

Borough of Lincoln Park
Stormwater Control Ordinance

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EXHIBIT A

ARTICLE X.A.

STORMWATER MANAGEMENT

LINCOLN PARK STORMWATER CONTROL ORDINANCE

PREFACE

The conversion by people of pervious soils to non-pervious man-made surfaces produces increased runoff volumes and flows. This generally leads to serious physical problems; which are difficult and expensive to resolve. The impacts of these physical problems are manifested in soil erosion, sedimentation, flooding, washouts, backups or water conveyance systems, infiltration and inflow of storm water into sanitary sewers, loss of human life and damage to real personal property. The Borough of Lincoln Park lies within the Passaic River Basin, the state's most hazardous flood area, and the rivers and streams within the Borough are subject to frequent recurrent flooding which endangers life and damages public and private property. Encroachments in the flood plain increase the potential for flooding, and all development within the flood plain contributes to this condition by decreasing flood storage volume. To allow a continuation of development in the Borough without Stormwater Management that establishes regulations, outlines area wide policy, and defines criteria and guidelines for development of stormwater programs and facilities, could lead to even greater flood losses in the future.

This Stormwater Management Plan documents the objectives, standards and procedures to be utilized by the Borough of Lincoln Park in regulating land development, drainage planning and upgrading the existing stormwater system for the successful management of stormwater.

SECTION 1: SCOPE & PURPOSE:

A. Findings:

It has been determined that the Passaic River, Pompton River, Beaver Dam Brook, East Ditch, West Ditch and their tributaries and artificially ponded segments, lakes and watercourses within the Borough of Lincoln Park are subject to recurrent flooding; that such flooding is also a danger to the natural resources of the Borough, County and State; that development tends to accentuate such flooding by increasing stormwater runoff, due to alteration of the hydro logic response of the watershed in changing from the undeveloped to the developed condition; that such increased flooding procedure by the development of real property contributes increased quantities of water-borne pollutants, and tends to increase erosion; that such increased flooding, increased erosion, and increased pollution constitutes deterioration of the water resources of the Borough, the County and State; and that such increased flooding, increased erosion and increased pollution can be controlled to a large extent by the regulation of stormwater runoff from such development. It is therefore determined that it is in the public interest to regulate the additional discharge of stormwater runoff from such developments as provided in this Ordinance.

B. Policy Statement

Flood control, groundwater recharge, and pollutant reduction through nonstructural or low impact techniques shall be explored before relying on structural BMPs. Structural BMPs should be integrated with nonstructural stormwater management strategies and proper maintenance plans. Nonstructural strategies include both environmentally sensitive site design and source controls that prevent pollutants from being placed on the site or from being exposed to stormwater. Source control plans should be developed based upon physical site conditions and the origin, nature, and the anticipated quantity or amount of potential pollutants. Multiple stormwater management BMPs may be necessary to achieve the established performance standards for water quality, quantity, and groundwater recharge.

C. Purposes:

1. It is the purpose of this ordinance to establish minimum stormwater management requirements and controls for "major developments" as defined in **Section 2**.
2. It is the further purpose of this Ordinance to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:
 - a. Protect human life and health;
 - b. Prevent the installation of structures which increase flood heights;
 - c. Prevent excessive property damage and to protect public and private property, wildlife and fisheries;
 - d. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
 - e. Reduce or minimize public expenditures for emergency operations, evacuations and restorations;
 - f. Minimize damage to or disruption of public facilities, transportation and utilities such as water and gas mains, electric, telephone and sewer lines, and streets and bridges;
 - g. Preserve, protect and enhance the natural environment of the floodplains;

- h. Minimize losses and damages due to inundation and siltation caused by flooding;
 - i. Remove the impediment to community development created by recurrent flooding;
 - j. Help maintain a stable tax base by providing for the sound use and development of flood hazard areas and floodplains in such a manner as to minimize future damages from floods;
 - k. Regulate and restrict those land uses in floodways, flood hazard areas and floodplains, which at times of flood cause increases in, flood heights and/or velocities, in order to reduce or minimize future expenditures for protective measures;
 - l. Protect individuals or corporations from buying lands; which are unsuited for intended purposes because of flood hazards;
 - m. Minimize prolonged business interruptions;
 - n. Protect the public from dangers caused by materials being swept onto nearby or downstream lands;
 - o. Insure that potential property purchasers are notified that property is in a flood hazard area or floodplain;
 - p. Insure that those who occupy the flood hazard areas of floodplains assume responsibility for their actions.
3. This Ordinance is also enacted for the purpose of complying with the requirements of the National Flood Insurance Act of 1968 and the Rules and Regulations of the United States Federal Emergency Management Agency; and the State of New Jersey, Flood Hazard Area Control Act, **N.J.S.A. 58 16A-SO et seq.**, and the State's Department of Environmental Protection Stormwater Management Regulations of February 7, 1983, **NJDEP Stormwater Management Rules N.J.A.C. 7:8, USEPA Phase II Rules (Federal Clean Water Act)** and Flood Hazard Area Regulations of May 21, 1984.

D. Objective:

The objective of this Ordinance is to accomplish its purposes as outlined in Section 1-C herein. In order to achieve this, the following methods and provisions shall be used:

1. Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
2. Require that uses vulnerable to floods, including facilities; which serve such uses, be protected against flood damage at the time of initial construction;
3. Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are necessary to accommodate or channel floodwaters;
4. Control filling, grading, dredging and other development; which may increase flood damage;
5. Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands;

6. Consider the need for master detention basins on an area-wide basis to supplement or replace individual detention basins or other facilities otherwise required at each site of development.
7. Maintain the adequacy of existing and proposed culverts and bridges, dams and other structures;
8. Prevent, to the greatest extent feasible, an increase in non-point source pollution;
9. Induce water recharge where natural storage and geologically favorable conditions exist when practical;
10. Maintain the integrity of stream channels for their biological functions, as well as for drainage and other purposes;
11. Prevent, to the greatest extent feasible, an increase in non-point source pollution;
12. Reduce and minimize the increase in runoff pollution and erosion due to any development or construction project, which otherwise would degrade the quality of water; and
13. Preserve and protect water facilities and resources by means of controlling increased flood discharges, stream erosion, and runoff pollution.

