Stormwater Management and Discharge Control Ordinance
Manasquan Watershed Management Group

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Stormwater Management and Discharge Control Ordinance

ARTICLE I

TITLE, AUTHORITY, PURPOSE AND APPLICABILITY

Section 1. Title. This ordinance shall be known as the Stormwater Management and Discharge Control Ordinance and may be so cited.

Section 2. Statutory Authority. The Municipal Land Use Law, N.J.S.A. 40:44D-1 et. seq. and the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq., and N.J.A.C. 2:90 – 1.1, N.J.A.C. 7:8 et seq., N.J.A.C. 7:13 – 4.11, and the Residential Site Improvement Standards, N.J.A.C. 5:21-7.1 et seq. provide the statutory authority for this ordinance.

Section 3. **Purpose and Intent.** The purpose of this ordinance is to reduce the volume of surface water flowing into the Manasquan River. To accomplish this goal, infiltration techniques that direct clean water runoff into the ground will be deployed using a variety of methods. Runoff from areas not capable of supporting infiltration because of soil conditions and runoff from land uses with contaminants present, like vehicle salvage yards for instance, will be treated by traditional stormwater management practices and good housekeeping practices. This ordinance will ensure the future health, safety, and general welfare of Manasquan watershed citizens by:

- **A.** Reducing pollutants in stormwater discharges to the maximum extent practicable;
- **B.** Reducing the volume of water discharged to the Manasquan River from development;
- **C.** Reducing the potential for increases in stream flooding and erosion from stormwater;
- **D.** Eliminating illicit connections and discharges to the storm drain system; and
- **E.** Regulating non-stormwater discharges to the storm drain system.

The intent of this ordinance is also to protect and enhance the ecological health and water quality of the Manasquan River, tributaries, water bodies, ground water, and wetlands in a manner pursuant to and consistent with the Federal Clean Water Act (33 U.S.C. §1342) and the 1981 Municipal Stormwater Management Act (P.L. 1981, c.32).

Section 4. Applicability. This ordinance shall be applicable to any major subdivision or site plan application, as defined in the Municipal Land Use Law, located within the municipality, which involves the disturbance of 1,000 square feet or more. Provisions of this ordinance pertaining to runoff from roof areas and requirements for drywells shall also apply to all applications for building permits except as otherwise provided for herein. The ordinance shall be applied to achieve its purposes to the extent reasonable and practical with respect to modifications of previously developed sites consistent with the nature and extent of such modifications.

ARTICLE II

FINDINGS AND GENERAL PROVISIONS

Section 1. Findings

A. The Manasquan River and its tributaries are experiencing severe erosion and sedimentation due to the increasing rate and volume of rain water being directed to streams.

B. The development of roadways, buildings, parking areas and lawn areas on lands once either forested or used for agricultural purposes change the patterns of stormwater runoff.

C. Impervious surfaces associated with development prevent the infiltration of rainfall into the ground and increase surface runoff of rainfall.

D. The installation of drainage pipes and drainage ditches exacerbate stormwater flow by changing runoff patterns from one of overland flow and ground infiltration to one of point source discharge to streams.

E. The increase in stream flow results in severe stream bank and channel scour that deposits sediments throughout the river system.

F. Sediment is made up of particulate matter derived from soil and rocks that settle and fill in the bottom of streams, rivers, and wetlands.

G. Sediment accumulation promotes shoaling and impedes navigation. Significant costs are associated with dredging and disposal of dredged material.

H. Suspended sediment makes the water cloudy and turbid and threatens the survival of filter-feeding organisms such as shellfish and aquatic organisms important to fish and wildlife, and increases the cost of water supply treatment.

I. Deposited sediments can change the physical nature of the river bottom, thus affecting fish habitat.

J. Pollutants such as metals, nutrients, and bacteria bond to sediments and are then carried further downstream resulting in greater distribution of pollutants.

K. Several Manasquan streams and the river's mainstem have been listed by NJDEP as either impaired or severely impaired and preliminary evidence suggests that contamination is associated with sediment disturbance.

