

ORDINANCE NUMBER 06-2024

An Ordinance to Amend the Zoning Ordinance, Article XV, Stormwater Management, Specific to the Provisions for Stormwater Control of the City of Lambertville

§ Z-1500 STORMWATER MANAGEMENT.

[Added 4-17-2006 by Ord. No. 2006-09; amended 9-15-2015 by Ord. No. 23-2015; 4-22-2021 by Ord. No. 08-2021]

§ Z-1500.1 Scope and Purpose.

A. Policy Statement.

- a. 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 green infrastructure, water quality, quantity, and groundwater recharge.

- B. Purpose. The purpose of this § Z-1500 is to establish minimum stormwater management requirements and controls for “major development” and “minor development”, as defined below in Section II.

C. Applicability.

1. This § Z-1500 shall be applicable to the following major and minor developments:
 - a. Non-residential major and minor developments and redevelopment projects; and
 - b. Aspects of residential major and minor developments and redevelopment projects that are not pre-empted by the Residential Site Improvement Standards (RSIS) at N.J.A.C. 5:21.
 - c. In the case of agricultural or horticultural development that meets the definition of "major development" or “minor development” under N.J.A.C. 7:8, a farm conservation plan that addresses the protection of soil and water resources shall be developed and implemented. Such a plan shall be approved by the Hunterdon County Soil Conservation District.
2. This § Z-1500 shall also be applicable to all major and minor developments undertaken by the City of Lambertville.
3. An application required by ordinance pursuant to (b)1 above that has been submitted prior to September 19, 2024, shall be subject to the stormwater management requirements in effect on September 18, 2024.

4. An application required by ordinance for approval pursuant to (b)1 above that has been submitted on or after March 2, 2021, but prior to September 19, 2024, shall be subject to the stormwater management requirements in effect on September 18, 2024.
5. Notwithstanding any rule to the contrary, a major or minor 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 § Z-1500 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 § Z-1500 shall be held to be the minimum requirements for the promotion of public health, safety, and general welfare.

This § Z-1500 is not intended to interfere with, abrogate, or annul any other § Z-1500, 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 higher standards shall control.

§ Z-1500.2 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 CENTER, CORES or NODES” means 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” means 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).

“CATEGORY ONE (C1) WATERS” means Waters of the state, including unnamed waterways that appear on Soil Survey and USGS Topographic Quadrangle within the same HUC 14 watershed, designated in N.J.A.C. 7:9B-1.15(c) through (h) for purposes of implementing the anti-degradation policies set forth at N.J.A.C. 7:9B-1.5(d) for protection from measurable changes in water quality characteristics because of their clarity, color, scenic setting, other characteristics of aesthetic value, exceptional ecological significance, exceptional recreational significance, exceptional water supply significance, or exceptional fisheries resources(s).

“COMMUNITY BASIN” means 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” means the increase in soil bulk density.

“CONTRIBUTORY DRAINAGE AREA” means the area from which stormwater runoff drains to a stormwater management measure, not including the area of the stormwater management measure itself.

“CORE” means a pedestrian-oriented area of commercial and civic uses serving the surrounding municipality, generally including housing and access to public transportation.

“COUNTY REVIEW AGENCY” means an agency designated by the County Board of Chosen Commissioners to review municipal stormwater management plans and implementing ordinance(s). The county review agency may either be:

1. A county planning agency or
2. 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” means the New Jersey Department of Environmental Protection.

“DESIGN ENGINEER” means 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” means a State Development and Redevelopment Plan Center, such as urban, regional, town, village, or hamlet, as designated by the State Planning Commission.

“DEVELOPMENT” means 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, by any person, for which permission is required under the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq.

In the case of development of agricultural lands, “development” means: any activity that requires a state permit; any activity reviewed by the County Agricultural Board (CAB) and the State Agricultural Development Committee (SADC), and municipal review of any activity not exempted by the Right to Farm Act, N.J.S.A. 4:1C-1 et seq.

“DISTURBANCE” means 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” means a geographic area within which stormwater, sediments, or dissolved materials drain to a particular receiving waterbody or to a particular point along a receiving waterbody.

“EMPOWERMENT NEIGHBORHOODS” means neighborhoods designated by the Urban Coordinating Council "in consultation and in conjunction with" the New Jersey Re-development Authority pursuant to N.J.S.A. 55:19-69.

“ENVIRONMENTALLY CONSTRAINED AREA” means 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” means an area or feature which is of significant environmental value, including but not limited to: stream corridors; natural heritage priority sites; habitat of endangered or threatened species; large areas of contiguous open space or upland forest; steep slopes; wellhead protection areas; and groundwater recharge areas. Habitats of endangered or threatened species are those identified by the Department's Landscape Project as approved by the Department's Endangered and Nongame Species Program, or by the Department pursuant to the Highlands Act at N.J.S.A. 13:20-32k. and 13:20-34a (4).

“EROSION” means the detachment and movement of soil or rock fragments by water, wind, ice or gravity.

“GREEN INFRASTRUCTURE” means a stormwater management measure that manages stormwater close to its source by:

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

“GROUNDWATER” means a body of water below the surface of the land in a zone of saturation where the spaces between the soil or geological materials are fully saturated with water.

“HUC 14 or HYDROLOGIC UNIT CODE 14” means an area within which water drains to a particular receiving surface water body, also known as a sub watershed, which is identified by a fourteen-digit hydrologic unit boundary designation, delineated within New Jersey by the United States Geological Survey.

“IMPERVIOUS SURFACE” means a surface that has been covered with a layer of material so that it is highly resistant to infiltration by water.

“INFILTRATION” is the process by which water seeps into the soil from precipitation.

“LEAD PLANNING AGENCY” means 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.

“LOW-IMPACT DEVELOPMENT (LID)” means a development approach that uses practices to manage stormwater close to its source that results in or mimics that of natural hydrologic processes in order to preserve hydrologic and ecologic functions of receiving waters, such as preservation of natural landscape features, minimizing impervious surfaces, infiltration, evapotranspiration, or other use of stormwater.

“MAINTENANCE PLAN” means a document required for all major and minor development projects for stormwater management maintenance. The document shall contain specific preventive maintenance tasks and schedules; cost estimates, including estimated cost of sediment, debris, or trash removal; and the name, address, and telephone number of the person or persons responsible for preventive and corrective maintenance (including replacement).

“MAJOR DEVELOPMENT” means an individual development, as well as multiple developments that individually or collectively result in:

1. The disturbance of one-quarter or more acres of land since February 2, 2004.
2. The creation of 4,000 square feet or more of "regulated impervious surface" since February 2, 2004.
3. The creation of 4,000 square feet or more of "regulated motor vehicle surface" since March 2, 2021; or
4. A combination of Subsection 2 and 3 above that totals an area of 4,000 square feet or more. The same surface shall not be counted twice when determining if the combination area equals 4,000 square feet or more.

Major development includes all developments that are part of a common plan of development or sale (for example, phased residential development) that collectively or individually meet any one or more of paragraphs 1, 2, 3, or 4 above. Projects undertaken by any 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.

“MINOR DEVELOPMENT” means an individual development, as well as multiple developments that individually or collectively result in:

1. The disturbance of 1,000 or more square feet of land since February 2, 2004 but does not meet the definition of a “major development”.
2. The creation of 400 or more square feet of "regulated impervious surface" since February 2, 2004 but does not meet the definition of a “major development”.
3. The creation of 400 or more square feet of "regulated motor vehicle surface" since March 2, 2021 but does not meet the definition of a “major development”; or
4. A combination of Subsection 2 and 3 above that totals an area of 400 or more square feet but does not meet the definition of a “major development”. The same

surface shall not be counted twice when determining if the combination area equals 400 or more square feet.