SECTION 2: DEFINITIONS:

Unless specifically defined below, words or phrases used in this Ordinance shall be interpreted so as to give them the meaning they have in common usage and to give this Ordinance its most reasonable application. The following words and terms when used in this Ordinance shall therefore have the following meanings unless the context clearly indicates otherwise:

ACT: Means The Flood Hazard Control Act, NJ.S.A. 58:16A-50 et seq.

ALTERATION: Means changes in banks, bed and vicinity of a stream; which affects its environment.

APPEAL: Means a request for a review of the Borough Engineer's interpretation of any provision of this Ordinance or a request for a variance.

APPLICANT: Means the owner of the property on which the permit is applied for or his legal agent.

APPLICATION: Means the Municipal Agency application form.

BASE FLOOD: Means the flood having a one (1%) percent chance of being equaled or exceeded in any given year.

BOROUGH: Means the Borough of Lincoln Park.

BRIDGE or CULVERT STRUCTURE: Means any structure, other than a culvert pipe, erected over a depression or an obstruction, which requires an area equal to or larger than the area represented by a five (5') foot diameter pipe to pass the runoff from the one hundred (100) year storm.

BUREAU: Means the Bureau of Flood Plain Management, State of New Jersey Department of Environmental Protection.

CAFRA PLANNING MAP: Means the geographic depiction of the boundaries for Coastal Planning Areas, CAFRA Centers, CAFRA Cores and CAFRA Nodes pursuant to N.J.A.C. 7:7E-5B.3.

CAFRA CENTERS, CORES OR NODES: Means those areas within boundaries accepted by the Department pursuant to N.J.A.C. 7:8E-5B.

CHANNEL: Means a watercourse with a definite bed and banks; which confine and conduct continuously or intermittently flowing water.

CHANNELIZATION: Means any artificial reconstruction of the stream channel such as by straightening, lining or deepening.

COMPACTION: Means the increase in soil bulk density.

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 Freeholders to review municipal stormwater management plans and implementing ordinance(s). The county review agency may either be:

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

CULVERT or CULVERT PIPE: Means any structure not classified as a bridge or culvert structure which provides an opening to carry water under a roadway or embankment, or is part of a closed conduit collection system allowing the free passage of storm water, and has an opening area less than that represented by a five (5') foot diameter pipe. All culvert or culvert pipes shall be designed on the basis of a twenty-five (25) year storm.

DAM: Means any artificial dike, levee or other barrier together with appurtenant works, which is constructed for the primary purpose of impounding water on a permanent or temporary basis that raises the water level five (5') feet or more above its usual mean low water height to the emergency spillway crest or in the absence of an emergency spillway, the top of dam.

DELINEATED FLOODWAY: Means any floodway designated by the State of New Jersey Department of Environmental Protection under the provisions of the Act.

DELINEATED STREAM: Means a stream that has a delineated floodway that has been officially adopted by the New Jersey Department of Environmental Protection and published in the New Jersey Register.

DEPARTMENT: Means the New Jersey Department of Environmental Protection.

DESIGNATED CENTER: Means a State Development and Redevelopment Plan Center as designated by the State Planning Commission such as urban, regional, town, village, or hamlet.

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.

DETENTION BASIN: Temporarily stores stormwater runoff, releasing the water through an outlet structure at a design controlled rate, until the basin is completely empty.

DEVELOPER: Means the legal or beneficial owner or owners of a lot or of any land proposed to be included in a proposed development including the holder of an option or contract to purchase, or other person having an enforceable proprietary interest in such land.

DEVELOPER'S AGREEMENT: Means a document executed by the Borough and the Developer stipulating various conditions to which both parties have agreed.

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.

DEVELOPMENT PERMIT: Means a permit issued by the Municipal Agency pursuant to the provisions of this Ordinance and other applicable Ordinances in force.

DIVERSION: Means a channel with or without a supporting ridge on the lower side constructed across or at the bottom of a slope.

DRAINAGE: Means the removal of surface water or ground water from land by drains, grading or other means and includes control of runoff to minimize erosion and sedimentation during and after construction or development and means necessary for water supply preservation or prevention or alleviation of flooding.

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.

DRAINAGE BASIN or SUB-BASIN: Means an area or sub-area drained by a watercourse.

EMPOWERMENT NEIGHBORHOOD: Means a neighborhood designated by the Urban Coordinating Council "in consultation and conjunction with" the New Jersey Redevelopment Authority pursuant to N.J.S.A 55:19-69.

ENCROACHMENT LINE: Means a line encompassing the channel of a natural stream and

portions of the 100-year flood plain adjoining the channel, which are reasonably required to carry, and discharge the flood water or flood flow of any natural stream. It is approximately equal to the floodway line along delineated streams.

ENVIRONMENTALLY CRITICAL AREAS: 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; and well head protection and groundwater recharge areas. Habitats of endangered or threatened species are identified using the Department's Landscape Project as approved by the Department's Endangered and Non-game Species Program.

EROSION: Means detachment and movement of soil or rock fragments by water, wind, ice or gravity.