Section 2. Definitions. The terms as used in this ordinance shall have the following meanings:

A. Best Management Practice (BMPs) shall mean any activities, prohibitions, practices, procedures, programs, or other measures designed to prevent or reduce the discharge of pollutants directly or indirectly into waters of the United States. BMPs shall include, but are not limited to, those measures specified in *Standards for Soil Erosion and Sediment Control in New Jersey* Adopted July 1999 by the New Jersey State Soil Conservation Committee and the *NJDEP/SCC BMP Manual*.

B. Bioretention area shall mean retention of stormwater through the use of vegetated depressions engineered to collect, store, and infiltrate runoff.

C. Cistern shall mean an engineered reservoir for storing roof water runoff for reuse.

D. Detention Basin shall mean any facility that accepts stormwater runoff and detains water for a period of time while releasing it at a slow rate.

E. Dry Wells shall mean any small sub-surface areas that are backfilled with gravel and/or porous material to store and slowly release stormwater runoff into the ground. Dry wells are typically used for roof runoff and small paved areas.

F. Erosion shall mean the process of soil detachment and movement by the forces of water.

G. Illicit Discharge shall mean any discharge to the storm drain system that is not composed entirely of stormwater runoff except discharges made pursuant to a New Jersey Pollutant Discharge Elimination System (NJPDES) permit or as otherwise authorized by the State or this municipality.

H. Illicit Connection shall mean any physical connection to a storm drain system that has not been permitted by this municipality or New Jersey Department of Environmental Protection.

I. Infiltration shall mean the absorption of rainfall into the ground either naturally or by diverting rainfall to areas where it can infiltrate into the ground.

J. Infiltration Systems shall mean sub-surface areas that are filled with gravel and porous material to store and slowly release stormwater runoff into the ground.

K. New Jersey Pollutant Discharge Elimination System (NJPDES) Permit shall mean a stormwater discharge permit issued by New Jersey Department of Environmental Protection in compliance with the Clean Water Act and the New Jersey Water Pollution Control Act.

L. Municipal NJPDES Permit shall mean an area-wide NJPDES permit issued to a government agency or agencies for the discharge of stormwater from a stormwater system.

M. Non-Stormwater Discharge shall mean any discharge to the storm drain system that is not entirely composed of stormwater.

N. Person shall mean any natural person, firm, association, club, organization, corporation, partnership, business trust, company or other entity that is recognized by law as the subject of rights or duties.

O. Pollutant shall mean anything that causes the deterioration of water quality such that it impairs subsequent and/;or competing uses of the water. Pollutants may include but are not limited to paints, oil and other automotive fluids, soil, rock, sand, cellar dirt, dredged material, rubbish, trash, garbage, debris, refuse, waste, thermal waste, sewage, sewage sludge, fecal coliform, fecal streptococcus, enterococcus, biological materials, medical waste, heavy metals, hazardous waste, radioactive substance, solid waste, incinerator residue, chemicals, munitions, fresh concrete, yard waste from commercial landscaping operations, animal waste, materials that result from the process of constructing a building or structure, wrecked or discarded equipment, industrial waste, municipal waste, agricultural waste, nauseous or offensive matter of any kind. "Pollutant" includes both hazardous and nonhazardous pollutants.

P. Porous Pavement shall mean paved surfaces that allow rainwater to infiltrate through the material. Porous pavement can be pervious interlocking concrete paving blocks, concrete grid pavers, perforated brick pavers, and compacted gravel. *Note: The use of porous asphalt pavement and bituminous concrete is discouraged due to the problems*

associated with continued maintenance and functioning of these types of systems, unless long-term maintenance is assumed by the applicant.

Q. Premises shall mean any building, lot, parcel of land, land or portion of land whether improved or unimproved.

R. Rain barrel shall mean a container designed to collect and store rooftop runoff for reuse.

S. Retention Basin shall mean a facility that accepts stormwater runoff and stores it while it slowly discharges from the basin through an outlet control structure. The retention basin stores water on a continuous basis and therefore does not run dry.