Minor development includes all developments that are part of a common plan of development or sale (for example, phased residential development) that collectively or individually meet any one or more of paragraphs 1, 2, 3, or 4 above. Projects undertaken by any government agency that otherwise meet the definition of "minor 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 minor development.

“MITIGATION” means an action by an applicant providing compensation or offset actions for on-site stormwater management requirements where the applicant has demonstrated the inability or impracticality of strict compliance with the stormwater management requirements set forth in N.J.A.C. 7:8, in an adopted regional stormwater management plan, or in this § Z-1500, and has received a waiver from strict compliance from the municipality. Mitigation, for the purposes of this § Z-1500, includes both the mitigation plan detailing how the project's failure to strictly comply will be compensated, and the implementation of the approved mitigation plan within the same.

“MOTOR VEHICLE” means 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” means 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, race-tracks, and runways.

“MUNICIPALITY” means any city, borough, town, township, or village, but refers specifically to the City of Lambertville in this section.

“NEW JERSEY STORMWATER BEST MANAGEMENT PRACTICES (BMP) MANUAL” means the manual maintained by the Department providing, in part, design specifications, removal rates, calculation methods, and soil testing procedures approved by the Department as being capable of contributing to the achievement of the stormwater management standards specified in this chapter. The BMP Manual is periodically amended by the Department as necessary to provide design specifications on additional 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 chapter. Alternative stormwater management measures, removal rates, or calculation methods may be utilized, subject to any limitations specified in this chapter, provided the design engineer demonstrates to the municipality, in accordance with Section Z-1500.4E. of this Ordinance and N.J.A.C. 7:8-5.2(g), that the proposed measure and its design will contribute to achievement of the design and performance standards established by this chapter.

“NODE” means an area designated by the State Planning Commission concentrating facilities and activities that are not organized in a compact form.

“NONSTRUCTURAL STORMWATER MANAGEMENT TECHNIQUES” means techniques that control or reduce stormwater runoff in the absence of stormwater structures (e.g., basins and piped conveyances), such as minimizing site disturbance, preserving important site features including, but not limited to, natural vegetation, reducing and disconnecting impervious cover, minimizing slopes, utilizing native vegetation, minimizing turf grass lawns, increasing time of concentration and maintaining and enhancing natural drainage features and characteristics.

“NUTRIENT” means a chemical element or compound, such as nitrogen or phosphorus, which is essential to and promotes the development of organisms or vegetation.

“PERMEABLE” means a surface or land cover capable of transmitting or percolating a significant amount of precipitation into the underlying soils.

“PERSON” means any individual, corporation, company, partnership, firm, association, political subdivision of this state and any state, interstate, or federal agency.

“POLLUTANT” means 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 non-hazardous pollutants.

"PUBLIC ROADWAY OR RAILROAD" means 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” means 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” means the amount of water from precipitation that infiltrates into the ground.

“REDEVELOPMENT” means the construction of structures or improvements on areas which previously contained structures or other improvements.

“REGULATED IMPERVIOUS SURFACE” means any of the following, alone or in combination:

1. A net increase of impervious surface.
2. The total area of impervious surface collected by a new stormwater conveyance system (for the purpose of this definition, a "new stormwater conveyance system" is a stormwater

conveyance system that is constructed where one did not exist immediately prior to its construction or an existing system for which a new discharge location is created).

3. The total area of impervious surface proposed to be newly collected by an existing stormwater conveyance system; and/or
4. The total area of impervious surface collected by an existing stormwater conveyance system where the capacity of that conveyance system is increased.

“REGULATED MOTOR VEHICLE SURFACE” means any of the following, alone or in combination:

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

“RETENTION” means the storage of runoff indefinitely until it is lost through soil infiltration, evaporation, plant uptake, irrigation, nonpotable reuse or any combination of these destinations.

“REVIEW AGENCY (MUNICIPAL)” means the municipal body or official that is responsible for the review of a major or minor development project for compliance with the stormwater management requirements.

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

“SITE” means the lot or lots upon which a major or minor development is to occur or has occurred.

“SOIL” means all unconsolidated mineral and organic material of any origin.

“SOLID AND FLOATABLE MATERIALS” means sediment, debris, trash, and other floating, suspended, or settleable solids.

“SPECIAL RESOURCE WATERS” means water bodies receiving special protections due to their drinking water status or role as high-quality habitat for threatened and endangered species or species of commercial or recreational importance. This includes waterways so designated through the NJ Stormwater Management Rules (N.J.A.C. 7:8) because of exceptional ecological significance, exceptional water supply significance, exceptional recreational significance, exceptional shellfish resource, or exceptional fisheries resource. Waters so designated are protected by a 300-foot buffer extending on either side of the waterway measured perpendicular from top-of-bank or center of channel for waterways lacking a defined top-of-bank.

“STATE DEVELOPMENT AND REDEVELOPMENT PLAN METROPOLITAN PLANNING AREA (PA1)” means 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” is defined as the geographic application of the State Development and Redevelopment Plan's goals and statewide policies, and the official map of these goals and policies.

“STORMWATER” means 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” means 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 basin), retain water in a permanent pool (a retention basin), or be planted mainly with wetland vegetation (most constructed stormwater wetlands).

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

“STORMWATER MANAGEMENT PLANNING AGENCY” means a public body authorized by legislation to prepare stormwater management plans.

“STORMWATER MANAGEMENT PLANNING AREA” means 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” means water flow on the surface of the ground, or in storm sewers, resulting from precipitation.

“STREAM BUFFER” means a strip of land located immediately adjacent to a stream channel consisting of natural, undisturbed vegetative cover, which serves as a transition area between uplands and riparian lands. A stream buffer may encompass wetlands, may be contained within a floodplain or floodway or may extend beyond a wetland, floodplain or floodway boundary.

“STRUCTURAL STORMWATER TECHNIQUES” means a stormwater management measure that involves control of concentrated stormwater runoff or infiltration such as stormwater basins, piped conveyance systems and manufactured stormwater devices, and can include various types of basins, filters, surfaces, and devices located on individual lots in a residential development or throughout a commercial, industrial, or institutional development site in areas not typically suited for larger, centralized structural facilities.

“THREATENED AND ENDANGERED SPECIES”. Endangered Species are those whose prospects for survival in New Jersey are in immediate danger because of a loss or change in habitat, over-exploitation, predation, competition, disease, disturbance or contamination. Assistance is needed to prevent future extinction in New Jersey. Threatened species are those who may become endangered if conditions surrounding them begin to or continue to deteriorate. Habitats of endangered or threatened species are those identified by the Department's Landscape Project as approved by the Department's Endangered

and Nongame Species Program, or by the Department pursuant to the Highlands Act at N.J.S.A. 13:20-32k and 13:20-34a(4).

“TIDAL FLOOD HAZARD AREA” means 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.

“TIME OF CONCENTRATION” means the time it takes for stormwater runoff to travel from the hydraulically most distant point of the watershed to the point of interest within a watershed.

“TRANSITION AREA” means an area of protected upland adjacent to a freshwater wetland that minimizes adverse impacts on the wetland or serves as an integral component of the wetland's ecosystem. Also called "buffer area."