EXCAVATION: Means removal or recovery by any means whatsoever of minerals, mineral substances or organic substances, other than vegetation, from the water, land surface or beneath the land surface, whether exposed or submerged. Normal agricultural activities shall not be considered to be excavation.

EXCEPTIONAL AND UNDUE HARDSHIP: Means situations where literal enforcement of or strict compliance with this Ordinance would result in peculiar and substantial burdens upon the owner and where such enforcement or compliance would not be necessary to avoid substantial detriment to the public health, safety and general welfare.

FILL: Means sand, gravel, earth or other materials of equal quality placed or deposited within the 100 year floodplain or flood hazard area so as to form an embankment or raise the elevation of the land surface.

FLOOD or FLOODING: Means a general and temporary condition of partial or complete inundation of a normally dry area from:

- a) The overflow of inland or tidal waters and/or
- b) The unusual and rapid accumulation or runoff of surface waters from any source.

FLOOD BOUNDARY and FLOODWAY MAP (FBFM): Means the official map on which the Federal Emergency Management Agency, Federal Insurance Administration has delineated the floodway and one (100) hundred-year floodplain boundary applicable to the municipality.

FLOOD CARRYING CAPACITY: Means the ability of a channel or floodway to transport flood waters, as determined by its shape, cross-sectional area, bed slope, coefficient of hydraulic friction, and upstream and downstream channel configurations as used in accepted engineering practices.

FLOOD DAMAGE POTENTIAL: Means the susceptibility at a particular site to damage by potential floods at that site, as well as increased off-site flooding or flood related damages caused by such use.

FLOOD FRINGE: Means that portion of the flood hazard area not designated as the floodway.

FLOOD HAZARD AREA: Means the floodway and the flood fringe area of a delineated stream.

FLOOD HAZARD AREA DESIGN FLOOD: Means the 100-year storm in non-delineated areas and the 100-year storm plus 25% percent in the delineated areas.

FLOOD HAZARD DESIGN ELEVATION: Means the elevation of the Flood Hazard Area Design.

FLOOD INSURANCE RATE MAP (FIRM): Means the Official Map on which the Federal Emergency Management Agency, Federal Insurance Administration has delineated both the Special Flood Hazard areas and the risk premium zones applicable to the municipality.

FLOOD INSURANCE STUDY: Means the Official Report in which the Federal Emergency Management Agency, Federal Insurance Administration has provided flood profiles, as well as the Flood Boundary and Floodway Map and the water surface elevation of the base flood.

FLOOD LEVEL: Means the elevation indicated on the Flood Map.

FLOOD PLAIN: Means the relatively flat area adjoining the channel of a natural stream; which has been or may be hereafter covered by flood-water.

FLOOD PLAIN/FLOODWAY/WETLANDS: Means the Official Maps on which the Borough of Lincoln Park has provided the Flood Hazard Area Design Flood Boundary, the One Hundred Year Flood Plain Boundary, the Floodway Limits and the Wetlands Conservation Areas for the natural streams, watercourses, water-bodies, and areas where the water table is usually at or near the surface as well as land covered by shallow water within the corporate limits of the Borough.

FLOODPROOFING: Means any combination of structural and nonstructural design features, additions, changes or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

FLOODWAY: Means the channel of a natural stream or other watercourse and portions of the adjacent land areas which are reasonable to carry and discharge the base flood without cumulatively increasing the water surface elevation more than 0.2 foot.

HAZARDOUS MATERIALS: Means any waste or combination of waste, which poses a present or potential threat to human health, living organisms or the environment. It shall include waste material that is toxic, carcinogenic, genetically harmful, corrosive, irritating or sensitizing radioactive, biologically infectious, explosive, or flammable. It includes, but need not be limited to, those materials and concentrations of materials that are determined to be toxic by the Federal Secretary of Health and Human Services pursuant to Section 20(6) of the Occupational Safety and Health Act of 1970 (Public Law 91-596, OSHA) and those materials listed in the current Part 172, Title 40 of the Code of Federal Regulations issued by the Federal Department of Transportation.

HISTORIC SITE: Means any building, structure, area or property that is significant in the history, architecture, archeology or culture of this municipality, and has been so designated.

IMPERVIOUS SURFACE: Means any natural or manmade surface that is/has been covered with a layer of material so that it is highly resistant to infiltration by water and causes surface runoff, including but not limited to, sidewalks, street pavement, driveways, patios and buildings, expressed as a percentage arrived at by dividing the area of impervious Surface by the gross site area.

INFILTRATION: Means the process by which water seeps into the soil from precipitation.

INFILTRATION BASIN: Collects and stores stormwater, which percolates completely into the ground, and performs the function of replenishing groundwater supply. This type of facility has no outlet structure.

LOWEST FLOOR: Means the lowest level (including basement, crawl space, and garage) of the lowest enclosed area.

MAJOR DEVELOPMENT: Means any "development" that provides for ultimately disturbing one or more acres of land. Disturbance for the purpose of this rule is the placement of impervious surface or exposure and/or movement of soil or bedrock or clearing, cutting, or removing of vegetation.

MAJOR PROJECT: Means that class project defined as major in the 90-Day Rules, N.J.A.C. 7:1c-1.

MANUAL: Means the Technical Manual for Stream Encroachment published August, 1984 by the Bureau.

MINOR PROJECT: Means that class of project defined as minor in the 90-Day Rules.

MLUL: Means the Municipal Land Use Law, N.J.A.C. 40:550-1 et seq.

MOBILE HOME: Means a structure that is transportable in one or more sections, built on a permanent chassis, and designed to be used with or without a permanent foundation when connected to the required utilities. It does not include recreational vehicles or travel trailers.

MUNICIPAL AGENCY: Means the Municipal Planning Board, Board of Adjustment or Governing Body of the Borough when acting pursuant to this Ordinance.

