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City of Elizabeth
Union County, New Jersey

Municipal Stormwater Management Plan

Tier A Municipal Separate Storm Sewer System
Permit Compliance Program

December 2018

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1 Introduction

This Municipal Stormwater Management Plan (MSWMP) documents the strategy for the City of Elizabeth (City) to address stormwater management primarily in new development and redevelopment projects that involve greater than 1 acre of disturbance. The development of this plan is required by N.J.A.C. 7:14A-25 Municipal Stormwater Regulations and the Tier A Municipal Separate Storm Sewer System (MS4) New Jersey Pollutant Discharge Elimination System (NJPDES) General Permit No. NJ01041852. This plan contains all required elements as described in N.J.A.C. 7:8 et seq. Stormwater Management Rules. The plan addresses groundwater recharge, stormwater quantity, and stormwater quality impacts to projects subject to the requirements of N.J.A.C. 7:8 et seq., by incorporating stormwater design and performance standards for new major development, defined as projects that disturb one or more acre of land. These standards are intended to minimize the adverse impact of stormwater runoff on water quality and water quantity and the loss of groundwater recharge that provides baseflow in receiving water bodies. The plan, in conjunction with the Stormwater Pollution Prevention Plan (SPPP), describes long-term operation and maintenance measures for existing and future stormwater facilities.

Most of the City is serviced by a combined sewer system (CSS), which collects and transports sanitary and stormwater flows in the same conduit. The discharge from the City's CSS is regulated under NJPDES Individual Permit No. NJ0108782, issued by the New Jersey Department of Environmental Protection (NJDEP) for Combined Sewer Overflow (CSO) control, with an effective date of July 1, 2015. In accordance with N.J.A.C. 7:14A-24.2(f), all stormwater facilities owned by the municipality that are in combined sewer areas are excluded from this MSWMP. While the City may choose to selectively implement components of the MSWMP throughout the municipality, complete implementation of this MSWMP is only required in those areas of the City serviced by Municipal Separate Storm Sewers (MS4s). Areas of the City serviced by the CSS have been excluded from the MSWMP. Refer to Section 6.9 for additional information on the delineation of combined sewer system and MS4 service areas.

The need for a "build-out" analysis has been determined. A "build out" analysis is needed if the total vacant or agricultural lands within a municipality exceed one square mile (640 acres). The City of Elizabeth covers a land area of approximately 12.3 square miles (7,872 acres), most of which is developed with limited vacant and no agricultural lands. Accordingly, the City does not meet the criterion that requires the completion of a build-out analysis.

The current plan update addresses the 2018 Tier A MS4 Permit renewal action, including the review of existing ordinances, Master Plan elements, and other planning documents for design standards that include low impact development techniques. Applicable changes and modifications to the plan will be addressed in subsequent updates. The plan also includes a mitigation strategy for review and approval of the Elizabeth Planning and Board of Adjustment for implementation when a waiver or exemption of the design and performance standards is required.

2 Regulatory Framework

According to the United States Environmental Protection Agency (EPA), polluted stormwater runoff is a leading cause of impairment to the nearly 40 percent of surveyed U.S. water bodies which do not meet water quality standards. Overland or via storm sewer systems, polluted runoff is discharged, often untreated, directly into local water bodies. When left uncontrolled, this water pollution can result in the destruction of fish, wildlife, and aquatic life habitats; a loss in aesthetic value; and threats to public health due to contaminated food, drinking water supplies, and recreational waterways.

Mandated by Congress under the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) Stormwater Program is a comprehensive two-phased national program for addressing the non-agricultural sources of stormwater discharges, which adversely affect the quality of our nation's waters. The program uses the NPDES permitting mechanism to require the implementation of controls designed to prevent harmful pollutants from being washed by stormwater runoff into local water bodies.

In response to the requirements of the second phase of the EPA's national NPDES Phase II regulations published in December 1999, the State of New Jersey developed the Municipal Stormwater Regulation Program. This program addresses pollutants entering our waters from storm drainage systems operated by local, county, state, interstate, and federal government agencies. These systems are referred to as "municipal separate storm sewer systems" or MS4s and are regulated under the New Jersey Pollutant Discharge Elimination System (NJPDES) Rules (N.J.A.C. 7:14A). The NJDEP created four (4) NJPDES Stormwater General Permits for the various types of public separate storm sewer systems. These general permits include the Tier A Municipal Stormwater General Permit, Tier B Municipal Stormwater General Permit, Public Complex Stormwater General Permit, and the Highway Agency Stormwater General Permit.

For each General Permit, NJDEP has mandated Statewide Basic Requirements (herein referred to as SBRs), which include minimum standards, measurable goals, and implementation schedules. The minimum standards are one or more actions that must be taken to comply with the requirement of the permit. The measurable goals are the mechanism for reporting to the NJDEP the progress that the municipality has made to implement the requirements of the permit and are accomplished primarily through the submittal of an Annual Report and Certification. The implementation schedule sets the deadlines for permit compliance.

All municipalities within the State of New Jersey have been classified as either Tier A or Tier B communities depending on the population density as determined in the most recent United States Census. The City of Elizabeth is regulated under the current NJPDES Stormwater Tier A General Permit NJ0141852 and the NJPDES Authorization to Discharge No. NJG0151530, which were renewed by NJDEP with an effective date of January 1, 2018. As part of the permit, several SBRs are mandated and an associated implementation schedule was established (refer to Appendix A of this plan for a copy of the current Tier A MS4 Permit conditions). To satisfy the permit requirements, each Tier A municipality is required to develop, implement, and enforce a Stormwater Management Program. The applicable SBRs are detailed in the Tier A MS4 Permit and summarized in a corresponding permit matrix, which is also in Appendix A. Each requirement of the Tier A MS4 Permit has a specific implementation schedule based on the effective date of permit authorization. This implementation schedule is summarized in Table 1.

Table 1: Tier A Permit Requirement Implementation Schedule

Requirement	Schedule in Months From EDPA	Anticipated Date
2018		
Public Notice	0	January 1, 2018
Local Public Education Program	0	January 1, 2018
Storm Drain Inlet Labeling Program	0	January 1, 2018
Post Construction Stormwater Management Program	0	January 1, 2018
Municipal Stormwater Management Plan and Ordinance	0	January 1, 2018
Major Development Stormwater Summaries (New)	0	January 1, 2018
Pet Waste, wildlife Feeding, Litter Control, Improper Waste Disposal, Containerized Yard Waste and Private Storm Drain Inlet Retrofitting Ordinance	0	January 1, 2018
Street Sweeping Program	0	January 1, 2018
Storm Drain Inlet Retrofitting	0	January 1, 2018
Inventory of Materials and Machinery / Good Housekeeping SOP's	0	January 1, 2018
Fueling Operations and Vehicle Maintenance SOP's	0	January 1, 2018
Secondary Containment Discharge	0	January 1, 2018
Onsite Equipment and Vehicle Washing	0	January 1, 2018
De - Icing Material/Sand Storage	0	January 1, 2018
Outfall Map	0	January 1, 2018
Illicit Connection Ordinance	0	January 1, 2018
Municipally Owned & Operated Stormwater Facility Maintenance	0	January 1, 2018
Update and post current SPPP on Municipal Website	3	April 1, 2018
Post current Municipal Stormwater Management Plan and Ordinance on Municipal Website	3	April 1, 2018
Municipal Board and Governing Body Members Training	6	July 1, 2018
2019		
Advertise public involvement of Local Public Education activities	12	January 1, 2019
Aggregate Material and Construction Debris Storage	12	January 1, 2019
Street Sweepings/Catch Basin Clean Out/Other Material Storage	12	January 1, 2019
Yard Trimmings and Wood Waste Management BMPs	12	January 1, 2019
Roadside Vegetation Management	12	January 1, 2019
Municipal Employee Training	12	January 1, 2019
Development/Redevelopment Application Reviewer Training	12	January 1, 2019
Submission of Outfall Map to NJDEP/Include in SPPP	12	January 1, 2019
Stream Scouring Program Update	12	January 1, 2019
Stormwater Facility Maintenance – Not Municipally Owned	12	January 1, 2019
TMDL Information Review and Incorporation	12	January 1, 2019
2020		
Electronic Submission of Outfall Map Data Points	24	December 21, 2020
2023		
Illicit Connection Physical Inspection (100% Complete)	60	January 1, 2023
Catch Basin & Storm Inlet Inspection / Cleaning (100% Complete)	60	January 1, 2023

Source: NJDEP Municipal Stormwater Regulation Program – Tier A Municipalities – 2018 Permit Update

3 General Requirements for Stormwater Management Planning

Subchapter 2 of N.J.A.C. 7:8 includes general requirements for municipal and regional stormwater management planning. For municipal stormwater management planning, the requirements are, at a minimum, applicable to management of stormwater related impacts of major developments, defined in this case as new development or redevelopment projects that ultimately disturb one or more acres of land. Accordingly, this stormwater management plan and the stormwater control ordinance that has been adopted by the City are designed in the context of the following goals for major developments:

- reduce flood damage, including damage to life and property;
- minimize, to the extent practical, any increase in stormwater runoff from any new development;
- reduce soil erosion from any development or construction project;
- assure the adequacy of existing and proposed culverts and bridges, and other in-stream structures;
- prevent, to the greatest extent feasible, an increase in nonpoint pollution;
- minimize pollutants in stormwater runoff from new and existing development to restore, enhance, and maintain the chemical, physical, and biological integrity of the waters of the state, to protect public health, to safeguard fish and aquatic life and scenic and ecological values, and to enhance the domestic, municipal, recreational, industrial, and other uses of water; and
- protect public safety through the proper design and operation of stormwater basins;
- maintain groundwater recharge;
- maintain the integrity of stream channels for their biological function, as well as for drainage.

To achieve these goals for new development and redevelopment projects, the adopted stormwater control ordinance (Appendix B) outlines specific stormwater design and performance standards for new development; preventative and corrective maintenance strategies to ensure the long-term effectiveness of stormwater management facilities, and safety standards for stormwater infrastructure to be implemented to protect public safety. The adopted ordinance applies to non-residential properties within the MS4 portion of the City and aspects of residential major development that are not pre-empted by the Residential Site Improvement Standards (RSIS) at N.J.A.C. 5:21. The City is enforcing the Residential Site Improvement Standards, which carries the same requirements as the adopted ordinance, but for residential development projects. Furthermore, the above goals will be considered should additional ordinances related to stormwater-related water quality and water quantity impacts of existing land uses be evaluated by the City.

4 Long Term Goals of the MSWMP

As discussed in Section 2, the municipal stormwater permitting program was founded in response to requirements in the Federal Clean Water Act (CWA). For surface waters of the State, the CWA goals are in part expressed in the policies and standards included in N.J.A.C. 7:9B Surface Water Quality Standards. These standards include requirements for maintenance and protection of the designated uses of surface waters of the State and where economically feasible, are attained wherever these uses are not precluded by natural conditions. Where the instream water quality parameters exceed the applicable state water quality criteria, the water is considered impaired, and the NJDEP may be required to develop a Total Maximum Daily Load (TMDL) for those pollutants to that waterway. When the non-point source pollution component of the TMDL is considered to be contributing to exceedance of water quality parameters, action may be necessary by the City regarding addressing stormwater related impacts of existing land uses.

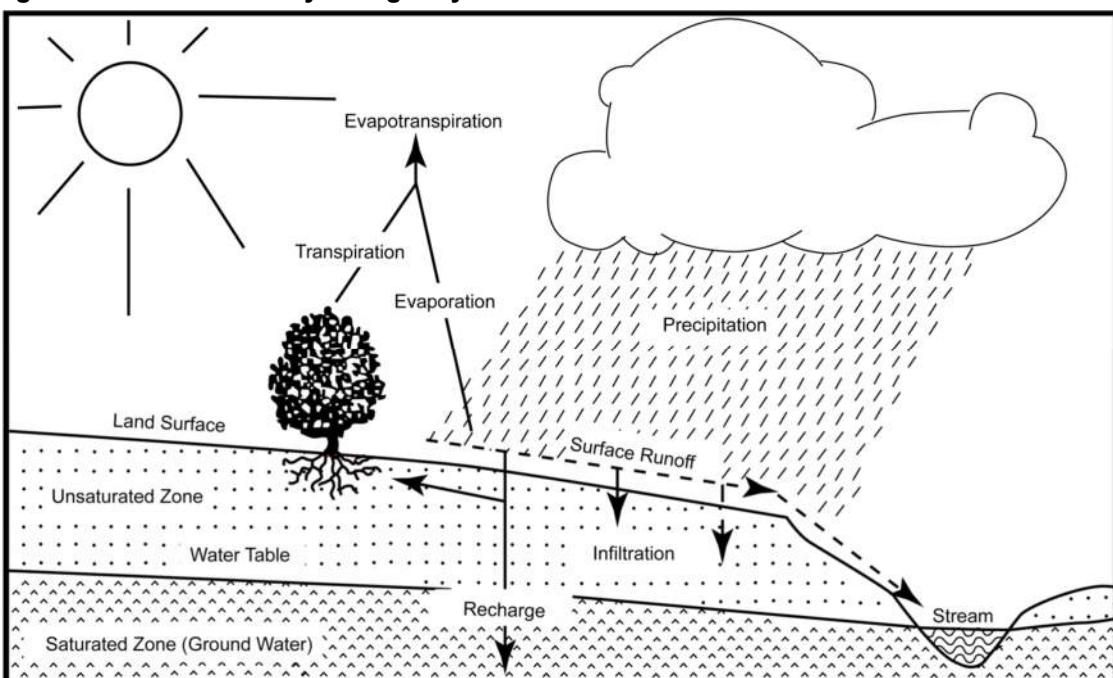
A TMDL is the amount of a pollutant that can be accepted by a waterbody without causing an exceedance of water quality standards or interfering with the ability to use a waterbody for one or more of its designated uses. The allowable load is allocated to the various sources of the pollutant, such as stormwater and wastewater discharges, which require an NJPDES permit to discharge, and nonpoint source, which includes stormwater runoff from residential areas, along with a margin of safety. Provisions may also be made for future sources in the form of reserve capacity. An implementation plan is developed to identify how the various sources will be reduced to the designated allocations. Implementation strategies may, in general, include: improved stormwater treatment; adoption of ordinances; retrofitting stormwater systems, and other Best Management Practices (BMPs).

The New Jersey Integrated Water Quality Monitoring and Assessment Report (305(b) and 303(d)) (Integrated List) is required by the federal Clean Water Act to be prepared biennially and is a valuable source of water quality information. This combined report (www.nj.gov/dep/dwq/msrp-tmdl-rh.htm) presents the extent to which New Jersey waters are attaining water quality standards and identifies waters that are impaired.

5 Stormwater Discussion

The NJDEP has developed a wealth of stormwater management information, both as background for the development of the stormwater management rules (N.J.A.C. 7:8 et seq.), and as support for the implementation of the municipal stormwater permitting program. This information has been made readily available on the NJDEP stormwater website at www.njstormwater.org. The full text of the NJ Stormwater BMP Manual can be found on that website. Of particular relevance to this section is Chapter 1 of the BMP Manual entitled “Impacts of Development on Runoff”, from which the following information was excerpted.

Figure 1: Schematic of Hydrologic Cycle



Source: New Jersey Geological Survey Report GSR-32

A schematic of the typical hydrologic cycle is shown in Figure 1. Land development can dramatically alter the hydrologic cycle of a site and, ultimately, an entire watershed. Prior to development, native vegetation can either directly intercept precipitation or draw that portion that has infiltrated into the ground and return it to the atmosphere through evapotranspiration. Development can remove this beneficial vegetation and replace it with lawn or impervious cover, reducing the site's evapotranspiration and infiltration rates. Clearing and grading a site can remove depressions that store rainfall. Construction activities may also compact the soil and diminish its infiltration ability, resulting in increased volumes and rates of stormwater runoff from the site.

Impervious areas that are connected to each other through gutters, channels, and storm sewers can transport runoff more quickly than natural areas. This shortening of the transport or travel time quickens the rainfall-runoff response of the drainage area, causing flow in downstream waterways to peak faster and higher than natural conditions. These increases can create new and aggravate existing downstream flooding and erosion problems and increase the quantity of

sediment in the channel. Filtration of runoff and removal of pollutants by surface and channel vegetation is eliminated by storm sewers that discharge runoff directly into a stream. Increases in impervious area can also decrease opportunities for infiltration, which, in turn, reduces stream base flow and groundwater recharge. Reduced base flows and increased peak flows produce greater fluctuations between normal and storm flow rates, which can increase channel erosion. Reduced base flows can also negatively impact the hydrology of adjacent wetlands and the health of biological communities that depend on base flows. Finally, erosion and sedimentation can destroy habitat from which some species cannot adapt.

In addition to increases in runoff peaks, volumes, and loss of groundwater recharge, land development often results in the accumulation of pollutants on the land surface that runoff can mobilize and transport to streams. New impervious surfaces and cleared areas created by development can accumulate a variety of pollutants from the atmosphere, fertilizers, animal wastes, and leakage and wear from vehicles. Pollutants can include metals, suspended solids, hydrocarbons, pathogens, and nutrients.

6 Municipal Background

6.1 General

The City of Elizabeth, located within Union County, New Jersey, covers a total area of approximately 13.464 square miles, including 12.319 square miles of land and 1.145 square miles of water. The population of the City from the 2010 U.S. Census is 124,969 people. For 2017, the Census Bureau's Population Estimates Program calculated a population of 130,215. The City is bounded by the City of Newark (in Essex County, NJ) to the north, by the Townships of Hillside and Union to the northwest, by the Boroughs of Roselle Park and Roselle to the west, and by the City of Linden to the southwest. Bayonne (in Hudson County, NJ) is located to the east across Newark Bay and the borough of Staten Island (New York) is located across the Arthur Kill to the south. Appendix C, Figure 1 depicts the City boundary on the U.S. Geological Survey Topographic map.

6.2 Land Use and Population

The City is a densely developed urban area consisting primarily of industrial development in the eastern portion and residential, commercial, and institutional development in the central and western portions of the City. The central and western sections are divided by the Elizabeth River and predominantly include a mix of urban residences, commerce, and light industry.

The low lying eastern section of the City is occupied by Port Elizabeth, Newark Liberty International Airport and other industrial development primarily related to the port activities.

Based on US Census data, the City is constantly growing. Table 2 shows the population growth between 1990 and 2010 censuses. US Census Bureau official estimates for 2017 show another increase of 5,156 persons, from the 2010 enumeration, an increase of 4.2%. Compared to other cities in New Jersey, the City ranks as the fourth largest by population and the largest in Union County.

Table 2: Population Trends

Unit	Census Year			% Change in 2010
	1990	2000	2010	
City of Elizabeth	110,002	120,568	124,969	3.7%
Union County	493,819	522,541	536,499	2.7%
New Jersey	7,730,188	8,414,350	8,899,339	5.8%

Source: U.S. Census Bureau, Census data for years 1990, 2000, and 2010

The 2010 Census indicates that there were 45,516 housing units in the City. Over 44 percent of the housing units were constructed prior to 1940. Residential housing units are predominately multi-family houses or apartments and residential areas are primarily high density, multifamily houses. Appendix C, Figure 2 illustrates the land use cover for the City of Elizabeth.

6.3 Topography

Topography in the City varies from the tidal elevations of the Elizabeth River to the high point along the northeast boundary, which is at an Elevation of 90 feet above sea level. The low-lying partially reclaimed tidal marsh areas along the eastern boundary are susceptible to tidal-flooding

during periods of intense rainfall. Appendix C, Figure 3 indicates the elevation differences across City of Elizabeth.

The City can be divided into three main topographic zones. The southern zone slopes to the Arthur Kill and Newark Bay, with some drainage to the Elizabeth River, and is generally bounded on the north by the New Jersey Turnpike. The ground varies in elevation from 30 feet above sea level at the Turnpike to sea level at the waterfront.

The eastern zone is separated from the western zone by a ridge extending from the New Jersey Turnpike northward along Elizabeth Avenue to Seventh Street and then northerly to the Hillside-Newark border and it drains through the conveyance channels of the Peripheral and Great Ditches to Newark Bay. The ridge ranges in elevations from 25 feet above sea level at Sixth Street to over 45 feet at the Conrail railroad. From this ridge, the ground slopes at about 0.5% to the east for about 1 mile to the low-lying areas developed for the Newark Liberty International Airport, the Port Elizabeth Marine Terminal, and the Jersey Gardens commercial zone.

The western zone includes the remainder of the City and is drained by the Elizabeth River which splits the zone from north to south. Ground surfaces are below Elevation 50 in all but the northwestern corner of the City, where ground surfaces approach Elevation 90.

The low-lying areas adjacent to the Elizabeth River are protected by the Elizabeth River Flood Control Project (ERFCP). North of US Route 1-9, the Elizabeth River rises slightly, but drainage of tributary areas is complicated by the presence of transverse ridges. There are 2 such cross ridges on the eastern slope and 4 on the western. The ridges generally increase in elevation from south to north and from east to west, reaching an elevation of about 90 feet above sea level in the northwestern corner of the City. The cross valleys do not drain uniformly to the Elizabeth River, but contain certain low points. Low points occur in other areas, but they are most frequent in the northern part of the western drainage zone.

6.4 Waterways

The City has three major waterways of interest, the Arthur Kill, the Newark Bay, and Elizabeth River. Arthur Kill and Newark Bay are located to the east of City. the Elizabeth River, which divides the City east to west and terminates at the Arthur Kill. There are 2 man-made stormwater drainage ditches, the Peripheral Ditch and the Great Ditch, that convey stormwater from the eastern areas of the City to Newark Bay. These drainage ditches also serve to convey discharges from 3 CSO outfall points in the City to Newark Bay. Figure 4 of Appendix C illustrates the waterways that surround the City.

6.5 Watershed

The City is situated along the east and west banks of the lower reach of the Elizabeth River in the Raritan Water Region. The river and its tributaries within the City boundaries flow into the Arthur Kill, which is designated as Watershed Management Area (WMA) 7. Smaller sub-watersheds within this WMA are delineated by a fourteen-digit hydrologic unit code, abbreviated as HUC14 code. There are four sub-watershed areas (HUC14) associated with the city area. Table 3 includes a breakdown of city drainage areas within each of the HUC14's.

Table 3: HUC14 Areas

HUC14 ID	Watershed Name	% of City Area
02030104020030	Elizabeth R (below Elizabeth CORP BDY)	33%
02030104010010	Newark Airport Peripheral Ditch	25%
02030104010020	Newark Bay / Kill Van Kull (74d 07m 30s)	39%
02030104030010	Morses Creek / Piles Creek	3%

Source: NJDEP Geographic Information Systems datasets

6.6 Stream Water Quality

NJDEP has established an Ambient Biomonitoring Network (AMNET) to document the health of the waterways of the state. There are over 800 AMNET sites throughout the state of New Jersey. These sites are sampled for benthic macroinvertebrates by NJDEP on a five-year cycle. The waterways are scored based on the data to generate the New Jersey Impairment Score (NJIS) and categorized as severely impaired, moderately impaired, and non-impaired.

Federal Clean Water Act (CWA) requires a biennial assessment report of water quality for New Jersey waterways. NJDEP publishes this information in "New Jersey Integrated Water Quality Monitoring and Assessment Report". This report presents the extent to which New Jersey primary waters are attaining water quality standard and identifies waters that are impaired. The Sublist 5 of the Integrated List constitutes the list of waters classified as impaired or threatened by pollutants, for which one or more TMDL may be needed. Table 4 summarizes information on the City waterways from the Sublist 5.