“URBAN COORDINATING COUNCIL EMPOWERMENT NEIGHBORHOOD” means a neighborhood given priority access to state resources through the New Jersey Redevelopment Authority.

“URBAN ENTERPRISE ZONES” means 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” is defined as previously developed portions of areas:

1. Delineated on the State Plan Policy Map (SPPM) as the Metropolitan Planning Area (PA1), Designated Centers, Cores or Nodes.
2. Designated as CAFRA Centers, Cores or Nodes.
3. Designated as Urban Enterprise Zones; and
4. Designated as Urban Coordinating Council Empowerment Neighborhoods.

“WATER CONTROL STRUCTURE” means 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” means the ocean and its estuaries, all springs, streams, wetlands, and bodies of surface or groundwater, whether natural or artificial, within the boundaries of the State of New Jersey or subject to its jurisdiction.

“WETLANDS or WETLAND” means 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.

§ Z-1500.3 Design and Performance Standards for Stormwater Management Measures

- A. Stormwater management measures for major and minor development shall be designed to provide erosion control, groundwater recharge, stormwater runoff quantity control and quality treatment as follows:
 - a. 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.
 - b. The minimum standards for groundwater recharge, stormwater quality, and stormwater runoff quantity shall be met by incorporating green infrastructure.
- B. The standards in this § Z-1500 only apply to new major and minor development as defined herein 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 developments 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.
- C. Except as may be specifically provided in this § Z-1500, the stormwater management requirements and standards applicable to minor development (non-residential and residential), as defined in this § Z-1500, shall be the requirements and standards as set forth in Section Z-1500.4.1.

§ Z-1500.4 Stormwater Management Requirements for Major Development.

- A. The development shall incorporate a maintenance plan for the stormwater management measures incorporated into the design of a major development in accordance with Section Z-1500.10.
- B. Stormwater management measures shall avoid adverse impacts of concentrated flow on habitat for threatened and endangered species as documented in the Department's Landscape Project or Natural Heritage Database established under N.J.S.A. 13:1B-15.147 through 15.150, particularly *Helonias bullata* (swamp pink) and/or *Clemmys muhlenbergi* (bog turtle). Applicant should consult the City's Environmental Resource Inventory for technical information.
- C. The following linear development projects are exempt from the groundwater recharge, stormwater runoff quality, and stormwater runoff quantity requirements of Section Z-1500.4P, 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 10 feet, provided that the access is made of permeable material.
- D. A waiver from strict compliance from the green infrastructure, groundwater recharge, stormwater runoff quality, and stormwater runoff quantity requirements of Section Z-

1500.4O, P, 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 Section Z-1500.4O, P, Q and R to the maximum extent practicable.
 3. The applicant demonstrates that, in order to meet the requirements of Section Z-1500.4O, 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 subsection 3 above within the upstream drainage area of the receiving stream, that would provide additional opportunities to mitigate the requirements of Section Z-1500.4O, P, Q and R that were not achievable onsite.
- E.** A waiver from strict compliance with the requirements of § Z-1500.4O, P, Q, and R may be issued only in those cases where an applicant has demonstrated the inability or impracticality of strict compliance, other than projects addressed under Subsection F1, with the stormwater management requirements set forth in N.J.A.C. 7:8 or in this local ordinance, whichever is stricter. A waiver from strict compliance for such projects can only be obtained if the applicant agrees to undertake a suitable mitigation measure meeting the policy contained in § Z-1500.14 of this section and Section 6.0 of the City of Lambertville Municipal stormwater management plan. In such cases, the applicant must submit a mitigation plan detailing how the project's failure to strictly comply will be compensated. In cases where a waiver is granted, an applicant should provide mitigation, if possible and/or practical within the same HUC-14 watershed within which the subject project is proposed, or provide for equivalent treatment at an alternate location, or other equivalent water quality benefit, in lieu of implementing the required stormwater control measures on their specific site. See § Z-1500.14, Mitigation Plan, for further details.
- F.** 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 Section Z-1500.4O, 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/>.

- G. Where the BMP tables in the NJ Stormwater Management Rule are different due to updates or amendments with the tables in this ordinance 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 RUN-OFF QUALITY TSS REMOVAL RATE (PERCENT)	STORMWATER RUNOFF QUANTITY	GROUNDWATER RECHARGE	MINIMUM SEPARATION FROM SEASONAL HIGH-WATER TABLE (FEET)
<u>Cistern</u>	<u>0</u>	<u>Yes</u>	<u>No</u>	<u>--</u>
<u>Dry Well(a)</u>	<u>0</u>	<u>No</u>	<u>Yes</u>	<u>2</u>
<u>Grass Swale</u>	<u>50 or less</u>	<u>No</u>	<u>No</u>	<u>2(e)</u> <u>1(f)</u>
<u>Green Roof</u>	<u>0</u>	<u>Yes</u>	<u>No</u>	<u>--</u>
<u>Manufactured Treatment Device(a) (g)</u>	<u>50 or 80</u>	<u>No</u>	<u>No</u>	<u>Dependent upon the device</u>
<u>Pervious Paving System(a)</u>	<u>80</u>	<u>Yes</u>	<u>Yes(b)</u> <u>No(c)</u>	<u>2(b)</u> <u>1(c)</u>
<u>Small-Scale Bioretention Basin(a)</u>	<u>80 or 90</u>	<u>Yes</u>	<u>Yes(b)</u> <u>No(c)</u>	<u>2(b)</u> <u>1(c)</u>
<u>Small-Scale Infiltration Basin(a)</u>	<u>80</u>	<u>Yes</u>	<u>Yes</u>	<u>2</u>
<u>Small-Scale Sand Filter</u>	<u>80</u>	<u>Yes</u>	<u>Yes</u>	<u>2</u>
<u>Vegetative Filter Strip</u>	<u>60-80</u>	<u>No</u>	<u>No</u>	<u>--</u>

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

TABLE 2 GREEN INFRASTRUCTURE BMPs FOR STORMWATER RUNOFF QUANTITY (OR FOR GROUNDWATER RECHARGE AND/OR STORMWATER RUNOFF QUALITY WITH A WAIVER OR VARIANCE FROM N.J.A.C. 7:8-5.3)				
BEST MANAGEMENT PRACTICE	STORMWATER RUNOFF QUALITY TSS REMOVAL RATE (PERCENT)	STORMWATER RUNOFF QUANTITY	GROUNDWATER RECHARGE	MINIMUM SEPARATION FROM SEASONAL HIGH-WATER TABLE (FEET)
<u>Bioretention System</u>	<u>80 or 90</u>	<u>Yes</u>	<u>Yes(b)</u> <u>No(c)</u>	<u>2(b)</u> <u>1(c)</u>
<u>Infiltration Basin</u>	<u>80</u>	<u>Yes</u>	<u>Yes</u>	<u>2</u>
<u>Sand Filter(b)</u>	<u>80</u>	<u>Yes</u>	<u>Yes</u>	<u>2</u>
<u>Standard Constructed Wetland</u>	<u>90</u>	<u>Yes</u>	<u>No</u>	<u>N/A</u>
<u>Wet Pond(d)</u>	<u>50-90</u>	<u>Yes</u>	<u>No</u>	<u>N/A</u>