MUNICIPALITY: Means any city, borough, town, township, or village.

NET FILL: Means additional earth or other fill beyond the total quantity already present above the low water level of the stream or ground water level (whichever is higher) in that portion of the project site, which is in the flood hazard area or 100 year flood plain.

NEW CONSTRUCTION: Means structures for which "start of construction" commenced on or after the effective date of this Ordinance.

NINETY-DAY RULES: Means N.J.A.C. 7:1C (90-Day Construction Permits).

N.J.D.E.P.: Means the New Jersey Department of Environmental Protection.

NODE: Means an area designated by the State Planning Commission concentrating facilities and activities, which are not organized in a compact form.

NON-POINT SOURCE POLLUTION: Means pollution from any source other than from any discernible, confined and discreet conveyances, and shall include, but not be limited to, pollutants from agricultural, mining, construction, subsurface disposal and urban runoff sources. 9

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

OBSTRUCTION: Means but is not limited to any structure, excavation, fill or other materials placed in, along, across or projecting into any channel, watercourse or floodway which may impede, retard or change the direction of the flow of water whether in itself or by catching or collecting debris carried by such water or that is placed where the flow of water might carry the same downstream to the damage of life or property.

OFF-SITE: Means located outside the lot lines of the lot in question but within the property (of which the lot is a part) which is the subject of a development application or contiguous portion of a street or right-of-way.

OFF-TRACT: Means not located on the property, which is the subject of a development application or on a contiguous portion of a street or right-of-way.

ON-SITE: Means located on the lot in question.

ON-TRACT: Means located on the property; which is the subject of a development application or on a contiguous portion of a street or right-of-way.

ONE HUNDRED YEAR FLOOD PLAIN: Means the area inundated by a 100-year flood. A 100-year flood is estimated to have a 1% percent chance, or one chance in 100, of being equaled or exceeded in any one year.

OPEN SPACE: Means any parcel or area of land or water essentially unimproved and set aside, dedicated, designated or reserved for private use of enjoyment of owners and occupants of land adjoining or neighboring such open space; provided that such areas may be improved with only those buildings, structures street and off-street parking and other improvements that are designed to be incidental to the natural openness of the land.

OWNER: Means any individual, family group, firm, association, syndicate, co-partnership or corporation having sufficient proprietary interest in land.

PERMITTED USE: Means any use, which shall be allowed upon approval by the Municipal Agency pursuant to this Ordinance.

PERSON: Means any individual, corporation, company, partnership, firm, association, [*insert name of municipality*], or political subdivision of this State subject to municipal jurisdiction pursuant to the Municipal Land Use Law , N.J.S.A. 40:55D-1 et seq.

PLANNING BOARD: Means the Borough Planning Board.

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, ground waters or surface waters of the State, or to a domestic treatment works. "Pollutant" includes both hazardous and non-hazardous pollutants.

PROHIBITED USE: Means a use, which shall not be allowed under any circumstances.

PUBLIC DRAINAGE WAY: Means the land reserved or dedicated for the installation of storm water sewers or drainage ditches, or required along a natural stream or watercourse for preserving the channel and providing for the flow of water to safeguard the public against flood damage, sedimentation and erosion.

RECHARGE: Means the amount of water from precipitation that infiltrates into the ground and is not evaporated.

RESTRICTED USE: Means any flood fringe use, which requires a restricted use permit from the Borough.

RUNOFF RATE: Means the volume rate of movement of quantity of stormwater flowing past a given point with respect to time, expressed in cubic feet per second or gallons per minute.

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

SEDIMENT BASIN: Means a natural or man-made hollow to retain rock, sand, gravel, silt or other material.

SITE: Means any plot or parcel of land or combination of contiguous lots or parcels of land where clearing or grading is performed or permitted.

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

SOIL CONSERVATION DISTRICT: Means a political subdivision of the State of New Jersey authorized under N.J.S.A. 4:24-2 et seq.

SOLID WASTE: Means garbage, sludge, refuse, trash, rubbish, debris or other discarded solid materials.

SPECIAL FLOOD HAZARD AREA: Means the land in the flood plain within the community subject to a one (1%) percent or greater chance of flooding in any one year.

START OF CONSTRUCTION: Means the first placement of permanent construction of a structure (other than a mobile home) on a site, such as the pouring of slabs or footings or any work beyond the stage of excavation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include excavation for a basement, footings piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as part of the main structure. For a structure (other than a mobile home) without a basement or poured footings, the "START OF CONSTRUCTION" includes the first permanent framing or assembly of the structure or any part thereof on its piling or foundation.

STATE DEVELOPMENT AND REDEVELOPMENT PLAN METROPOLITAN PLANNING AREA (PA-1): 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 AREA: Means the entire corporate area of the Borough of Lincoln Park consisting of nine drainage sub-areas drained by the Passaic River, Pompton River, Beaver Dam Brook, East Ditch, West Ditch, their tributaries and delineated on the Stormwater Management Area Map of the Borough of Lincoln Park.

STORMWATER MANAGEMENT AREA MAP: Means the official map on which the Borough of Lincoln Park has delineated the Stormwater Management Area, consisting of nine drainage sub-areas, and showing the planned Stormwater Facilities Improvements for the Borough of Lincoln Park with updates.

STORMWATER RUNOFF or RUNOFF: Means flow on the surface of the ground or in storm sewers, resulting from precipitation.

STORMWATER MANAGEMENT BASIN: Means an excavation or embankment and related areas designed to retain stormwater runoff. A stormwater management basin 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 structural or nonstructural strategy, 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.

STREAM ENCROACHMENT: Means any structure, alteration, filling, construction or other development within the area; which would be inundated by the 100-year flood of any non-delineated stream or within the flood hazard area of a delineated stream.