Table 4: Waterways on CWA 303(d) Sublist 5

Waterway Name	Parameter	Priority Rating
Elizabeth River - Below Corporate Boundary	Arsenic, Benzo(a)pyrene(PAHs) Chlordane DDT & its metabolites Dioxin (including 2,3,7,8-TCDD) Heptachlor Epoxide Hexachlorobenzene Lead Mercury PCB	Low
Elizabeth River - Below Corporate Boundary	pH Phosphorous (Total) Total Dissolved Solids	Medium
Newark Airport Peripheral Ditch	Benzo(a)pyrene (PAHs) Chlordane DDT & its metabolites Dieldrin Dioxin (including 2,3,7,8-TCDD) Heptachlor epoxide Hexachlorobenzene Mercury PCB	Low
Newark Airport Peripheral Ditch	Phosphorous	Medium

Source: New Jersey Integrated Water Quality Monitoring and Assessment Report 2014

Additional pollution control measures are necessary only if required by a TMDL, regional stormwater management plan, other elements of an adopted area-wide Water Quality Management Plan or the adopted Statewide Water Quality Management Plan. NJDEP has not

established TMDL limit for pollutants listed in Table 4 for waterways in city limits and City is not part of any current regional stormwater management plan.

The TMDLs for fecal coliforms to address 48 streams in the Raritan basin were adopted by NJDEP and EPA in September of 2003. The TMDL report can be accessed via web link www.nj.gov/dep/dwq/msrp-tmdl-rh.htm. The TMDL report lists one segment of Elizabeth river as impaired for fecal coliforms, that is within the city boundary, see Table 5 below. Additional best management practices to control fecal coliforms from the contributing area to this segment of the river will be required. Appendix C, Figure 5 shows the area draining to the impaired segment of the river.

Table 5: Impaired Stream Segments for Fecal Coliforms

Stream Segment ID	Watershed Description
1393350	Elizabeth River watershed upstream of the head of tide; located near Elizabeth

Source: www.nj.gov/dep/dwq/msrp-tmdl-rh.htm, accessed December 2018

A review of the NJDEP GIS layer for Surface Water Quality Standards(SWQS) indicated that impaired segment of Elizabeth river has a classification of FW2-NT, indicating fresh water classification that does not support trout production or maintenance. The New Jersey Surface Water Quality Standards (N.J.A.C. 7:9B-1.14(c)) for freshwater fecal coliforms has the following criteria: "Fecal coliform levels shall not exceed a geometric average of 200 CFU/100 ml nor should more than 10 percent of the total samples taken during any 30-day period exceed 400 CFU/100 ml in FW2 waters".

The TMDL report identifies the percent reduction necessary for each stream segment to meet the fecal coliform SWQS. Segments on Elizabeth river requires a 98% reduction. Most of the area tributary to this segment of Elizabeth river is served by the combined sewer system. Best management practices to reduce fecal coliforms from remaining areas will be implemented to the maximum extent practicable.

6.7 Well Head Protection Areas

A review of the NJ State GIS indicates that there are wellhead protection areas within the City boundary in the southwest corner of the municipality. As illustrated in Appendix C, Figure 6, there are several public community water supply wells located within Roselle Borough, just south of the City. The "12 Year Time of Travel Protection Area" for the Roselle community water supply wells crosses the southwestern boundary of the City and is partially in a MS4 service area that discharges to the Elizabeth River.

6.8 Groundwater Recharge

Groundwater recharge areas have been delineated within the City's highly urbanized boundaries and are primarily limited to the western portion of the City. This western section facilitates approximately 7 to 9 inches per year of groundwater recharge with small pockets of 1 to 6 inches per year present. As illustrated in Appendix C, Figure 7, the City predominantly has limited groundwater recharge potential with a large extent of the City either exhibiting no recharge ability (0 in/yr) or Hydric Soil conditions. Additionally, the City is located within a Metropolitan Planning Area (PA1) and N.J.A.C. 7:8-5.4(a) ii states that groundwater recharge requirements do not apply to projects within urban redevelopment areas. The city's landuse boards will consider stormwater management regulations requirements for groundwater recharge on a case-by-case basis, given the potential site constraints such as depth to groundwater, underground contamination, and proximity to existing basements. In those areas

that can accommodate groundwater recharge, the landuse board's may consider requiring the developers to comply with the recharge regulations.

6.9 Existing Infrastructure and Proposed Improvements

As previously indicated, the City of Elizabeth is served mostly by a combined sewer system which conveys both sanitary and storm flows through the same conduit. Therefore, a majority of stormwater runoff within the City is conveyed through the combined system. Combined flows from the eastern portion of the City discharge the flow to the Arthur Kill or Newark Bay and combined flows from the western and central portions of the City discharge to the Elizabeth River. Refer to Appendix D, Map A for an overall City sewer system map. The City separate stormwater collection system follows a similar pattern with a majority of the MS4 areas discharging to Newark Bay and the Elizabeth River. There are currently thirteen (13) MS4 areas within the City. The discharge points associated with each of these areas are being evaluated in conjunction with the Stormwater Pollution Prevention Plan (SPPP). Appendix C, Figure 8 illustrates the location of the separate storm sewer system catchment areas within the City.

Issues with stormwater quantity within City have been divided into two categories; flooding as the result of infrastructure problems and flooding as the result of proximity to delineated flood plains.

The following areas of the City have chronic flooding problems as the result of the infrastructure issues. It is important to note that the City is currently addressing these areas and is at various stages of design, construction and operation of each of the projects described below:

- Elizabeth River Flood Control Project
- South Street Flood Control Project
- Trumbull Street Flood Control Project
- Progress Street Flood Control Project
- Restoration and Flood Mitigation for Mattano Park, Trenton Avenue, and Kapkowski Road Pump Stations

FEMA Flood Hazard Area Map is provided in Figure 9 of Appendix C, which indicates the location of floodplains within the City. The United States Army Corps of Engineers constructed flood levees along the Elizabeth River in the late 1970s from the Arthur Kill to Spring Street in the southeastern corner of the City. These structures are indicated on the Flood Maps.

6.10 Soils and Underlying Geology

In general, there are three (3) major soil types within the City. These include glacial ground moraine, composed primarily of sand and silt with a mixture of clay, gravel, cobbles, and boulders. The depth to bedrock in these areas ranges from 10 feet to more than 90 feet with an average of 20-30 feet to bedrock. Recent alluvium, tidal marsh, and filled land make up the second soil group within the City. These soils are predominately located in the northeastern portion of the City with deposits of alluvium found along the Elizabeth River. The third soil group consisting of filled or made land overlying compressed tidal marsh is located primarily along the eastern coast. The depth to bedrock in these areas varies considerably with depths greater than 100 feet common in areas tidal marsh and filled land. Soils and underlying geology is shown in Figure 10 of Appendix C,

7 Design and Performance Standards

The City of Elizabeth has adopted a Municipal Stormwater Management Ordinance that is based on the NJDEP model ordinance (See Appendix B). As part of the adoption process, the City also adopted the design and performance standards for stormwater management measures as presented in N.J.A.C. 7:8-5 to minimize the adverse impact of stormwater runoff on water quality and water quantity in receiving water bodies. The applicability of the Municipal Stormwater Management Ordinance is limited to non-residential developments that ultimately involve one or more acre of disturbance as defined by N.J.A.C. 7:8 et. seq. and aspects of major residential developments that are not pre-empted by the RSIS at N.J.A.C. 5:21.

The design and performance standards in the ordinance include language for the maintenance of stormwater management measures consistent with the stormwater management rules at N.J.A.C. 7:8-5.8, Maintenance Requirements, and language for safety standards consistent with N.J.A.C. 7:8-6, Safety Standards for Stormwater Management Basins. The adopted ordinance and adopted MSWMP have been submitted to Union County for review and were approved. During construction, City representatives observe the construction of the projects to ensure that the stormwater management measures are constructed per approved plans and function as designed.

New Jersey Pollution Discharge Elimination System (NJPDES) Stormwater Regulations Program Rules (N.J.A.C. 7:14A) are intended to address and reduce pollutants associated with existing stormwater runoff. The City is an authorized discharger under the Tier A MS4 General Permit Program. The City has developed a Stormwater Pollution Prevention Plan (SPPP) to implement the statewide basic requirements as stipulated under Tier A MS4 Permit. The City has adopted ordinances for pet waste, wildlife feeding, litter control, improper disposal of waste, containerized yard waste, private storm inlet retrofitting, illicit connections and refuse/dumpster covers to reduce stormwater pollution at the source.

8 Plan Consistency

8.1 Regional Stormwater Management Plans

The City is not currently within an adopted Regional Stormwater Management Planning Area (RSWMP). If any RSWMPs are developed in the future, this Municipal Stormwater Management Plan will be updated, as appropriate, to be consistent with those programs.

8.2 Total Maximum Daily Loads

Elizabeth River above Broad Street has an established TMDL for fecal coliform. The potential sources of contamination include wildlife (geese), pet waste, combined sewer overflows, and improper disposal of waste. The City has adopted ordinances to reduce these pollutants at the source. This Municipal Stormwater Management Plan is consistent with the TMDL. The SPPP will be continually updated to prioritize stormwater maintenance activities and to identify and develop strategies to address specific sources of pollutants contributing to discharges authorized under MS4 permit.

8.3 Residential Site Improvement Standards (RSIS)

The Municipal Stormwater Management Plan is consistent with the Residential Site Improvement Standards (RSIS) at N.J.A.C. 5:21. The municipality will utilize the most current update of the RSIS in the stormwater management review of residential applications. This Municipal Stormwater Management Plan will be updated to be consistent with any future updates to the RSIS.

8.4 Soil Conservation

The City's Municipal Stormwater Management Ordinance requires applicable new development and redevelopment plans in MS4 areas to comply with New Jersey's Soil Erosion and Sediment Control Standards. During construction, City representatives observe on-site soil erosion and sediment control measures and report any inconsistencies to the local Soil Conservation District.

9 Nonstructural Stormwater Management Strategies

As required by State regulations, the City reviews its municipal Master Plan, official map and ordinances to incorporate appropriate nonstructural stormwater management strategies. As necessary and appropriate, the City adopts or revises land use and zoning ordinances to incorporate updated NJDEP requirements for nonstructural stormwater management strategies.

The City has revised Section 17.36.110.D of the Land Development Ordinance to increase the amount of open space for proposed multi-family residential and commercial developments as follows:

D. Open space shall be provided as follows:

1. Open space shall be provided for all projects containing three (3) or more dwelling units. Mixed use projects shall provide open space for the residential component.
2. Open space for all residential units except one- and two-family dwellings shall be two hundred (200) square feet per unit. The open space shall have a cap of four thousand (4,000) square feet for buildings over four (4) stories.
3. Open space shall be limited to the following:
 - a. Exterior yards, courts and recreational areas, not devoted to auto usage with a minimum dimension of twenty (20) feet in width and minimum area of five hundred (500) square feet.
 - b. Common areas including balconies and porches with a minimum depth of twenty (20) feet.
 - c. Interior multi-family communal spaces, exclusive of passageways, with a minimum dimension of ten (10) feet.
4. A minimum of seventy-five (75) percent of the total required open space is required to be exterior lawn and/or court yard areas suitable for recreational use.

10 Land Use/Build-Out Analysis

As previously noted, a build-out analysis is required where the municipality has more than 1 square mile (640 acres) of undeveloped land. As Appendix C, Figure 2 indicates, the vast majority of the City is highly urbanized with High Density Residential, Commercial and Industrial land uses. The only remaining open spaces are dedicated public parks. Accordingly, the City of Elizabeth does not meet the criteria established by the NJDEP and accordingly does not have to complete a build-out analysis.

11 Mitigation Plan

The City may grant a waiver for any or all of the design and performance standards for projects reviewed under the Municipal Land Use Law (MLUL), or for projects undertaken by the City that are not subject to the MLUL. Any waiver granted by the City for its own projects must include a report for the project addressing the requirements for mitigation projects. A summary of each waiver granted must be included in the Annual Report and Certification prepared by the City as part of the Tier A MS4 Permit compliance. Waivers for linear development projects must be evaluated using the requirements under N.J.A.C. 8:8-5.2(e), which includes the requirements to address mitigation for the performance standard that compliance was not obtained. The issuance of a permit by the NJDEP that includes a stormwater management review and an associated waiver under the provisions of the specific permit does not automatically waive the requirements for mitigation to be performed under the City's review. The City may choose to require mitigation for projects receiving a waiver from the Department.

The mitigation project must provide additional groundwater recharge benefits or protection from stormwater runoff quality and quantity from previously developed property that does not currently meet the design and performance standards outlined in the Municipal Stormwater Management Plan. The applicant must ensure that the long-term maintenance of the project, including the maintenance requirements under Chapters 8 and 9 of the NJDEP Stormwater BMP Manual. If a suitable mitigation site cannot be located in the same drainage area as the proposed development, the mitigation project may provide mitigation that is not equivalent to the impacts for which the waiver or exemption is sought, but that addresses the same issue. For example, if a waiver is given because the 80 percent total suspended solids (TSS) removal requirement (50 percent for redevelopment areas) is not met; the selected project may address water quality impacts due to a fecal impairment.

11.1 Specific Mitigation Projects

The different performance standards require different ways to look at mitigation projects for each performance standard identified. Stormwater quality is intended to prevent an increase in pollutants from entering the waterbodies. Stormwater quantity focuses on the impacts of increased runoff on flooding, and groundwater recharge maintains the water that feeds baseflow in streams and aquifers. Mitigation projects can be retrofits of an existing system, such as preexisting development where stormwater management was not sufficiently addressed based on the new performance standards. They may also be new projects designed to provide control of stormwater runoff where none previously existed.

Sensitive receptors are areas with specific sensitivity to impacts of stormwater, whether through changes to stormwater runoff quality, stormwater runoff quantity, and groundwater recharge. Examples of sensitive receptors are trout associated waters, threatened and endangered species, impaired waterways, inadequate culverts, property subject to flooding, Category One waters, and aquifers. The sensitive receptor that is affected by the performance standard for which a waiver is sought should be identified and considered when selecting the mitigation project.

11.1.1 Mitigation Projects for Stormwater Quality

Stormwater quality is regulated for the purpose of minimizing/preventing non-point pollution from reaching a waterway. Mitigation for stormwater quality can be achieved by directing the runoff

from the water quality design storm into a natural area where it can be filtered and/or infiltrated into the ground; by constructing a new BMP to intercept previously untreated runoff; or by retrofitting existing stormwater systems that previously did not provide sufficiently for water quality.

Some examples of areas or features sensitive to water quality changes include:

- Trout associated waters - chemical pollutants and temperature effects can diminish viability of trout populations;
- Lakes, ponds or other impoundments - these waterways are sensitive to the addition of nutrients;
- Threatened and endangered species or their habitats - sensitive to both water quality and quantity changes;
- Drinking water supplies - adverse effects on quality can increase the cost of treatment or threaten the use of drinking water supplies;
- Category One waters - an issue for those streams where quality was basis of the designation; and
- Waterways with water quality or use impairment – non-point pollution. may result in further deterioration of water quality.

11.1.2 Mitigation Projects for Stormwater Quantity

Increased stormwater runoff volume from new development can cause damage to property and habitat due to increased flood elevations and/or flood velocities. Mitigation project areas can include locations that will provide for additional storage and slower release of excess stormwater. Mitigation of stormwater quantity can be accomplished by increasing existing ponding areas along a waterway, creating new BMPs to control previously uncontrolled runoff, or by retrofitting existing stormwater structures to decrease the volume and peak of stormwater runoff.

In areas adjacent to a stream, a hydrologic and hydraulic analysis can be performed to determine if increasing storage capacity would offset the additional volume of runoff from sites upstream of the storage area. Areas that may provide storage are lakes, ponds, parkland, or other land upstream of constrictions such as inadequately sized bridges or culverts. Increases in the storage capacity of an existing structure, such as upstream of a bridge or culvert, can also be considered provided that it is demonstrated that such an increase does not exacerbate flooding at other areas.

Some examples of areas or features sensitive to changes with regard to flooding include:

- Culverts and bridges - these features may constrict flow and cause flooding or may provide storage that, if lost, would cause downstream flooding problems;
- Property subject to flooding - areas of concern include those where there is historical evidence of recurrent problems, particularly if exacerbated over time because of increasing impervious surface in the contributing watershed;
- Eroding/widening stream banks or channels - particularly if due to changes in hydrology due to the effects of development;
- Category One waters - flooding affects could alter habitat that was the basis for the designation; and
- Wetlands - changes in hydrology can affect viability of wetlands, either by increasing or decreasing volumes and velocities of water discharging to the wetlands.

11.1.3 Mitigation Projects for Groundwater Recharge

Groundwater recharge is regulated to maintain the groundwater hydrology of the project area. Recharge is the portion of the infiltrated stormwater runoff that makes it below the root mass and becomes groundwater. There are two (2) options to demonstrate compliance with the groundwater recharge standards. The first is that 100 percent of the site's average annual pre-developed groundwater recharge volume be maintained after development, and the second is that 100 percent of the difference between the sites pre-and post-development 2-year runoff volumes be infiltrated. To mitigate for groundwater recharge, either computational method can be utilized to determine the deficit that needs to be provided by the mitigation project.

Some examples of areas or features sensitive to groundwater recharge changes include:

- Springs, seeps, wetlands, white cedar swamps – these features are sensitive to changes in ground water level/hydrology;
- Threatened and endangered species or their habitats - some are sensitive to changes in ambient groundwater levels;
- Streams with low base flow or passing flow requirements – these features may be particularly sensitive to changes in hydrology;
- Aquifer recharge zones - loss of recharge in these areas can adversely affect groundwater supply; and
- Category One waters - loss of base flow may affect the basis for the designation.

11.2 Selection of Mitigation Projects

Mitigation projects shall be proposed by the applicant. The applicant shall locate an appropriate project and site for the mitigation of the performance standard for which they are requesting a waiver. The applicant shall look at existing problems related to stormwater runoff quality, stormwater runoff quantity, and groundwater recharge to assist in the identification of appropriate projects. The process of selecting mitigation projects must incorporate the following requirements:

- The mitigation project must be within the same drainage area that would contribute to the sensitive receptor impacted by, the project. If there is no specific sensitive receptor impacted, then the location of the mitigation project can be located anywhere within the City, preferably at a location that would provide the most benefit relative to an existing stormwater problem in the same category (i.e. quality, quantity, or recharge).
- Legal authorization must be obtained to construct the project at the location selected. This includes the maintenance and any access needs for the project in the future.
- The project should be close to the location of the original project, and if possible, be located upstream at a similar distance from the identified sensitive receptor. This distance should not be based on actual location, but on a similar hydraulic distance to the sensitive receptor. For example, if the project for which a waiver is obtained discharges to a tributary, but the closest location of the application project discharges to the main branch, it may be more beneficial to identify a location for mitigation which discharges to the same tributary.
- It is preferable to have one location that addresses any and all performance standards waived rather than one location for each performance standard.
- The location must demonstrate no adverse impacts to other properties.
- Mitigation projects that address stormwater runoff quantity can choose to provide storage for proposed increases in runoff volume, as opposed to a direct peak flow reduction.

- Mitigation projects that address stormwater runoff quality can choose to address another pollutant, other than TSS, which has been demonstrated to be of particular concern such as streams listed as an impaired waterbody on the Integrated List. Care should be taken to ensure that waivers from the TSS requirement do not result in impairment of an existing unimpaired area.

11.3 Requirements for Mitigation Projects

The following requirements for mitigation projects must be included in the project submission.

Impact from noncompliance:

Provide a table to show the required values, and the values provided in the applicant's project, the corresponding deficit(s) from the performance standard(s) and include an alternatives analysis demonstrating that on-site compliance was maximized.

Narrative and supporting information regarding the need for the waiver:

The waiver cannot be due to a condition created by the applicant. If the applicant can provide compliance with the Stormwater Management Rules through a reduction in the scope of the project, the applicant has created the condition and a waiver cannot be issued.

A discussion and supporting information of the site conditions that would not allow the construction of a stormwater management facility to provide compliance with the performance standards, and/or if the denial of the application would impose an extraordinary hardship on the applicant brought about by circumstances particular to the subject property. Site conditions to be considered are soil type, the presence of karst geology, acid soils, a high groundwater table, unique conditions that would create an unsafe design, as well as conditions that may provide a detrimental impact to public health, welfare and safety.

Demonstrate that the grant of the requested waiver will not result in an adverse impact that will not be compensated for by off-site mitigation.

Sensitive Receptor

Identify the sensitive receptor to the performance standard from which a waiver is sought. Demonstrate that the mitigation site contributes to the same sensitive receptor.

Design of Mitigation Project

Provide the design of the mitigation project. This includes, but is not limited to, drawings, calculations, and other information needed to evaluate the mitigation project.

Responsible Party

List the party or parties responsible for the construction and the maintenance of the mitigation project. Documentation must be provided to demonstrate that the responsible party is aware of, has authority to perform, and accepts the responsibility for the construction and maintenance of the mitigation project. Under no circumstances shall the responsible party be an individual single-family homeowner.

Maintenance

Include a maintenance plan that addresses the maintenance criteria at N.J.A.C. 7:8-5.8 as part of the mitigation plan. In addition, if the maintenance responsibility is being transferred to the City (if such an arrangement is approved by the City), or other entity, the entity responsible for the cost of the maintenance must be identified. The City may provide the option for the applicant

to convey the mitigation project to the City (if such an arrangement is approved by the City), if the applicant provides the cost of maintenance in perpetuity.

Permits

Obtain any and all local, State or other applicable permits for the mitigation measure or project. These must be obtained prior to the City approval of the project for which mitigation is being provided.

Construction

Demonstrate that the construction of the mitigation project coincides with the construction of the proposed application project. A certificate of occupancy or final approval by the City for the application project cannot be issued until the mitigation project or measure receives final approval by the City and/or other agencies requiring approval. Any mitigation project proposed by the City to offset the stormwater impacts of the City's own projects must be completed within 6 months of the completion of the City project in order to remain in compliance with the NJPDES General Permit.

11.4 Funding Municipal Projects

The City may allow an applicant to fund analyses to identify potential mitigation projects that could be used to address deficits in complying with each of the performance standards. However, this funding option shall only be allowed where the project requesting the waiver will have no measurable impact with respect to flooding, erosion, water quality degradation, etc. and will have no immediate impact to a sensitive receptor. The funding option may also be used in situations where the size of an individual project requesting a waiver is small, or the degree of deficit in complying with the design and performance standard(s) is small. Also, if the project requiring mitigation is for one individual single-family home, a financial contribution may be a preferred option. In these situations, it may not be practical to implement a commensurate mitigation project and may be preferable to accumulate funds to implement an analysis and construction of a larger mitigation project. In such cases, the receipt of the financial contribution shall satisfy the mitigation obligation for the applicant. This funding option will only be used in limited circumstances after all other mitigation options have been considered. The City becomes responsible to ensure that the mitigation occurs in a timely fashion and must provide a detailed discussion of the status of the mitigation fund and funded projects in the annual report required under the NJPDES municipal stormwater permit.