T. Storm Drain System shall mean any facility within the municipality by which stormwater may be conveyed to waters of New Jersey. Storm drain system includes but is not limited to any roads with drainage systems, streets, curbs, gutters, catch basins, natural and artificial channels, ditches, aqueducts, storm drains, inlets, detention basins, retention basins, infiltration basins, conduit or other drainage structure.

U. Stormwater Runoff shall mean surface runoff and drainage associated with rainstorm events and snowmelt.

V. Vegetated Swales shall mean drainage swales that slow water velocities and encourage infiltration. Vegetation in the swales is used to reduce velocities and improve water quality through biofiltration of the water.

W. Water Quality Storm shall mean a design storm that is a one-year frequency 24-hour storm using the rainfall distribution recommended for New Jersey by the U.S. Department of Agriculture, Soil Conservation Service, or a storm of 1.25 inches of rainfall in two hours.

Section 3. Responsibility for Administration. This ordinance shall be administered by municipalities that have entered into a Memorandum of Agreement with NJDEP.

Section 4. Regulatory Consistency. This ordinance shall be construed to assure consistency with the requirements of New Jersey laws and acts amendatory thereof or supplementary thereto, applicable implementing regulations, and any existing or future municipal NJPDES Permits and any amendments or revisions thereto or reissuance thereof. This ordinance is not intended to interfere with, abrogate, or annul any other ordinance, rule or regulation, statute, or other provision of law. Where any provision of this ordinance imposes restrictions different from those imposed by any other ordinance, rule or regulation, or other provision of law, whichever provisions are more restrictive or impose higher standards shall control.

Section 5. Severability. If any provision, clause, sentence, paragraph, section, or subsection of this ordinance or the application thereof to any person, establishment, or circumstances shall be held invalid by a court of competent jurisdiction, such order of judgment shall not affect or invalidate the other provisions or application of this ordinance which can be given effect without the invalid provision or application, and to this end, the provisions of this ordinance are hereby declared to be severable.

ARTICLE III

MANAGEMENT AND DISCHARGE CONTROLS

Traditionally, stormwater runoff has been viewed as undesirable and must therefore be removed from the site as quickly as possible to achieve good drainage. This philosophy has resulted in extremely efficient stormwater runoff conveyance systems that do not adequately control runoff

volumes. The goal of this ordinance is to creatively design sites that replicate predevelopment hydrology by expanding rainwater infiltration opportunities that will result in improving stream stability, habitat structure, base flows, and water quality. These methods follow a hierarchy of prevention, infiltration, and detention/retention. Methods may include reducing impervious surfaces, maintaining natural drainage courses, minimizing clearing and grading, dispersing runoff uniformly throughout a site, encouraging sheet flow through vegetated areas, and strategically routing flows to increase travel time. Benefits include decreasing the use of storm drain piping and inlet structures, reducing the size of stormwater ponds, lowering infrastructure and maintenance costs, improving water quality, and increasing base flow yields to receiving waters.

Section 1. <u>Reduction of Pollutants in Stormwater.</u>

A. General. It is a violation of this ordinance to throw, deposit, leave, maintain, keep, or permit to be thrown, deposited, placed, left or maintained, any pollutant in or upon any street, alley, sidewalk, storm drain, inlet, catch basin, conduit or other drainage structures, business place, or upon any public or private plot of land. The only exception being where a pollutant is temporarily placed in an appropriate container with a spill containment system for later collection and removal. It is a violation of this ordinance to cause or permit any dumpster, solid waste bin, or similar container to leak such that any pollutant is discharged into any street, alley, sidewalk, storm drain, inlet, catch basin, conduit or other drainage structures, business place, or upon any public or private plot of land.

B. New Development and Redevelopment. New development or redevelopment projects shall control stormwater runoff so as to prevent any deterioration of water quality that would impair subsequent or competing uses of the water. The *Standards for Soil Erosion and Sediment Control in New Jersey* (adopted July 1999) identifies BMPs that may be implemented to prevent such deterioration, establishes criteria for selecting BMPs appropriate for a particular site, and identifies the manner of implementation. Stormwater management strategies shall follow a hierarchy from prevention, to infiltration, and then detention/retention.