STREAM ENCROACHMENT PERMIT: Means a permit issued by the Department, Borough or delegated agency under the provisions of N.J.S.A. 58:16A-50 et seq. and N.J.A.C. 7:13.

STRUCTURE: Means any assembly of materials above or below the surface of land or water, including, but not limited to buildings, fences, pipelines, landings, dams, fills, levees, bulkheads, dikes, jetties, embankments, causeways, culverts, roads, railroads, bridges and the facilities of any utility or governmental agency. Trees or other vegetation shall not be considered to be structures.

SUBSTANTIAL IMPROVEMENT: Means any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds fifty (50%) percent of the market value of the structure either:

- a) Before the improvement or repair is started, or
- b) Dimensions of the structure. The term does not, however, include either:
 - (1) Any project for the improvement of a structure to comply with existing state or local code, specifications which are solely necessary to assure safe living conditions; or
 - (2) Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

TIDAL FLOOD HAZARD AREA: Means a flood hazard area, which may be influenced by stormwater runoff from inland areas, but which is primarily caused by the Atlantic Ocean.

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.

VARIANCE: Means a grant of relief from the requirements of this Ordinance, which permits construction in a manner that would otherwise be prohibited by this Ordinance.

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

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

SECTION 3: GENERAL PROVISIONS & APPLICABILITY:

A. This Ordinance shall apply to all areas within the corporate limits of the Borough of Lincoln Park and shall be applicable but not limited to each of the types of development named below.

- 1. Residential construction or redevelopment of dwelling units and substantial improvements of a structure (except as provided in subparagraph 4 below).
- 2. All governmental, commercial or industrial developments, which cover land with additional impervious surface (except as provided in subparagraph 4 below).
- 3. Any construction of one or more of the following uses:
 - a. Confined feeding and holding areas that provide for more than 150 head of cattle or 1,000 head of poultry;

- b. Pipelines, storage, or distribution systems for petroleum products or chemicals;
 - c. Storage, distribution or treatment facilities (excluding home septic systems for liquid waste);
 - d. Solid waste storage, disposition, incineration or landfill;
 - e. Quarries, mines or borrow pits;
 - f. Land application of sludge or effluents; and
 - g. Storage, distribution or treatment facilities for radioactive wastes.
4. Control of stormwater runoff is mandated in all areas for residential construction or non-residential construction, which add impervious surface. If the planning area is classified as a rural area under the provisions of N.J.A.C. 7:8, residential construction of more than 25 units shall be considered by the threshold of applicability.
 5. In the case of projects for which State and County as well as municipal approval of proposed drainage facilities is required, the applicant shall be required to comply with all provisions of this Ordinance. In such a case, the only provisions of the municipal Ordinance, which shall govern, are those requirements, which are stricter than those of the State or County.

B. Applicability

1. This ordinance shall be applicable to all site plans and subdivisions for the following major developments that require preliminary or final site plan or subdivision review:
 - a. Non-residential major developments; and
 - b. Aspects of residential major developments that are not pre-empted by the Residential Site Improvement Standards at N.J.A.C. 5:21.
2. This ordinance shall also be applicable to all major developments undertaken by the Borough Of Lincoln Park.

C. Administration:

The administration and enforcement of the provisions of this Ordinance relating to the construction, erection, maintenance and continued operation of storm water and drainage facilities and other facilities, structures, devices and techniques require to carry out the objectives of this Ordinance shall be the responsibility of the Municipal Agency.

D. Basis for Establishing Special Flood Hazard Areas and Flood Hazard Areas:

1. The Special Flood Hazard Areas identified by the Federal Emergency Management Agency, Federal Insurance Administration through a scientific and engineering report entitled "Flood Insurance Study, Borough of Lincoln Park, Morris County, New

Jersey," dated August 24, 1994, with accompanying Flood Insurance Rate Maps and Flood Boundary and Floodway Maps and any revisions thereto are hereby Adopted by reference and declared a part of this Ordinance. The Flood Insurance Study is on file in the Borough's Municipal Building, 34 Chapel Hill Road, Lincoln Park, New Jersey 07035.

2. The Flood Hazard Areas delineated by Thonet Associates for the Borough of Lincoln Park on the maps entitled "Floodplain/Floodway/Wetlands, Lincoln Park, New Jersey," dated April 1985, along with the delineated wetland area limits and any revisions thereto are hereby Adopted by reference and declared a part of this Ordinance.

E. Submission:

The applicant shall submit materials, as required by Section 15 hereof, to the Planning Board prior to or at least at the same time he submits his application for municipal approval.

F. Review:

The applicant's project shall be reviewed by the Planning Board. The Planning Board shall consult with the Borough Engineer to determine if the project meets the standards set forth in this Ordinance.

G. Compatibility with Other Permit and Ordinance Requirements:

Development approvals issued for subdivisions and site plans pursuant to this ordinance are to be considered an integral part of development approvals under the subdivision and site plan review process and do not relieve the applicant of the responsibility to secure required permits or approvals for activities regulated by any other applicable code, rule, act, or ordinance. In their interpretation and application, the provisions of this ordinance shall be held to be the minimum requirements for the promotion of the public health, safety, and general welfare. This ordinance is not intended to interfere with, abrogate, or annul any other ordinances, rule or regulation, statute, or other provision of law except that, where any provision of this ordinance imposes restrictions different from those imposed by any other ordinance, rule or regulation, or other provision of law, the more restrictive provisions or higher standards shall control.

H. Variances:

1. For good reason, the Municipal Agency may grant a waiver of the provisions of this Ordinance. In each such case, the Planning Board shall make a report within 30 days to
2. The County Planning Board, giving a full explanation of the nature of the variance, and the reasons why it was granted.