Appendices

A. Tier A Municipal Stormwater Master General Permit

B. Adopted Stormwater Control Ordinance

C. Additional Figures

- Figure 1 Administrative Boundaries
- Figure 2 Land Use Classification 2012
- Figure 3 Topography
- Figure 4 Water Bodies
- Figure 5 Total Maximum Daily Load Segment Drainage Area Map
- Figure 6 Wellhead Protection Areas
- Figure 7 Groundwater Recharge Areas
- Figure 8 Combined and Separate Storm Sewer Areas
- Figure 9 FEMA Flood Hazard Areas Map
- Figure 10 Soils and Underlying Geology

D. Maps

Map A Sewer System Overall Map

A. Tier A Municipal Stormwater Master General Permit

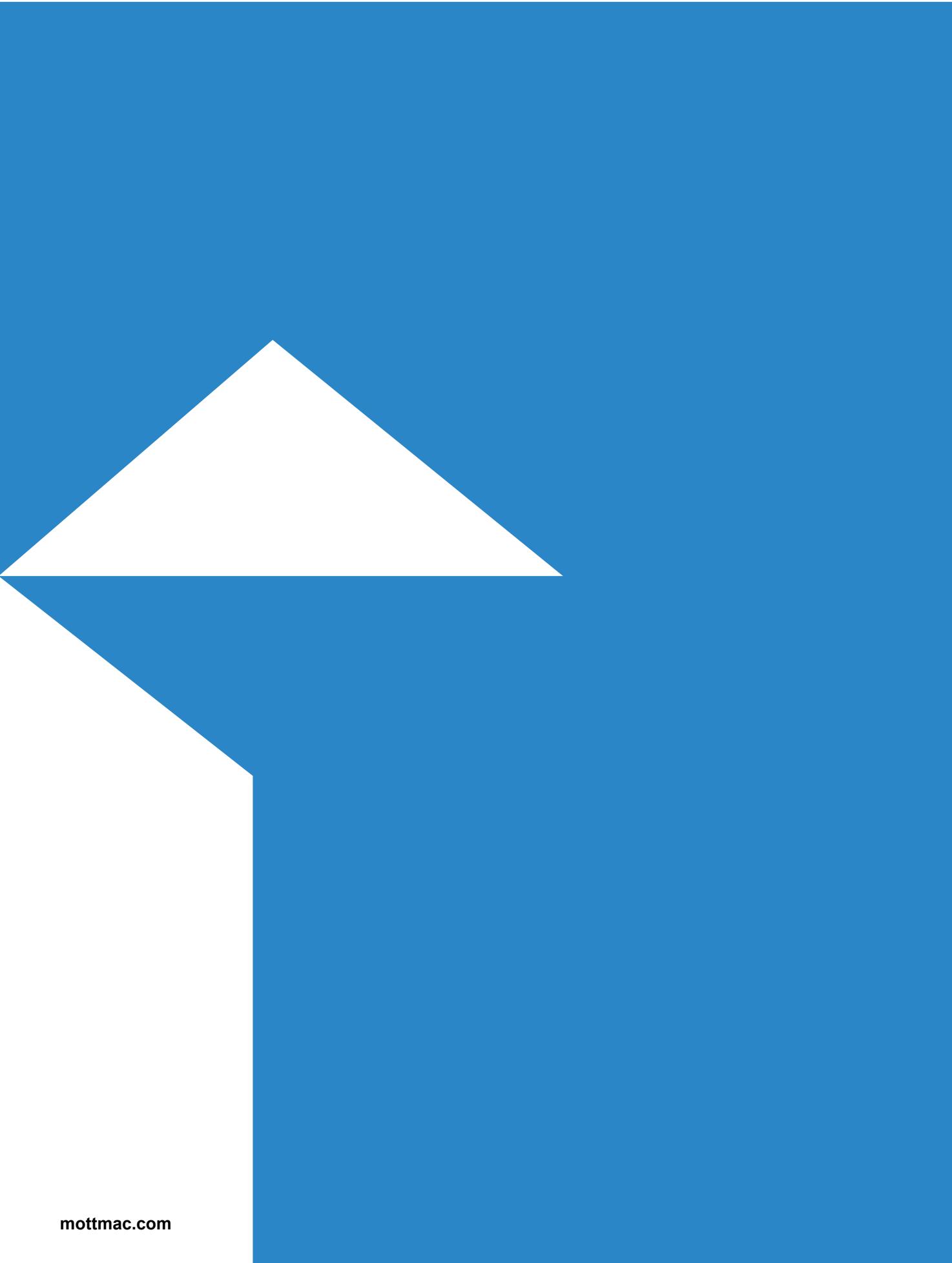
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D. Maps

Map A **Sewer System Overall Map**

The logo consists of a large blue square containing a white stylized 'M' shape. This 'M' shape is formed by two thick, white, downward-sloping lines that meet at a point on the left side of the square. The rest of the square is filled with a solid blue color.

mottmac.com

A. Tier A Municipal Stormwater Master General Permit



State of New Jersey

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Mail Code - 401-02B

Water Pollution Management Element
Bureau of Nonpoint Pollution Control
P.O. Box 420 – 401 E. State St.
Trenton, NJ 08625-0420
Tel: (609) 633-7021 / Fax: (609) 777-0432
http://www.state.nj.us/dep/dwq/bnpc_home.htm

BOB MARTIN
Commissioner

December 8, 2017

SENT VIA EMAIL to: Dee.Gillespie@amwater.com

Dee Gillespie
ELIZABETH CITY
50 WINFIELD SCOTT PLAZA
ELIZABETH, NJ 07201-2462

Re: Stormwater Discharge General Permit Authorization Renewal
Category: R9 -Tier A Municipal Stormwater General Permit
NJPDES: NJG0151530 / PI ID #: 46299
ELIZABETH CITY
Elizabeth City, Union County

Dear Stormwater Program Coordinator:

Enclosed is New Jersey Pollutant Discharge Elimination System (NJPDES) Authorization to Discharge No. NJG0151530 (Category R9 -Tier A Municipal Stormwater General Permit) issued under the authority of Stormwater NJPDES Master General Permit No. NJ0141852 (Tier A Permit).

The permit and associated documents are posted at http://www.nj.gov/dep/dwq/tier_a.htm, where you can find a copy of the Tier A Permit, and a Response to Comments document, which includes a summary of the significant and relevant comments received during the Tier A Permit public comment period, the Department's responses, and an explanation of any changes from the draft action. In addition, you can also find a crosswalk which provides a detailed comparison of changes from 2009 to this 2017 permit, and a Frequently Asked Questions document. These documents will be useful in understanding your renewed Authorization.

If you have any questions or comments regarding the above referenced action, please contact Monique Girona by telephone at 609-633-7021.

Sincerely,

James J. Murphy, Chief
Bureau of Nonpoint Pollution Control

C: Water Compliance and Enforcement Regional Office

New Jersey Department of Environmental Protection



Mail Code - 401-02B
Bureau of Nonpoint Pollution Control
Water Pollution Management Element
PO Box 420
Trenton, NJ 08625-0420
Phone: (609) 633-7021
Fax: (609) 777-0432

**AUTHORIZATION TO DISCHARGE
R9 -Tier A Municipal Stormwater General Permit**

Facility Name: ELIZABETH CITY

Permit Number: NJG0151530

Program Interest No.: 46299

Facility Address:

50 WINFIELD SCOTT PLZ
ELIZABETH, NJ 07201-2462

Type of Activity: Stormwater Discharge General Permit Authorization Renewal

Owner:

ELIZABETH CITY
50 WINFIELD SCOTT PLAZA
ELIZABETH, NJ 07201-2462

Operating Entity:

ELIZABETH CITY
50 WINFIELD SCOTT PLAZA
ELIZABETH, NJ 07201-2462

Issuance Date:

12/08/2017

Effective Date:

01/01/2018

Expiration Date:

12/31/2022

Your Request for Authorization under NJPDES General Permit No. NJ0141852 has been approved by the New Jersey Department of Environmental Protection.


James J. Murphy, Chief
Bureau of Nonpoint Pollution Control

Date: 12/08/2017

(Terms, conditions and provisions attached hereto)

Division of Water Quality

PART I GENERAL REQUIREMENTS: NJPDES

A. General Requirements of all NJPDES Permits

1. Requirements Incorporated by Reference

- a. The permittee shall comply with all conditions set forth in this permit and with all the applicable requirements incorporated into this permit by reference. The permittee is required to comply with the regulations, including those cited in paragraphs b. through e. following, which are in effect as of the effective date of the final permit.
- b. General Conditions
 - Penalties for Violations N.J.A.C. 7:14-8.1 *et seq.*
 - Incorporation by Reference N.J.A.C. 7:14A-2.3
 - Toxic Pollutants N.J.A.C. 7:14A-6.2(a)4i
 - Duty to Comply N.J.A.C. 7:14A-6.2(a)1 & 4
 - Duty to Mitigate N.J.A.C. 7:14A-6.2(a)5 & 11
 - Inspection and Entry N.J.A.C. 7:14A-2.11(e)
 - Enforcement Action N.J.A.C. 7:14A-2.9
 - Duty to Reapply N.J.A.C. 7:14A-4.2(e)3
 - Signatory Requirements for Applications and Reports N.J.A.C. 7:14A-4.9
 - Effect of Permit/Other Laws N.J.A.C. 7:14A-6.2(a)6 & 7 & 2.9(c)
 - Severability N.J.A.C. 7:14A-2.2
 - Administrative Continuation of Permits N.J.A.C. 7:14A-2.8
 - Permit Actions N.J.A.C. 7:14A-2.7(c)
 - Reopener Clause N.J.A.C. 7:14A-6.2(a)10
 - Permit Duration and Renewal N.J.A.C. 7:14A-2.7(a) & (b)
 - Consolidation of Permit Process N.J.A.C. 7:14A-15.5
 - Confidentiality N.J.A.C. 7:14A-18.2 & 2.11(g)
 - Fee Schedule N.J.A.C. 7:14A-3.1
 - Treatment Works Approval N.J.A.C. 7:14A-22 & 23
- c. Operation And Maintenance
 - Need to Halt or Reduce not a Defense N.J.A.C. 7:14A-2.9(b)
 - Proper Operation and Maintenance N.J.A.C. 7:14A-6.12
- d. Monitoring And Records
 - Monitoring N.J.A.C. 7:14A-6.5
 - Recordkeeping N.J.A.C. 7:14A-6.6
 - Signatory Requirements for Monitoring Reports N.J.A.C. 7:14A-6.9
- e. Reporting Requirements
 - Planned Changes N.J.A.C. 7:14A-6.7
 - Reporting of Monitoring Results N.J.A.C. 7:14A-6.8
 - Noncompliance Reporting
 - Hotline/Two Hour & Twenty-four Hour Reporting N.J.A.C. 7:14A-6.10 & 6.8(h)
 - Written Reporting N.J.A.C. 7:14A-6.10(c) & (d)
 - N.J.A.C. 7:14A-6.10(e) &(f) & 6.8(h)
 - Duty to Provide Information N.J.A.C. 7:14A-2.11, 6.2(a)14 & 18.1
 - Schedules of Compliance N.J.A.C. 7:14A-6.4
 - Transfer N.J.A.C. 7:14A-6.2(a)8 & 16.2

PART II

GENERAL REQUIREMENTS: DISCHARGE CATEGORIES

A. Additional Requirements Incorporated By Reference

- a. The Stormwater Management rules at N.J.A.C. 7:8.
- b. Conditions for General Permits at N.J.A.C. 7:14A-6.13, including the Department's authority to require, for due cause, a Tier A Municipality to apply for and obtain a different stormwater permit for specific activities otherwise authorized under this permit.
- c. Additional Conditions applicable to UIC permits at N.J.A.C. 7:14A-8.9, UIC Corrective Action (N.J.A.C. 7:14A-8.11) and UIC Operating Criteria (N.J.A.C. 7:14A-8.16).
- d. Conditions for reopening and modification of small MS4 permits at N.J.A.C. 7:14A-16.4(b) and N.J.A.C. 7:14A-25.7(b).
- e. Requirements for Discharges to Ground Water at N.J.A.C. 7:14A-7.
- f. National Pollutant Discharge Elimination System (NPDES) Electronic Reporting rule at 40 CFR Part 127.

B. General Conditions

1. Notification of Non-Compliance

- a. The Tier A Municipality shall notify the Department of any non-compliance when required by N.J.A.C. 7:14A-6.10 by contacting the DEP Hotline at 1-877-WARN-DEP.

2. Discharge of Pollutants

- a. For discharges authorized by this permit, the Tier A Municipality is exempt from N.J.A.C. 7:14A-6.2(a)2. This exemption means that the discharge of any pollutant not specifically regulated in this NJPDES permit or listed and quantified in the RFA shall not constitute a violation of the permit.

3. Standard Reporting Requirements – Electronic Reporting of NJPDES Information

- a. Unless already required by this permit to be submitted electronically by an earlier date, effective December 21, 2020, the below identified documents and reports shall be electronically submitted via the Department's designated electronic submission service:
 - i. General permit authorization requests (i.e. RFAs);
 - ii. General permit termination/revocation requests; and
 - iii. Municipal separate storm sewer system (MS4) program reports (see Part IV.G).

4. Other Regulatory Requirements

- a. Permit conditions remain in effect and enforceable until and unless the permit is modified, renewed or revoked by the Department.
- b. The issuance of this permit shall not be considered as a waiver of any applicable federal, State or local rules, regulations and ordinances.
- c. In accordance with N.J.A.C. 7:14A-6.2(a)7, this permit does not authorize any infringement of State or local law or regulations, including, but not limited to, N.J.A.C. 7:50 (the Pinelands rules), N.J.A.C. 7:1-E (Discharges of Petroleum and other Hazardous Substances), regulations concerning threatened and endangered species and their designated critical habitat, and other Department rules. No discharge of hazardous substances (as defined in N.J.A.C. 7:1E-1.6) resulting from an onsite spill shall be deemed to be “pursuant to and in compliance with this permit” within the meaning of the Spill Compensation and Control Act at N.J.S.A. 58:10-23.11c.
- d. While the Tier A Municipality is required to comply with applicable operation and maintenance requirements of N.J.A.C. 7:14A-6.12(a), the Tier A Municipality is exempt from the operations and maintenance manual requirements of N.J.A.C. 7:14A-6.12(c). This exemption applies only to discharges authorized under this permit and does not alter the operation and maintenance requirements for municipally or privately owned stormwater facilities specified in this permit or N.J.A.C. 7:8.

C. Eligibility

1. Permit Scope

- a. The Tier A MS4 NJPDES Permit applies to all areas of New Jersey as follows:
 - i. This permit applies to all municipalities assigned to Tier A under N.J.A.C. 7:14A-25.3(a)1. Tier A Municipalities are generally located within the more densely populated regions of the state or along or near the Atlantic coast.
 - ii. On a case-by-case basis, the Department may use this permit to regulate municipalities assigned to Tier B under N.J.A.C. 7:14A-25.3(a). As used in this permit, the term “Tier A Municipality” includes Tier B Municipalities that seek or obtain authorization under this provision of this permit.
- b. This permit applies to the owner or operator of the Municipal Separate Storm Sewer System (MS4) meaning the Tier A Municipality. The owner or operator is responsible for ensuring compliance with this permit.
- c. The short title of this permit is the “Tier A MS4 NJPDES permit.”

2. Authorized Discharges Under the Tier A MS4 NJPDES Permit

- a. Eligible Stormwater Discharges – Except as provided in Part II.C.3 below, this permit authorizes all new and existing stormwater discharges to surface water and groundwater from:
 - i. Small MS4s (as defined at N.J.A.C. 7:14A-1.2) owned or operated by Tier A Municipalities; and
 - ii. Municipal maintenance yards and other ancillary operations (see Part IV.B.5.c) owned or operated by Tier A Municipalities.

- b. Eligible Non-Stormwater Discharges – Except as identified in Part II.C.3.e below, the following new and existing non-stormwater discharges from small MS4s owned or operated by Tier A Municipalities and from Municipal maintenance yards and other ancillary operations (see Part IV.B.5.c) owned or operated by Tier A Municipalities are eligible for authorization under this permit:
- i. Potable water line flushing and discharges from potable water sources, excluding the discharge of filter backwash and first flush water from potable well development/redevelopment activities utilizing chemicals in accordance with N.J.A.C. 7:9D. The volume of first flush water, which is a minimum of three times the volume of the well water column, shall be handled and disposed of properly;
 - ii. Uncontaminated ground water (e.g. infiltration, crawl space or basement sump pumps, foundation or footing drains, rising ground waters);
 - iii. Air conditioning condensate (excluding contact and non-contact cooling water; and industrial refrigerant condensate);
 - iv. Irrigation water (including landscape and lawn watering runoff);
 - v. Flows from springs, riparian habitats, wetlands, water reservoir discharges and diverted stream flows;
 - vi. Residential car washing water; and dechlorinated swimming pool discharges from single family residential homes;
 - vii. Sidewalk, driveway and street wash water;
 - viii. Flows from firefighting activities including the washing of fire fighting vehicles;
 - ix. Flows from clean water rinsing of beach maintenance equipment immediately following use and only if the equipment is used for its intended purpose;
 - x. Flows from clean water rinsing of equipment and vehicles used in the application of salt and de-icing materials. Prior to rinsing, all equipment shall be cleaned using dry methods such as shoveling and sweeping. Recovered materials are to be returned to storage or properly discarded; and
 - xi. Rinsing of equipment in Part II.C.2.b.ix and x, above is limited to exterior, undercarriage, and exposed parts and does not apply to engines or other enclosed machinery.

3. Discharges Not Authorized Under the Tier A MS4 NJPDES Permit

- a. Stormwater Discharges Associated with Industrial Activity
 - i. The Tier A MS4 NJPDES Permit does not authorize “stormwater discharge associated with industrial activity” as defined in N.J.A.C. 7:14A-1.2 except as otherwise specifically provided in this permit.
 - ii. Types of facilities that a Tier A Municipality might operate and that are considered to be engaging in “industrial activity” include but are not limited to certain: 1) landfills; 2) transportation facilities (including certain local passenger transit and air transportation facilities); 3) facilities handling domestic sewage or sewage sludge; and 4) steam electric power generating facilities.

- iii. Any municipality that operates an industrial facility with such a discharge must submit a separate Request for Authorization (RFA) or individual permit application for that discharge (see www.nj.gov/dep/dwq/forms_storm.htm). An RFA submitted for the Tier A MS4 NJPDES Permit does not qualify as an RFA for such a discharge.
 - iv. Yard Trimmings and Wood Waste Management Sites that are not owned and operated by the Tier A Municipality.
- b. Stormwater Discharges Associated with Construction Activity
- i. The Tier A MS4 NJPDES Permit does not authorize “stormwater discharges associated with construction activity” as described in N.J.A.C. 7:14A-24.10(a). In general, this is the discharge to surface water of stormwater from construction activity that disturbs at least one acre.
 - ii. Any municipality that operates a construction site with such a discharge shall submit a separate RFA under NJPDES Permit No. NJ0088323 (General Stormwater Permit Construction Activity, see www.nj.gov/dep/dwq/5g3.htm), or an application for an individual permit for that discharge. An RFA submitted for the Tier A MS4 NJPDES Permit does not qualify as an RFA for such a discharge. See Part IV.B.3 of the Tier A MS4 NJPDES Permit.
- c. Stormwater Discharges Authorized under Another NJPDES Permit
- i. The Tier A MS4 NJPDES Permit does not authorize any stormwater discharge that is authorized under another NJPDES permit.
 - ii. A Tier A Municipality does not have to implement measures contained in this NJPDES permit for stormwater discharges at facilities owned or operated by that municipality that are regulated under a separate NJPDES stormwater permit authorizing those discharges.
- d. Stormwater Discharges that Conflict with a Water Quality Management Plan
- i. The Tier A MS4 NJPDES Permit does not authorize stormwater discharges from projects or activities that conflict with an adopted Areawide or Statewide Water Quality Management Plan.
- e. Non-Stormwater Discharges that are Contributors of Pollutants
- i. If any of the discharges listed in Part II.C.2.b above are identified by the Tier A Municipality as a significant contributor of pollutants to or from the MS4, the Tier A Municipality must address the discharge as an illicit connection or as an improper disposal of waste as specified in Part IV.B.6 of this permit.

D. Administrative Process

1. Automatic Renewal of Authorizations

- a. Upon reissuance of this general permit, existing authorizations shall be automatically renewed as provided by N.J.A.C. 7:14A-6.13(d)9 and 25.4(a)3 using the information provided in the permittees’ most recently submitted RFA.

2. Notification of Changes

- a. A Tier A Municipality shall provide a corrected RFA to the Department within 90 days of the effective date of a renewed authorization under this general permit if any information in its most recently submitted RFA is no longer true, accurate, and/or complete.
- b. The Tier A Municipality shall notify the Department of any changes of its Municipal Stormwater Program Coordinator information using www.nj.gov/dep/dwq/pdf/msrp_update_form.pdf

- c. A Tier A Municipality that already has authorization to discharge from a small MS4 under the Tier A permit does not need to submit an RFA for the expansion (e.g. new residential development) of an existing small MS4.

3. Requests for Authorization (RFA, see www.nj.gov/dep/dwq/forms_storm.htm)

- a. New RFAs under the Tier A MS4 permit
 - i. A single RFA is required for the entire eligible discharge from the small MS4 owned or operated by and located within a single municipality. Multiple RFAs are not required for multiple municipal operations (e.g., municipally owned and operated maintenance yards or other ancillary operations, facilities, garages, and/or offices).
 - ii. An RFA shall include at a minimum: the name and address of the municipality; the name and address of the Municipal Stormwater Program Coordinator; a certification acknowledging the best management practices and measurable goals specified in the permit; and any other information as required by the Department.
- b. Upon receipt of an RFA the Department may, in accordance with N.J.A.C. 7:14A-6.13, do one of the following:
 - i. Issue notification of authorization under this permit;
 - ii. Deny authorization under this permit and require submittal of an application for an individual permit; or
 - iii. Deny authorization under this permit and require submittal of an RFA for another general permit.
- c. Reassignment of Municipality to Tier A
 - i. If a municipality receives notice from the Department (pursuant to N.J.A.C. 7:14A-25.3(a)(3)) that it has been reassigned from Tier B to Tier A (pursuant to N.J.A.C. 7:14A-25.3(a)(1) and (2)), the deadline to submit an RFA is 180 days after the receipt of that notice, unless the Department approves a later date.

PART III

Recordkeeping and Reporting

The Tier A Municipality shall keep records necessary to document, in the Annual Report and Certification, the status of compliance with the conditions of this permit. The requirement to keep records and to submit an Annual Report and Certification is found at Part IV.G of this permit.

PART IV

SPECIFIC REQUIREMENTS: NARRATIVE

Notes and Definitions

A. Footnotes

1. Acronyms

- a. Stormwater acronyms included in this permit are as follows:
 - i. "BMP" - Best Management Practice
 - ii. "CFR" - Code of Federal Regulations
 - iii. "EDPA" - Effective Date of Permit Authorization
 - iv. "MS4" - Municipal Separate Storm Sewer System
 - v. "MSWMP" - Municipal Stormwater Management Plan
 - vi. "MSRP" - Municipal Stormwater Regulation Program
 - vii. "MTD" - Manufactured Treatment Device
 - viii. "N.J.A.C." - New Jersey Administrative Code
 - ix. "NJPDES" - New Jersey Pollutant Discharge Elimination System
 - x. "N.J.S.A." - New Jersey Statutes Annotated
 - xi. "RSIS" - Residential Site Improvement Standards
 - xii. "SPPP" - Stormwater Pollution Prevention Plan
 - xiii. "TMDL" - Total Maximum Daily Load

2. Internal Cross References

- a. For the purposes of this permit:
 - i. References to Part IV Notes and Definitions are preceded with the words "Notes and Definitions" (e.g. Notes and Definitions Part IV.A.1 refers to Acronyms).
 - ii. References to Part IV Tier A MS4 NJPDES Permit are not preceded by descriptive text (e.g. Part IV.A.1 refers to Overview of the Tier A MS4 NJPDES Permit).

