitions.**

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

**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, 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 section.

**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 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 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 land, 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 NEIGHBORHOODS** — Neighborhoods 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 AREA** — 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 wellhead 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:

- A. Treating stormwater runoff through infiltration into subsoil;
- B. Treating stormwater runoff through filtration by vegetation or soil; or
- C. 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 "subwatershed," which is identified by a fourteen-digit hydrologic unit boundary designation, delineated within New Jersey by the United States Geological Survey.

**IMPACT FEE** — As applied to this section a fee or assessment imposed upon development, including subdivision, building construction, or other land use change in order to help meet the maintenance needs and/or requirements occasioned by the developments in the Township of Upper Freehold that require the construction or improvement of stormwater management facilities necessary, including water treatment and distribution facilities, wastewater treatment and disposal facilities, as well as stormwater drainage and flood control facilities.

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.

MAINTENANCE — As it relates to the maintenance of stormwater management facilities is defined as the general upkeep of the facilities, including mowing of the area, keeping the area clean from debris; it includes the preventative and corrective maintenance to be performed to maintain the function of the stormwater management measures, including the repairs or replacement to the structure, removal of sediment, debris, and/or trash, and as defined further in the New Jersey Administrative Code. Pursuant to this section, maintenance for residential stormwater management facilities shall be divided between the Township of Upper Freehold, which shall be responsible for corrective maintenance as defined herein at § 35-521.10B9, and the respective private homeowners' associations, which shall be responsible for preventative maintenance as defined herein at § 35-521.10B8. Maintenance for nonresidential stormwater management facilities shall be the sole responsibility of the owner of the property.

MAJOR DEVELOPMENT —

- A. 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 1/4 acre or more of regulated impervious surface since February 2, 2004;
  - 3. The creation of 1/4 acre or more of regulated motor vehicle surface since the effective date of this section, whichever is earlier; or
  - 4. A combination of Subsection A2 and 3 above that totals an area of 1/4 acre or more. The same surface shall not be counted twice when determining if the combination area equals 1/4 acre or more.
  
- B. 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 Subsection A1, 2, 3, or 4 above. Projects undertaken by any government 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.

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 Upper Freehold in Monmouth County, New Jersey.

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 section. The BMP Manual is periodically amended by the Department as necessary to provide design specifications on additional best management practices 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 best management practice to contribute to compliance with the standards contained in this section. Alternative stormwater management measures, removal rates, or calculation methods may be utilized, subject to any limitations specified in this section, provided the design engineer demonstrates to the municipality, in accordance with § 35-521.4F of this section 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 section.

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, Township of Upper Freehold, 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, groundwaters or surface waters of the state, or to a domestic treatment works. "Pollutant" includes both hazardous and nonhazardous pollutants.

**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.*

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:

- A. A net increase of impervious surface;
- B. 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);
- C. The total area of impervious surface proposed to be newly collected by an existing stormwater conveyance system; and/or
- D. 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 — Any of the following, alone or in combination:

- A. The total area of motor vehicle surface that is currently receiving water;
- B. A net increase in motor vehicle surface; and/or
- C. 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 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 nonstormwater discharges into stormwater conveyances.

**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.

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

**TIDAL FLOOD HAZARD AREA** — A flood hazard area in which the flood elevation resulting from the two-, ten-, 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), designated centers, cores or nodes;
- B. Designated as CAFRA centers, cores or nodes;
- C. Designated as Urban Enterprise Zones; and
- D. 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-, ten-, 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 water or groundwater, 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 groundwater 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."

**§ 35-521.3. Design and performance standards for stormwater management measures.**

- A. Stormwater management measures for major development shall be designed to provide 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.
- B. Except as otherwise expressly provided, the standards in this section 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.

**§ 35-521.4. Stormwater management requirements for major development.**

- A. Maintenance plan. The development shall incorporate a maintenance plan for the stormwater management measures incorporated into the design of a major development in accordance with § 35-521.10.
- B. Threatened and endangered species habitat. 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 13:1B-15.150, particularly *Helonias bullata* (swamp pink) and/or *Clemmys muhlenbergi* (bog turtle).
- C. Exemptions. The following linear development projects are exempt from the groundwater recharge, stormwater runoff quality, and stormwater runoff quantity requirements of § 35-521.4P, Q and R:
  - 1. The construction of an underground utility line, provided that the disturbed areas are revegetated upon completion;
  - 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. Waivers. A waiver from strict compliance from the green infrastructure, groundwater recharge, stormwater runoff quality, and stormwater runoff quantity requirements of § 35-

521.4P, Q and R 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;
  2. The applicant demonstrates through an alternatives analysis, that through the use of stormwater management measures, the option selected complies with the requirements of § 35-521.4O, P, Q and R to the maximum extent practicable;
  3. The applicant demonstrates that, in order to meet the requirements of § 35-521.4O, P, Q and R, 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 § 35-521.4D3 above within the upstream drainage area of the receiving stream, that would provide additional opportunities to mitigate the requirements of § 35-521.4O, P, Q and R that were not achievable on-site.
- E. Green infrastructure BMPs and BMPs for groundwater recharge, stormwater runoff quality, and/or stormwater runoff quantity. 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 § 35-521.4O, P, Q and R. 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: <https://dep.nj.gov/stormwater/bmp-manual/>.
- F. NJ Stormwater Management Rule precedence. Where the BMP tables in the NJ Stormwater Management Rule are different due to updates or amendments with the tables in this section, 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**