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

TABLE 3 BMPs FOR GROUNDWATER RECHARGE, STORMWATER RUNOFF QUALITY, AND/OR STORMWATER RUNOFF QUANTITY ONLY WITH A WAIVER OR VARIANCE FROM N.J.A.C. 7:8-5.3				
BEST MANAGEMENT PRACTICE	STORMWATER RUNOFF QUALITY TSS REMOVAL RATE (PERCENT)	STORMWATER RUNOFF QUANTITY	GROUNDWATER RECHARGE	MINIMUM SEPARATION FROM SEASONAL HIGH-WATER TABLE (FEET)
<u>Blue Roof</u>	<u>0</u>	<u>Yes</u>	<u>No</u>	<u>N/A</u>
<u>Extended Detention Basin</u>	<u>40-60</u>	<u>Yes</u>	<u>No</u>	<u>1</u>
<u>Manufactured Treatment Device(h)</u>	<u>50 or 80</u>	<u>No</u>	<u>No</u>	<u>Dependent upon the device</u>
<u>Sand Filter(c)</u>	<u>80</u>	<u>Yes</u>	<u>No</u>	<u>1</u>
<u>Subsurface Gravel Wetland</u>	<u>90</u>	<u>No</u>	<u>No</u>	<u>1</u>
<u>Wet Pond</u>	<u>50-90</u>	<u>Yes</u>	<u>No</u>	<u>N/A</u>

(Notes corresponding to annotations (b) through (d) are found below)

Notes to Tables 1, 2, and 3:

- a. subject to the applicable contributory drainage area limitation specified at Section Z-1500.4O2.
 - 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 percent of the shoreline and to include a stormwater runoff retention component designed to capture stormwater runoff for beneficial reuse, such as irrigation.
 - e. designed with a slope of less than two percent.
 - f. designed with a slope of equal to or greater than two percent.
 - g. manufactured treatment devices that meet the definition of green infrastructure at Section Z-1500.2.
 - h. manufactured treatment devices that do not meet the definition of green infrastructure at Section Z-1500.2.
- H.** 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 Section Z-1500.4B. Alternative stormwater management measures may be used to satisfy the requirements at Section Z-1500.4O only if the measures meet the definition of green infrastructure at Section Z-1500.2. Alternative stormwater management measures that function in a similar manner to a BMP listed at Section Z-1500.4O2 are subject to the contributory drainage area limitation specified at Section Z-1500.4O2 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 Section Z-1500.4O2 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 Section Z-1500.4D is granted from Section Z-1500.4O.
- I.** Whenever the stormwater management design includes one or more BMPs that will infiltrate stormwater into subsoil, the design engineer shall assess and certify 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.

J. 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 one-third the width of the diameter of the orifice or one-third 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 Section Z-1500.8C.
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, 7.4, and 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 Section Z-1500.8; and
5. The size of the orifice at the intake to the outlet from the stormwater management BMP shall be a minimum of two and one-half inches in diameter.

K. Manufactured treatment devices may be used to meet the requirements of this subchapter, provided the pollutant removal rates are verified by the New Jersey Corporation for Advanced Technology and certified by the Department. Manufactured treatment devices that do not meet the definition of green infrastructure at Section Z-1500.2 may be used only under the circumstances described at Section Z-1500.4O4.

L. Any application for a new agricultural development that meets the definition of major development at Section Z-1500.2 shall be submitted to the Soil Conservation District for review and approval in accordance with the requirements at Sections Z-1500.4O, 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.

M. If there is more than one drainage area, the groundwater recharge, stormwater runoff quality, and stormwater runoff quantity standards at Section Z-1500.4P, Q and R shall be met in each drainage area, unless the runoff from the drainage areas converge onsite and

no adverse environmental impact would occur as a result of compliance with any one or more of the individual standards being determined utilizing a weighted average of the results achieved for that individual standard across the affected drainage areas.

- N.** 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 Hunterdon 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 Section Z-1500.4O, 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 Section Z-1500.10B5. 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.
- O.** 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 Section Z-1500.4 of this ordinance 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 Hunterdon 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.
- P. 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 Section Z-1500.4P and Q, the design engineer shall utilize green infrastructure BMPs identified in Table 1 at Section Z-1500.4F and/or an alternative stormwater management measure approved in accordance with Section Z-1500.4G. The following green infrastructure BMPs are subject to the following maximum contributory drainage area limitations:

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

3. To satisfy the stormwater runoff quantity standards at Section Z-1500.4R, the design engineer shall utilize BMPs from Table 1 or from Table 2 and/or an alternative stormwater management measure approved in accordance with Section Z-1500.4G.
4. If a variance in accordance with N.J.A.C. 7:8-4.6 or a waiver from strict compliance in accordance with Section Z-1500.4D 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 Z-1500.4G. may be used to meet the groundwater recharge, stormwater runoff quality, and stormwater runoff quantity standards at Z-1500.4P, 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 Section Z-1500.4P, Q and R, unless the project is granted a waiver from strict compliance in accordance with Section Z-1500.4D.

Q. Groundwater Recharge Standards

1. This subsection contains the minimum design and performance standards for groundwater recharge as follows:
2. The design engineer shall, using the assumptions and factors for stormwater runoff and groundwater recharge calculations at Section Z-1500.5, either:
 - a. Demonstrate through hydrologic and hydraulic analysis that the site and its stormwater management measures maintain 100 percent of the average annual pre-construction groundwater recharge volume for the site; or
 - b. Demonstrate through hydrologic and hydraulic analysis that the increase of stormwater runoff volume from pre-construction to post-construction for the

projected 2-year storm, as defined and determined pursuant to Section Z-1500.5D of this ordinance, is infiltrated.

3. This groundwater recharge requirement does not apply to projects within the “urban redevelopment area,” or to projects subject to subsection 4 below.
4. 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.

R. 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 4,000 square feet 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 2 above, unless the major development is itself subject to a NJPDES permit with a numeric effluent limitation for TSS or the NJPDES permit to which the major development is subject exempts the development from a numeric effluent limitation for TSS.
4. The water quality design storm is 1.25 inches of rainfall in two hours. Water quality calculations shall take into account the distribution of rain from the water quality design storm, as reflected in Table 4, below. The calculation of the volume of runoff may take into account the implementation of stormwater management measures.

Table 4 - Water Quality Design Storm Distribution

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

5. If more than one BMP in series is necessary to achieve the required 80 percent 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,
and

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 Section Z-1500.4P, 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)3.i, runoff from the water quality design storm that is discharged within a 300-foot riparian zone shall be treated in accordance with this subsection to reduce the post-construction load of total suspended solids by 95 percent of the anticipated load from the developed site, expressed as an annual average.
10. The 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.
11. Preserve and maintain a City of Lambertville stream corridor on each side of the waterway, of 75 feet, measured perpendicular to the waterway from the top of bank outwards or from the center line of the waterway where the bank is not defined, consisting of existing structures, vegetation or vegetation allowed to follow natural succession is provided.

S. 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 Section Z-1500.5, 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 2-, 10-, and 100-year storm events, as defined and determined in Section Z-1500.5C and D, respectively, of this ordinance, do not exceed, at any point in time, the pre-construction runoff hydrographs for the same storm events.
 - b. Demonstrate through hydrologic and hydraulic analysis that there is no increase, as compared to the pre-construction condition, in the peak runoff rates of stormwater leaving the site for the current and projected 2-, 10-, and 100-year storm events, as defined and determined pursuant to Section Z-1500.5C 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 2-, 10-, and 100-year storm events, as defined and determined in Section Z-1500.5C and D, respectively, of this ordinance, are 50, 75 and 80 percent, respectively, of the pre-construction peak runoff rates. The percentages apply only to the post-construction stormwater runoff that is attributable to the portion of the site on which the proposed development or project is to be constructed; or
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.