I. Penalties for Non-Compliance:

1. No structure of land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of the Ordinance and other applicable regulations. Violation of the provisions of this Ordinance by failure to comply with any of the requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor.

2. Any person who violates this Ordinance or fails to comply with any of its requirements shall upon conviction thereof be subject to penalties as described in **Section 18: PENALTIES**, as herein provided. Nothing herein contained shall prevent the Borough of Lincoln Park from taking such other lawful action as is necessary to prevent or remedy any violation.

J. Abrogation and Greater Restrictions:

This Ordinance is not intended to repel, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this Ordinance and or other Ordinance, easement, covenant, or deed restriction conflict or overlap whichever imposes the more stringent restrictions shall prevail.

K. Interpretation:

In the interpretation and application of this Ordinance, all provisions shall be:

1. Considered as minimum requirements;
2. Liberally construed in favor of the Governing Body; and
3. Deemed neither to limit nor repeal any other powers granted under State statutes.

L. Warning and Disclaimer of Liability:

The degree of flood protection required by this Ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. This Ordinance does not imply that land outside the areas of SPECIAL FLOOD HAZARDS and FLOOD HAZARD AREAS or uses permitted within such areas will be free from flooding or flood damages. This Ordinance shall not create liability on the part of the Borough of Lincoln Park, any officer or employee thereof or the Federal Insurance Administration, for any flood damages that result from reliance on this Ordinance or any administrative decision lawfully made there under.

M. Any application for development shall include a Stormwater Control Plan containing sufficient information to effectuate the intent and purpose of this Section. Applications for the following shall be exempt from the requirements of this Section:

1. Additions or alterations to one and two family residence;
2. A one or two family residence to be constructed on a lot; which is not contiguous to any other vacant buildable lot;
3. The use or re-occupancy of any other land, building or structure without a change of use of substantial alteration or reconstruction thereof following an affirmative finding by the Municipal Agency of compliance with the standards herein.

N. General Standards:

1. Whenever an applicant seeks approval from the Municipal Agency for a development to which this Ordinance is applicable, the applicant shall be required to demonstrate that this Stormwater Control Plan and design of stormwater control facilities are based on sound planning, engineering and architectural techniques and adhere to the standards set forth in this Ordinance.
2. Design and Performance Standards for Stormwater Management Measures
 - a. Stormwater management measures for major development shall be developed to meet the erosion control, groundwater recharge, stormwater runoff quantity, and stormwater runoff quality standards in Section 4. To the maximum extent practicable, these standards shall be met by incorporating nonstructural stormwater management strategies into the design. If these strategies alone are not sufficient to meet these standards, structural stormwater management measures necessary to meet these standards shall be incorporated into the design.
 - b. The standards in this ordinance apply only to new major development and are intended to minimize the impact of stormwater runoff on water quality and water quantity in receiving water bodies and maintain groundwater recharge. The standards do not apply to new major development to the extent that alternative design and performance standards are applicable under a regional stormwater management plan or Water Quality Management Plan adopted in accordance with Department rules.

Note: Alternative standards shall provide at least as much protection from stormwater-related loss of groundwater recharge, stormwater quantity and water quality impacts of major development projects as would be provided under the standards in N.J.A.C. 7:8-5.

3. All detention facilities that limit the rate of discharge must be designed to provide for one (1') foot of freeboard above the design high water of the pond.
4. Detention areas may be depressions in parking areas, excavated basins, basins elevated through use of curbs, stabilized earth berms or dikes, or any other form of grading which serves to temporarily impound and store water.
5. Innovative surface water runoff control and recharge devices may be proposed, such as rooftop storage, dry wells, roof drains, infiltration trench, underground tank storage, gravel layers underneath paving, swale storage, front and back yard ponding, oversized sewers, detention within Pedestrian Plazas and Malls, parking lot detention including pre-cast concrete turf grids, etc., providing they are accomplished by detailed engineering plans and performance capabilities.

O. Specific Standards:

1. For engineering review by the Municipal Agency, each proposed project not exempted from the operation of this Ordinance shall provide a stormwater control plan that establishes runoff volumes and peak rates of discharge by current techniques. The methods of computation shall meet, as a minimum, the following specific design standards:

<u>Facility</u>	<u>Design Frequency</u>
Bridges/Culvert Structures	100 year
Channels, Ditches for drainage external to the development	100 year
Culverts, cross-drains, storm sewers and collection system	25 year
Roadside swales for drainage internal to the development	25 year
Detention/Retention Basins or storage systems	100 Year

2. Storm Sewer Requirements:

- a. Storm sewer line design shall be performed using technical procedures as set forth in American Society of Civil Engineers (ASCE) Manual and Report on Engineering Practice No. 37. For storm sewer lines under traffic areas, reinforced concrete culvert pipe (RCCP) of appropriate class shall be used. Corrugated metal pipe (CMP) may be used elsewhere.
- b. The minimum inside diameter of pipe shall be fifteen (15") inches and a minimum cover of two (2') feet on top of all lines shall be required.
- c. The maximum design velocity for conduits shall be fifteen (15') feet per second, and the minimum design velocity shall be three (3') feet per second. Where discharge is made into a stream bed, adequate protection shall be provided and the allowable velocities shall be as shown in the Standards and Specifications for Soil Erosion and Sediment
- d. Control in New Jersey, Design of Roadside Channels, Hydraulic Design Series No. 4, Department of Transportation, Federal Highway Administration, or in Design Charts for Open Channel Flow, United States Department of Commerce, Bureau of Public Roads.
- e. Ends of pipes starting or terminating in an open channel shall have reinforced concrete headwalls or flared end sections.
- f. Storm sewer lines shall not have a horizontal or adverse slope.
- g. Storm sewer structures shall be placed where lines change alignment, grade or size, or are joined by other lines. In addition, storm sewer structures shall be placed not more than three hundred (300') feet apart. Inlets shall be located to prevent gutter flow from crossing street pavement and to prevent runoff accumulations above curbing at all intersections and low points along the roadway. Maximum inlet flow rate shall be based on the capacity of the type of inlet and shall not exceed six and zero-tenths

(6.0) cubic feet per second. All hydraulic structures shall have sufficient depth to prevent overflow due to energy losses or changes in flow regimes.