Best Management Practice	Stormwater Runoff Quality TSS Removal Rate	Stormwater Runoff Quantity	Groundwater Recharge	Minimum Separation from Seasonal High-Water Table (feet)
Cistern	0%	Yes	No	—
Dry well <sup>(a)</sup>	0%	No	Yes	2
Grass swale	50% or less	No	No	2 <sup>(e)</sup> 1 <sup>(f)</sup>
Green roof	0%	Yes	No	—
Manufactured treatment device <sup>(d)</sup>	50% or 80%	No	No	Dependent upon the device
Pervious paving system <sup>(a)</sup>	80%	Yes	Yes <sup>(b)</sup> No <sup>(c)</sup>	2 <sup>(b)</sup> 1 <sup>(c)</sup>
Small-scale bioretention basin <sup>(a)</sup>	80% or 90%	Yes	Yes <sup>(b)</sup> No <sup>(c)</sup>	2 <sup>(b)</sup> 1 <sup>(c)</sup>
Small-scale infiltration basin <sup>(a)</sup>	80%	Yes	Yes	2
Small-scale sand filter	80%	Yes	Yes	2
Vegetative filter strip	60% to 80%	No	No	—

**Notes to Tables 1, 2, and 3:**

- (a) Subject to the applicable contributory drainage area limitation specified at § 35-521.402;
- (b) Designed to infiltrate into the subsoil;
- (c) Designed with underdrains;
- (d) Designed to maintain at least a ten-foot-wide area of native vegetation along at least 50% 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 2%;
- (f) Designed with a slope of equal to or greater than 2%;

(g) Manufactured treatment devices that meet the definition of "green infrastructure" at § 35-521.2.

(h) Manufactured treatment devices that do not meet the definition of "green infrastructure" at § 35-521.2.

**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)

Best Management Practice	Stormwater Runoff Quality TSS Removal Rate	Stormwater Runoff Quantity	Groundwater Recharge	Minimum Separation from Seasonal High-Water Table (feet)
Bioretention system	80% or 90%	Yes	Yes <sup>(b)</sup> No <sup>(c)</sup>	2 <sup>(b)</sup> 1 <sup>(c)</sup>
Infiltration basin	80%	Yes	Yes	2
Sand filter <sup>(b)</sup>	80%	Yes	Yes	2
Standard constructed wetland	90%	Yes	No	N/A
Wet pond <sup>(d)</sup>	50% to 90%	Yes	No	N/A

**Notes to Tables 1, 2, and 3:**

(a) Subject to the applicable contributory drainage area limitation specified at § 35-521.402;

(b) Designed to infiltrate into the subsoil;

(c) Designed with underdrains;

(d) Designed to maintain at least a ten-foot-wide area of native vegetation along at least 50% 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 2%;

(f) Designed with a slope of equal to or greater than 2%;

(g) Manufactured treatment devices that meet the definition of "green infrastructure" at § 35-521.2.

(h) Manufactured treatment devices that do not meet the definition of "green infrastructure" at § 35-521.2.

Best Management Practice	Stormwater Runoff Quality TSS Removal Rate	Stormwater Runoff Quantity	Groundwater Recharge	Minimum Separation from Seasonal High-Water Table (feet)
Blue roof	0%	Yes	No	N/A
Extended detention basin	40% to 60%	Yes	No	1
Manufactured treatment device <sup>(h)</sup>	50% or 80%	No	No	Dependent upon the device
Sand filter <sup>(c)</sup>	80%	Yes	No	1
Subsurface gravel wetland	90%	No	No	1
Wet pond	50% to 90%	Yes	No	N/A

**Notes to Tables 1, 2, and 3:**

- (a) Subject to the applicable contributory drainage area limitation specified at § 35-521.402;
- (b) Designed to infiltrate into the subsoil;
- (c) Designed with underdrains;
- (d) Designed to maintain at least a ten-foot-wide area of native vegetation along at least 50% 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 2%;
- (f) Designed with a slope of equal to or greater than 2%;
- (g) Manufactured treatment devices that meet the definition of "green infrastructure" at § 35-521.2.
- (h) Manufactured treatment devices that do not meet the definition of "green infrastructure" at § 35-521.2.

G. Alternative stormwater management measures. 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 municipality. 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 § 35-521.6B. Alternative stormwater management measures may be used to satisfy the requirements at § 35-521.4O only if the measures meet the definition of "green infrastructure" at § 35-521.2. Alternative stormwater management measures that function in a similar manner to a BMP listed at § 35-521.4O2 are subject to the contributory drainage area limitation specified at § 35-521.4O2 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 § 35-521.4O2 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 § 35-521.4D is granted from § 35-521.4O.