1. **<u>Stormwater Prevention.</u>** Prevention methods shall be employed that minimize site disturbance and mimic predevelopment hydrology by using site designs that retain the natural features of the landscape. All sensitive areas that affect hydrology like streams, riparian buffers, floodplains, wetlands, steep slopes, high-permeability soils, low lying areas, open space, and woodland conservation zones shall be identified in order to preserve the natural hydrologic functions of the site. Riparian areas shall not be disturbed and shall support a buffer protection zone of at least 75 feet. Trout maintenance streams identified by NJDEP must have a buffer protection zone of at least 150 feet. Properties located along drainage ways or watercourses that do not have vegetated buffers must be restored by planting native plant material within a buffer protection zone of at least 75 feet. The Natural Resource Conservation Service offers publications that provide guidance on riparian restoration such as Stream Corridor Restoration: Principles, Processes, and Practices (10/1998). Buffer protection zones shall be identified and protected by conservation easements. Specific hydrologic features that will remain undisturbed shall be mapped and marked in the field by property monuments. Hydrologic features that will be altered shall be identified on the site plan and include an assessment of their environmental impact to the receiving water body.

2. **<u>Stormwater Infiltration.</u>** Once prevention methods have been deployed, infiltration structures shall be the second method of protection when developing the site and shall accompany disturbed areas as a control strategy. Infiltration structures shall be incorporated into the site plan when suitable conditions exist. Suitable conditions include all of the following:

1. Suitable soils include sand, sandy loam and loamy sand, as defined by the U.S. Department of Agriculture,

2. the soil infiltration rate is .50 inches/hour or greater, and

3. the minimum depth to the seasonal groundwater table or bedrock is at least three (3) feet from the bottom of the infiltration structure.

If the above criteria are met, infiltration facilities shall be used with the following land uses and activities: residential streets and rural highways, residential development, institutional development, office developments, non-industrial rooftops, and pervious areas, except golf courses and nurseries.

A. Golf courses and nurseries shall be designed to drain internally where ponds capture irrigation runoff that can then be used for nutrient and water recycling.

B. Infiltration basins shall have an adequate back-up drainage system in the event that the infiltration capacity of the infiltration basin fails.

C. Infiltration basins shall include pre-treatment controls such as vegetative filter strips that prevent suspended solids from reaching the basin.

In addition to large infiltration systems designed for development projects, additional stormwater controls can assist in reducing runoff volumes.

A. Regardless of the above soil criteria, runoff shall be directed to permeable areas, by orienting it away from impermeable areas and towards swales, berms, vegetative filter strips, bioretention areas, gravel beds, sand filters, or french drains; by installing rain-gutters oriented towards permeable areas; by modifying the grade of the property to divert flow to permeable areas and minimize the amount of stormwater runoff leaving the property; and by designing curbs, berms or other structures such that they do not isolate permeable or landscaped areas.

B. Stormwater storage facilities shall be deployed on a lot-by-lot basis for buildings greater than 500 square feet, by using retention structures, dry wells, cisterns, rain barrels, or other structures to store stormwater runoff for reuse or slow release.

Infiltration facilities shall <u>not</u> be used with the following land uses and activities: vehicle salvage yards and recycling facilities, vehicle fueling stations, vehicle service and maintenance facilities, vehicle and equipment cleaning facilities, fleet storage areas (bus, truck, etc.), industrial sites, marinas (service and maintenance), outdoor liquid container storage, outdoor loading/unloading facilities, public works storage areas, facilities that generate or store hazardous materials, commercial container nursery, and other land uses and activities as designated by this municipality. If applicants can demonstrate that pollutants will not contaminate stormwater runoff, then variances may be granted.