3. Bridges, Culverts:

- a. All bridges and culverts shall be designed in accordance with the following publications:
 - (1). New Jersey Department of Transportation Design Manual - Bridges and Structures
 - (2). U.S. Department of Transportation
- b. All bridges and culverts shall meet the requirements and procedures set forth in the Manual.

4. Responsibility for operation maintenance and repair of detention facilities installed, including periodic removal and disposal of accumulated particulate and debris, mowing of grass, and mosquito control shall remain with the owner or owners of the property, with permanent arrangements satisfactory to the Borough Engineer and the Borough Attorney, shall be made to pass the responsibility to successors in title. These arrangements shall designate for each project the property owner, governmental agency, or other legally established entity to be permanently responsible for operation, maintenance and repair hereinafter in this section referred to as the responsible person.

5. Prior to granting approval to any project subject to review under this Ordinance, the applicant shall enter into an agreement with the Municipal Agency to ensure the continued operation and maintenance of the detention facility. This agreement shall be in a form satisfactory to the Municipal Attorney, and may include, but may not necessarily be limited to, personal guarantees, deed restrictions, covenants, and bonds. In cases where property is subdivided and sold separately, a homeowner's association or similar permanent entity should be established as the responsible entity, absent an agreement by a governmental agency to assume responsibility.

6. A schedule of maintenance inspections shall be developed and followed by the owner subject to the approval of the Borough Engineer. In the event that the detention facility becomes a danger to public safety or public health, or if it is in need of maintenance, the Municipal Agency shall so notify in writing the responsible person. From that notice, the responsible person shall have fourteen (14) days to affect such maintenance and repair of the facility in a manner that is approved by the Borough Engineer or his designee. If the responsible person fails or refuses to perform such maintenance and repair, the municipality may immediately proceed to do so and shall bill the cost thereof to the responsible person in accordance with the provisions of the Developer's Agreement.

7. In instances where the provisions of separate detention facilities for a number of single sites are technically and economically prohibitive and more difficult to maintain than provisions of joint facilities for a number of sites, the Municipal Agency will be willing to consider provisions of joint and/or master detention facilities which will fulfill the requirements of this Ordinance. Where these detention facilities may have to be located

outside the property limits of the site, they will be considered as "off-site" drainage detention facilities and shall comply with criteria outlined in **Section 11** of this Ordinance. In such cases, a properly planned staged program for the facilities may be approved by the Municipal Agency in which compliance with some requirements may be postponed at early stages while preliminary phases are being undertaken and construction fund accumulated.

8. Detention facilities in special flood hazard areas and flood hazard areas as established in **Section 3** or flood hazard areas as determined by the State of New Jersey Department of Environmental Protection under provisions of the Act shall comply with the following:
 - a. Whenever practical, developments and their stormwater detention facilities should be beyond the extent of the flood hazard area of a stream. When that is not feasible and detention facilities are proposed to be located partially or wholly within the flood hazard area, or other areas; which are frequently flooded, some storm conditions will make the facility ineffective at providing retention of site runoff. This will happen if the stream is already overflowing its banks and the detention basin, causing the basin to be filled prior to the time it is needed. In such cases the standards established in these regulations will be modified in order to give only partial credit to detention capacities located within a flood hazard area. The credit will vary in a ratio intended to reflect the probability that storage in a detention basin will be available at the time a storm occurs at the site.
 - b. Detention storage provided below the elevation of the edge of the flood hazard area will be credited as effective storage at a reduced proportion as indicated in the table below:

<u>Elevation</u>	<u>Size of Drainage Area*</u>		
	<u>Less than 5 sq. mi.</u>	<u>5-100 sq. mi.</u>	<u>Greater than 100 sq. mi.</u>
	<u>REDUCED NET CREDIT/VALUE</u>		
Less than 2' Below	40%	65%	90%
Between 2' & 4' Below	25%	50%	75%
Over 4' below	10%	25%	50%

*Area contributing floodwaters to the flood hazard area at the site in question.

- c. This effective detention will be required to provide for drainage of the developed land in accordance with the criteria already established in these regulations.
- d. However, the gross storage considered for crediting will not exceed that which would be filled by runoff of a 100-year storm from the site.

SECTION 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 10**.

B. Stormwater management measures shall avoid adverse impacts of concentrated flow on habitat for threatened and endangered species as documented in the Department' 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 muhlnebergi* (bog turtle).

C. The following linear development projects are exempt from the groundwater recharge, stormwater runoff quantity, and stormwater runoff quality requirements of paragraph 4.F. and 4.G.:

1. The construction of an underground utility line provided that the disturbed areas are revegetated upon completion;
2. The construction of an aboveground utility line provided that the existing conditions are maintained to the maximum extent practicable; and
3. The construction of a public pedestrian access, such as a sidewalk or trail with a maximum width of 14 feet, provided that the access is made of permeable material.