- H. Groundwater table hydraulic impact assessments for infiltration BMPs. 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. Design standards for stormwater management measures are as follows:
  - 1. 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. 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 § 35-521.8C;

3. 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, 5:21-7.4, and 5:21-7.5 shall be deemed to meet this requirement;
  4. Stormwater management BMPs shall be designed to meet the minimum safety standards for stormwater management BMPs at § 35-521.8; and
  5. The size of the orifice at the intake to the outlet from the stormwater management BMP shall be a minimum of 2 1/2 inches in diameter.
- J. Manufactured treatment devices. Manufactured treatment devices may be used to meet the requirements of this section, 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 § 35-521.2 may be used only under the circumstances described at § 35-521.4O4.
- K. Erosion control. Any application for a new agricultural development that meets the definition of "major development" at § 35-521.2 shall be submitted to the Soil Conservation District for review and approval in accordance with the requirements at § 35-521.4O, P, Q and R 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. Multiple drainage areas. If there is more than one drainage area, the groundwater recharge, stormwater runoff quality, and stormwater runoff quantity standards at § 35-521.4P, Q and R shall be met in each drainage area, unless the runoff from the drainage areas converge on-site 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. Recordation of deed notice for maintenance of stormwater management measures. Any stormwater management measure authorized under the municipal stormwater management plan or ordinance shall be reflected in a deed notice recorded in the office of the Monmouth County Clerk. A form of deed notice shall be submitted to the municipality 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 § 35-521.4O, P, Q and R 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 § 35-521.10B5. Prior to the commencement of construction, proof that the above-required deed notice has been filed shall be submitted to the municipality. 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 municipality is not a copy of the complete recorded document, a copy of the complete recorded

document shall be provided to the municipality within 180 calendar days of the authorization granted by the municipality.

N. Alteration and/or replacement of approved stormwater management measures. A stormwater management measure approved under the municipal stormwater management plan or ordinance may be altered or replaced with the approval of the municipality, if the municipality determines that the proposed alteration or replacement meets the design and performance standards pursuant to § 35-521.4 of this section 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 municipality for approval and subsequently recorded with the office of the Monmouth County Clerk and shall contain a description and location of the stormwater management measure, as well as reference to the maintenance plan, in accordance with Subsection M above. Prior to the commencement of construction, proof that the above required deed notice has been filed shall be submitted to the municipality in accordance with Subsection M above.

O. 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 § 35-521.4P and Q, the design engineer shall utilize green infrastructure BMPs identified in Table 1 at § 35-521.4F and/or an alternative stormwater management measure approved in accordance with § 35-521.4G. The following green infrastructure BMPs are subject to the following maximum contributory drainage area limitations:

Best Management Practice	Maximum Contributory Drainage Area (acres)
Dry well	1
Manufactured treatment device	2.5
Pervious pavement systems	Area of additional inflow cannot exceed 3 times the area occupied by the BMP
Small-scale bioretention systems	2.5
Small-scale infiltration basin	2.5
Small-scale sand filter	2.5

3. To satisfy the stormwater runoff quantity standards at § 35-521.4R, the design engineer shall utilize BMPs from Table 1 or from Table 2 and/or an alternative stormwater management measure approved in accordance with § 35-521.4G.
4. If a variance in accordance with N.J.A.C. 7:8-4.6 or a waiver from strict compliance in accordance with § 35-521.4D 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 § 35-521.4G may be used to meet the



groundwater recharge, stormwater runoff quality, and stormwater runoff quantity standards at § 35-521.4P, Q and R.

5. 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 § 35-521.4P, Q and R, unless the project is granted a waiver from strict compliance in accordance with § 35-521.4D.
- P. Groundwater recharge standards. This subsection contains the minimum design and performance standards for groundwater recharge as follows:
1. The design engineer shall, using the assumptions and factors for stormwater runoff and groundwater recharge calculations at § 35-521.5, 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 post-construction for the *projected two-year storm, as defined and determined pursuant to § 35-521.5D of this ordinance*, is infiltrated.
  2. This groundwater recharge requirement does not apply to projects within the "urban redevelopment area," or to projects subject to § 35-521.4P3 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 *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; *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.

Q. 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 1/4 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 TSS removal 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. If the surface is considered regulated motor vehicle surface because the water quality treatment for an area of motor vehicle surface that is currently receiving water quality treatment either by vegetation or soil, by an existing stormwater management measure, or by treatment at a wastewater treatment plant is to be modified or removed, the project shall maintain or increase the existing TSS removal of the anticipated load expressed as an annual average.
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 Pollutant 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 Subsection Q2 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

Table 4  
Water Quality Design Storm Distribution

Time (minutes)	Cumulative Rainfall (inches)	Time (minutes)	Cumulative Rainfall (inches)	Time (minutes)	Cumulative Rainfall (inches)
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:

$$R = A + B - (A \times B)/100$$

Where:

- R = total TSS percent load removal from application of both BMPs.
- A = the TSS percent removal rate applicable to the first BMP.
- B = the TSS percent removal rate applicable to the second BMP.

6. Stormwater management measures shall also be designed to reduce, to the maximum extent feasible, the post-construction nutrient load of the anticipated load from the developed site in stormwater runoff generated from the water quality design storm. In achieving reduction of nutrients to the maximum extent feasible, the design of the site shall include green infrastructure BMPs that optimize nutrient removal while still achieving the performance standards in § 35-521.4P, Q and R.

7. 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.
8. 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.
9. Pursuant to the Flood Hazard Area Control Act Rules at N.J.A.C. 7:13-11.2(j)3i, 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% of the anticipated load from the developed site, expressed as an annual average.
10. This 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.