3. Department Resources for Guidance Relating to MS4 Issues

- a. MS4 main website and related links: www.nj.gov/dep/dwq/msrp_home.htm
- b. MS4 Tier A Guidance document: www.nj.gov/dep/dwq/tier_a_guidance.htm

Notes and Definitions

- c. Construction Site Stormwater Runoff: www.nj.gov/dep/dwq/5g3.htm
- d. Snow Removal and Disposal Policy: www.nj.gov/dep/dwq/bnpc_home.htm
- e. Green Infrastructure and related links: www.nj.gov/dep/gi/
- f. Stormwater management information and training tools: www.nj.gov/dep/stormwater/
- g. Public education for stormwater pollution: www.cleanaternj.org
- h. Clean Communities, a statewide litter abatement program: www.njclean.org
- i. Total Maximum Daily Load (TMDL) information: www.nj.gov/dep/dwq/msrp-tmdl-rh.htm

4. EPA Resources for Guidance Relating to MS4 Issues

- a. EPA's MS4 website and related links:
www.epa.gov/npdes/stormwater-discharges-municipal-sources
- b. EPA's National Menu of Stormwater Best Management Practices:
www.epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater
- c. EPA's guidance for Green Infrastructure:
<http://water.epa.gov/infrastructure/greeninfrastructure/index.cfm>
- d. Guidance from EPA Region 3 for municipalities that wish to improve their municipal stormwater programs: www.epa.gov/npdes/pubs/region3_factsheet_swmp.pdf
- e. EPA's Trash Free Waters resource page: www.epa.gov/trash-free-waters
- f. Illicit Discharge Detection and Elimination Guidance
www3.epa.gov/npdes/pubs/idde_manualwithappendices.pdf

B. Definitions

1. Definitions

- a. All words and terms used in this permit shall have meanings as defined in the "Regulations Concerning the New Jersey Pollutant Discharge Elimination System" (N.J.A.C. 7:14A), unless otherwise stated or unless the context clearly requires a different meaning.
- b. "Catch Basin" means a cistern, vault, chamber or well that is usually built along a street as part of the storm sewer system to capture sediment, debris, and pollutants.
- c. "Effective Date of Permit Authorization" means the date the permittee's authorization to discharge under this Tier A MS4 NJPDES permit becomes effective. This date may be found on the permittee's Authorization to Discharge.
- d. "Existing permittee" means a municipality that held an authorization to discharge under the Tier A MS4 NJPDES permit on or before December 31, 2017.
- e. "Green infrastructure" means methods of stormwater management that reduce wet weather/stormwater volume, flow, or changes the characteristics of the flow into combined or separate sanitary or storm sewers, or surface waters, by allowing the stormwater to infiltrate, to be treated by vegetation or by soils, or to be stored for reuse. Green infrastructure includes, but is not limited to, pervious paving, bioretention basins, vegetated swales, and cisterns.

- f. "Illicit connection" means any physical or non-physical (i.e. leak, flow, or overflow into the municipal separate storm sewer system) connection that discharges the following to a municipal separate storm sewer system (unless that discharge is authorized under a NJPDES permit other than this Tier A MS4 NJPDES permit);
 - i. Domestic sewage;
 - ii. Non-contact cooling water, process wastewater, or other industrial waste (other than stormwater); or
 - iii. Any category of non-stormwater discharges that a permittee for the MS4 identifies as a source or significant contributor of pollutants pursuant to 40 C.F.R. 122.34(b)(3)(iii).
- g. "Maintenance plan" means a maintenance plan pursuant to N.J.A.C. 7:8-5.2(b) and 5.8 prepared by the design engineer for the stormwater management measures incorporated into the design of a major development.
- h. "Major development" means any development that provides for ultimately disturbing one or more acres of land and any additional development defined as "major development" by a municipality's stormwater control ordinance. Disturbance is the placement of impervious surface or exposure and/or movement of soil or bedrock or clearing, cutting, or removing of vegetation. Projects undertaken by any government agency which otherwise meet the definition of "major development" but which do not require approval under the Municipal Land Use Law, N.J.S.A. 40:55D-1et seq., are also considered "major development."
 - i. "Manufactured treatment device" means a pre-fabricated stormwater treatment structure utilizing settling, filtration, absorptive/adsorptive materials, vortex separation, vegetative components, and/or other appropriate technology to remove pollutants from stormwater runoff.
 - j. "Municipal separate storm sewer" means a municipal separate storm sewer as defined in N.J.A.C. 7:14A-1.2.
 - k. "Municipality" means a municipality as defined in the Municipal Land Use Law at N.J.S.A. 40:55D-5, that is, any city, borough, town, township, or village.
- l. "New permittee" means a municipality that obtains its first authorization to discharge under the Tier A MS4 NJPDES permit on or after January 1, 2018.
- m. "Permanent structure" means a permanent building or permanent structure that is anchored to a permanent foundation with an impermeable floor, and that is completely roofed and walled (a door is recommended, but not required). A fabric frame structure is a permanent structure if it meets the following specifications:
 - i. Concrete blocks, jersey barriers or other similar material shall be placed around the interior of the structure to protect the side walls during loading and unloading of de-icing materials;
 - ii. The design shall prevent stormwater run-on and run through and the fabric cannot leak;
 - iii. The structure shall be erected on an impermeable slab;
 - iv. The structure cannot be open sided; and
 - v. The structure shall have a roll up door or other means of sealing the access way from wind driven rainfall.

- n. "Small MS4" means all municipal separate storm sewers (other than "large" or "medium" municipal separate storm sewer systems as defined in N.J.A.C. 7:14A-1.2) that are:
 - i. Owned or operated by municipalities described under N.J.A.C. 7:14A-25.1(b);
 - ii. Owned or operated by county, State, interstate, or Federal agencies, and located at public complexes as described under N.J.A.C. 7:14A-25.2(a)2;
 - iii. Owned or operated by county, State, interstate, or Federal agencies, and located at highways and other thoroughfares as described under N.J.A.C. 7:14A-25.2(a)3; or
 - iv. Owned or operated by county, State, interstate, Federal, or other agencies, and receive special designation under N.J.A.C. 7:14A-25.2(a)4.
- v. Note that all MS4s covered under the Tier A MS4 NJPDES permit are "small MS4s".
- o. "Solids and floatable materials" means sediment, debris, trash, and other floating, suspended, or settleable solids as defined at N.J.A.C. 7:14A-25.6(b)3iii.
- p. "Storm drain inlet" means the point of entry into the storm drain system and is, where a catch basin is present, the uppermost portion (or cover) of a catch basin.
- q. "Stormwater" means water resulting from precipitation (including rain and snow) that runs off the land's surface; is transmitted to the subsurface; is captured by separate storm sewers or other sewerage or drainage facilities; or is conveyed by snow removal equipment.
- r. "Stormwater facility" includes, but is not limited to: catch basins, detention basins, retention basins, filter strips, riparian buffers, infiltration trenches, sand filters, constructed wetlands, wet basins, bioretention systems, low flow bypasses, and stormwater conveyances. Stormwater facilities include structural stormwater management measures.
- s. "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 wet pond), or be planted mainly with wetland vegetation (most constructed stormwater wetlands).
- t. "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. Stormwater management measures include stormwater facilities.
- u. "Stream scouring" means the erosion or removal of streambed or bank material by the physical action of flowing water and the sediment that it carries.
- v. "Subsurface infiltration/detention system" means a vault, perforated pipe, and/or stone bed that is located entirely below the ground surface and that temporarily stores and attenuates stormwater runoff."
- w. "Tier A Municipality's MS4" means an MS4 owned and operated by a Tier A Municipality.
- x. "Wood waste" means source separated whole trees, tree trunks, tree parts, tree stumps, brush and leaves provided that they are not composted, and lumber (non-chemically treated and unpainted);
- y. "Yard trimmings" means grass clippings, leaves, wood chips from tree parts, and brush.

- z. "Yard waste" means loose leaves and grass clippings.

Tier A Municipal Stormwater General Permit

A. Permit Overview

1. Overview of the Tier A MS4 NJPDES Permit

- a. The Tier A Municipality (i.e. the permittee) is required to develop, update, implement and enforce an MS4 stormwater program. A primary objective of the MS4 stormwater program is to implement best management practices and other measures that are designed to achieve the permit's requirement to reduce the discharge of pollutants from the Tier A Municipality's MS4, municipal maintenance yards and other ancillary operations, to the maximum extent practicable pursuant to N.J.A.C. 7:14A-25.6(a)1 and 40 CFR 122.34(a), to protect water quality, and to satisfy the applicable water quality requirements of the Clean Water Act.

2. Primary Plans Required by the Tier A MS4 NJPDES Permit

- a. The Stormwater Pollution Prevention Plan (SPPP) documents the Tier A Municipality's stormwater program and describes the measures necessary for compliance with the Statewide Basic Requirements as well as any Other Control Measures, Additional Measures and/or Optional Measures (if deemed appropriate). See Part IV.F (SPPP) and Attachment A (Measurable Goals and Implementation Schedule for Existing Permittees) and Attachment A-1 (Measurable Goals and Implementation Schedule for New Permittees).
- b. A significant component of the SPPP is the Municipal Stormwater Management Plan (MSWMP). The MSWMP is also a component of the municipal master plan (N.J.S.A. 40:55D-94). The MSWMP describes the municipality's strategy, structure and process for addressing stormwater runoff from new development and redevelopment to ensure compliance with the Stormwater Management rules (N.J.A.C. 7:8 et seq.). This strategy, structure and process also constitutes much of the post construction stormwater management program in this permit. See Part IV.B.4 (Post Construction). Any MSWMP that complies with N.J.A.C. 7:8 also complies with this condition and Part IV.B.4.f (MSWMP).

3. Summary of Tier A MS4 NJPDES Permit Requirements

- a. The Tier A Municipality shall develop, update, implement and enforce a stormwater program as documented in an SPPP to ensure compliance with:
 - i. The Statewide Basic Requirements. See Part IV.B;
 - ii. Other Control Measures. See Part IV.C;
 - iii. Additional Measures. See Part IV.D; and
 - iv. Optional Measures, if deemed appropriate See Part IV.E.
- b. The Tier A Municipality shall develop, update, implement and maintain a written SPPP in conformance with Attachment A (Measurable Goals and Implementation Schedule for Existing Permittees) and Attachment A-1 (Measurable Goals and Implementation Schedule for New Permittees). See Part IV.A.2.a and IV.F (SPPP).
- c. The Tier A Municipality shall submit an Annual Report and Certification summarizing the status of compliance with this permit. See Part IV.G (Annual Report and Certification).
- d. The Tier A Municipality shall adopt, amend and implement a written MSWMP. See Part IV.A.2.b and B.4.f (MSWMP).

Tier A Municipal Stormwater General Permit

- e. The Tier A Municipality shall modify and update its stormwater program (including applicable plans and ordinances) to conform with applicable new legislation; or new or amended regulations. Such modification shall be completed and effective within 12 months of written notification by the Department of the need for modification.

B. Statewide Basic Requirements and Associated Conditions

1. Minimum Standards for Public Involvement and Participation Including Public Notice

- a. Tier A Municipalities shall comply with applicable State and local public notice requirements when providing for public participation in the development and implementation of a MS4 stormwater program. Requirements include but are not limited to:
 - i. The Open Public Meetings Act (“Sunshine Law,” N.J.S.A. 10:4-6 et seq.);
 - ii. Statutory procedures for the enactment of ordinances (N.J.S.A. 40:49-2), including the municipal stormwater control ordinance and other ordinances adopted to comply with Part IV of this permit; and
 - iii. The Municipal Land Use Law concerning the adoption or amendment of the MSWMP (N.J.S.A. 40:55D-13, 28 and 94), and the review of applications for development (N.J.S.A. 40:55D-12). The Tier A Municipality shall also ensure that applicants for development meet the notice requirements of N.J.S.A. 40:55D-12.
- b. Tier A Municipalities shall make elements of its MS4 stormwater program available to the public:
 - i. Provide the current SPPP upon request as required by Part IV.F.1.g (SPPP);
 - ii. Post the current SPPP on its website to the extent required by Part IV.F.1.f (SPPP); and
 - iii. Post the current MSWMP and all ordinances required by this permit on its website or otherwise comply with the notification requirements of N.J.A.C. 7:8-4.4(e). See Part IV.B.4.f (MSWMP), 4.g (Stormwater Control Ordinance), 5.a (Community Wide Ordinances).
- c. The Tier A Municipality may involve another entity (e.g. a watershed association) to satisfy one or more of the Tier A Municipality’s NJPDES permit condition(s) (or component thereof) through the implementation of one or more best management practices or control measures. See Part IV.F.4 (Implementation of SPPP Conditions through Shared or Contracted Services).
- d. The Tier A Municipality shall maintain records necessary to demonstrate compliance with the public participation requirements of a, above.
- e. Existing Permittee: An existing permittee shall meet the minimum standards of this permit, and the measurable goals (including any recordkeeping) and implementation schedules for Public Involvement and Participation specified in Attachment A for Existing Permittees (Measurable Goals and Implementation Schedule).

2. Minimum Standards for Local Public Education and Outreach

- a. The Tier A Municipality shall implement a Public Education and Outreach Program that focuses on educational and pollution prevention activities about the impacts of stormwater discharges on surface water and groundwater and to involve the public in reducing pollutants in stormwater and mitigating flow. The Tier A Municipality shall annually conduct activities that total at least 12 points and include activities from at least three of the five categories as set forth in Attachment B (Points System for Public Education and Outreach Activities). At a minimum, at least one of the activities shall involve educating businesses and the general public of hazards associated with illicit connections and improper disposal of waste. Records shall be kept necessary to demonstrate compliance with this requirement, including date of activities and any other relevant documentation.
- b. The Tier A Municipality shall label all storm drain inlets for those drains that do not have permanent wording cast into the structure of the inlet. The Tier A Municipality shall also maintain the legibility of those labels and replace any labels that are missing or not legible. See the Tier A Municipal Guidance document (www.nj.gov/dep/dwq/tier_a_guidance.htm) for specific measures. This requirement shall include the following:
 - i. All storm drain inlets along sidewalks that are adjacent to municipal streets;
 - ii. All storm drain inlets within plazas, parking areas or maintenance yards that are operated by the municipality.
- c. The Tier A Municipality shall advertise public involvement program(s) pertaining to education and outreach activities on the municipality's website, through a mailing, through newspaper advertisement, or other similar means.
- d. Existing Permittee: An existing permittee shall meet the minimum standards of this permit, and the measurable goals (including any recordkeeping) and implementation schedules for Local Public Education and Outreach specified in Attachment A for Existing Permittees (Measurable Goals and Implementation Schedule).

3. Minimum Standards for Construction Site Stormwater Runoff

- a. Construction site stormwater runoff activities are authorized under a separate NJPDES permit, generally the Construction Activity Stormwater General Permit No. NJ0088323 pursuant to N.J.A.C. 7:14A-25.6(b)2 (or an individual permit pursuant to N.J.A.C. 7:14A-24.7(a)2). See Part II.C.3.b and www.nj.gov/dep/dwq/5g3.htm. Pursuant to N.J.A.C. 7:14A-25.7(b), the Tier A Municipality is not required to reference construction site stormwater runoff control in its SPPP.

4. Minimum Standards for Post Construction Stormwater Management in New Development and Redevelopment

- a. The Tier A Municipality shall develop, update, implement and enforce its stormwater management program to address post construction stormwater runoff in new development and redevelopment and to ensure compliance with the Stormwater Management rules at N.J.A.C. 7:8 et seq. In general, the regulations at N.J.A.C. 7:8:
 - i. Contain requirements for stormwater management plans and stormwater control ordinances;
 - ii. Provide information for the adoption and implementation of municipal stormwater management plans and regional stormwater management plans; and
 - iii. Establish design, performance and maintenance standards for stormwater management measures and establish safety standards for stormwater management basins.

- b. The post construction stormwater management program established by the Tier A Municipality shall address stormwater runoff from the following types of major development unless any additional development is defined as “major development” by a municipality’s stormwater control ordinance:
 - i. New development and redevelopment projects that disturb one acre or more and are not operated by the municipality (e.g. retail stores, residential complexes);
 - ii. New development and redevelopment projects that disturb one acre or more and are operated by the municipality itself (e.g. town complex); and
 - iii. All new development and redevelopment projects that disturb less than one acre and are part of a larger common plan of development or sale (e.g. phased residential development) that ultimately disturbs one acre or more.
- c. The post construction stormwater management program established by the Tier A Municipality shall require compliance with the applicable design, performance and maintenance standards established under N.J.A.C. 7:8 et seq. for major development as defined in this permit.
- d. The Tier A Municipality shall review and analyze development applications for compliance with Part IV.B.4 (Post Construction) of this permit even if a separate permit is required by the Department for the same or similar activity (e.g. a Land Use permit).
- e. The post construction stormwater management program established by the Tier A Municipality shall ensure that any residential development and redevelopment projects that are subject to the Residential Site Improvement Standards (RSIS) for stormwater management (N.J.A.C. 5:21-7) comply with those standards, including any exception, waiver, or special area standard that was approved under N.J.A.C. 5:21 et seq.
- f. The Tier A Municipality shall adopt, amend and implement a written Municipal Stormwater Management Plan (MSWMP), pursuant to N.J.A.C. 7:8 et seq., to describe the framework of the Tier A Municipality’s strategy, structure and process for its post construction stormwater management program.
 - i. The Tier A Municipality shall submit the adopted plan for approval to the County review agency in accordance with N.J.A.C. 7:8-4;
 - ii. The Tier A Municipality shall notify the Department and post the approved plan and any amendments on its website (or otherwise comply with the notification requirements of N.J.A.C. 7:8-4.4(e)) within thirty days of the effective date of the plan. See Part IV.B.1.b.iii (Public Involvement and Participation);
 - iii. The Tier A Municipality shall review and update its MSWMP as necessary, and as a part of the reexamination of its municipal master plan in accordance with N.J.A.C. 7:8-4.3(c) and (d).
- g. In order to implement the post construction stormwater management program, the Tier A Municipality shall adopt, amend, implement and enforce a municipal stormwater control ordinance. The Tier A Municipality shall develop and adopt the contents of the ordinance in accordance with N.J.A.C. 7:8 et seq. A sample stormwater ordinance consistent with the requirements of the Stormwater Management Rules is posted at www.nj.gov/dep/stormwater/bmp_manual2.htm and a sample stormwater ordinance applicable to Pinelands Area Municipalities is posted at www.nj.gov/dep/stormwater/pinelands.htm. The municipal stormwater control ordinance shall include, at a minimum, the following elements:

- i. Control aspects of residential development and redevelopment projects that are not pre-empted by the RSIS;
 - ii. Control stormwater from non-residential development and redevelopment projects, in accordance with the requirements at N.J.A.C. 7:8 et seq.; and
 - iii. Set forth special area standards approved by the Site Improvement Advisory Board for residential development or redevelopment projects under N.J.A.C. 5:21-3.5.
- h. The Tier A Municipality shall only grant a variance or exemption from the design and performance standards for stormwater management measures if the municipality has a mitigation plan which meets the following requirements:
- i. A mitigation plan must be included in an approved MSWMP and stormwater control ordinance(s). The mitigation plan shall identify measures that are necessary to offset the deficit created by granting the variance or exemption, and can be provided through a menu of design and performance standards with corresponding mitigation projects for different drainage areas within the municipality. See Chapter 3 of the NJ Stormwater BMP Manual at www.nj.gov/dep/stormwater/ for guidance; and
 - ii. The municipality submits, within 30 days after the grant of a variance or exemption, a written report to the county review agency and the Department describing the variance or exemption and the required mitigation. Submit the written report to the Department at:
NJDEP-DWQ-BNPC
Mail Code 401-02B
PO Box 420
Trenton, NJ 08625-0420
- i. The Tier A Municipality shall:
- i. Enforce, through the stormwater control ordinance(s) or a separate ordinance, compliance with the standards set forth in Attachment C (Design Standards for Storm Drain Inlets) of this permit to control passage of solid and floatable materials through storm drain inlets not installed by the Tier A Municipality; and
 - ii. Comply with the standards set forth in Attachment C (Design Standards for Storm Drain Inlets) of this permit to control passage of solid and floatable materials through storm drain inlets installed by the municipality.
- j. The Tier A Municipality shall ensure adequate long-term cleaning, operation and maintenance of stormwater management measures:
- i. Pursuant to Part IV.C.1.a (Stormwater Facilities Maintenance), owned or operated by the Tier A Municipality; and
 - ii. Pursuant to Part IV.C.1.b (Stormwater Facilities Maintenance), not owned or operated by the Tier A Municipality.
- k. For each structural and non-structural stormwater measure (e.g. stormwater management basin, subsurface infiltration/detention system, manufactured treatment device, green infrastructure), the Tier A Municipality shall:
- i. Complete a Major Development Stormwater Summary (as posted on the Department's website at www.nj.gov/dep/dwq/tier_a_forms.htm; courtesy copy provided as Attachment D of this permit) when an application is made to the Tier A Municipality after EDPA;

- ii. Update the Major Development Stormwater Summary while stormwater measures are being installed;
 - iii. Finalize the Major Development Stormwater Summary once certificate of occupancy is issued; and
 - iv. Maintain a completed Major Development Stormwater Summary and make it available to the Department upon request.
- l. The Stormwater Management rules (N.J.A.C. 7:8) and the Residential Site Improvement Standards for stormwater management (N.J.A.C. 5:21-7), independently and as implemented in this permit, apply to all areas of the Tier A Municipality.
 - m. Existing Permittee: An existing permittee shall meet the minimum standards of this permit, and the measurable goals (including any recordkeeping) and implementation schedules for Post Construction Stormwater Management in New Development and Redevelopment specified in Attachment A for Existing Permittees (Measurable Goals and Implementation Schedule).

5. Minimum Standards for Pollution Prevention / Good Housekeeping for Municipal Operators

- a. Community Wide Ordinances: The Tier A Municipality shall adopt and enforce the following community wide ordinances to address improper disposal of waste:
 - i. Pet Waste Ordinance: Adopt and enforce an ordinance that requires pet owners or their keepers to immediately and properly dispose of their pet's solid waste deposited on any property, public or private, not owned or possessed by that person. Information on the Pet Waste Ordinance and the benefits of proper disposal of pet solid waste shall be distributed with pet licenses. See the Tier A Municipal Guidance document (www.nj.gov/dep/dwq/tier_a_guidance.htm) for a sample ordinance.
 - ii. Wildlife Feeding Ordinance: Adopt and enforce an ordinance that prohibits the feeding of any wildlife (e.g. Canada Geese) in any public park or on any other property owned or operated by the Tier A Municipality. Exclusions include wildlife confined in zoos, parks, or rehabilitation centers as well the following unconfined animals: (1) wildlife at environmental education centers; (2) feral cats as part of an approved Trap-Neuter-Release program; and (3) other kinds of unconfined animals, if any, that the ordinance specifically lists and excludes for reasons set forth in the ordinance. See the Tier A Municipal Guidance document (www.nj.gov/dep/dwq/tier_a_guidance.htm) for a sample ordinance.
 - iii. Litter Control Ordinance: Adopt and enforce a litter ordinance or enforce the existing State litter statute at N.J.S.A 13:1E-99.3. See the Tier A Municipal Guidance document (www.nj.gov/dep/dwq/tier_a_guidance.htm) for a sample ordinance.
 - iv. Improper Disposal of Waste Ordinance: Adopt and enforce an ordinance prohibiting the improper spilling, dumping, or disposal of materials other than stormwater into the MS4 system excluding those discharges as allowable under Part II.C.2.b. See the Tier A Municipal Guidance document (www.nj.gov/dep/dwq/tier_a_guidance.htm) for a sample ordinance.