D. A waiver from strict compliance from the groundwater recharge, stormwater runoff quantity, and stormwater runoff quality requirements of paragraphs 4.F. and 4.G. may be obtained for the enlargement of an existing public roadway or railroad; or the construction or enlargement of a public pedestrian access, provided that the following conditions are met:

1. The applicant demonstrates that there is a public need for the project that cannot be accomplished by any other means;
2. The applicant demonstrates through an alternatives analysis, that through the use of nonstructural and structural stormwater management strategies and measures, the option selected complies with the requirements of paragraphs 4.F. and 4.G. to the maximum extent practicable;
3. The applicant demonstrates that, in order to meet the requirements of paragraphs 4.F. and 4.G., existing structures currently in use, such as homes and buildings, would need to be condemned; and
4. The applicant demonstrates that it does not own or have other rights to areas, including the potential to obtain through condemnation lands not falling under paragraph D.3. above within the upstream drainage area of the receiving stream, that would provide additional opportunities to mitigate the requirements of paragraphs 4.F. and 4.G. that were not achievable on-site.

E. Nonstructural Stormwater Management Strategies

1. To the maximum extent practicable, the standards in paragraphs 4.F. and 4.G. shall be met by incorporating nonstructural stormwater management strategies set forth at paragraph 4.E. into the design. The applicant shall identify the nonstructural measures incorporated into the design of the project. If the applicant contends that it is not feasible for engineering, environmental, or safety reasons to

incorporate any nonstructural stormwater management measures identified in paragraph 2. below into the design of a particular project, the applicant shall identify the strategy considered and provide a basis for the contention.

2. Nonstructural stormwater management strategies incorporated into site design shall:
 - a. Protect areas that provide water quality benefits or areas particularly susceptible to erosion and sediment loss;
 - b. Minimize impervious surfaces and break up or disconnect the flow of runoff over impervious surfaces;
 - c. Maximize the protection of natural drainage features and vegetation;
 - d. Minimize the decrease in the "time of concentration" from pre-construction to post construction. "Time of concentration" is defined as the time it takes for runoff to travel from the hydraulically most distant point of the watershed to the point of interest within a watershed;
 - e. Minimize land disturbance including clearing and grading;
 - f. Minimize soil compaction;
 - g. Provide low-maintenance landscaping that encourages retention and planting of native vegetation and minimizes the use of lawns, fertilizers and pesticides;
 - h. Provide vegetated open-channel conveyance systems discharging into and through stable vegetated areas;
 - i. Provide other source controls to prevent or minimize the use or exposure of pollutants at the site, in order to prevent or minimize the release of those pollutants into stormwater runoff. Such source controls include, but are not limited to:
 - (1) Site design features that help to prevent accumulation of trash and debris in drainage systems, including features that satisfy paragraph 4.E.3. below;
 - (2) Site design features that help to prevent discharge of trash and debris from drainage systems;
 - (3) Site design features that help to prevent and/or contain spills or other harmful accumulations of pollutants at industrial or commercial developments; and
 - (4). When establishing vegetation after land disturbance, applying fertilizer in accordance with the requirements established under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq., and implementing rules.
3. Site design features identified under paragraph 4.E.2.i.(2). 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 paragraph 4.E.3.c. below.

a. 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:

- (1). 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
- (2). 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.

b. 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.

c. This standard does not apply:

- (1). Where the review agency determines 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;
- (2). Where flows from the water quality design storm as specified in paragraph 4.G.1. are conveyed through any device (e.g., end of pipe netting facility, manufactured treatment device, or a catch basin hood) that is designed, at a minimum, to prevent delivery of all solid and floatable materials that could not pass through one of the following:
 - (a) A rectangular space four and five-eighths inches long and one and one-half inches wide (this option does not apply for outfall netting facilities); or
 - (b) A bar screen having a bar spacing of 0.5 inches.
- (3). Where flows are conveyed through a trash rack that has parallel bars with one-inch (1") spacing between the bars, to the elevation of the water quality design storm as specified in paragraph 4.G.1.; or

- (4). Where the New Jersey Department of Environmental Protection determines, pursuant to the New Jersey Register of Historic Places Rules at N.J.A.C. 7:4-7.2(c), that action to meet this standard is an undertaking that constitutes an encroachment or will damage or destroy the New Jersey Register listed historic property.
4. Any land area used as a nonstructural stormwater management measure to meet the performance standards in paragraphs **4.F.** and **4.G.** shall be dedicated to a government agency, subjected to a conservation restriction filed with the appropriate County Clerk's office, or subject to an approved equivalent restriction that ensures that measure or an equivalent stormwater management measure approved by the reviewing agency is maintained in perpetuity.
5. Guidance for nonstructural stormwater management strategies is available in the New Jersey Stormwater Best Management Practices Manual. The BMP Manual may be obtained from the address identified in **Section 7**, or found on the Department's website at www.njstormwater.org.

F. Erosion Control, Groundwater Recharge and Runoff Quantity Standards:

1. This subsection contains minimum design and performance standards to control erosion, encourage and control infiltration and groundwater recharge, and control stormwater runoff quantity impacts of major development.
 - a. The minimum design and performance standards for erosion control are those established under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq. and implementing rules.
 - b. The minimum design and performance standards for groundwater recharge are as follows:
 - (1). The design engineer shall, using the assumptions and factors for stormwater runoff and groundwater recharge calculations at **Section 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 2-year storm is infiltrated.
 - (2). This groundwater recharge requirement does not apply to projects within the "urban redevelopment area," or to projects subject to (3) below.
 - (3). The following types of stormwater shall not be recharged:
 - (a) Stormwater from areas of high pollutant loading. High pollutant loading areas are areas in industrial and commercial developments where solvents and/or petroleum products are loaded/unloaded, stored, or applied, areas where pesticides are loaded/unloaded or stored; areas where hazardous materials are expected to be present in greater than "reportable quantities" ²⁴