R. Stormwater runoff quantity standards.

1. This subsection contains the minimum design and performance standards to control stormwater runoff quantity impacts of major development.
2. In order to control stormwater runoff quantity impacts, the design engineer shall, using the assumptions and factors for stormwater runoff calculations at § 35-521.5, complete one of the following:
  - a. Demonstrate through hydrologic and hydraulic analysis that for stormwater leaving the site, post-construction runoff hydrographs for the current and projected two-, ten-, and 100-year storm events, as defined and determined in § 35-521.5C and D, respectively, of this ordinance, do not exceed, at any point in time, the preconstruction runoff hydrographs for the same storm events;
  - b. Demonstrate through hydrologic and hydraulic analysis that there is no increase, as compared to the preconstruction condition, in the peak runoff rates of stormwater leaving the site for the current and projected two-, ten- and 100-year storm events, as defined and determined in § 35-521.5C and D, 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;
  - c. Design stormwater management measures so that the post-construction peak runoff rates for the current and projected two-, ten-, and 100-year storm events,

as defined and determined in § 35-521.5C and D, respectively, of this ordinance, are 50%, 75% and 80%, respectively, of the preconstruction 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

- d. In tidal flood hazard areas, stormwater runoff quantity analysis in accordance with Subsection R2a, b and c 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.
3. The stormwater runoff quantity standards shall be applied at the site's boundary to each abutting lot, roadway, watercourse, or receiving storm sewer system.

#### **§ 35-521.5. Calculation of stormwater runoff and groundwater recharge.**

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

1. The design engineer shall calculate runoff using 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://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. For the purpose of calculating curve numbers and groundwater recharge, there is a presumption that the preconstruction condition of a site or portion thereof is a wooded land use with good hydrologic condition. The term "curve number" applies to both the NRCS methodology above at § 35-521.5A1a A 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 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 preconstruction 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 tailwater in the design of structural stormwater management measures.

- B. Groundwater recharge calculation. Groundwater recharge may be calculated in accordance with the following: The New Jersey Geological Survey Report GSR-32, A Method for Evaluating Ground- Water-Recharge Areas in New Jersey, incorporated herein by reference as amended and supplemented. Information regarding the methodology is available from the New Jersey Stormwater Best Management Practices Manual; at the New Jersey Geological Survey website at:

<https://www.nj.gov/dep/njgs/pricelst/gsrreport/gsr32.pdf>

or at New Jersey Geological and Water Survey, 29 Arctic Parkway, PO Box 420 Mail Code 29-01, Trenton, New Jersey 08625-0420.

- C. ***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 1 and 2 below:***

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

2. 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

- D. 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

County	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

§ 35-521.6. Sources for technical guidance.

- A. Sources. 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:

<https://dep.nj.gov/stormwater/bmp-manual/>

1. Guidelines for stormwater management measures are contained in the New Jersey Stormwater Best Management Practices 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://dep.nj.gov/stormwater/bmp-manual/>

- B. New Jersey Department of Environmental Protection submissions. Submissions required for review by the Department should be mailed to:

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.

### **§ 35-521.7. Solids and floatable materials control standards.**

- A. Site design features identified under § 35-521.4F above, or alternative designs in accordance with § 35-521.4G 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 subsection "solid and floatable materials" means sediment, debris, trash, and other floating, suspended, or settleable solids. For exemptions to this standard see § 35-521.7A2 below.

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 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 7.0 square inches, or be no greater than 2.0 inches across the smallest dimension.
2. The standard in § 35-521.7A1 above does not apply:
  - a. Where each individual clear space in the curb opening in existing curb-opening inlet does not have an area of more than 9.0 square inches;

- b. Where the municipality agrees that the standards would cause inadequate hydraulic performance that could not practicably be overcome by using additional or larger storm drain inlets;
- c. 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:
  - 1) A rectangular space 4.625 inches long and 1.5 inches wide (this option does not apply for outfall netting facilities); or
  - 2) A bar screen having a bar spacing of 0.5 inch.
  - 3) 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 5:21-7.4(b)1].
- d. Where flows are conveyed through a trash rack that has parallel bars with one-inch spacing between the bars, to the elevation of the water quality design storm as specified in N.J.A.C. 7:8; or
- e. 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.