§ Z-1500.4.1 Stormwater Management Requirements for Minor Development.

- A. This section contains the minimum design and performance standards for stormwater management for Minor Development as follows:
- B. The design engineer shall, using the assumptions and factors for stormwater runoff, onsite retention and groundwater recharge calculations at Section Z-1500.5, meet the following criteria:
 1. Demonstrate through hydrologic and hydraulic analysis that onsite retention volume is infiltrated or retained onsite using green infrastructure practices listed in Section Z-1500.4P or other methods as identified by references included in Section Z-1500.6 of this article. Onsite retention volume for minor development shall equal the rainfall on all impervious surfaces within the limit of disturbance during the water quality design storm (1.25 inches of rainfall in two hours).

2. Where the onsite retention volume cannot be infiltrated or retained onsite, the onsite retention volume shall be slow released at a rate of not more than 0.02 cfs per acre of drainage area to mimic receiving water groundwater discharge flow. The retention volume shall be released within 72 hours.
- C. Soil testing shall be performed to confirm the permeability of the soils and the depth of the water table and seasonal high-water table.
 - D. Applicant shall submit a signed and notarized affidavit that states that the stormwater management feature shall be maintained by the Property Owner and/or his or her agent for the life of the feature, and further, that any future Property Owner shall be notified of the requirement to maintain the stormwater management feature in perpetuity. The affidavit shall be permanently retained in the City's block and lot file for the property. Failure to maintain the feature in accordance with the stormwater management requirements may result in the City issuing penalties to the Property Owner per City code or the City taking action to maintain the system and placing a lien on the property for the cost of such maintenance, or both.
 - E. The development shall incorporate a maintenance plan for the stormwater management measures incorporated into the design of a minor development in accordance with Section Z-1500.10.
 - F. All such development shall be subject to review by the City Engineer to determine that all stormwater runoff created by the development is adequately controlled, does not cause impacts on adjoining property owners, and does not exacerbate flooding upstream or downstream of the site.
 - G. Inspection of the stormwater management feature shall be conducted by the City Engineer to verify that the stormwater management feature is in compliance with the approved design.

§ Z-1500.5 Calculation of Stormwater Runoff, Onsite Retention, and Groundwater Recharge.

- A. Stormwater Runoff shall be calculated in accordance with the following:
 1. The design engineer shall calculate stormwater runoff using the following methods:

The USDA Natural Resources Conservation Service (NRCS) methodology, including the NRCS Runoff Equation, NRCS 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 methodology is available from the Natural Resources Conservation Services 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 pre-construction condition of a site or portion thereof is wooded

land use with good hydrologic condition. The term “curve number” applies to the NRCS methodology above at Section Z-1500.5A1. 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 pre-construction stormwater runoff, the design engineer shall account for all significant land features and structures, such as ponds, wetlands, depressions, hedgerows, or culverts, that may reduce pre-construction 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 may be calculated in accordance with the following:

The New Jersey Geological Survey Report GSR-32: A Method for Evaluating Groundwater-Recharge Areas in New Jersey, incorporated herein by reference as amended and supplemented. Information regarding the methodology is available from the New Jersey Stormwater Best Management Practices Manual; at the New Jersey Geological Survey website at:

<https://www.nj.gov/dep/njgs/pricelst/gsreport/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.

Field testing is required to derive values for permeability (hydraulic conductivity). Field methodologies that are applied should be as per N.J.A.C. 7:9A-6.4 through 7:9A-6.7.

- 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 subsections 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; and

2. The applicant shall utilize the Current Precipitation Adjustment Factors of 1.02 (2-year Design Storm), 1.05 (10-year Design Storm) and 1.13 (100-year Design Storm), which are the applicable multipliers for the drainage area(s) of the site, in accordance with the county where the drainage area(s) of the site is located.

D. Future Precipitation Change Factors of 1.19 (2-year Design Storm), 1.23 (10-year Design Storm) and 1.42 (100-year Design Storm) sets forth the change factors to be used in determining the projected 2-, 10-, and 100-year storm events for use in this chapter. The precipitation depth of the projected 2-, 10-, and 100-year storm events of a site shall be determined by multiplying the precipitation depth of the 2-, 10-, and 100-year storm events determined from the National Weather Service's Atlas 14 Point Precipitation Frequency Estimates pursuant to subsection (c)1 above, by the change factor, in accordance with the county where the drainage area(s) of the site is located.

E. Onsite Retention Volume.

1. Onsite retention volume for major development shall be calculated as the prescribed depth of precipitation over all impervious surfaces on the site, both existing and proposed.
2. Onsite retention volume for minor development shall be calculated as the prescribed depth of precipitation over all proposed impervious surfaces on the site within the limit of disturbance.
3. Onsite retention volume (ft³) = Precipitation Depth (in) x (1 ft / 12 in) x Impervious Area (ft²).

§ Z-1500.6 Sources for Technical Guidance.

A. Technical guidance for stormwater management measures can be found in the documents listed below, which are available to download from the Department's website at:

http://www.nj.gov/dep/stormwater/bmp_manual2.htm.

1. Guidelines for stormwater management measures are contained in the New Jersey Stormwater 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://www.njstormwater.org/maintenance_guidance.htm.

B. Submissions required for review by the Department should be mailed to: The Division of Water Quality, New Jersey Department of Environmental Protection, Mail Code 501-02B, PO Box 420, Trenton, New Jersey 08625-0420.

§ Z-1500.7 Solids and Floatable Materials Control Standards.

A. Site design features identified under Section Z-1500.4F above, or alternative designs in accordance with Section Z-1500.4G 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 Section Z-1500.7A2 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 seven square inches or is no greater than 0.5 inch across the smallest dimension.

Examples of grates subject to this standard include grates in grate inlets, the grate portion (non-curb-opening portion) of combination inlets, grates on storm sewer manholes, ditch grates, trench grates, and grates of spacer bars in slotted drains. Examples of ground surfaces include surfaces of roads (including bridges), driveways, parking areas, bikeways, plazas, sidewalks, lawns, fields, open channels, and stormwater system floors used to collect stormwater from the surface into a storm drain or surface water body.

- c. For curb-opening inlets, including curb-opening inlets in combination inlets, the clear space in that curb opening, or each individual clear space if the curb opening has two or more clear spaces, shall have an area of no more than seven square inches, or be no greater than two inches across the smallest dimension.
2. The standard in Subsection A1 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 nine (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:
 - i. A rectangular space $4 \frac{5}{8}$ (4.625) inches long and $1 \frac{1}{2}$ (1.5) inches wide (this option does not apply for outfall netting facilities); or
 - ii. A bar screen having a bar spacing of 0.5 inch.

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

- d. Where flows are conveyed through a trash rack that has parallel bars with one inch (1 inch) spacing between the bars, to the elevation of the Water Quality Design Storm as specified in N.J.A.C. 7:8; or
- 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.

§ Z-1500.8 Safety Standards for Stormwater Management Basins.