3. **<u>Stormwater Reduction Goals and Technical Standards</u>.**

a. <u>No net increase in nonpoint source pollution</u> - Stormwater control systems shall be designed to prevent the degradation of water quality in receiving watercourses from nonpoint source pollution associated with stormwater runoff. NJDEP's Surface Water Quality Standards, NJAC 7:9B, shall be used for this determination.

b. No net increase in sediment loadings - Stormwater control systems shall be designed to reduce to the maximum extent possible, the total suspended solids (TSS) from stormwater runoff for storm events with magnitudes as high as the Water Quality Storm and to retain, as closely as possible, the pre-development hydrologic response of the site and the watershed.

c. No net increase in stormwater runoff rates and stream channel erosion - Stormwater control systems shall be designed so that, to the maximum extent possible, the post-development stormwater runoff rates from the site and at any point in the watershed between the site are no greater than pre-development rates, in order to retain as closely as possible the pre-development hydrologic response of the site and the watershed.

d. No net increase in stormwater runoff volumes - Wherever suitable infiltration, soil permeability, and favorable geological conditions exist, stormwater control systems shall be designed so that stormwater runoff from impervious surfaces is infiltrated into the soil for the first 1.25 inch, 2-hour storm, using the Type III rainfall distribution recommended for New Jersey by the U.S. Soil Conservation Service.

C. Procedures for Measuring Compliance with the No Net Increase Goals of the Ordinance

1. Hydrologic/hydraulic analyses shall be prepared and submitted demonstrating that the post-development stormwater runoff rates do not exceed the standards set forth in this ordinance for the water quality storm and the 2, 10, 25, 50 and 100-year storms. In the absence of a regional stormwater management plan, post -project construction peaks shall be 50 percent of the pre-project construction peak runoff for the two year storm, 75 percent for the 10 year storm, and 80 percent for the 100 year storm as called for in the Residential Site Improvement Standards (5:21-7.5(d)3).

   a. The hydrologic and hydraulic analyses shall generally conform to methods developed by the Natural Resources Conservation Service and published in National Engineering Handbook, Section 4 - Hydrology, Technical Release No. 55 and Technical Release No. 20. Other approved methods may be utilized if pre-approved by the Township engineer.

   b. Standards and procedures for developing hydrographs and calculating peak rates of runoff shall be as shown in the Stormwater and Nonpoint Source Pollution Control Best Management Practices Manual, dated December 1994.

   c. Rainfall - Frequency relationships shall be as shown in Technical Paper No. 40, Rainfall Frequency Atlas of the United States published by the U.S. Weather Bureau.

2. For infiltration facilities proposed to meet the no net increase goals of this ordinance, the results of a subsurface investigation and soil tests demonstrating the suitability of the area's soils and groundwater table for infiltration and treatment of runoff shall be provided.

3. A nonpoint source pollutant loading analysis shall be prepared and submitted, demonstrating that the nonpoint source pollutant and sediment loadings resulting from the proposed land development or construction project do not exceed the standards set forth in this ordinance.

4. In preparing the required analysis it shall be acceptable to utilize the average removal efficiency statistics provided in the Stormwater and Nonpoint Source Pollution Control Best Management Practices Manual, dated December 1994, and any subsequent revisions thereto, prepared by the N.J.D.E.P. and the New Jersey Department of Agriculture.

D. Existing Development. Existing development shall control stormwater runoff so as to prevent any deterioration of water quality that would impair subsequent or competing uses of the water. The municipality shall identify the BMPs that may be implemented to prevent such deterioration and shall identify the manner of implementation.

Section 2. **Illicit Connections/Discharges.** It is a violation of this ordinance to establish, use, maintain, or continue illicit connections to the storm drain system, or to commence or continue any illicit discharges to the storm drain system. This prohibition against illicit connections and discharges is expressly retroactive and applies to connections and discharges made in the past, regardless of whether permissible under the law or practices applicable or prevailing at the time of the connection or discharge.

Section 3. Non-Stormwater Discharges. The discharge of non-stormwater into the storm drain system is a violation of this ordinance except as specified below.

A. The discharge prohibition shall not apply to any discharge regulated under a NJPDES Permit or Waiver issued to the discharger by the State of New Jersey, provided that the discharger is in full compliance with all requirements of the permit or waiver and other applicable laws or regulations.