**§ 35-521.8. Safety standards for stormwater management basins.**

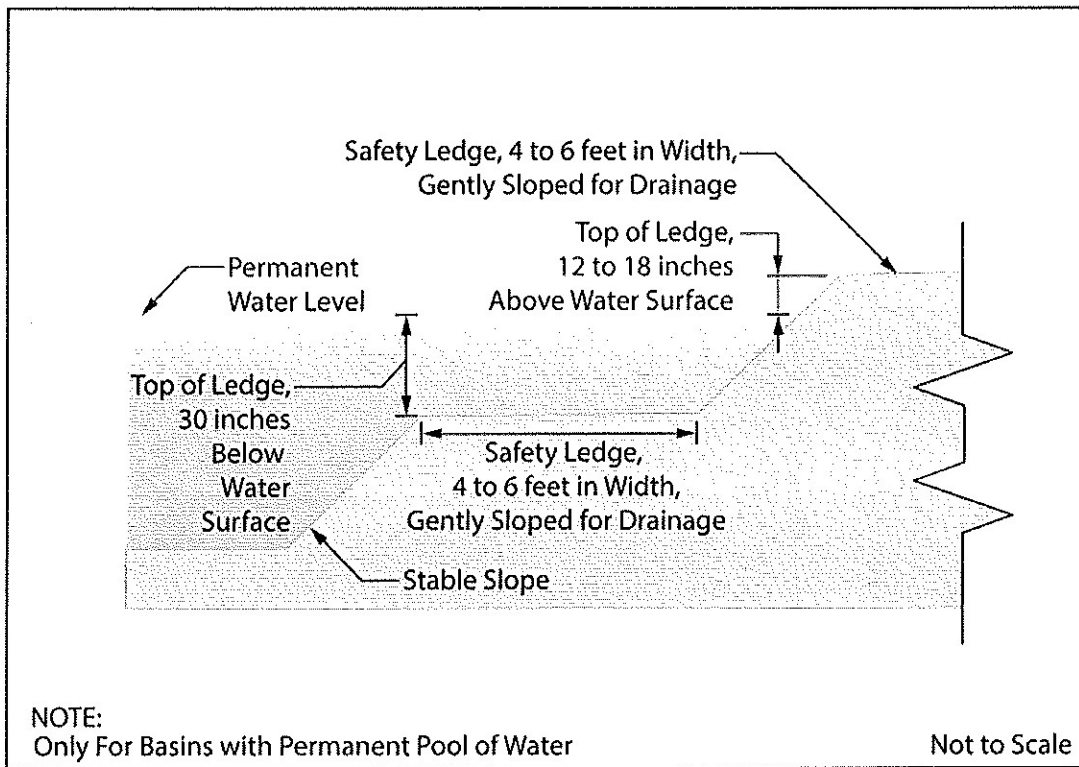
- A. Applicability. This section sets forth requirements to protect public safety through the proper design and operation of stormwater management BMPs. This section applies to any new stormwater management BMP.
- B. Precedence. The provisions of this section are not intended to preempt more stringent 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 § 35-521.8C1, 2, and 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 of rigid, durable, and corrosion-resistant material and designed to withstand a perpendicular live loading of 300 pounds per square foot.
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 removable for emergencies and maintenance.
  - b. The overflow grate spacing shall be no greater 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.
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 municipality pursuant to § 35-521.8C, 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. 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 § 35-521.8E for an illustration of safety ledges in a stormwater management BMP; and
  - 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 standard. A variance or exemption from the safety standards for stormwater management BMPs may be granted only upon a written finding

by the appropriate reviewing agency of the Township of Upper Freehold that the variance or exemption will not constitute a threat to public safety.

E. Safety ledge illustration.

**Elevation View - Basin Safety Ledge Configuration**



**§ 35-521.9. Requirements for a site development stormwater plan.**

- A. Submission of site development stormwater plan.
  - 1. Whenever an applicant seeks municipal approval of a development subject to this section, the applicant shall submit all of the required components of the Checklist for the Site Development Stormwater Plan at § 35-521.9C 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 section.
  - 3. The applicant shall submit 16 copies of the materials listed in the Checklist for Site Development Stormwater Plans in accordance with § 35-521.9C of this section.
- 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 municipality'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 section.
- C. Submission of site development stormwater plan. 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 plans. 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 will 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 for proposed changes in natural conditions shall also be

provided.

4. Land use planning and source control plan. This plan shall provide a demonstration of how the goals and standards of §§ 35-521.3 through 35-521.5 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 § 35-521.4 of this section.
  - 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.
7. Maintenance and repair plan. The design and planning of the stormwater management facility shall meet the maintenance requirements of § 35-521.10.
8. Waiver from submission requirements. The municipal official or board reviewing an application under this section may, in consultation with the municipality's review engineer, waive submission of any of the requirements in § 35-521.9C1 through 6 of this section 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.

#### **§ 35-521.10. Maintenance and repair.**

##### **A. Applicability.**

1. Projects subject to review as in § 35-521.1C of this section shall comply with the requirements of § 35-521.10B and C.
2. Existing residential and nonresidential stormwater management facilities shall comply with the requirements, where applicable, of § 35-521.10B, C, and D.

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; the plan shall include a specific and complete checklist of any and all preventative maintenance responsibilities of homeowners' associations, including a detailed description and timetable for all informal inspections and a checklist for all corrective maintenance to be the responsibility of Upper Freehold Township; and the name, address, and telephone number of the person or persons responsible for preventative and corrective maintenance (including replacement). Should the Township accept and dedicate the residential stormwater management facility pursuant to § 35-521.10B10, a checklist for all preventative and corrective maintenance shall be provided. 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 or entity'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 § 35-521.10B3 above is not a public agency, the maintenance plan and any future revisions based on § 35-521.10B7 below shall be recorded upon the deed of record for each property on which the maintenance described in the maintenance plan must be undertaken. The maintenance requirements and the formation and existence of homeowners' associations shall be recorded upon the deed of record for each property in the development.