- A. This section sets forth requirements to protect public safety through the proper design and operation of stormwater management BMPs. This section applies to any new stormwater management BMP.
- B. The provisions of this section are not intended to preempt more stringent municipal or county safety requirements for new or existing stormwater management BMPs. Municipal and county stormwater management plans and ordinances may, pursuant to their authority, require existing stormwater management BMPs to be retrofitted to meet one or more of the safety standards in Section Z-1500.8C1, 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:

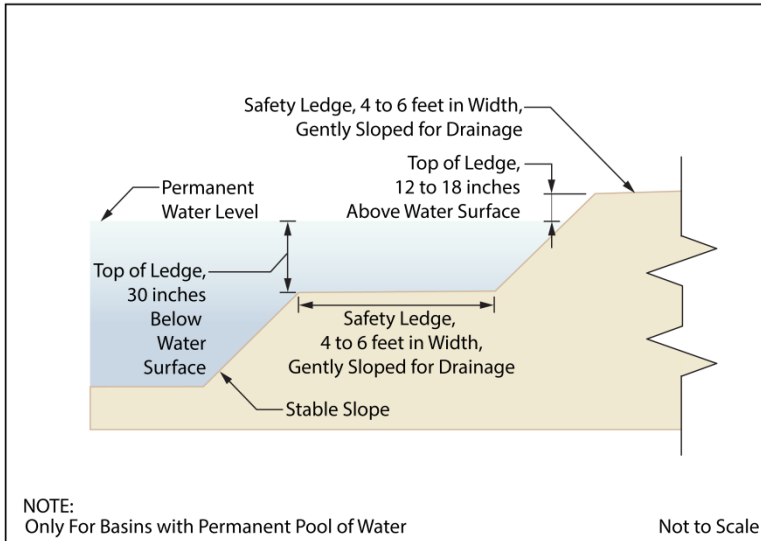
- a. The overflow grate shall be secured to the outlet structure but removable for emergencies and maintenance.
 - b. The overflow grate spacing shall be no greater than two inches across the smallest dimension.
 - c. The overflow grate shall be constructed and installed to be rigid, durable, and corrosion 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 ingress and egress from stormwater management BMPs. With the prior approval of the municipality pursuant to Z-1500.8C, a free-standing 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 two and one-half feet. Safety ledges shall be comprised of two steps. Each step shall be four to six feet in width. One step shall be located approximately two and one-half feet below the permanent water surface, and the second step shall be located one to one and one-half feet above the permanent water surface. See Z-1500.8E 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 Standards.

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 (municipality, county or Department) municipality that the variance or exemption will not constitute a threat to public safety.

E. Safety Ledge Illustration

Elevation View –Basin Safety Ledge Configuration



§ Z-1500.9 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 ordinance, the applicant shall submit all the required components of the Checklist for the Site Development Stormwater Plan at Section Z-1500.9C below as part of the submission of the applicant's application for subdivision or site plan approval.
2. The applicant shall demonstrate that the project meets the standards set forth in this ordinance.
3. The applicant shall submit to the approving municipal authority the required number of copies of the materials listed in the checklist for site development stormwater plans in accordance with Section Z-1500.9C of this ordinance.

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 (the review agency). 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 ordinance.

C. Submission of Site Development Stormwater Plan for Major Development.

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 1"=200' or greater, showing 2-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 flood plains 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 manmade 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 Subsections 3 through 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:

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.

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

Comprehensive hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in Section Z-1500.4 of this ordinance.

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

onsite 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.

The municipality shall be notified of site investigation activities and given the opportunity to have a witness, either prior to approval or as a condition of approval, as appropriate for the specific type of measure. Subsequent to approval of the major development, post-construction bulk soil density and infiltration testing shall be required for all infiltration measures that were used as justification for meeting the recharge standard, to ensure that they were properly constructed.

7. Maintenance and Repair Plan

The design and planning of the stormwater management facility shall meet the maintenance requirements of Section Z-1500.10.

8. Waiver from Submission Requirements

The municipal official or board reviewing an application under this ordinance may, in consultation with the municipality's review engineer, waive submission of any of the requirements in Section Z-1500.9C1 through Z-1500.9C6 of this ordinance when it can be demonstrated that the information requested is impossible to obtain or it would create a hardship on the applicant to obtain and its absence will not materially affect the review process.

D. Submission of Site Development Stormwater Plan for Minor Development.

1. Applicants seeking municipal approval of minor developments shall submit the information described in Sections Z-1500.9C.3, 4, 5, and 7, as well as any fees and escrows required per City code to cover the cost for the review and retention of the submitted information and all required inspections. Applicants shall also submit information and calculations demonstrating compliance with the retention standard in Section Z-1500.4.1.
2. The conditions for a waiver from submission requirements are defined in the Municipal Land Use Law, N.J.S.A. 40:55D-10.3.

§ Z-1500.10 Maintenance and Repair.

A. Applicability.

Projects subject to review pursuant to Section Z-1500.1C of this section shall comply with the requirements of Section Z-1500.10B. and C.

B. General Maintenance.

The design engineer shall prepare a maintenance plan for the stormwater management measures incorporated into the design of a major development. Maintenance and inspection guidance can be found on the Department's website at:

<https://dep.nj.gov/stormwater/maintenance-guidance/>.

1. The maintenance plan shall contain specific preventive maintenance tasks and schedules; cost estimates, including estimated cost of sediment, debris, or trash removal,

the name, address, and telephone number of the person or persons responsible for preventive and corrective maintenance (including replacement). The plan shall contain information on BMP location, design, ownership, maintenance tasks and frequencies, and other details as specified in Chapter 8 of the NJ BMP Manual, as well as the tasks specific to the type of BMP, as described in the applicable chapter containing design specifics.

2. 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.
3. 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.
4. If the party responsible for maintenance identified under Section Z-1500.10B3 above is not a public agency, the maintenance plan and any future revisions based on Section Z-1500.10B7 below shall be recorded upon the deed of record for each property on which the maintenance described in the maintenance plan must be undertaken.
5. Upon completion of construction of the stormwater management measures incorporated into the design of a major development, a two-year maintenance guarantee shall be posted in accordance with N.J.S.A. 40:55D-53.
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 non-vegetated linings.
7. The party responsible for maintenance identified under Section Z-1500.10B3 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, submit annually to the municipality 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 Section Z-1500.10B6 and 7 above. The report should be submitted to the

Lambertville City Clerk by March 15 of every year that certifies the completion of maintenance responsibilities for the prior year.

8. The requirements of Section Z-1500.10B3 and 4 do not apply to stormwater management facilities that are dedicated to and accepted by the municipality or another governmental agency, subject to all applicable municipal stormwater general permit conditions, as issued by the Department.
 9. In the event that the stormwater management facility becomes a danger to public safety or public health or if is in need of maintenance or repair, the municipality shall notify the responsible person in writing. Upon receipt of that notice, the responsible person shall have fourteen (14) days to effect maintenance and repair of the facility in a manner that is approved by the Municipal Engineer or his designee. The municipality, in its discretion, may extend the time allowed for effecting maintenance and repair for good cause. If the responsible person fails or refuses to perform such maintenance and repair, the City or County may immediately proceed to do so and shall bill the cost thereof to the responsible person. Nonpayment of such a bill may result in a lien on the property.
- C. Nothing in this § Z-1500.10 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.
- D. The maintenance plan shall specifically provide a specific municipal right of access for inspection of measures, and for maintenance if required under Subsection B9, and billed to Owner.
- E. The person(s) identified in Subsection B2 above for the long-term maintenance of the facility shall cause to be prepared and submit a report to the Lambertville City Clerk by March 15 of every year that certifies the completion of maintenance responsibilities for the prior year. The responsible party shall allow a representative of the City to inspect the stormwater management facilities.