B. Discharges from the following activities will not be considered a violation of this ordinance when properly managed: water line flushing and other discharges from potable water sources, landscape irrigation and lawn watering, irrigation water, diverted stream flows, rising ground waters, infiltration to separate storm drains, uncontaminated pumped ground water, foundation and footing drains, water from crawl space or basement sump pumps, air conditioning condensation, springs, individual residential car washing, flows from riparian habitats and wetlands, swimming pool discharges or flows from fire fighting. When possible, controlled discharges shall be directed over vegetated areas, such as lawns, before the reaching a street or storm drain.

Section 4. Discharges in violation of Permit.

A. Municipal NJPDES Permit. Any discharge that would result in or contribute to a violation of an existing or future Municipal NJPDES Permit(s) or any amendment or revision thereto or reissuance thereof, either separately considered or when combined with other discharges, is a violation of this ordinance and is prohibited. Liability for any such discharge shall be the responsibility of the person(s) causing or responsible for the discharge, and such persons shall defend, indemnify and hold harmless the municipality in any administrative or judicial enforcement action relating to such discharge.

B. NJPDES Permit for Industrial/Commercial and Construction Activity. Any industrial discharger, discharger associated with construction activity, or other discharger subject to any NJPDES permit issued by the New Jersey Department of Environmental Protection shall comply with all requirements of such permit. Such dischargers shall specifically comply with the following permits: the Industrial Stormwater General Permit, the Construction Activity Stormwater General Permit, and the Dewatering General Permit. Proof of compliance with said NJPDES General Permits may be required in a form acceptable to the New Jersey Department of Environmental Protection, Freehold Soil Conservation District, or this municipality prior to issuance of any grading, building, or occupancy permits.

ARTICLE IV

OPERATION, INSPECTION, MAINTENANCE, REPAIR AND SAFETY

Section 1. Responsibility for Operation, Inspection, Maintenance, Repair, and Safety

A. Responsibility for operation, inspection, maintenance, repair, and safety of stormwater management facilities, including periodic removal and disposal of accumulated particulate material and debris, shall remain with the property owner and all successors in title unless assumed by a governmental agency.

B. Prior to granting approval or as a condition of final subdivision or site plan approval to any project subject to review under this ordinance, the applicant shall develop a stormwater BMP maintenance plan and enter into an agreement with the municipality to ensure the long term/perpetual operation, maintenance, repair, and safety of the stormwater management facility. In cases where property is subdivided and sold separately, a homeowner's association or similar permanent entity, or an individual shall be established as the responsible person absent an agreement by a governmental agency to assume responsibility. It shall be demonstrated to the municipality that any proposed new responsible entity or individual has the capability to perform the required maintenance.

C. In the event that the stormwater management facility becomes a danger to public safety or public health, or if it is in need of maintenance, the municipality shall so 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 a designee. If for reasons of safety there is need for immediate action, the responsible person shall act forthwith to remove the danger. If the responsible person fails or refuses to perform such maintenance and repair, the municipality may immediately proceed to do so and shall be reimbursed for the cost thereof by the responsible person or entity.

Section 2. Inspection, Maintenance and Repair Procedures

A. Inspection and maintenance procedures are required to maintain the intended operation and safe condition of the stormwater management facility by reducing the occurrence of problems and malfunctions. To be effective, inspections and maintenance shall be performed on a regular basis and include such routine procedures as training of staff, periodic inspections, grass cutting and fertilizing, soil aeration, silt and debris removal and disposal, upkeep of moving parts, storm drain vacuuming, control of mosquitoes and other insects, pond maintenance, and review of maintenance and inspection work to identify where the maintenance program could be more effective.

B. Repair procedures are required to correct a problem or malfunction at a stormwater management facility and to restore the facility's intended operation and safe condition. Based upon the severity of the problem, repairs shall be performed on an as-needed or emergency basis and include such procedures as structural repairs, mosquito control, removal of debris, sediment and trash which threaten discharge capacity, erosion repair, snow and ice removal, fence repair, and restoration of vegetation.

ARTICLE V

EFFECTIVE DATE OF ORDINANCE

This ordinance shall take effect 30 days after its adoption.