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, or trash; restoration of eroded areas; snow and ice removal; fence repair or replacement; restoration of vegetation; and repair or replacement of nonvegetated linings.
7. The party responsible for maintenance identified under § 35-521.10B3 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;
  - b. Evaluate the effectiveness of the maintenance plan at least once per year and adjust the plan and the deed as needed; and
  - c. 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 § 35-521.10B6 and 7 above.
8. Where the Township of Upper Freehold has not accepted the residential stormwater management facility for dedication as set forth in § 35-521.10B10, homeowners' associations shall be formed and be responsible for the general and preventative maintenance of residential stormwater management facilities as set forth in § 35-521.10B6 and 7. Such general and preventative maintenance shall include: removal of sediment, trash, and debris; fence repair or replacement; restoration of vegetation; beautification; general maintenance of the landscaping; maintenance of receipts and work orders for the preventative maintenance performed; annual informal inspections on the operation of the facility to be filed with the Township of Upper Freehold Administrator; and shall retain and make available upon request by any public entity with administrative, health, environmental, or safety authority over the site, the receipts, work orders, and annual inspection reports.
9. Where the Township of Upper Freehold has not accepted the residential stormwater management facility for dedication as set forth in § 35-521.10B10, the Township shall be responsible for corrective maintenance to maintain the function of residential stormwater management facilities, including repairs or replacement to the structure; snow and ice removal; restoration of eroded areas; replacement of filters; repair or replacement of nonvegetated linings; maintain a detailed log of all corrective maintenance for the structural stormwater management measures incorporated into the design of the development; shall evaluate the effectiveness of the maintenance plan at least once per year and adjust the plan as needed; maintain copies of all corrective maintenance-related work orders; is responsible for the formal inspections required pursuant to NJDEP regulations to be performed by a licensed professional engineer and filed with the appropriate administrative and governmental bodies; shall retain and make available, upon request by any public entity with administrative, health, environmental, or safety authority over the site, the maintenance plan and the

documentation required within this section.

10. The requirements of § 35-521.10B8 and 9 do not apply to stormwater management facilities that are dedicated to and accepted by the municipality by approval of the Township Committee; in such case, the Township of Upper Freehold shall be responsible for all maintenance of the residential stormwater management facilities described in § 35-521.10B8 and 9, subject to all applicable municipal stormwater general permit conditions, as issued by the Department.
11. The maintenance of nonresidential stormwater management facilities, including commercial, industrial, and other nonresidential stormwater management facilities shall include all preventative and corrective maintenance described above in § 35-521.10B6 and 7, detailed in the New Jersey Stormwater Best Management Practices Manual, pursuant to New Jersey State law and regulations, and shall be the direct responsibility of the owner of such nonresidential stormwater management facilities and/or property. The Township of Upper Freehold shall have no responsibility for the maintenance, preventative, corrective, or otherwise, for any and all nonresidential stormwater management facilities.
12. Should any homeowners' association, lot owner, or nonresidential stormwater management facility fail to comply with the applicable requirements contained in § 35-521.10B3, 6, 7 and/ or 8, the New Jersey Stormwater Best Management Practices Manual, or the state law and regulations, the Township of Upper Freehold reserves the right to compel the completion of said requirements by any lawful means necessary, including the institution of equitable and/or legal actions, and reserves the right to enter and perform said maintenance, repairs, and/or replacement and assess the costs to the applicable homeowners' associations, individual property and/or lot owners, and owners of nonresidential stormwater management facilities and/or property. The Township Committee shall have the discretion to determine whether such entities are not in compliance with this section.
13. In the event that the residential or nonresidential stormwater management facility becomes a danger to public safety or public health, and/or if it is in need of emergency maintenance or repair, the Township of Upper Freehold shall so notify the homeowners' association, private lot owner, and/or 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 Municipal Engineer or his designee. The Township of Upper Freehold, 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 of Upper Freehold may immediately perform the necessary corrective maintenance or repair and incur the cost therein and reserves the right to enter and perform said maintenance and repair, except that should the danger to public safety or health be as a result of the actions or omissions of homeowners' associations, private lot owners, or another responsible party, the Township of Upper Freehold expressly reserves the right to institute appropriate legal and/or equitable actions to recover the costs of the maintenance and/or repairs.

14. Should any other stormwater management facilities not expressly provided for in this section require maintenance pursuant to the New Jersey Stormwater Best Practices Manual and state law and regulations, the owners of said property and/or facilities shall be solely responsible for all maintenance.
15. All applicants for major developments shall maintain all aspects of the residential and nonresidential stormwater management facilities during the construction phase of the project.

C. Performance guarantees.

1. Nothing in this subsection shall preclude the municipality in which the major development is located from requiring the posting of a performance or maintenance guarantee in accordance with N.J.S.A. 40:55D-53.
2. Upon certification by the Township Engineer that the residential stormwater management facility is complete and prior to the guarantee bond for the project being released, any acceptance or dedication of the entire residential stormwater management facility pursuant to § 35-521.12B10 and/or acceptance of the corrective maintenance provided in § 35-521.10B9 shall be authorized by resolution of the Township Committee and said resolution pursuant to and in accordance with N.J.S.A. 40:55D-1 et seq.