- v. Containerized Yard Waste/Yard Waste Collection Program Ordinances: (1) Adopt and enforce an ordinance that prohibits placing non-containerized yard wastes (defined as leaves and/or grass clippings) into the street; or (2) develop and implement a non-containerized yard waste collection and disposal program that includes adoption and enforcement of an ordinance that prohibits placing non-containerized yard waste at the curb or along the street within 10 feet of any storm drain inlet and at any time other than a set yard waste collection schedule. The frequency of yard waste pickups shall be determined at the discretion of the Tier A Municipality but shall be part of a set yard waste collection schedule which is noticed to all municipal residents and businesses. Any area, which the municipality determines to have no yard waste, will be exempt from the collections. See the Tier A Municipal Guidance document (www.nj.gov/dep/dwq/tier_a_guidance.htm) for sample ordinances.
 - vi. Private Storm Drain Inlet Retrofitting Ordinance: Adopt and enforce an ordinance requiring the retrofitting of existing storm drain inlets on private property to meet the standard in Attachment C (Design Standard for Storm Drain Inlets). Specifically, this ordinance: 1) shall apply to storm drain inlets, on property not owned or operated by the Tier A Municipality (e.g. condominium associations), that are in direct contact (i.e. contiguous) to repaving; repairing (excluding individual pothole repair); resurfacing (including top coating or chip sealing with asphalt emulsion or a thin base of hot bitumen); and reconstruction or alteration of facilities; and 2) shall not apply to a residential lot with one single family house. For a sample ordinance see www.nj.gov/dep/dwq/tier_a.htm.
 - vii. Additional ordinance requirements of this permit are found at Part IV.B.4.g (Stormwater Control Ordinance) above and Part IV.B.6.d (Illicit Connection Ordinance) below.
- b. Community Wide Measures: The Tier A Municipality shall develop and continue to implement the following community wide pollution prevention/good housekeeping measures to control solids and floatables:
- i. Street Sweeping: Tier A Municipalities shall sweep, at a minimum of once per month (weather and street surface conditions permitting), all streets (including roads or highways) that meet all of the following criteria: (1) the street is owned or operated by the municipality; (2) the street is curbed and has storm drains; (3) the street has a posted speed limit of 35 miles per hour or less; (4) the street is not an entrance or exit ramp; and (5) the street is in a predominantly commercial area.
 - ii. Catch Basin and Storm Drain Inlet Inspection and Cleaning: The Tier A Municipality shall inspect storm drain inlets and any associated catch basins that it owns or operates and remove sediment, trash, or debris when present. Each catch basin and inlet shall be inspected at least once every five years. The Tier A Municipality shall clean any municipally owned or operated storm drain inlet or catch basin as frequently as necessary to eliminate recurring problems and restore proper function.
 - iii. Tier A Municipality Storm Drain Inlet Retrofit: The Tier A Municipality shall retrofit existing Tier A Municipality owned or operated storm drain inlets that are: (1) in direct contact with any repaving, repairing (excluding individual pothole repair), or resurfacing (including top coating or chip sealing with asphalt emulsion or a thin base of hot bitumen); or (2) in direct contact with any reconstruction or alteration of facilities. Storm drain inlet retrofits shall meet the standard in Attachment C (Design Standards for Storm Drain Inlets).

- c. Municipal Maintenance Yards and Other Ancillary Operations: The Tier A Municipality shall implement the best management practices described in Attachment E (Best Management Practices for Municipal Maintenance Yards and Other Ancillary Operations) for municipal maintenance yards and other ancillary operations owned or operated by the Tier A Municipality. Ancillary operations include but are not limited to impound yards, permanent and mobile fueling locations, and yard trimmings and wood waste management sites. The Inventory of Material and Machinery, and Inspections and Good Housekeeping practices specified in Attachment E shall be conducted at all municipal maintenance yards and other ancillary operations. Best Management Practices shall be implemented for the following activities, whenever such activities occur:
 - i. Fueling Operations;
 - ii. Discharge of Stormwater from Secondary Containment;
 - iii. Vehicle Maintenance;
 - iv. On-Site Equipment and Vehicle Washing and Wash Wastewater Containment;
 - v. Salt and De-icing Material Storage and Handling;
 - vi. Aggregate Material and Construction Debris Storage;
 - vii. Street Sweepings, Catch Basin Clean Out, and Other Material Storage;
 - viii. Yard Trimmings and Wood Waste Management Sites that are owned and operated by the Tier A Municipality; and
 - ix. Roadside Vegetation Management.
- d. Employee Training: The Tier A Municipality shall develop, update and implement an employee training program to address Tier A MS4 NJPDES permit components and SPPP requirements. All municipal employees shall receive training on those stormwater topics applicable to their title and duties within 3 months of commencement of duties. Records including sign in sheet(s), date(s) of training, and training agenda(s) shall be kept in the SPPP. Training shall occur at least once every two years, unless otherwise specified below:
 - i. Yard Waste Collection Program (if applicable) – Provide training on frequency of yard waste pickups and schedule; and policy for how and when yard waste can be placed curbside. See Part IV.B.5.a.v (Yard Waste Ordinance).
 - ii. Monthly Sweeping of Certain Streets in Predominantly Commercial Areas - Provide training on sweeping schedules and proper management of materials collected. See Part IV.B.5.b.i (Street Sweeping).
 - iii. Illicit Connection Elimination and Outfall Pipe Mapping - Provide training on the impacts associated with illicit connections and details of the program including investigation techniques, physical observations, field sampling, and mapping procedures. See Part IV.B.6 (MS4 Outfall Pipe Mapping, and Illicit Discharge) and the National Menu of Stormwater Best Management Practices at www.epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater.
 - iv. Outfall Pipe Stream Scouring Detection and Control - Provide training on how to identify outfall pipe stream scouring and contributing factors. See Part IV.B.6.b (Stream Scouring).

- v. Maintenance Yard Operations (including Ancillary Operations) - Provide training annually on inventory of materials and machinery, inspections and good housekeeping; fueling operations; discharge of stormwater from secondary containment; vehicle maintenance; on-site equipment and vehicle washing and wash wastewater containment; salt and de-icing material storage and handling; aggregate material and construction debris storage; street sweeping, catch basin clean out, and other material storage; yard trimmings and wood waste management sites. See Part IV.B.5.c (Municipal Maintenance Yards and Other Ancillary Operations).
 - vi. Waste Disposal Education - Provide training on the impacts associated with improper waste disposal, how to respond to inquiries regarding improper waste disposal, and appropriate enforcement authority.
 - vii. Municipal Ordinances - Provide training on the following ordinances: Pet Waste Ordinance; Wildlife Feeding Ordinance; Litter Control Ordinance; Improper Disposal of Waste Ordinance; Containerized Yard Waste/Yard Waste Collection Ordinance; and the Private Storm Drain Inlet Ordinance. Training shall include an overview of these ordinance requirements, enforcement policies and the repercussions of non-compliance with these ordinances. See Part IV.B.5.a (Community Wide Ordinances).
 - viii. Stormwater Facility Maintenance – Provide training annually on maintenance of stormwater facilities, and catch basin and inlet cleaning methods. See Part IV.C.1 (Stormwater Facilities Maintenance), and Part IV.B.5.b.ii (Catch Basin and Storm Drain Inlets).
 - ix. Construction Activity/Post-Construction Stormwater Management in New Development and Redevelopment - Provide general training on the permitting requirements for construction activity and Post-Construction Stormwater Management in New Development and Redevelopment. See Part IV.B.3 (Construction Site Runoff) and B.4 (Post Construction).
 - x. Provide general training annually on the Tier A Municipality's SPPP, applicable recordkeeping requirements, and detailed training on any component applicable to an employee's title and duties. See Part IV.F (SPPP).
 - xi. Training may also be conducted on stormwater-related topics that serve an educational purpose for employees.
- e. **Stormwater Management Design Review Training:** The Tier A Municipality shall ensure that all design engineers, municipal engineers and other individuals that review the stormwater management design for development and redevelopment projects on behalf of the municipality, complete the Department approved Stormwater Management Design Review Course (see www.nj.gov/dep/stormwater/training.htm) once every five years. This includes those individuals that review any projects that are subject to the Tier A Municipality's municipal stormwater management plan and control ordinance as described in Part IV.B.4 (Post Construction). Individuals that will review stormwater management design and have not completed this course within the past five years must attend the next scheduled course offering. If unable to attend, the Tier A Municipality must notify the Department in writing no later than thirty days after the missed course offering explaining why attendance was not possible and what alternate arrangements are being made. Training completed within five calendar years prior to EDPA qualifies towards this requirement. The Tier A Municipality is required to maintain a list of the dates and names of training program participants in its SPPP.

- f. Municipal Board and Governing Body Member Related Training: The Tier A Municipality shall ensure that municipal board and governing body members that review and approve applications for development and redevelopment projects, complete the “Asking the Right Questions in Stormwater Review Training Tool” posted at www.nj.gov/dep/stormwater/training.htm. This includes those individuals that review any projects for compliance with Part IV.B.4 (Post Construction) of this permit. Training must be completed by current municipal board and governing body members on or before EDPA + 6 months and by new members within six months of commencing duties. Once per term of service thereafter, municipal board and governing body members must review at least one of the tools offered under Post-Construction Stormwater Management found at the website above. The Tier A Municipality is required to maintain a list of the dates and names of training program participants in its SPPP.
- g. Existing Permittee: An existing permittee shall meet the minimum standards of this permit, and the measurable goals (including any recordkeeping) and implementation schedules for Pollution Prevention / Good Housekeeping for Municipal Operators specified in Attachment A for Existing Permittees (Measurable Goals and Implementation Schedule).

6. Minimum Standards for MS4 Outfall Pipe Mapping, and Illicit Discharge and Scouring Detection and Control

- a. Outfall Pipe Mapping: Tier A Municipalities shall develop, update and maintain an outfall pipe map showing the location of the end of all MS4 outfall pipes (tidal and non-tidal) owned or operated by the Tier A Municipality which discharge to a surface water body. The outfall pipe map shall:
 - i. Be current at the end of each calendar year;
 - ii. Show the location (and name, where known to the municipality) of all surface water bodies receiving discharges from those outfall pipes;
 - iii. Be included in the SPPP;
 - iv. Be provided to the Department by Existing Permittees on or before EDPA + 12 months and by New Permittees on or before EDPA + 36 months. New data points subsequently added to the map shall be provided to the Department annually thereafter; and
 - v. Be submitted electronically by December 21, 2020 via the Department’s designated electronic submission service.
- b. Stream Scouring: Tier A Municipalities shall develop, update and implement a program to detect, investigate and control any localized stream scouring from stormwater outfall pipes owned or operated by the municipality. See the Tier A Municipal Guidance document (www.nj.gov/dep/dwq/tier_a_guidance.htm) for specific measures. The Tier A Municipality shall, at a minimum:
 - i. Inspect each outfall pipe which discharges to a stream for localized stream scouring in the vicinity of the outfall pipe. Each outfall pipe shall be inspected at least once every five years;
 - ii. Inspect any outfall pipes newly identified in compliance with Part IV.B.6.a for localized stream scouring in the vicinity of the outfall pipe;

- iii. When localized stream scouring is detected, document sources of stormwater that contribute to the outfall pipes identified in i and ii, above. Each identified source shall be investigated; and (1) where identified sources are located on property owned or operated by the Tier A Municipality, corrective action to reduce stormwater rate or volume shall be taken by the municipality when feasible, or (2) where identified sources are within the jurisdiction of but not located on property owned or operated by the Tier A Municipality, the municipality shall ensure proper operation and maintenance of stormwater facilities located thereon pursuant to Part IV.C.1.b (Stormwater Facilities Maintenance), below;
 - iv. Prioritize, schedule and complete remediation of identified localized stream scouring and take action based upon the requirements of Part IV.B.6.b.iii(1) and (2), above. If not completed, a schedule for completion shall be maintained as required in Part IV.C.1.a.iv (Stormwater Facilities Maintenance); and
 - v. All stream scouring restoration shall be made in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey at N.J.A.C. 2:90-1 (e.g., Conduit Outlet Protection 12-1) and the requirements for bank stabilization and channel restoration found at N.J.A.C. 7:13 et seq. All associated maintenance or repairs to stormwater facilities shall be made in accordance N.J.A.C 7:8.
- c. Illicit Discharge Detection and Elimination: The Tier A Municipality shall develop, update, implement and enforce an ongoing Illicit Discharge Detection and Elimination Program in accordance with this permit. This program shall be documented in the written SPPP, as required in Part IV.F.1.a.iii (SPPP). See the Tier A Municipal Guidance document (www.nj.gov/dep/dwq/tier_a_guidance.htm) for specific measures. See also USEPA Guidance at www3.epa.gov/npdes/pubs/idde_manualwithappendices.pdf. The Tier A Municipality shall, at a minimum:
- i. Conduct visual dry weather inspection of all outfall pipes owned or operated by the municipality at least once every five years to determine if dry weather flow or other evidence of illicit discharge is present. Dry weather flow is flow occurring 72 hours after a rain event.
 - ii. Investigate the source if evidence of illicit discharge is found;
 - iii. Eliminate non-stormwater discharges that are traced to their source and found to be illicit connections;
 - iv. Document investigations and actions taken using the Department's Illicit Connection Inspection Report Form. See www.nj.gov/dep/dwq/tier_a_forms.htm;
 - v. Inspect any outfall pipes newly identified in compliance with Part IV.B.6.a for illicit discharges;
 - vi. Investigate dry weather flows discovered during routine inspection and maintenance of other elements of the MS4; and
 - vii. Investigate, within three months of receipt, complaints and reports of illicit connections, including those from operating entities of interconnected MS4s.
- d. The Tier A Municipality shall adopt and enforce an ordinance that prohibits illicit connections to the municipal separate storm sewer system operated by the Tier A Municipality. See the Tier A Municipal Guidance document (www.nj.gov/dep/dwq/tier_a_guidance.htm) for a sample ordinance.

- e. Existing Permittee: An existing permittee shall meet the minimum standards of this permit, and the measurable goals (including any recordkeeping) and implementation schedules for MS4 Outfall Pipe Mapping, and Illicit Discharge and Scouring Detection and Control specified in Attachment A for Existing Permittees (Measurable Goals and Implementation Schedule).

C. Other Control Measures

1. Minimum Standards for Stormwater Facilities Maintenance

- a. The Tier A Municipality shall develop, update and implement a program to ensure adequate long-term cleaning, operation and maintenance of all municipally owned or operated stormwater facilities.
 - i. Stormwater facility inspection and maintenance must be performed pursuant to any maintenance plans, or more frequently as needed, to ensure the proper function and operation of the stormwater facility. See www.nj.gov/dep/stormwater/maintenance_guidance.htm.
 - ii. The Tier A Municipality shall maintain a log sufficient to demonstrate compliance with this section; including but not limited to the stormwater facility inspected, location information of the facility inspected (location information must be specific enough to locate and identify the stormwater facility in the field; e.g. geographic coordinates), name of inspector, date of inspection, findings, and any preventative and corrective maintenance performed. Example Maintenance Logs and Inspection Records forms which are sufficient to demonstrate compliance with this section are available at www.nj.gov/dep/stormwater/maintenance_guidance.htm.
 - iii. The Tier A Municipality shall certify annually that municipally owned or operated stormwater facilities are properly functioning.
 - iv. If stormwater facilities were found not to be functioning properly and repairs were not made, then necessary preventive and corrective maintenance shall be documented and prioritized, and a schedule for such repairs shall be maintained. The Tier A Municipality shall prioritize this schedule based upon but not limited to: (1) environmental, health and safety concerns; (2) the findings of catch basin and storm drain inlet inspections performed pursuant to Part IV.B.5.b.ii, above; (3) the findings of stream scouring inspections performed pursuant to Part IV.B.6.b, above; and (4) to incorporate the findings pursuant to Part IV.C.2 (TMDL Information), below.
- b. The Tier A Municipality shall develop, update, implement and enforce a program to ensure adequate long-term cleaning, operation and maintenance of stormwater facilities not owned or operated by the Tier A Municipality, not subject to the conditions of another NJPDES stormwater permit and constructed after February 7, 1984.
 - i. The Tier A Municipality shall ensure that stormwater facility maintenance is performed pursuant to any maintenance plans, or more frequently as needed to ensure the proper function and operation of the stormwater facility. See www.nj.gov/dep/stormwater/maintenance_guidance.htm.

- ii. The Tier A Municipality shall maintain a log sufficient to demonstrate compliance with this section; including but not limited to the actions taken by the municipality to enforce compliance with the long-term cleaning, operation and maintenance program; the stormwater facility that was the subject of the action; location information of the facility that was the subject of the action (location information must be specific enough to locate and identify the stormwater facility in the field; e.g. geographic coordinates); the name of person taking the action; the date of the action; and the findings. Example Maintenance Logs and Inspection Records forms which are sufficient to demonstrate compliance with this section are available at www.nj.gov/dep/stormwater/maintenance_guidance.htm.
- c. The Tier A Municipality shall maintain copies of all maintenance plans, as defined in Notes and Definitions Part IV.B.1.g of this permit, for stormwater facilities approved by the municipality. The Tier A municipality shall make copies of these maintenance plans available to the Department upon request.
- d. Existing Permittee: An existing permittee shall meet the minimum standards of this permit, and the measurable goals (including any recordkeeping) and implementation schedules for Stormwater Facilities Maintenance specified in Attachment A for Existing Permittees (Measurable Goals and Implementation Schedule).

2. Minimum Standards for Total Maximum Daily Load (TMDL) Information

- a. Incorporation of TMDL Information Into the SPPP
 - i. The Tier A Municipality shall annually review approved or adopted TMDL reports to identify stormwater related pollutants listed therein and associated with any segment of surface water wholly or partially within or bordering the Tier A Municipality. This information may be accessed at www.nj.gov/dep/dwq/msrp-tmdl-rh.htm;
 - ii. The Tier A Municipality shall use TMDL information identified in i, above to, at a minimum, (1) assist in the prioritization of stormwater facility maintenance including schedules for repairs required at Part IV.B.6.b.iv (Stream Scouring) and IV.C.1.a.iv (Stormwater Facilities Maintenance), above; and (2) identify and develop strategies to address specific sources of stormwater related pollutants contributing to discharges authorized under this Tier A MS4 NJPDES permit. Strategies may include but are not limited to those found in the implementation section of approved or adopted TMDL reports (for examples see "Total Maximum Daily Load (TMDL) Guidance for Tier A MS4 Permittees" found at www.nj.gov/dep/dwq/msrp-tmdl-rh.htm); and
 - iii. The Tier A Municipality shall annually update its SPPP to list information identified in i and ii, above; and
 - iv. The Tier A Municipality shall incorporate any strategies identified in ii(2), above as an Optional Measure. See Part IV.E (Optional Measures) and Part IV.F.1.c (SPPP), below.
- b. Existing Permittee: An existing permittee shall meet the minimum standards of this permit, and the measurable goals (including any recordkeeping) and implementation schedules for Total Maximum Daily Load (TMDL) Information specified in Attachment A for Existing Permittees (Measurable Goals and Implementation Schedule).

D. Additional Measures

1. Incorporation of Additional Measures

- a. Additional Measures are non-numeric (e.g., best management practices) or numeric effluent limitations that are expressly required to be included in a Tier A Municipality's stormwater program by a TMDL; a regional stormwater management plan; other elements of an adopted areawide Water Quality Management Plan; or the adopted Statewide Water Quality Management Plan.
- b. The Department will provide written notice of the adoption of any Additional Measure(s) to any affected Tier A Municipality. The Department will list each adopted Additional Measure in a minor modification to the Tier A MS4 NJPDES permit. For any required Additional Measure(s) other than numeric effluent limitations, the required Additional Measure(s) will specify the best management practices that shall be implemented and the measurable goals. The required Additional Measure(s) will also specify the implementation schedule.

E. Optional Measures

1. Incorporation of Optional Measures

- a. Optional Measures are BMPs, developed by the Tier A Municipality, that extend beyond the requirements of the Tier A MS4 NJPDES permit and that prevent or reduce pollution to waters of the State.
- b. The Tier A Municipality may, at its own discretion, incorporate Optional Measures into its MS4 stormwater program. Such BMPs shall be identified in the SPPP as Optional Measures.
- c. Failure to implement an Optional Measure identified in the SPPP shall not be considered a violation of the NJPDES permit.

2. Refuse Container / Dumpster Ordinance

- a. Tier A Municipalities have the option of adopting and enforcing an ordinance requiring dumpsters and other refuse containers that are outdoors or exposed to stormwater to be covered at all times. This ordinance serves to prevent the spilling, dumping, leaking, or otherwise discharge of liquids, semi-liquids or solids from the containers. This ordinance is not intended for litter receptacles; individual homeowner trash and recycling containers; containers that hold large bulky items (e.g., furniture, bound carpet and padding); permitted temporary demolition containers; and refuse containers at industrial facilities authorized to discharge stormwater under a valid NJPDES permit. For a sample ordinance see www.nj.gov/dep/dwq/tier_a.htm.

F. Stormwater Pollution Prevention Plan (SPPP)

1. SPPP Requirements

- a. The Tier A Municipality shall develop, update, implement, and maintain a written SPPP (see the Tier A Municipal Guidance document www.nj.gov/dep/dwq/tier_a_guidance.htm) that:
 - i. Identifies the person designated as the Municipal Stormwater Program Coordinator (Stormwater Coordinator) per Part IV.F.2, below and the members of the SPPP Team.
 - ii. Documents the municipality's Tier A MS4 Stormwater Program including a description of shared or contracted services as allowed under Part IV.F.4, below.
 - iii. Describes the measures necessary for compliance with all components of the Tier A MS4 NJPDES permit including all measures described in Part IV.B, C, D and E above.

- iv. Reflects the measurable goals, implementation schedules, record keeping and other requirements in Attachment A for Existing Permittees and Attachment A-1 for New Permittees (Measurable Goals and Implementation Schedule).
- b. The Tier A Municipality's Stormwater Coordinator shall sign and date the SPPP per Part IV.F.3, below.
- c. The Tier A Municipality shall review the SPPP at least annually and update it as often as necessary to reflect changes related to the municipality's Tier A MS4 Stormwater Program. Any amendments to the SPPP:
 - i. Shall continue to meet the requirements of this permit;
 - ii. Shall be signed and dated by the Stormwater Coordinator; and
 - iii. Shall be retained for a period of at least five years from the date of amendment unless the Department issues a written notice to extend the retention period.
- d. The SPPP shall include any records required by this Tier A MS4 NJPDES permit. See Attachment A for Existing Permittees and Attachment A-1 for New Permittees (Measurable Goals and Implementation Schedule) for additional detail.
- e. The Department may notify the Tier A Municipality at any time that the SPPP does not meet one or more of the minimum requirements. Within thirty (30) days after receiving such notification unless otherwise specified by the Department, the Tier A Municipality shall amend the SPPP to adequately address all deficiencies, and written certification of such amendments shall be submitted to the Department.
- f. The current SPPP shall be posted on the Tier A Municipality's website no later than EDPA + 90 days with updates posted annually thereafter. The version posted on the website can exclude:
 - i. Inspection logs and other required record keeping; and
 - ii. The names of SPPP Team members but must include the name of the Stormwater Coordinator.
- g. The SPPP shall be made available to the Department and public upon request pursuant to N.J.A.C. 7:14A-25.6(j)2.