§ Z-1500.11 Penalties.

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 a fine or imprisonment in accordance with Section 900 of the Lambertville Subdivision Ordinance, Section 1000 of the City Zoning Ordinance, and all applicable sections of the municipal code of the City of Lambertville. In accordance with the aforementioned codes and ordinances, in the event the City determines to abate any violation after the owner thereof has been notified to abate the violation and fails or refuses to do so, the City, upon completing the abatement, shall be entitled to a lien upon the property on which the violation took place, in the amount of the funds expended by the City in conducting the abatement work, which shall run with the property until satisfied in full, with interest, as provided in State law for abatement of nuisances.

§ Z-1500.12 Effective Date.

This § Z-1500 shall take effect immediately upon the approval by the County Review Agency, or 60 days from the receipt of Ordinance No. 06-2024 by the Hunterdon County Planning Board if the Hunterdon County Planning Board, as county review agency, should fail to act.

§ Z-1500.13 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.

§ Z-1500.14 Mitigation Plan.

- A. The Board having jurisdiction over an application requiring a stormwater management plan shall have the jurisdiction to grant a waiver from strict compliance with the performance requirements of this § Z-1500 or the stormwater management plan. The waiver may be granted where an applicant has demonstrated the inability or impracticality of strict compliance with § Z-1500, and/or the stormwater management plan upon the following conditions. The applicant must demonstrate one of the following: (1) an inability to apply any of the best management practices and methodologies as defined and approved herein and in the stormwater management plan, due to an extraordinary and exceptional situation uniquely affecting the subject property or the structures thereon, resulting in a peculiar and exceptional practical difficulty or undue hardship; or (2) that the purposes of this § Z-1500 and stormwater management plan can be advanced by a deviation from the best management practices and methodologies as defined and approved herein and in the stormwater management plan, where the benefits of such deviation substantially outweigh any detriment.
- B. In requesting a waiver as to any application, the applicant may submit as reasons for the waiver the site conditions of the proposed project, including soils types; thin soil cover; low permeability soils, and/or shallow depths to groundwater (high groundwater levels), unique conditions which would create an unsafe design, or conditions which would provide a detrimental impact to public health, welfare or safety.
- C. The waiver cannot be granted due to conditions created by the applicant. If the applicant can comply with the requirements of § Z-1500 and the stormwater management plan through reduction of the size of the project, the hardship is self-imposed and the Board lacks jurisdiction to grant any waiver under this section.
- D. The applicant must propose a suitable mitigation method through submission of a mitigation plan which will conform as closely as possible to the design and performance standards of this § Z-1500, through structural or nonstructural stormwater management measures, governing stormwater quality, quantity, and groundwater recharge.
- E. The mitigation plan shall include sufficient data and analyses, including an alternatives analysis, which demonstrate how on-site compliance is to be maximized.
- F. The mitigation plan must provide stormwater management results compatible with the same HUC-14 watershed within which the subject project is proposed. Alternatively, the mitigation plan may (1) fund an analysis to determine a more appropriate mitigation method to be presented to the Board for approval; or (2) provide for equivalent treatment at an alternate location, or (3) provide some other equivalent water quality benefit, if an on-site method is not proposed, provided the results required herein are achieved.
- G. The applicant shall be responsible for locating an appropriate site for mitigation of the performance section for which the waiver is sought.

- H. The funding option shall be allowed only in situations where there will be no immediate impact upon a sensitive receptor. Contribution to a municipal or off-site mitigation plan shall be allowed for any application for one individual single-family residence. When approved by the Board, receipt of the financial contribution shall be deemed to satisfy the mitigation requirement for that application.
- I. The Board having jurisdiction over the individual application may determine that, due to the size of the project necessary to mitigate for the waiver, it is not practical to require a mitigation project.
- J. In all instances the Board having jurisdiction over the application shall have the power to impose additional conditions as may be appropriate under the circumstances of the application. The Board shall make specific findings of fact and conclusions consistent with this section (1) showing the inability or impracticality of strict compliance with § Z-1500 and the stormwater management plan and (2) justifying the approval of the applicant's mitigation plan, in order to satisfy the reporting requirements of the municipality's NJPDES permit and other applicable state law requiring the submission of reports to any state or county review agency. The Board shall also have the power to require mitigation as to applications which have received waivers from the New Jersey Department of Environmental Protection.
- K. For purposes of this § Z-1500, "mitigation" shall incorporate the definition set forth in § Z-1500.2 and shall include situations where the applicant has demonstrated the inability or impracticality of strict compliance with the stormwater management requirements set forth in N.J.A.C. 7:8 in addition to the requirements set forth in this § Z-1500.

§ Z-1500.15 Private Storm Drain Inlet Retrofitting.

A. Purpose.

- 1. An ordinance requiring the retrofitting of existing storm drain inlets which are in direct contact with repaving, repairing, reconstruction, or resurfacing or alterations of facilities on private property, to prevent the discharge of solids and floatables (such as plastic bottles, cans, food wrappers and other litter) to the municipal separate storm sewer system(s) operated by the City of Lambertville 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 ordinance, the following terms, phrases, words, and their derivations shall have the meanings stated herein unless their use in the text of this Chapter clearly demonstrates a different meaning. When not inconsistent with the context, words used in the present tense include the future, words used in the plural number include the singular number, and words used in the singular number include the plural number. The word "shall" is always mandatory and not merely directory.

"MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)" means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) that is owned or operated by the City of Lambertville or other public body, and is designed and used for collecting and conveying stormwater. MS4s do not include combined sewer systems, which are sewer systems that are

designed to carry sanitary sewage at all times and to collect and transport stormwater from streets and other sources.

“PERSON” means any individual, corporation, company, partnership, firm, association, or political subdivision of this State subject to municipal jurisdiction.

“STORM DRAIN INLET” means an opening in a storm drain used to collect stormwater runoff and includes, but is not limited to, a grate inlet, curb-opening inlet, slotted inlet, and combination inlet.

“WATERS OF THE STATE” means the ocean and its estuaries, all springs, streams and bodies of surface or ground water, whether natural or artificial, within the boundaries of the State of New Jersey or subject to its jurisdiction.

C. Prohibited Conduct.

1. No person in control of private property shall authorize the repaving, repairing (excluding the repair of individual potholes), resurfacing (including top coating or chip sealing with asphalt emulsion or a thin base of hot bitumen), reconstructing or altering any surface that is in direct contact with an existing storm drain inlet on that property without first obtaining a Zoning Permit to ensure that the existing inlet meets one of the following conditions:
 - a. Already meets the design standard below to control passage of solid and floatable materials; or
 - b. Is retrofitted or replaced to meet the standard in Section IV below prior to the completion of the project.

D. Design Standard.

Storm drain inlets identified in Section C above shall comply with the following standard to control passage of solid and floatable materials through storm drain inlets. For purposes of this paragraph, “solid and floatable materials” means sediment, debris, trash, and other floating, suspended, or settleable solids. For exemptions to this standard see Section E.3 below.