D. Maintenance for existing stormwater management facilities.

1. The Township of Upper Freehold shall perform corrective maintenance as described herein in § 35-521.10B9 for all existing and/or approved residential stormwater management facilities in the Township of Upper Freehold that are the responsibility of homeowners' associations and/or private lot owners and shall be responsible under § 35-521.10B13 for maintenance and repair when such stormwater management facilities become a danger to the public safety or public health to the extent provided therein, except as provided in § 35-521.10B10 where the Township Committee approves the dedication of the facility to the Township of Upper Freehold.
2. The preventative maintenance, as described in § 35-521.10B8, for residential stormwater management facilities shall continue to be the responsibility of existing homeowners' associations and private lot owners as previously established in recorded deeds, resolutions, developers' agreements, and/or other legal documents requiring homeowners' associations private lot owners, and/or other entities to be responsible for the maintenance of stormwater management facilities.
3. This § 35-521.10D does not apply to nonresidential stormwater management facilities within the Township of Upper Freehold. All maintenance, preventative and corrective, and as required pursuant to state law and regulations, of existing nonresidential stormwater management facilities continues to be the sole responsibility of the property owners.
4. This § 35-521.10D does not apply to existing residential developments and/or properties with private roadway systems. The maintenance of stormwater

management facilities in such developments and/or properties with private roadway systems shall continue to be the responsibility of such developments and/or properties.

5. All other stormwater management facilities in the Township of Upper Freehold shall continue to comply with the applicable New Jersey Stormwater Best Practices Manual and state law and regulations.

**§ 35-521.11. Dedicated stormwater management facilities.**

A. Applicability.

1. This section shall apply to instances where the Township Committee of the Township of Upper Freehold expressly agrees to dedicate and accept the residential stormwater management facility pursuant to § 35-521.10B10.

B. Requirements.

1. The applicant shall maintain the residential stormwater management facility during the construction phase of the project.
2. The Planning Board of the Township of Upper Freehold shall estimate the impact fees for both preventative and corrective maintenance of the residential stormwater management facility as defined herein in § 35-521.13B and pursuant to § 35-521.13D, final approval by the Township Committee.
3. Prior to the acceptance and dedication by the Township Committee of any residential stormwater management facility, the developer's engineer shall certify that said facilities were constructed in accordance with the approved plan.
4. Only upon certification by the Township Engineer that the residential stormwater management facility and the project are complete may the Township Committee accept and dedicate the residential stormwater management facility by resolution and release the guarantee of the project pursuant to N.J.S.A. 40:55D-1 et seq.

**§ 35-521.12. Illicit connection.**

- A. Purpose. The purpose of this section is to prohibit illicit connections to the municipal separate storm sewer system(s) operated by the Township of Upper Freehold, so as to protect public health, safety and welfare, and to prescribe penalties for the failure to comply.
- B. Definitions. For the purpose of this section, the following terms, phrases, words, and their derivations shall have the meanings stated herein unless their use in the text of this section 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 Upper Freehold, unless that discharge is authorized under a NJPDES permit other than the Tier A municipal stormwater general permit. 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) — 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 Upper Freehold 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, or political subdivision of this state subject to municipal jurisdiction.

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, is captured by separate storm sewers or other sewerage or drainage facilities, or is conveyed by snow removal equipment.

- C. 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 Upper Freehold any domestic sewage, noncontact cooling water, process wastewater, or other industrial waste (other than stormwater).
- D. Enforcement. This section shall be enforced by the Township of Upper Freehold Code Enforcement Officer.
- E. **Penalties. Any person who violates or fails to comply with any provision of this section**

*or any rule or regulation promulgated pursuant thereto by resolution of the Township Committee to the penalty stated in Chapter 1, Section 1-5.*

**§ 35-521.13. Impact fees.**

- A. Authority to impose. The Planning Board of Upper Freehold Township is hereby authorized to assess impact fees, as herein defined, in accordance with the standards set forth herein. The Planning Board of Upper Freehold Township is required under this section to impose such impact fees upon developments affected by this section on a case-by-case basis and in accordance with the requirements of § 35-521.13B, C, and D.
- B. Assessment formula and methodology.
1. The amount of any impact fee shall be a proportional share of any and all municipal maintenance costs which is reasonably related to the needs created by the development.
  2. A strong causal nexus is required by the off-site infrastructure and the development in order to justify such an impact fee, and developers shall not be required to pay fees for a disproportionate share of the cost of improvements that also benefit other persons.
  3. Each impact fee shall be accounted for and shall be segregated from the Township's general fund and be placed in a lawful interest-bearing General Stormwater Maintenance Escrow Account to be disbursed by resolution of the Township Committee of Upper Freehold Township.
  4. All impact fees shall be estimated and assessed prior to the signing and recording of the final subdivision plat and as a condition of subdivision approval from the Planning Board.
  5. Between the dates of the assessment and collection, the Planning Board may require developers to post security, in the form of a cash bond, letter of credit or performance bond, pursuant to N.J.S.A. 40:55D-1 et seq., so as to guaranty future payment of assessed impact fees.
  6. Impact fees shall be collected as a condition for the issuance for any certificate of occupancy in the subject development.
  7. The Planning Board of Upper Freehold Township and the assessed party, may with final review and approval of the Township Committee, Township Engineer and Township Attorney, establish alternate, mutually acceptable schedules of payment of impact fees.
  8. It shall be in the discretion of the Planning Board of Upper Freehold Township to estimate and assess such impact fees for maintenance of stormwater management facilities on a case-by-case basis based upon the following criteria:
    - a. The annual maintenance and occasional maintenance costs of the Township of Upper Freehold of the residential stormwater management facility for a period

of 100 years;

- b. A 6% annual construction/maintenance cost increase must be included in the estimate;
- c. The published rate of the New Jersey statutory general rate of interest at the time of the approval of the impact fee estimation shall be calculated as the annual rate of return on the escrow account;
- d. The estimate and assessment must be calculated on the basis herein to perform a sinking fund analysis to reach a balance of zero factoring in rate of return on escrow and the rate of increase of 6% at the end of the 100 years.