2. Designation of the Municipal Stormwater Program Coordinator (Stormwater Coordinator)

- a. Each Tier A Municipality shall designate a Stormwater Coordinator.
- b. The Stormwater Coordinator shall be either a principal executive officer or a ranking elected official as required at N.J.A.C. 7:14A-4.9(a)3;
- c. A principal executive officer or ranking elected official of the Tier A Municipality may assign this responsibility, as allowed at N.J.A.C. 7:14A-4.9(b), to a duly authorized representative who has overall responsibility for the operation of municipal stormwater facilities or municipal environmental matters;
- d. If an assignment under b or c, above changes, then a new assignment of responsibility shall be submitted to the Department. This is accomplished through completion of the online MSRP Annual Report (see Part IV.G Annual Report and Certification below) or the Stormwater Program Coordinator Information Update Sheet posted at www.nj.gov/dep/dwq/pdf/msrp_update_form.pdf. This information shall be submitted to the Department within 30 days of such change taking place.

3. Responsibilities of the Municipal Stormwater Program Coordinator (Stormwater Coordinator)

- a. The Tier A Municipality shall designate a Municipal Stormwater Program Coordinator (Stormwater Coordinator). The Stormwater Coordinator is responsible for:
 - i. Coordinating the permittee's implementation of the SPPP and Tier A MS4 NJPDES permit conditions;
 - ii. Signing and dating the SPPP;
 - iii. Coordinating the completion and submittal of the Annual Report and Certification; and
 - iv. Certifying, signing and dating the Annual Report.

4. Implementation of SPPP Conditions through Shared or Contracted Services

- a. The Tier A Municipality may rely on another governmental, private, or nonprofit entity to satisfy one or more of the Tier A Municipality's MS4 NJPDES permit conditions, or component thereof, through the implementation of best management practices or control measures. This is only allowable provided the following conditions are met:
 - i. The other entity implements the best management practice(s) or control measure(s);
 - ii. The particular best management practice(s) or control measure(s), or component(s) thereof, is at least as stringent or as frequent as the corresponding NJPDES permit requirement;
 - iii. The other entity agrees in writing or is required by law to implement the measure(s), or component(s) thereof, in such a manner that is in compliance with the Tier A MS4 NJPDES permit on the Tier A Municipality's behalf; and
 - iv. The Tier A Municipality specifies in its SPPP (1) which NJPDES permit conditions will be implemented by another entity and (2) the name of the responsible entity.
- b. For any projects or activities which the Tier A Municipality assigns to another entity which is a private contractor, the awarded contract shall require the contractor to conduct such projects or activities in such a manner that is in compliance with the Tier A MS4 NJPDES permit.
- c. The Tier A Municipality is responsible for compliance with this permit if the other entity fails to implement the measure(s) or component(s), thereof.

G. Annual Report and Certification**1. Reporting Requirements**

- a. The Tier A Municipality shall complete an Annual Report, including any Supplemental Questions, using the electronic format provided by the Department via the MSRP Annual Report service accessed through the Regulatory Services Portal (www.njdeponline.com). The Annual Report shall summarize the status of compliance with the conditions of this permit. Specifically, this includes compliance for the subject year between January 1 and December 31 with the Statewide Basic Requirements (Part IV.B), Other Control Measures (Part IV.C), Additional Measures (Part IV.D), Optional Measures (Part IV.E), Stormwater Pollution Prevention Plan (Part IV.F), and any other Tier A MS4 NJPDES permit conditions listed on the Annual Report form, including Supplemental Questions.

- b. The Stormwater Coordinator shall certify, sign and date the Annual Report.
- c. Submit an Annual Report and Certification: on or before May 1st annually to the Department through the Regulatory Services Portal (instructions at www.nj.gov/dep/dwq/tier_a.htm).
- d. A copy of each Annual Report and Certification shall be kept at a central location and shall be made available to the Department for inspection.
- e. The Tier A Municipality shall retain the Annual Report and Certification as well as any records required to be kept by this permit for a period of at least five years.
- f. The Tier A Municipality shall document in the Annual Report (1) if it relies on another entity to satisfy one or more of the Tier A Municipality's MS4 NJPDES permit conditions as described in Part IV.F.4.a (Implementation of SPPP Conditions through Shared or Contracted Services), above; (2) which NJPDES permit conditions will be satisfied by another entity; and (3) the name of the governmental, private, or nonprofit entity.

ELIZABETH CITY , Elizabeth

Permit No.NJG0151530
DST170001 Stormwater Discharge General Permit Authorization
Renewal

Attachment A – Measurable Goals and Implementation Schedule for Existing Permittees

General

The following table specifies the Measurable Goals and Implementation Schedule of this Tier A MS4 NJPDES Permit for Existing Permittees. Each Measurable Goal and Implementation Schedule is associated with a permit citation and a summary of the associated Minimum Standard. The summary of Minimum Standard column represents a paraphrase of permit conditions. Actual Minimum Standards are found in Part IV of the permit.

An indication of whether the cited Minimum Standard is a new requirement is provided in the last column. Where a requirement is not new and not modified (and for some that are modified), the Existing Permittee is expected to be in compliance on the Effective Date of Permit Authorization (EDPA). For most new requirements (and for some modified requirements), additional time is provided for achieving compliance.

See below for specific Measurable Goals that shall be documented in the SPPP. **The SPPP shall be updated as required by Part IV.F.1.c, above.** The Implementation Schedule refers to the date that a Minimum Standard must be incorporated into the Tier A Municipality's stormwater program, along with any ongoing requirements. In addition to the requirements of Part IV.F.1 above, the SPPP shall identify and discuss the Minimum Standard of each Statewide Basic Requirement (Part IV.B, above) and Other Control Measures (Part IV.C, above) where the following information is required for each item:

- Describe the method of implementation;
- Include required recordkeeping;
- Include an implementation schedule, consistent with permit requirements, including interim milestones;
- Include any special diagrams required by the permit (e.g., stormwater facilities map); and
- Include inspection and maintenance schedules, as appropriate.

This table does not include Measurable Goals and an Implementation Schedule for the Notes and Definitions Part IV, Part IV.A (Permit Overview), Part IV.D (Additional Measures), IV.E (Optional Measures), IV.F (SPPP), and IV.G (Annual Report and Certification) because these are not Statewide Basic Requirements or Other Control Measures (see N.J.A.C. 7:14A-25.6). While not included in this table, Notes and Definitions Part IV, Part IV.A, D, E, F, and G are permit requirements and compliance is required.

Measurable Goals for Statewide Basic Requirements and Other Conditions of this Permit for Existing Permittees				
Summary of Minimum Standard (See Part IV for specific permit requirements)	Permit Cite	Measurable Goal (See Part IV for specific permit requirements)	Implementation Schedule	New Requirement?
Public Involvement and Participation Including Public Notice				
Provide for public notice under the Open Public Meetings Act, statutory procedures for enactment of ordinances, and Municipal Land Use Law when providing for public participation in the development and implementation of a stormwater program, and maintain records necessary to demonstrate compliance.	IV.B.1.a & d	Certify in each annual report that all public notice requirements have been met and relevant records kept. Reference in the SPPP the location of associated municipal records.	EDPA	No
Provide the current SPPP to the public upon request.	IV.B.1.b.i	Certify in each annual report that the SPPP was made available to the public.	EDPA	No
Post the current SPPP on the municipality's website.	IV.B.1.b.ii	Certify in each annual report that the SPPP has been posted on the municipality's website (to the extent required by Part IV.F.1.f) and that the posted SPPP is current.	EDPA + 90 days	Yes
Post the current Municipal Stormwater Management Plan (MSWMP) and related ordinances on the municipality's website.	IV.B.1.b.iii	Certify in each annual report that the MSWMP and related ordinances have been posted on the municipality's website and that the posted documents are current.	EDPA + 90 days	Yes
Local Public Education and Outreach				
Implementation of a Public Education and Outreach Program by conducting activities that total a minimum of 12 points on an annual basis.	IV.B.2.a	Certify in each annual report that the minimum point value has been met and report point totals in the Annual Report. Maintain records of materials and activities from Attachment B, including dates of activities and any other relevant documentation (e.g. brochures, pictures, sign-in sheets, press clippings).	EDPA	Modified
Label storm drain inlets, maintain the legibility of those labels, and replace labels that are missing or not legible along sidewalks that are adjacent to municipal streets; and within plazas, parking areas or maintenance yards operated by the municipality.	IV.B.2.b	Certify in each annual report that storm drains have been properly labeled and/or maintained. Records tracking storm drain inlet label status shall be kept with the SPPP.	EDPA	No

Summary of Minimum Standard (See Part IV for specific permit requirements)	Permit Cite	Measurable Goal (See Part IV for specific permit requirements)	Implementation Schedule	New Requirement?
Advertise public involvement program(s) pertaining to education and outreach activities.	IV.B.2.c	Certify in each annual report that public involvement program(s) have been properly advertised on the website, through a mailing, through newspaper advertisement, or other similar means. Public advertisement records shall be kept with the SPPP.	EDPA + 12 months	Yes
Post Construction Stormwater Management in New Development and Redevelopment				
Develop, update, implement and enforce its post construction stormwater management program in new development and redevelopment to ensure compliance with the Stormwater Management rules (N.J.A.C. 7:8).	IV.B.4.a, b, c, d, e, f, g, h, i, j, l	Certify in each annual report that the Tier A Municipality has developed, and is implementing and enforcing a program to address stormwater runoff from new development and redevelopment projects. Records demonstrating compliance with Part IV.B.4 shall be kept, or their location shall be referenced, in the SPPP.	EDPA	No
For each structural and non-structural stormwater measure (e.g. basins), for which an application is made to the municipality after EDPA, the municipality shall complete, update, finalize and maintain a Major Development Stormwater Summary.	IV.B.4.k	Certify in each annual report that Major Development Stormwater Summaries (Attachment D) have been completed and records have been maintained by the Tier A municipality. Records demonstrating compliance with Part IV.B.4 shall be kept, or their location shall be referenced, in the SPPP.	EDPA	Yes
Pollution Prevention/Good Housekeeping - Community Wide Ordinances				
Adopt and enforce a pet waste ordinance. Distribute pet waste ordinance information with pet licenses.	IV.B.5.a.i	Certify in each annual report the date the ordinance was adopted, that it is being enforced and that pet waste ordinance information is distributed with pet licenses. A log of enforcement actions and information distribution dates shall be kept in the SPPP.	EDPA	No
Adopt and enforce a wildlife feeding ordinance.	IV.B.5.a.ii	Certify in each annual report the date the ordinance was adopted and that it is being enforced. A log of enforcement actions shall be kept in the SPPP.	EDPA	No

Summary of Minimum Standard (See Part IV for specific permit requirements)	Permit Cite	Measurable Goal (See Part IV for specific permit requirements)	Implementation Schedule	New Requirement?
Adopt and enforce a litter control ordinance.	IV.B.5.a.iii	Certify in each annual report the date the ordinance was adopted and that it is being enforced. A log of enforcement actions shall be kept in the SPPP.	EDPA	No
Adopt and enforce an improper disposal of waste ordinance.	IV.B.5.a.iv	Certify in each annual report the date the ordinance was adopted and that it is being enforced. A log of enforcement actions shall be kept in the SPPP.	EDPA	No
Adopt and enforce a containerized yard waste / yard waste collection program ordinance.	IV.B.5.a.v	Certify in each annual report the date the ordinance was adopted and that it is being enforced. A log of enforcement actions shall be kept in the SPPP.	EDPA	No
Adopt and enforce a private storm drain inlet retrofitting ordinance	IV.B.5.a.vi	Certify in each annual report the date the ordinance was adopted and that it is being enforced. A log of enforcement actions shall be kept in the SPPP.	EDPA	No
Pollution Prevention/Good Housekeeping - Community Wide Measures				
Develop and continue to implement street sweeping measures as specified at Part IV.B.5.b.i.	IV.B.5.b.i	Certify in each annual report that a street sweeping schedule is being maintained as well as records including the date and areas swept, number of miles of streets swept, and the total amount of materials collected in wet tons. Include totals in the Annual Report and keep records in the SPPP.	EDPA	No
Develop and continue to implement catch basin and storm drain inlet inspection and cleaning measures as specified at Part IV.B.5.b.ii.	IV.B.5.b.ii	Certify in each annual report that a catch basin and storm drain inlet inspection and cleaning schedule is being maintained, and a log indicating the number of municipally owned and operated catch basins and inlets within the municipality, the number of catch basins and inlets inspected, and the number cleaned is being maintained. Maintain records documenting the amount of materials collected in wet tons during cleaning activities in the SPPP. Include totals in the Annual Report.	EDPA	Modified

Summary of Minimum Standard (See Part IV for specific permit requirements)	Permit Cite	Measurable Goal (See Part IV for specific permit requirements)	Implementation Schedule	New Requirement?
Develop and continue to implement storm drain inlet retrofit measures as specified at Part IV.B.5.b.iii.	IV.B.5.b.iii	Certify in each annual report that a record of the number and location of storm drain inlets retrofitted as well as the number and location of storm drain inlets exempted is being maintained. Include totals in the Annual Report and keep records in the SPPP.	EDPA	No
Pollution Prevention/Good Housekeeping - Municipal Maintenance Yards and Other Ancillary Operations				
Implement the BMP's found in Attachment E, including the Inventory of Materials and Machinery, and Inspections and Good Housekeeping practices, at Municipal Maintenance Yards and Other Ancillary Operations.	IV.B.5.c	Certify in each annual report that the SPPP includes all applicable requirements and that the requirements (including maintenance of inspection logs and tracking forms) of Attachment E have been met. Keep records required by Attachment E in the SPPP.	EDPA	No
BMPs shall be implemented for fueling operations.	IV.B.5.c.i	Certify in each annual report that BMPs in Attachment E have been implemented for fueling operations.	EDPA	No
BMPs shall be implemented for discharge of stormwater from secondary containment.	IV.B.5.c.ii	Certify in each annual report that BMPs in Attachment E have been implemented for discharge of stormwater from secondary containment.	EDPA	No
BMPs shall be implemented for vehicle maintenance.	IV.B.5.c.iii	Certify in each annual report that BMPs in Attachment E have been implemented for vehicle maintenance.	EDPA	No
BMPs shall be implemented for on-site equipment and vehicle washing and wash wastewater containment.	IV.B.5.c.iv	Certify in each annual report that BMPs in Attachment E have been implemented for on-site equipment and vehicle washing and wash wastewater containment.	EDPA	Modified
BMPs shall be implemented for salt and de-icing material storage and handling.	IV.B.5.c.v	Certify in each annual report that BMPs in Attachment E have been implemented for salt and de-icing material storage and handling.	EDPA	No
BMPs shall be implemented for aggregate material and construction debris storage.	IV.B.5.c.vi	Certify in each annual report that BMPs in Attachment E have been implemented for aggregate material and construction debris storage.	EDPA + 12 months	Yes

Summary of Minimum Standard (See Part IV for specific permit requirements)	Permit Cite	Measurable Goal (See Part IV for specific permit requirements)	Implementation Schedule	New Requirement?
BMPs shall be implemented for street sweepings and catch basin clean-out material storage.	IV.B.5.c.vii	Certify in each annual report that BMPs in Attachment E have been implemented for street sweepings and catch basin clean-out material storage.	EDPA + 12 months	Yes
BMPs shall be implemented for yard trimmings and wood waste management sites.	IV.B.5.c.viii	Certify in each annual report that BMPs in Attachment E have been implemented for yard trimmings and wood waste management sites.	EDPA + 12 months	Yes
BMPs shall be implemented for roadside vegetation management.	IV.B.5.c.ix	Certify in each annual report that BMPs in Attachment E have been implemented for roadside vegetation management.	EDPA + 12 months	Yes
Pollution Prevention/Good Housekeeping - Training Program				
Provide training to municipal employees within 3 months of commencement of duties, and at least once every two years thereafter, to address all required components. The exceptions are Part IV.B.5.d.v, viii, and x which require annual training instead of once every two years.	IV.B.5.d	Certify in each annual report that employee training has been conducted, and maintain records including sign in sheet(s), date(s) of training, and training agenda(s). These records shall be kept in the SPPP.	EDPA + 12 months	Modified
Ensure that individuals that review development and redevelopment projects for compliance with N.J.A.C. 7:8 on behalf of the municipality complete Department approved training once every five years.	IV.B.5.e	Certify in each annual report that individuals reviewing projects have completed the required training, and maintain a list of the names and dates that individuals received training. This list shall be kept in the SPPP.	EDPA + 12 months	Yes
Ensure that current Municipal Board and Governing Body Members that review and approve applications for development and redevelopment projects complete the “Training Tool” on or before EDPA + 6 months, and by new members within 6 months of commencement of duties. Once per term of service thereafter, Municipal Board and Governing Body Members must review at least one of the tools offered under the Post-Construction Stormwater Management website.	IV.B.5.f	Certify in each annual report that municipal board and governing body members have completed the necessary training, and maintain a list of the names and dates that individuals completed training. This list shall be kept in the SPPP.	EDPA + 6 months	Yes

Summary of Minimum Standard (See Part IV for specific permit requirements)	Permit Cite	Measurable Goal (See Part IV for specific permit requirements)	Implementation Schedule	New Requirement?
MS4 Outfall Pipe Mapping and Illicit Discharge and Scouring Detection and Control				
Develop, update and maintain an MS4 Outfall Pipe Map showing the location of the end of all outfall pipe which discharge to a surface water body.	IV.B.6.a.i	Certify in each annual report that the outfall pipe map is current at the end of the calendar year.	EDPA	No
Show the location (and name where known) of all surface water bodies receiving discharges from those outfall pipes.	IV.B.6.a.ii	Certify in each annual report that the surface water bodies associated with each outfall pipe end is located on the map.	EDPA	No
Include Outfall Pipe map in the SPPP	IV.B.6.a.iii	Certify in each annual report following the implementation deadline that the Outfall Pipe Map is included in the SPPP.	EDPA +12 months	Yes
Provide Outfall Pipe Map to the Department	IV.B.6.a.iv	Certify in each annual report following the implementation deadline that the Outfall Pipe Map and any new data points subsequently added to the map have been provided to the Department.	EDPA +12 months	Yes
Submitted the Outfall Pipe Map information to the Department electronically by December 21, 2020	IV.B.6.a.v	Submit the Outfall Pipe Map information to the Department using Department's designated electronic submission service by December 21, 2020.	12/21/2020	Yes
Develop, update and implement a program to detect, investigate and control localized stream scouring from stormwater outfall pipes.	IV.B.6.b	Certify in each annual report that municipally owned outfall pipes have received the required visual inspection at least once every five years and maintain a log indicating the number and location of outfall pipes inspected, repairs prioritized, and repairs scheduled or performed. Certify in the annual report that a repair schedule has been prepared for those that have not been completed. Keep records required by Part IV.B.6.b in the SPPP.	EDPA + 12 months	Modified

Summary of Minimum Standard (See Part IV for specific permit requirements)	Permit Cite	Measurable Goal (See Part IV for specific permit requirements)	Implementation Schedule	New Requirement?
Develop, update, implement and enforce an ongoing Illicit Discharge Detection and Elimination Program.	IV.B.6.c	Certify in each annual report that the municipality has developed a program to detect and eliminate illicit discharges and has conducted inspections required at Part IV.B.6.c at least once every five years. Document all investigations and actions taken on the Department's Illicit Connection Inspection Report Form. Keep records required by Part IV.B.6.c in the SPPP.	EDPA	Modified
Adopt and enforce an ordinance that prohibits illicit connections to the MS4 operated by the Tier A Municipality.	IV.B.6.d	Certify in each annual report that the ordinance is being maintained and the date it was adopted. A log of enforcement actions shall be kept in the SPPP.	EDPA	No
Stormwater Facilities Maintenance				
Develop, update and implement a program to ensure adequate long-term cleaning, operation and maintenance of all stormwater facilities owned or operated by the Tier A Municipality.	IV.C.1.a	Certify in each annual report that the municipality has developed, updated and implemented a program to ensure adequate long-term cleaning, operation and maintenance of all municipally owned stormwater facilities. Records required by Part IV.C.1.a, a.i, a.ii, a.iii and a.iv shall be kept, or their location shall be referenced, in the SPPP.	EDPA	Modified
Inspect and maintain stormwater facilities pursuant to any maintenance plans, or more frequently as needed, to ensure proper function and operation of each stormwater facility.	IV.C.1.a.i	Certify in each annual report that inspections and maintenance was performed pursuant to any maintenance plans, or more frequently as needed, to ensure proper function and operation of stormwater facilities.	EDPA	Modified

Summary of Minimum Standard (See Part IV for specific permit requirements)	Permit Cite	Measurable Goal (See Part IV for specific permit requirements)	Implementation Schedule	New Requirement?
Maintain a log sufficient to demonstrate compliance with this section; including but not limited a list of inspections and preventative and corrective maintenance performed, and a schedule for repairs to be made.	IV.C.1.a.ii	Certify in each annual report that a maintenance log is kept that, at a minimum, records the stormwater facility inspected, location information of the facility inspected (location information must be specific enough to locate and identify the stormwater facility in the field; e.g. geographic coordinates), name of inspector, date of inspection, findings, and any preventative and corrective maintenance performed.	EDPA	Modified
Certify annually that municipally owned or operated stormwater facilities are properly functioning.	IV.C.1.a.iii	Certify in each annual report that all municipally owned or operated stormwater facilities are properly functioning.	EDPA	No
If stormwater facilities were found not to be functioning properly and repairs not made, then necessary preventative and corrective maintenance shall be documented and prioritized and a schedule for maintenance shall be maintained.	IV.C.1.a.iv	Certify in each annual report that a prioritized schedule of necessary preventive and corrective maintenance exists for stormwater facilities inspected and found not to be functioning properly. The municipality shall prioritize this schedule as specified in Part IV.C.1.iv.	EDPA	Modified
Develop, update, implement and enforce a program to ensure adequate long-term cleaning, operation and maintenance of stormwater facilities not owned or operated by the Tier A Municipality, not subject to the conditions of another NJPDES stormwater permit and constructed after February 7, 1984.	IV.C.1.b	Certify in each annual report that the municipality has developed, updated, implemented and enforced a program to ensure adequate long-term cleaning, operation and maintenance of stormwater facilities not owned and operated by the municipality, not subject to the conditions of another NJPDES stormwater permit and constructed after February 7, 1984. Records required by Part IV.C.1.b, b.i and b.ii shall be kept, or their location shall be referenced, in the SPPP.	EDPA + 12 months	Modified

Summary of Minimum Standard (See Part IV for specific permit requirements)	Permit Cite	Measurable Goal (See Part IV for specific permit requirements)	Implementation Schedule	New Requirement?
Ensure that stormwater facility inspection and maintenance is performed pursuant to any maintenance plans, or more frequently as needed to ensure proper function and operation of each stormwater facility.	IV.C.1.b.i	Certify in each annual report that maintenance was performed pursuant to any maintenance plans, or more frequently, to ensure proper function and operation of stormwater facilities not owned and operated by the municipality.	EDPA + 12 months	Modified
Maintain a log sufficient to demonstrate compliance with this section; including but not limited actions taken by the municipality to enforce compliance with the long-term cleaning, operation and maintenance program.	IV.C.1.b.ii	Certify in each annual report that a log is being kept that, at a minimum, records the actions taken by the municipality to enforce compliance with the long-term cleaning, operation and maintenance program; the stormwater facility that was the subject of the action; location information of the facility that was the subject of the action (location information must be specific enough to locate and identify the stormwater facility in the field; e.g. geographic coordinates); the name of person taking the action; the date of the action; and the findings.	EDPA + 12 months	Modified
Maintain copies of all maintenance plans for stormwater facilities approved by the municipality, and make them available to the Department upon request.	IV.C.1.c	Certify in each annual report that copies of all maintenance plans are kept on file. Records required by Part IV.C.1.c shall be kept, or their location shall be referenced, in the SPPP.	EDPA + 12 months	Yes
Total Maximum Daily Load (TMDL) Info.				
Annually review approved or adopted TMDL reports to identify stormwater related pollutants listed therein and associated with any segment of surface water wholly or partially within or bordering the Tier A Municipality.	IV.C.2.a.i	Certify in each annual report that approved or adopted TMDLs have been identified and reviewed and stormwater related pollutants identified. Records required by Part IV.C.2.a.i, a.ii and a.iii shall be kept in the SPPP.	EDPA + 12 months	Yes

Summary of Minimum Standard (See Part IV for specific permit requirements)	Permit Cite	Measurable Goal (See Part IV for specific permit requirements)	Implementation Schedule	New Requirement?
Use TMDL information identified in compliance with Part IV.C.2.a.i to: (1) assist in the prioritization of stormwater facility maintenance including schedules for repairs related to Stream Scouring and Stormwater Facilities Maintenance; and (2) identify and develop strategies to address specific sources of stormwater related pollutants contributing to discharges authorized under this Tier A MS4 NJPDES permit.	IV.C.2.a.ii	Certify in each annual report that the municipality has used information identified in compliance with Part VI.C.2.a.i to (1) assist in the prioritization of repairs as required at Part IV.B.6.b.iv (Stream Scouring) and IV.C.31.a.iv (Stormwater Facilities Maintenance); and (2) identify and develop strategies to address specific sources of stormwater related pollutants contributing to discharges authorized under this Tier A MS4 NJPDES permit.	EDPA + 12 months	Yes
Update SPPP to list information identified in Part VI.C.2.a.i and ii.	IV.C.2.a.iii	Certify in each annual report that the municipality has updated its SPPP to list information identified in Part VI.C.2.a.i and ii.	EDPA + 12 months	Yes
Incorporate any strategies identified in Part VI.C.2.a.ii(2) as an Optional Measure	IV.C.2.a.iv	Certify in each annual report that the municipality has incorporated any strategies identified in Part VI.C.2.a.ii(2) as an Optional Measure.	EDPA + 12 months	Yes

Attachment A-1 – Measurable Goals and Implementation Schedule for New Permittees

General

The following table specifies the Measurable Goals and Implementation Schedule of this Tier A MS4 NJPDES Permit for New Permittees. Each Measurable Goal and Implementation Schedule is associated with a permit citation and a summary of the associated Minimum Standard. The summary of Minimum Standard column represents a paraphrase of permit conditions. Actual Minimum Standards are found in Part IV of the permit.