1. Design engineers shall use either of the following grates whenever they use a grate in pavement or another ground surface to collect stormwater from that surface into a storm drain or surface water body under that grate:
 - a. The New Jersey Department of Transportation (NJDOT) bicycle safe grate, which is described in Chapter 2.4 of the NJDOT Bicycle Compatible Roadways and Bikeways Planning and Design Guidelines (April 1996); or
 - b. A different grate, if each individual clear space in that grate has an area of no more than seven (7.0) square inches, or is no greater than 0.5 inches across the smallest dimension.

Examples of grates subject to this standard include grates in grate inlets, the grate portion (non-curb-opening portion) of combination inlets, grates on storm sewer manholes, ditch grates, trench grates, and grates of spacer bars in slotted drains. Examples of ground surfaces include surfaces of roads (including bridges), driveways, parking areas, bikeways, plazas, sidewalks, lawns, fields,

open channels, and stormwater basin floors.

2. Whenever design engineers use a curb-opening inlet, the clear space in that curb opening (or each individual clear space, if the curb opening has two or more clear spaces) shall have an area of no more than seven (7.0) square inches, or be no greater than two (2.0) inches across the smallest dimension.
3. This standard does not apply:
 - a. Where the municipal engineer agrees that this standard would cause inadequate hydraulic performance that could not practicably be overcome by using additional or larger storm drain inlets that meet these standards;
 - b. Where flows are conveyed through any device (e.g., end of pipe netting facility, manufactured treatment device, or a catch basin hood) that is designed, at a minimum, to prevent delivery of all solid and floatable materials that could not pass through one of the following:
 - i. A rectangular space four and five-eighths inches long and one and one-half inches wide (this option does not apply for outfall netting facilities); or
 - ii. A bar screen having a bar spacing of 0.5 inches.
 - c. Where flows are conveyed through a trash rack that has parallel bars with one-inch (1") spacing between the bars; or
 - d. Where the New Jersey Department of Environmental Protection determines, pursuant to the New Jersey Register of Historic Places Rules at N.J.A.C. 7:4-7.2(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.

E. Enforcement.

1. This ordinance shall be enforced by the Police Department and/or other Municipal Officials of the City of Lambertville.

F. Penalties.

1. Any person(s) who is found to be in violation of the provisions of this ordinance shall be subject to the following for each storm drain inlet that is not retrofitted to meet the design standard:
 - a. The assigned Municipal Official of the City of Lambertville shall issue a memo to the person in violation informing them of the requirement to obtain Municipal approval. The person shall have a time limit of 30 days, from the issuance of the memo, to comply.
 - b. Failure to comply within the given time limit will result in the following:
 - i. First offense penalty not to exceed \$250.00,
 - ii. Second offense penalty not to exceed \$2,000.00,
 - iii. Third offense shall include a court summons be issued to the person for non-compliance.

Introduction and First Reading: August 15, 2024

Public Hearing and Second Reading: September 19, 2024



GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

August 13, 2024

File No. 23-07066

Andrew J. Nowick, Mayor
City of Lambertville
18 York Street
Lambertville, NJ 08530-2093

Reference: Ordinance No. 06-2024 Memorandum
Article XV Stormwater Management Ordinance
City of Lambertville, Hunterdon County, New Jersey

Dear Mayor:

Pursuant to your request, Gilmore & Associates, Inc. (G&A) has reviewed proposed Ordinance No. 06-2024 and offers the following information for consideration by the City Council.

Ordinance No. 06-2024 is an Ordinance of the City of Lambertville to amend the Lambertville Zoning Ordinance, Article XV Stormwater Management (§Z-1500). §Z-1500 was added to the Zoning Ordinance on April 17, 2006 by Ordinance No. 09-2006 and was last amended by the City on July 20, 2023 by Ordinance No. 14-2023. As stated in proposed §Z-1500.1.B of the Zoning Ordinance, “the purpose of this §Z-1500 is to establish minimum stormwater management requirements and controls for “major development” and “minor development”.”

This Ordinance was prepared as part of the municipal separate storm sewer system (MS4), Tier A permit requirements. The state issued a model ordinance called “Stormwater Control Ordinance” for municipal consideration. Our office compared the “Stormwater Control Ordinance” to the current §Z-1500. The City then formed a Stormwater Committee to review and provide feedback on the amendments proposed by our office. Ordinance No. 06-2024 contains the amendments that are required for §Z-1500 to contain all the necessary language from the model ordinance, as well as additional amendments to address the comments of the Stormwater Committee and the recent stormwater management concerns by the Residents and Governing Bodies. If adopted, the proposed Ordinance will amend each of the individual sections of §Z-1500, as required.

To assist City Council with their review of the proposed ordinance, the following is a general breakdown of the amendments to the model ordinance proposed within Ordinance No. 06-2024:

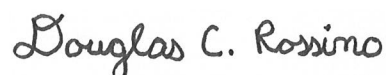
- All references to “redevelopment projects” within the current §Z-1500 was added into the proposed ordinance to ensure that the stormwater runoff from redevelopment projects is regulated.
- References to “Minor Development” were added throughout the ordinance, for example §Z-1500.3.C.
- The definitions of the following terms were added to the ordinance: Category One (C1) Waters, Groundwater, Low-Impact Development (LID), Maintenance Plan, Mitigation, Nonstructural Stormwater Management Techniques, Permeable, Retention, Review Agency (Municipal), Solid and Floatable Materials, Special Resource Waters, Stream Buffer, Structural Stormwater Techniques, Threatened and Endangered Species, Time of Concentration, and Transition Area.
- In the definition for “Major Development”, the disturbance requirement has been lowered from one-half to one-quarter of an acre, while the creation of impervious surface requirements have been lowered from one-quarter to 4,000 square feet. By lowering these requirements, smaller projects will be required to follow the stormwater regulations for major developments.

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- A definition for “Minor Development” was added to the ordinance with a disturbance of land requirement ranging from 1,000 square feet to ¼ acre (10,890 square feet) and creation of impervious surface requirements ranging from 400 to 4,000 square feet. By adding a definition for minor development, small projects will also be required to follow stormwater regulations.
- All references to “mitigation” within the current §Z-1500 was added into the proposed ordinance (i.e. definition, §Z-1500.4.E, §Z-1500.14.A-K, etc.) to ensure that the City can still require suitable mitigation measures for projects that require a waiver from strict compliance with the requirements of the ordinance due to existing site features.
- §Z-1500.4.R.11 was added to the ordinance to “preserve and maintain a City of Lambertville stream corridor on each side of the waterway”.
- §Z-1500.4.1 was added to the ordinance to specify the “Stormwater Management Requirements for Minor Development.”
- §Z-1500.5.B was amended to include field testing “to derive values for permeability”.
- §Z-1500.5.C&D were amended to increase the Precipitation Adjustment Factors to account for future increased rainfall amounts.
- §Z-1500.5.E was added to the ordinance to specify the requirements for “Onsite Retention Volume.”
- §Z-1500.9.C.6 was amended to include post-construction infiltration testing for all infiltration measures “to ensure that they were properly constructed.”
- §Z-1500.9.D was added to the ordinance to specify the requirements for “Submission of Site Development Stormwater Plan for Minor Development.”
- §Z-1500.10.B.7.c was amended to include the submission of an annual report to the City “that certifies the completion of maintenance responsibilities for the prior year.”
- §Z-1500.15 (Private Storm Drain Inlet Retrofitting) was added to the ordinance, since it was adopted by the City by Ordinance No. 14-2023.

If you have any questions regarding the above, please contact this office.

Sincerely,



Douglas C. Rossino, P.E.
Gilmore & Associates, Inc.
City Engineer

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