C. Applicability of impact fees.

1. This section shall not be deemed to affect the existing authority of the Planning Board of Upper Freehold Township over subdivision and site plans, including, but not limited to, the authority to declare a development to be premature or scattered in accordance with the applicable regulations of the Planning Board.

D. Approval by Township Committee of final impact fees and security instruments.

1. All impact fees estimated and assessed by the Planning Board of Upper Freehold Township shall be subject to review by the Township Attorney and Township Engineer and review and approval of the Township Committee prior to final approval by the Planning Board. The Township Committee may, in its discretion, adjust said impact fees prior to their final approval.
2. Any form of security for the maintenance of the residential stormwater management facility, securing payment of the impact fee assessed, shall be approved by the Township Attorney, Finance Officer, and Township Engineer.

**§ 35-521.14. Education.**

A. Public education.

1. A NJDEP educational brochure shall be copied and provided annually to residents and businesses in the Township of Upper Freehold.
2. The Township Administrator of the Township of Upper Freehold shall conduct a yearly educational event to be held at the Township of Upper Freehold municipal complex on stormwater management issues.

B. Employee education.

1. The Township Administrator shall annually provide NJDEP educational brochures to members of the Township Committee and employees within the Township of Upper Freehold that are assigned to the maintenance of the stormwater management facilities, as well as emergency responders responsible for the public safety and welfare.

2. The Township Administrator must develop and maintain an employee training program for appropriate employees, those assigned to the maintenance of the stormwater management facilities, as well as emergency responders responsible for the public safety and welfare.

### **§ 35-521.15. Violations and penalties.**

- A. Authority. Any person who erects, constructs, alters, repairs, converts, maintains, or uses any building, structure or land in violation of this section shall be subject to penalties prescribed by the Township with consideration to this section, including any penalties contained in the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq.; the Stormwater Management Rules, N.J.A.C. 7:8- 1.1 et seq.; and/or § 1-5 of the Township's Code of Ordinances.
- B. Fines.
  1. Any violation of any provision of this section shall be punishable by a fine not to exceed \$2,000 for each offense and/or imprisonment for a term not exceeding 90 days. The following individuals shall be subject to punishment:
    - a. The homeowners' associations and private lot owners responsible for the preventative maintenance of residential stormwater management facilities shall be subject to fines, but not imprisonment, for its violations of this section.
    - b. The owner, general agent, contractor, or occupant of a building, premises, or part thereof where such a violation has been committed or does exist.
    - c. The owner or party responsible for the maintenance of nonresidential stormwater management facilities.
    - d. Any agent, contractor, architect, engineer, builder, corporation, or other person who commits, takes part or assists in the violation.
- C. Continuing violations. Each day that a violation continues shall constitute a separate offense.
- D. Reservation of rights. The imposition of penalties herein shall not preclude the Township or any other person from instituting an action to prevent an unlawful construction, reconstruction, alteration, repair, conversion, or use or to restrain, correct or abate a violation, or to prevent the illegal occupancy of a building, land or premises.
- E. Equitable relief. In addition to the foregoing, the Township of Upper Freehold may institute and maintain actions for equitable relief.

### **SECTION 2. REPEALER.**

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

### **SECTION 3. INCONSISTENT ORDINANCES.**



All other Ordinances or parts thereof inconsistent with the provisions of this Ordinance are hereby repealed as to such inconsistency.

**SECTION 4. SEVERABILITY.**

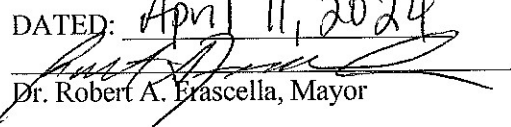
Each section, subsection, sentence, clause and phrase of this Ordinance is declared to be an independent section, subsection, sentence, clause and phrase, and the finding or holding of any such portion of this Ordinance to be unconstitutional, void, or ineffective for any cause, or reason, shall not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

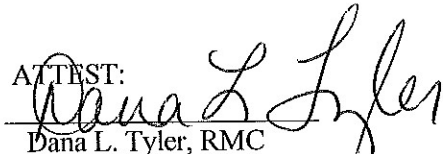
**SECTION 5. EFFECTIVE DATE.**

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

Approved on First Reading: February 1, 2024

Approved, Passed & Adopted: April 11, 2024

DATED: April 11, 2024  
  
Dr. Robert A. Erascella, Mayor

ATTEST:  
  
Dana L. Tyler, RMC  
Municipal Clerk/Administrator