See below for specific Measurable Goals that shall be documented in the SPPP. **The SPPP shall be created by EDP + 12 months and updated on annual basis thereafter as required by Part IV.F.** The Implementation Schedule refers to the date that a Minimum Standard must be incorporated into the Tier A Municipality's stormwater program, along with any ongoing requirements. In addition to the requirements of Part IV.F above, the SPPP shall identify and discuss the Minimum Standard of each Statewide Basic Requirement (Part IV.B, above) and Other Control Measures (Part IV.C, above) where the following information is required for each item:

- Describe the method of implementation;
- Include required recordkeeping;
- Include an implementation schedule, consistent with permit requirements, including interim milestones;
- Include any special diagrams required by the permit (e.g., stormwater facilities map); and
- Include inspection and maintenance schedules, as appropriate.

This table does not include Measurable Goals and an Implementation Schedule for the Notes and Definitions Part IV, Part IV.A (Permit Overview), Part IV.D (Additional Measures), IV.E (Optional Measures), IV.F (SPPP), and IV.G (Annual Report and Certification) because these are not Statewide Basic Requirements or Other Control Measures (see N.J.A.C. 7:14A-25.6). While not included in this table, Notes and Definitions Part IV, Part IV.A, D, E, F, and G are permit requirements and compliance is required.

Measurable Goals for Statewide Basic Requirements and Other Conditions of this Permit for New Permittees			
Summary of Minimum Standard (See Part IV for specific permit requirements)	Permit Cite	Measurable Goal (See Part IV for specific permit requirements)	Implementation Schedule
Public Involvement and Participation Including Public Notice			
Provide for public notice under the Open Public Meetings Act, statutory procedures for enactment of ordinances, and Municipal Land Use Law when providing for public participation in the development and implementation of a stormwater program, and maintain records necessary to demonstrate compliance.	IV.B.1.a & d	Certify in each annual report that all public notice requirements have been met and relevant records kept. Reference in the SPPP the location of associated municipal records.	EDPA
Provide the current SPPP to the public upon request.	IV.B.1.b.i	Certify in each annual report that the SPPP was made available to the public.	EDPA + 12 months
Post the current SPPP on the municipality's website.	IV.B.1.b.ii	Certify in each annual report that the SPPP has been posted on the municipality's website (to the extent required by Part IV.F.1.f) and that the posted SPPP is current.	EDPA + 12 months)
Post the current Municipal Stormwater Management Plan (MSWMP) and related ordinances on the municipality's website.	IV.B.1.b.iii	Certify in each annual report that the MSWMP and related ordinances have been posted on the municipality's website and that the posted documents are current.	EDPA + 90 days
Local Public Education and Outreach			
Implementation of a Public Education and Outreach Program by conducting activities that total a minimum of 12 points on an annual basis.	IV.B.2.a	Certify in each annual report that the minimum point value has been met and report point totals in the Annual Report. Maintain records of materials and activities from Attachment B, including dates of activities and any other relevant documentation (e.g. brochures, pictures, sign-in sheets, press clippings).	EDPA

Summary of Minimum Standard (See Part IV for specific permit requirements)	Permit Cite	Measurable Goal (See Part IV for specific permit requirements)	Implementation Schedule
Label storm drain inlets, maintain the legibility of those labels, and replace labels that are missing or not legible along sidewalks that are adjacent to municipal streets; and within plazas, parking areas or maintenance yards operated by the municipality.	IV.B.2.b	Certify in each annual report that storm drains have been properly labeled and/or maintained. Records tracking storm drain inlet label status shall be kept with the SPPP.	EDPA
Advertise public involvement program(s) pertaining to education and outreach activities.	IV.B.2.c	Certify in each annual report that public involvement program(s) have been properly advertised on the website, through a mailing, through newspaper advertisement, or other similar means. Public advertisement records shall be kept with the SPPP.	EDPA + 12 months
Post Construction Stormwater Management in New Development and Redevelopment			
Develop, update, implement and enforce its post construction stormwater management program in new development and redevelopment to ensure compliance with the Stormwater Management rules (N.J.A.C. 7:8).	IV.B.4.a, b, c, d, e, f, g, h, i, j, l	Certify in each annual report that the Tier A Municipality has developed, and is implementing and enforcing a program to address stormwater runoff from new development and redevelopment projects. Records demonstrating compliance with Part IV.B.4 shall be kept, or their location shall be referenced, in the SPPP.	EDPA
For each structural and non-structural stormwater measure (basins), for which an application is made to the municipality after EDPA, the municipality shall complete, update, finalize and maintain a Major Development Stormwater Summary.	IV.B.4.k	Certify in each annual report that Major Development Stormwater Summaries (Attachment D) have been completed and records have been maintained by the Tier A municipality. Records demonstrating compliance with Part IV.B.4 shall be kept, or their location shall be referenced, in the SPPP.	EDPA

Pollution Prevention/Good Housekeeping - Community Wide Ordinances			
Adopt and enforce a pet waste ordinance. Distribute pet waste ordinance information with pet licenses.	IV.B.5.a.i	Certify in each annual report the date the ordinance was adopted, that it is being enforced and that pet waste ordinance information is distributed with pet licenses. A log of enforcement actions and information distribution dates shall be kept in the SPPP.	EDPA + 12 months
Adopt and enforce a wildlife feeding ordinance.	IV.B.5.a.ii	Certify in each annual report the date the ordinance was adopted and that it is being enforced. A log of enforcement actions shall be kept in the SPPP.	EDPA + 12 months
Adopt and enforce a litter control ordinance.	IV.B.5.a.iii	Certify in each annual report the date the ordinance was adopted and that it is being enforced. A log of enforcement actions shall be kept in the SPPP.	EDPA + 12 months
Adopt and enforce an improper disposal of waste ordinance.	IV.B.5.a.iv	Certify in each annual report the date the ordinance was adopted and that it is being enforced. A log of enforcement actions shall be kept in the SPPP.	EDPA + 12 months
Adopt and enforce a containerized yard waste / yard waste collection program ordinance.	IV.B.5.a.v	Certify in each annual report the date the ordinance was adopted and that it is being enforced. A log of enforcement actions shall be kept in the SPPP.	EDPA + 12 months
Adopt and enforce a private storm drain inlet retrofitting ordinance	IV.B.5.a.vi	Certify in each annual report the date the ordinance was adopted and that it is being enforced. A log of enforcement actions shall be kept in the SPPP.	EDPA + 12 months
Pollution Prevention/Good Housekeeping - Community Wide Measures			
Develop and continue to implement street sweeping measures as specified at Part IV.B.5.b.i.	IV.B.5.b.i	Certify in each annual report that a street sweeping schedule is being maintained as well as records including the date and areas swept, number of miles of streets swept, and the total amount of materials collected in wet tons. Include totals in the Annual Report and keep records in the SPPP.	EDPA + 24 months

Develop and continue to implement catch basin and storm drain inlet inspection and cleaning measures as specified at Part IV.B.5.b.ii.	IV.B.5.b.ii	Certify in each annual report that a catch basin and storm drain inlet inspection and cleaning schedule is being maintained, and a log indicating the number of municipally owned and operated catch basins and inlets within the municipality, the number of catch basins and inlets inspected, and the number cleaned is being maintained. Maintain records documenting the amount of materials collected in wet tons during cleaning activities in the SPPP. Include totals in the Annual Report.	EDPA + 24 months
Develop and continue to implement storm drain inlet retrofit measures as specified at Part IV.B.5.b.iii.	IV.B.5.b.iii	Certify in each annual report that a record of the number and location of storm drain inlets retrofitted as well as the number and location of storm drain inlets exempted is being maintained. Include totals in the Annual Report and keep records in the SPPP.	EDPA + 12 months
Pollution Prevention/Good Housekeeping - Municipal Maintenance Yards and Other Ancillary Operations			
Implement the BMP's found in Attachment E, including the Inventory of Materials and Machinery, and Inspections and Good Housekeeping practices, at Municipal Maintenance Yards and Other Ancillary Operations.	IV.B.5.c	Certify in each annual report that the SPPP includes all applicable requirements and that the requirements (including maintenance of inspection logs and tracking forms) of Attachment E have been met. Keep records required by Attachment E in the SPPP.	EDPA + 12 months
BMPs shall be implemented for fueling operations.	IV.B.5.c.i	Certify in each annual report that BMPs in Attachment E have been implemented for fueling operations.	EDPA + 12 months
BMPs shall be implemented for discharge of stormwater from secondary containment.	IV.B.5.c.ii	Certify in each annual report that BMPs in Attachment E have been implemented for discharge of stormwater from secondary containment.	EDPA + 12 months
BMPs shall be implemented for vehicle maintenance.	IV.B.5.c.iii	Certify in each annual report that BMPs in Attachment E have been implemented for vehicle maintenance.	EDPA + 12 months

BMPs shall be implemented for on-site equipment and vehicle washing and wash wastewater containment.	IV.B.5.c.iv	Certify in each annual report that BMPs in Attachment E have been implemented for on-site equipment and vehicle washing and wash wastewater containment.	EDPA + 60 months
BMPs shall be implemented for salt and de-icing material storage and handling.	IV.B.5.c.v	Certify in each annual report that BMPs in Attachment E have been implemented for salt and de-icing material storage and handling.	EDPA + 60 months
BMPs shall be implemented for aggregate material and construction debris storage.	IV.B.5.c.vi	Certify in each annual report that BMPs in Attachment E have been implemented for aggregate material and construction debris storage.	EDPA + 18 months
BMPs shall be implemented for street sweepings and catch basin clean-out material storage.	IV.B.5.c.vii	Certify in each annual report that BMPs in Attachment E have been implemented for street sweepings and catch basin clean-out material storage.	EDPA + 18 months
BMPs shall be implemented for yard trimmings and wood waste management sites.	IV.B.5.c.viii	Certify in each annual report that BMPs in Attachment E have been implemented for yard trimmings and wood waste management sites.	EDPA + 18 months
BMPs shall be implemented for roadside vegetation management.	IV.B.5.c.ix	Certify in each annual report that BMPs in Attachment E have been implemented for roadside vegetation management.	EDPA + 18 months
Pollution Prevention/Good Housekeeping - Training Program			
Provide training to municipal employees within 3 months of commencement of duties, and at least once every two years thereafter, to address all required components. The exceptions are Part IV.B.5.d.v, viii, and x which require annual training instead of once every two years.	IV.B.5.d	Certify in each annual report that employee training has been conducted, and maintain records including sign in sheet(s), date(s) of training, and training agenda(s). These records shall be kept in the SPPP.	EDPA + 12 months
Ensure that individuals that review development and redevelopment projects for compliance with N.J.A.C. 7:8 on behalf of the municipality complete Department approved training once every five years.	IV.B.5.e	Certify in each annual report that individuals reviewing projects have completed the required training, and maintain a list of the names and dates that individuals received training. This list shall be kept in the SPPP.	EDPA + 12 months

Ensure that current Municipal Board and Governing Body Members that review and approve applications for development and redevelopment projects complete the “Training Tool” on or before EDPA + 6 months, and by new members within 6 months of commencement of duties. Once per term of service thereafter, Municipal Board and Governing Body Members must review at least one of the tools offered under the Post-Construction Stormwater Management website.	IV.B.5.f	Certify in each annual report that municipal board and governing body members have completed the necessary training, and maintain a list of the names and dates that individuals completed training. This list shall be kept in the SPPP.	EDPA + 6 months
MS4 Outfall Pipe Mapping and Illicit Discharge and Scouring Detection and Control			
Develop, update and maintain an MS4 Outfall Pipe Map showing the location of the end of all outfall pipe which discharge to a surface water body.	IV.B.6.a.i	Certify in each annual report following the implementation deadline that the outfall pipe map is current at the end of the calendar year.	EDPA + 36 months
Show the location (and name where known) of all surface water bodies receiving discharges from those outfall pipes.	IV.B.6.a.ii	Certify in each annual report following the implementation deadline that the surface water bodies associated with each outfall pipe end is located on the map.	EDPA + 36 months
Include Outfall Pipe map in the SPPP	IV.B.6.a.iii	Certify in each annual report following the implementation deadline that the Outfall Pipe Map is included in the SPPP.	EDPA + 36 months
Provide Outfall Pipe Map to the Department	IV.B.6.a.iv	Certify in each annual report following the implementation deadline that the Outfall Pipe Map and any new data points subsequently added to the map have been provided to the Department.	EDPA + 36 months
Submitted the Outfall Pipe Map information to the Department electronically by December 21, 2020	IV.B.6.a.v	Submit the Outfall Pipe Map information to the Department using Department’s designated electronic submission service by December 21, 2020.	12/21/2020

Develop, update and implement a program to detect, investigate and control localized stream scouring from stormwater outfall pipes.	IV.B.6.b	Certify in each annual report that municipally owned outfall pipes have received the required visual inspection at least once every five years and maintain a log indicating the number and location of outfall pipes inspected, repairs prioritized, and repairs scheduled or performed. Certify in the annual report that a repair schedule has been prepared for those that have not been completed. Keep records required by Part IV.B.6.b in the SPPP.	EDPA + 60 months
Develop, update, implement and enforce an ongoing Illicit Discharge Detection and Elimination Program.	IV.B.6.c	Certify in each annual report that the municipality has developed a program to detect and eliminate illicit discharges and has conducted inspections required at Part IV.B.6.c at least once every five years. Document all investigations and actions taken on the Department's Illicit Connection Inspection Report Form. Keep records required by Part IV.B.6.c in the SPPP.	EDPA + 60 months
Adopt and enforce an ordinance that prohibits illicit connections to the MS4 operated by the Tier A Municipality.	IV.B.6.d	Certify in each annual report that the ordinance is being maintained and the date it was adopted. A log of enforcement actions shall be kept in the SPPP.	EDPA + 12 months
Stormwater Facilities Maintenance			
Develop, update and implement a program to ensure adequate long-term cleaning, operation and maintenance of all stormwater facilities owned or operated by the Tier A Municipality.	IV.C.1.a	Certify in each annual report that the municipality has developed, updated and implemented a program to ensure adequate long-term cleaning, operation and maintenance of all municipally owned stormwater facilities. Records required by Part IV.C.1.a, a.i, a.ii, a.iii and a.iv shall be kept, or their location shall be referenced, in the SPPP.	EDPA + 18 months

Inspect and maintain stormwater facilities pursuant to any maintenance plans, or more frequently as needed, to ensure proper function and operation of each stormwater facility.	IV.C.1.a.i	Certify in each annual report that inspections and maintenance was performed pursuant to any maintenance plans, or more frequently as needed, to ensure proper function and operation of stormwater facilities.	EDPA + 18 months
Maintain a log sufficient to demonstrate compliance with this section; including but not limited a list of inspections and preventative and corrective maintenance performed, and a schedule for repairs to be made.	IV.C.1.a.ii	Certify in each annual report that a maintenance log is kept that, at a minimum, records the stormwater facility inspected, location information of the facility inspected (location information must be specific enough to locate and identify the stormwater facility in the field; e.g. geographic coordinates), name of inspector, date of inspection, findings, and any preventative and corrective maintenance performed.	EDPA + 18 months
Certify annually that municipally owned or operated stormwater facilities are properly functioning.	IV.C.1.a.iii	Certify in each annual report that all municipally owned or operated stormwater facilities are properly functioning.	EDPA + 18 months
If stormwater facilities were found not to be functioning properly and repairs not made, then necessary preventative and corrective maintenance shall be documented and prioritized and a schedule for maintenance shall be maintained.	IV.C.1.a.iv	Certify in each annual report that a prioritized schedule of necessary preventive and corrective maintenance exists for stormwater facilities inspected and found not to be functioning properly. The municipality shall prioritize this schedule as specified in Part IV.C.1.iv.	EDPA + 18 months
Develop, update, implement and enforce a program to ensure adequate long-term cleaning, operation and maintenance of stormwater facilities not owned or operated by the Tier A Municipality, not subject to the conditions of another NJPDES stormwater permit and constructed after February 7, 1984.	IV.C.1.b	Certify in each annual report that the municipality has developed, updated, implemented and enforced a program to ensure adequate long-term cleaning, operation and maintenance of stormwater facilities not owned and operated by the municipality, not subject to the conditions of another NJPDES stormwater permit and constructed after February 7, 1984. Records required by Part IV.C.1.b, b.i and b.ii shall be kept, or their location shall be referenced, in the SPPP.	EDPA + 18 months

Ensure that stormwater facility inspection and maintenance is performed pursuant to any maintenance plans, or more frequently as needed to ensure proper function and operation of each stormwater facility.	IV.C.1.b.i	Certify in each annual report that maintenance was performed pursuant to any maintenance plans, or more frequently, to ensure proper function and operation of stormwater facilities not owned and operated by the municipality.	EDPA + 18 months
Maintain a log sufficient to demonstrate compliance with this section; including but not limited actions taken by the municipality to enforce compliance with the long-term cleaning, operation and maintenance program.	IV.C.1.b.ii	Certify in each annual report that a log is being kept that, at a minimum, records the actions taken by the municipality to enforce compliance with the long-term cleaning, operation and maintenance program; the stormwater facility that was the subject of the action; location information of the facility that was the subject of the action (location information must be specific enough to locate and identify the stormwater facility in the field; e.g. geographic coordinates); the name of person taking the action; the date of the action; and the findings.	EDPA + 18 months
Maintain copies of all maintenance plans for stormwater facilities approved by the municipality, and make them available to the Department upon request.	IV.C.1.c	Certify in each annual report that copies of all maintenance plans are kept on file. Records required by Part IV.C.1.c shall be kept, or their location shall be referenced, in the SPPP.	EDPA + 12 months
Total Maximum Daily Load (TMDL) Info.			
Annually review approved or adopted TMDL reports to identify stormwater related pollutants listed therein and associated with any segment of surface water wholly or partially within or bordering the Tier A Municipality.	IV.C.2.a.i	Certify in each annual report that approved or adopted TMDLs have been identified and reviewed and stormwater related pollutants identified. Records required by Part IV.C.2.a.i, a.ii and a.iii shall be kept in the SPPP.	EDPA + 12 months

Use TMDL information identified in compliance with Part IV.C.2.a.i to: (1) assist in the prioritization of stormwater facility maintenance including schedules for repairs related to Stream Scouring and Stormwater Facilities Maintenance; and (2) identify and develop strategies to address specific sources of stormwater related pollutants contributing to discharges authorized under this Tier A MS4 NJPDES permit.	IV.C.2.a.ii	Certify in each annual report that the municipality has used information identified in compliance with Part VI.C.2.a.i to (1) assist in the prioritization of repairs as required at Part IV.B.6.b.iv (Stream Scouring) and IV.C.31.a.iv (Stormwater Facilities Maintenance); and (2) identify and develop strategies to address specific sources of stormwater related pollutants contributing to discharges authorized under this Tier A MS4 NJPDES permit.	EDPA + 12 months
Update SPPP to list information identified in Part VI.C.2.a.i and ii.	IV.C.2.a.iii	Certify in each annual report that the municipality has updated its SPPP to list information identified in Part VI.C.2.a.i and ii.	EDPA + 12 months
Incorporate any strategies identified in Part VI.C.2.a.ii(2) as an Optional Measure	IV.C.2.a.iv	Certify in each annual report that the municipality has incorporated any strategies identified in Part VI.C.2.a.ii(2) as an Optional Measure.	EDPA + 12 months

Attachment B – Points System for Public Education and Outreach Activities

The Tier A Municipality shall implement a Public Education and Outreach Program that focuses on educational and pollution prevention activities about the impacts of stormwater discharges on surface water and groundwater and to involve the public in reducing pollutants in stormwater runoff and mitigating flow.

The Tier A Municipality shall **annually** conduct educational activities that total at least **12 points** and include activities from at least three of the five categories found below. At a minimum, at least one of the activities shall involve educating businesses and the general public of hazards associated with illicit connections and improper disposal of waste. Each approved activity is listed below with an assigned point value. Additional information on how to conduct these Public Education and Outreach activities can be found under Notes and Definitions Part IV.A.3 and 4 of this Tier A MS4 NJPDES permit. Records shall be kept necessary to demonstrate compliance with this requirement, including date of activities and any other relevant documentation.

Category 1: General Public Outreach		
Activity	Description	Points
Website and Social Media	Maintain a stormwater related page on the municipal website or on a municipal social media site. The web page may include links to other stormwater related resources, including the NJDEP stormwater website (www.njstormwater.org).	1
Newspaper Ad	Use Department created and approved stormwater education materials available on www.cleanwatersnj.org to publish an ad in a newspaper or newsletter that serves the municipality.	1
Radio/Television	Broadcast a radio or television public service announcement from www.cleanwatersnj.org on a local radio or municipal public service channel.	1
Green Infrastructure Signage	Post signs at municipally-owned green infrastructure sites that describe the function and importance of the infrastructure, contact phone number, municipal identification number, and/or website for more information. *New signs receive 0.5 credits per sign. Existing signs that are maintained or upgraded receive 0.25 credits per sign. A maximum of 5 credits are allowed.	5*
Billboard/Sign	Produce and maintain (for credit in subsequent years) a billboard or sign which can be displayed on a bus, bus stop shelter, recreation field (outfield sign), or other similar public venue.	2
Mural	Produce and maintain (for credit in subsequent years) the planning and painting of a stormwater pollution themed mural, storm drain art or other artwork at a local downtown/commercial area or other similar public venue.	2
Stormwater Facility Signage	Post signs at municipally-owned stormwater management basins or other structural stormwater related facilities that describe the function and importance of the facility, contact phone number, municipal identification number, and/or website for more information. *New signs receive 0.5 credits per sign. Existing signs that are maintained or upgraded receive 0.25 credits per sign. A maximum of 5 credits are allowed.	5*

Category 2: Targeted Audiences Outreach		
Activity	Description	Points
Stormwater Display	Present a stormwater related display or materials at any municipal event (e.g., Earth Day, town picnic), at the municipal building or other similar public venue.	1
Promotional Item	Distribute an item or items with a stormwater related message (e.g., refrigerator magnets, temporary tattoos, key chains, bookmarks, pet waste bag dispensers, coloring books, and pens or pencils). Municipality must initially have available a minimum number of the items equal to 10% of the municipal population.	2
Mailing or e-Mailing Campaign	Provide information to all known owners of stormwater facilities not owned or operated by the municipality (i.e., privately owned) highlighting the importance of proper maintenance of stormwater measures. For assistance, see information at www.nj.gov/dep/stormwater/maintenance_guidance.htm .	3
Mailing or e-Mailing Campaign	Distribute any of the Department's educational brochures, tip cards, or a municipally produced equivalent (e.g., community calendar, newsletter, or recycling schedule) via a mailing to every resident and business in the municipality.	2
Ordinance Education	Distribute a letter or e-mail from the mayor or municipal official to every resident and business in the municipality highlighting the requirements and environmental benefits of the Pet Waste, Wildlife Feeding, Litter Control, Improper Disposal of Waste, Containerized Waste/Yard Waste Collection, Private Storm Drain Inlet Retrofitting and Illicit Connection ordinances. Provide a link to the municipal website where subject ordinances are posted.	3

Category 3: School / Youth Education and Activities		
Activity	Description	Points
School Presentations	Provide water-related educational presentation(s) and/or activities to local preschool, elementary, middle, and/or high school classes using municipal staff or local partner organizations. Topics could include stormwater, nonpoint source pollution, watersheds, water conservation and water quality. For ideas, see information at www.nj.gov/dep/seeds . *Presentations receive 1 credit per presentation, with a maximum of 5 credits allowed.	5*
Water Education Workshops	Provide water-related professional development workshops for local teachers from a registered NJ Department of Education Professional Development Provider.	2
Storm Drain Labeling	Organize a project to label and/or maintain storm drain labels (that are not already precast with a message) with a scout troop, local school district, or faith based group, or other community youth group for a minimum of 40 labels. This project could also include stenciling over precast labels to improve legibility.	3
Educational Contest for Schools	Organize an educational contest with a local school district or a local community organization serving youth to design a poster, magnet, rain stick, rain barrel or other craft/art object. Contest themes shall have an appropriate stormwater message. Winning entries are to be displayed at publicly accessible locations within the municipality such as at the town hall, library, post office, or school. The winning design should be shown on the municipality's website or social media site, if practical.	3
AmeriCorps Event	Coordinate an event (e.g. volunteer stream monitoring, educational presentations, or stormwater awareness project) through AmeriCorps NJ Watershed Ambassador Program	4
Clean-up	Sponsor or organize a litter clean up for a scout troop, local school district, faith based group or other community youth group along a local waterway, public park, stormwater facility, or in an area with storm drains that discharge to a local lake or waterway.	3

Category 4: Watershed/Regional Collaboration

Activity	Description	Points
Regional Stormwater Collaboration	Participate in a regional stormwater, community collaborative or other watershed-based group on a regular basis to discuss impaired waterbodies, TMDLs, regional stormwater related issues, or watershed restoration plans that address those waterbodies. Evaluate, develop and implement remedies that resolve stormwater-related issues within the affected waterbody or watershed.	3
Green Infrastructure Workshop	Organize or participate in a rain barrel, rain garden or other green infrastructure workshop on a regional or watershed basis. This could be a partnership exercise with a local watershed organization, utility, university, school, youth/faith based group, and/or other organization.	3
Community Activity	Organize or participate in the organization of a regional or watershed based event to carry out stormwater activities such as stormwater facility maintenance or litter clean-up. The municipality may identify and enter into a partnership agreement with a local group such as a watershed organization, utility, university, school, youth/faith based group, and/or other organization to carry out these activities.	3

Category 5: Community Involvement Activities

Activity	Description	Points
Volunteer Stormwater Assessment or Stream Monitoring	Establish a volunteer stormwater facility assessment (inspection, inventory and/or mapping) or stream monitoring program for a waterbody within the municipality in order to gauge the health of the waterway through chemical, biological or visual monitoring protocols. Contact NJDEP's <u>AmeriCorps NJ Watershed Ambassador Program</u> or review <u>USEPA National Directory of Volunteer Monitoring Programs</u> .	3
Rain Barrel Workshop	Organize or participate in a rain barrel workshop. This could be a partnership exercise with a local watershed organization, university, school, youth/faith based group, and/or other nonprofit.	3
Rain Garden Workshop	Organize or participate in a rain garden training or installation workshop. This could be a partnership exercise with a local watershed organization, university, school, youth/faith based group, and/or other nonprofit.	3
Community Event	Organize or participate in the organization of a community event to carry out stormwater activities such as stormwater measure maintenance or a stream buffer restoration. The municipality may identify and enter into a partnership agreement with a local group such as a watershed organization, university, utility, school, youth/faith based group, and/or other nonprofit to carry out these activities.	3
Community Involvement	Organize a project with a local organization to create and post signs at either green and/or gray stormwater infrastructure sites or facilities that describe the function and importance of the facility, contact phone number, municipal identification number, and/or website for more information.	5*

*Signs receive 0.5 credits per sign. A maximum of 5 credits are allowed.

Attachment C - Design Standards for Storm Drain Inlets

Application of Design Standard

The below design standard applies to the following types of storm drain inlet installation or retrofit projects unless a more stringent standard is specified by the municipality's stormwater control ordinance:

- Storm drain inlets installed as part of new development and redevelopment (public or private) that disturb one acre or more;
 - Storm drain inlets installed as part of new development and redevelopment (public or private) that disturb less than one acre that are part of a larger common plan of development or sale (e.g. phased residential development) that ultimately disturbs one acre or more;
- Tier A Municipality owned or operated storm drain inlets must be retrofitted where the storm drains are (1) in direct contact with any repaving, repairing (excluding individual pothole repair), or resurfacing (including top coating or chip sealing with asphalt emulsion or a thin base of hot bitumen); or (2) in direct contact with any reconstruction or alteration of facilities; and
- Privately owned or operated storm drain inlets (e.g. condominium association) must be retrofitted where the storm drains are (1) in direct contact with anyrepaving, repairing (excluding individual pothole repair), or resurfacing (including top coating or chip sealing with asphalt emulsion or a thin base of hot bitumen); or (2) in direct contact with any reconstruction or alteration of facilities. This does not include single family homes.

Design Standard

Grates in pavement or other ground surfaces shall meet either of the following standards:

- The New Jersey Department of Transportation (NJDOT) bicycle safe grate standards described in Chapter 2.4 of the NJDOT Bicycle Compatible Roadways and Bikeways Planning and Design Guidelines (see www.nj.gov/transportation/publicat/pdf/BikeComp/introtofac.pdf); or
- A grate where each individual clear space in that grate has an area of no more than seven (7.0) square inches, or is not greater than 0.5 inches across the smallest dimension. Note that the Residential Site Improvement Standards at N.J.A.C. 5:21 include requirements for bicycle safe grates.

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 used to collect stormwater from the surface into a storm drain or surface water body.

For curb-openings inlets, including curb-opening inlets in combination inlets, the clear space in the 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.

Exemptions from the Design Standard

- Where each individual clear space in the curb opening in existing curb-opening inlets does not have an area of more than nine (9.0) square inches;
- Where the review agency determines that the standards would cause inadequate hydraulic performance that could not practicably be overcome by using additional or larger storm drain inlets;
- Where flows from the water quality design storm as specified in N.J.A.C. 7:8 are conveyed through any device (e.g., end of pipe netting facility, manufactured treatment device, or a catch basin hood) that is designed, at a minimum, to prevent delivery of all solid and floatable materials that could not pass through one of the following:

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

A bar screen having a bar spacing of 0.5 inches;

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

- 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 N.J.A.C. 7:8; or
- Where the Department 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 the standard is an undertaking that constitutes an encroachment or will damage or destroy the New Jersey Register listed historic property.

Attachment D – Major Development Stormwater Summary

General Information			
1. Project Name:			
2. Municipality:	County:	Block(s):	Lot(s):
3. Site Location (State Plane Coordinates – NAD83):	E:	N:	
4. Date of Final Approval for Construction by Municipality: Date of Certificate of Occupancy:			
5. Project Type (circle all that apply): Residential Commercial Industrial Other (please specify) _____			
6. Soil Conservation District Project Number:			
7. Did project require NJDEP Land Use Permit? Yes No Land Use Permit #:			
8. Did project require the use of any mitigation measures? Yes No If yes, which standard was mitigated?			

Site Design Specifications			
1. Area of Disturbance (acres):	Area of Proposed Impervious (acres):		
2. List all Hydrologic Soil Groups:			
3. Please Identify the Amount of Each Best Management Practices (BMPs) Utilized in Design Below: Bioretention Systems _____ Constructed Wetlands _____ Dry Wells _____ Extended Detention Basins _____ Infiltration Basins _____ Combination Infiltration/Detention Basins _____ Manufactured Treatment Devices _____ Pervious Paving Systems _____ Sand Filters _____ Vegetative Filter Strips _____ Wet Ponds _____ Grass Swales _____ Subsurface Gravel Wetlands _____ Other _____			

Storm Event Information			
Storm Event: Rainfall (inches and duration)	2 yr.: _____	10 yr.: _____	
	100 yr.: _____	WQ DS: _____	
Runoff Computation Method (circle one): NRCS: Dimensionless Unit Hydrograph NRCS: Delmarva Unit Hydrograph Rational Modified Rational Other: _____			

Basin Specifications (answer all that apply) *If more than one basin, attach multiple sheets*			
1. Type of Basin:	Surface/Subsurface (circle one)		
2. Owner (circle one): Public Private: If so, Name: _____	Phone number: _____		
3. Basin Construction Completion Date:			
4. Drain Down Time (hr.):			
5. Design Soil Permeability (in./hr.):			
6. Seasonal High Water Table Depth from Bottom of Basin (ft.):	Date Obtained: _____		
7. Groundwater Recharge Methodology (circle one):	2 Year Difference	NJGRS	Other
8. Groundwater Mounding Analysis (circle one):	Yes	No	If Yes Methodology Used: _____
9. Maintenance Plan Submitted: Yes	No	Is the Basin Deed Restricted: Yes	No

Comments: _____

Name of Person Filling Out This Form: _____

Signature: _____

Title: _____

Date: _____

Basin Specifications (answer all that apply)
If more than one basin, attach multiple sheets

10. Type of Basin:	Surface/Subsurface (circle one)		
11. Owner (circle one): Public Private: If so, Name:	Phone number:		
12. Basin Construction Completion Date:			
13. Drain Down Time (hr.):			
14. Design Soil Permeability (in./hr.):			
15. Seasonal High Water Table Depth from Bottom of Basin (ft.):	Date Obtained:		
16. Groundwater Recharge Methodology (circle one): 2 Year Difference	NJGRS	Other	NA
17. Groundwater Mounding Analysis (circle one): Yes No If, Yes Methodology Used:			
18. Maintenance Plan Submitted: Yes No Is the Basin Deed Restricted: Yes No			

Basin Specifications (answer all that apply)
If more than one basin, attach multiple sheets

19. Type of Basin:	Surface/Subsurface (circle one)		
20. Owner (circle one): Public Private: If so, Name:	Phone number:		
21. Basin Construction Completion Date:			
22. Drain Down Time (hr.):			
23. Design Soil Permeability (in./hr.):			
24. Seasonal High Water Table Depth from Bottom of Basin (ft.):	Date Obtained:		
25. Groundwater Recharge Methodology (circle one): 2 Year Difference	NJGRS	Other	NA
26. Groundwater Mounding Analysis (circle one): Yes No If, Yes Methodology Used:			
27. Maintenance Plan Submitted: Yes No Is the Basin Deed Restricted: Yes No			

Basin Specifications (answer all that apply)
If more than one basin, attach multiple sheets

28. Type of Basin:	Surface/Subsurface (circle one)		
29. Owner (circle one): Public Private: If so, Name:	Phone number:		
30. Basin Construction Completion Date:			
31. Drain Down Time (hr.):			
32. Design Soil Permeability (in./hr.):			
33. Seasonal High Water Table Depth from Bottom of Basin (ft.):	Date Obtained:		
34. Groundwater Recharge Methodology (circle one): 2 Year Difference	NJGRS	Other	NA
35. Groundwater Mounding Analysis (circle one): Yes No If, Yes Methodology Used:			
36. Maintenance Plan Submitted: Yes No Is the Basin Deed Restricted: Yes No			

Name of Person Filling Out This Form: _____

Signature: _____

Title: _____

Date: _____

Attachment E – Best Management Practices for Municipal Maintenance Yards and Other Ancillary Operations

The Tier A Municipality shall implement the following practices at municipal maintenance yards and other ancillary operations owned or operated by the municipality. Inventory of Materials and Machinery, and Inspections and Good Housekeeping shall be conducted at all municipal maintenance yards and other ancillary operations. All other Best Management Practices shall be conducted whenever activities described below occur. Ancillary operations include but are not limited to impound yards, permanent and mobile fueling locations, and yard trimmings and wood waste management sites.

Inventory of Materials and Machinery

The SPPP shall include a list of all materials and machinery located at municipal maintenance yards and ancillary operations which could be a source of pollutants in a stormwater discharge. The materials in question include, but are not limited to: raw materials; intermediate products; final products; waste materials; by-products; machinery and fuels; and lubricants, solvents, and detergents that are related to the municipal maintenance yard operations and ancillary operations. Materials or machinery that are not exposed to stormwater at the municipal maintenance yard or related to its operations do not need to be included.

Inspections and Good Housekeeping

1. Inspect the entire site, including the site periphery, monthly (under both dry and wet conditions, when possible). Identify conditions that would contribute to stormwater contamination, illicit discharges or negative impacts to the Tier A Municipality's MS4. Maintain an inspection log detailing conditions requiring attention and remedial actions taken for all activities occurring at Municipal Maintenance Yards and Other Ancillary Operations. This log must contain, at a minimum, a record of inspections of all operations listed in Part IV.B.5.c. of this permit including dates and times of the inspections, and the name of the person conducting the inspection and relevant findings. This log must be kept on-site with the SPPP and made available to the Department upon request. See the Tier A Municipal Guidance document (www.nj.gov/dep/dwq/tier_a_guidance.htm) for additional information.
2. Conduct cleanups of spills of liquids or dry materials immediately after discovery. All spills shall be cleaned using dry cleaning methods only. Clean up spills with a dry, absorbent material (i.e., kitty litter, sawdust, etc.) and sweep the rest of the area. Dispose of collected waste properly. Store clean-up materials, spill kits and drip pans near all liquid transfer areas, protected from rainfall.
3. Properly label all containers. Labels shall be legible, clean and visible. Keep containers in good condition, protected from damage and spillage, and tightly closed when not in use. When practical, store containers indoors. If indoor storage is not practical, containers may be stored outside if covered and placed on spill platforms or clean pallets. An area that is graded and/or bermed to prevent run-through of stormwater may be used in place of spill platforms or clean pallets. Outdoor storage locations shall be regularly maintained.

Fueling Operations

1. Establish, maintain and implement standard operating procedures to address vehicle fueling; receipt of bulk fuel deliveries; and inspection and maintenance of storage tanks, including the associated piping and fuel pumps.
 - a. Place drip pans under all hose and pipe connections and other leak-prone areas during bulk transfer of fuels.
 - b. Block storm sewer inlets, or contain tank trucks used for bulk transfer, with temporary berms or temporary absorbent booms during the transfer process. If temporary berms or booms are being used instead of blocking the storm sewer inlets, all hose connection points associated with the transfer of fuel shall be within the temporarily bermed or boomed area during the loading/unloading of bulk fuels. A trained employee shall be present to supervise the bulk transfer of fuel.
 - c. Clearly post, in a prominent area of the facility, instructions for safe operation of fueling equipment. Include all of the following:
 - “Topping off of vehicles, mobile fuel tanks, and storage tanks is strictly prohibited”
 - “Stay in view of fueling nozzle during dispensing”
 - Contact information for the person(s) responsible for spill response.
 - d. Immediately repair or replace any equipment, tanks, pumps, piping and fuel dispensing equipment found to be leaking or in disrepair.

Discharge of Stormwater from Secondary Containment

The discharge pipe/outfall from a secondary containment area (e.g. fuel storage, de-icing solution storage, brine solution) shall have a valve and the valve shall remain closed at all times except as described below. A municipality may discharge stormwater accumulated in a secondary containment area if a visual inspection is performed to ensure that the contents of aboveground storage tank have not come in contact with the stormwater to be discharged. Visual inspections are only effective when dealing with materials that can be observed, like petroleum. If the contents of the tank are not visible in stormwater, the municipality shall rely on previous tank inspections to determine with some degree of certainty that the tank has not leaked. If the municipality cannot make a determination with reasonable certainty that the stormwater in the secondary containment area is uncontaminated by the contents of the tank, then the stormwater shall be hauled for proper disposal.

Vehicle Maintenance

1. Operate and maintain equipment to prevent the exposure of pollutants to stormwater.
2. Whenever possible, conduct vehicle and equipment maintenance activities indoors. For projects that must be conducted outdoors, and that last more than one day, portable tents or covers shall be placed over the equipment being serviced when not being worked on, and drip pans shall be used at all times. Use designated areas away from storm drains or block storm drain inlets when vehicle and equipment maintenance is being conducted outdoors.

On-Site Equipment and Vehicle Washing and Wash Wastewater Containment

1. Manage any equipment and vehicle washing activities so that there are no unpermitted discharges of wash wastewater to storm sewer inlets or to waters of the State.
2. Tier A Municipalities which cannot discharge wash wastewater to a sanitary sewer or which cannot otherwise comply with 1, above, may temporarily contain wash wastewater prior to proper disposal under the following conditions:
 - a. Containment structures shall not leak. Any underground tanks and associated piping shall be tested for integrity every 3 years using appropriate methods determined by "*The List of Leak Detection Evaluations for Storage Tank Systems*" created by the National Work Group on Leak Detection Evaluations (NWGLDE) or as determined appropriate and certified by a professional engineer for the site specific containment structure(s).
 - b. For any cathodically protected containment system, provide a passing cathodic protection survey every three years.
 - c. Operate containment structures to prevent overfilling resulting from normal or abnormal operations, overfilling, malfunctions of equipment, and human error. Overfill prevention shall include manual sticking/gauging of the tank before each use unless system design prevents such measurement. Tank shall no longer accept wash wastewater when determined to be at 95% capacity. Record each measurement to the nearest ½ inch.
 - d. Before each use, perform inspections of all visible portions of containment structures to ensure that they are structurally sound, and to detect deterioration of the wash pad, catch basin, sump, tank, piping, risers, walls, floors, joints, seams, pumps and pipe connections or other containment devices. The wash pad, catch basin, sump and associated drains should be kept free of debris before each use. Log dates of inspection; inspector's name, and conditions. This inspection is not required if system design prevents such inspection.
 - e. Containment structures shall be emptied and taken out of service immediately upon detection of a leak. Complete all necessary repairs to ensure structural integrity prior to placing the containment structure back into service. Any spills or suspected release of hazardous substances shall be immediately reported to the NJDEP Hotline (1-877-927-6337) followed by a site investigation in accordance with N.J.A.C. 7:26C and N.J.A.C 7:26E if the discharge is confirmed.
 - f. All equipment and vehicle wash wastewater placed into storage must be disposed of in a legally permitted manner (e.g. pumped out and delivered to a duly permitted and/or approved wastewater treatment facility).
 - g. Maintain a log of equipment and vehicle wash wastewater containment structure clean-outs including date and method of removal, mode of transportation (including name of hauler if applicable) and the location of disposal. See Underground Vehicle Wash Water Storage Tank Use Log at end of this attachment.
 - h. Containment structures shall be inspected annually by a NJ licensed professional engineer. The engineer shall certify the condition of all structures including: wash pad, catch basin,

sump, tank, piping, risers to detect deterioration in the, walls, floors, joints, seams, pumps and pipe connections or other containment devices using the attached Engineer's Certification of Annual Inspection of Equipment and Vehicle Wash Wastewater Containment Structure. This certification may be waived for self-contained systems on a case-by-case basis. Any such waiver would be issued in writing by the Department.

3. Maintain all logs, inspection records, and certifications on-site. Such records shall be made available to the Department upon request.

Salt and De-icing Material Storage and Handling

1. Store material in a permanent structure.
2. Perform regular inspections and maintenance of storage structure and surrounding area.
3. Minimize tracking of material from loading and unloading operations.
4. During loading and unloading:
 - a. Conduct during dry weather, if possible;
 - b. Prevent and/or minimize spillage; and
 - c. Minimize loader travel distance between storage area and spreading vehicle.
5. Sweep (or clean using other dry cleaning methods):
 - a. Storage areas on a regular basis;
 - b. Material tracked away from storage areas;
 - c. Immediately after loading and unloading is complete.
6. Reuse or properly discard materials collected during cleanup.
7. Temporary outdoor storage is permitted only under the following conditions:
 - a. A permanent structure is under construction, repair or replacement;
 - b. Stormwater run-on and de-icing material run-off is minimized;
 - c. Materials in temporary storage are tarped when not in use;
 - d. The requirements of 2 through 6, above are met; and
 - e. Temporary outdoor storage shall not exceed 30 days unless otherwise approved in writing by the Department;
8. Sand must be stored in accordance with Aggregate Material and Construction Debris Storage below.

Aggregate Material and Construction Debris Storage

1. Store materials such as sand, gravel, stone, top soil, road millings, waste concrete, asphalt, brick, block and asphalt based roofing scrap and processed aggregate in such a manner as to minimize stormwater run-on and aggregate run-off via surface grading, dikes and/or berms (which may include sand bags, hay bales and curbing, among others) or three sided storage bays. Where possible the open side of storage bays shall be situated on the upslope. The area in front of storage bays and adjacent to storage areas shall be swept clean after loading/unloading.
2. Sand, top soil, road millings and processed aggregate may only be stored outside and uncovered if in compliance with item 1 above and a 50-foot setback is maintained from surface water bodies, storm sewer inlets, and/or ditches or other stormwater conveyance channels.
3. Road millings must be managed in conformance with the “Recycled Asphalt Pavement and Asphalt Millings (RAP) Reuse Guidance” (see www.nj.gov/dep/dshw/rrtp/asphaltguidance.pdf) or properly disposed of as solid waste pursuant to N.J.A.C. 7:26-1 et seq.
4. The stockpiling of materials and construction of storage bays on certain land (including but not limited to coastal areas, wetlands and floodplains) may be subject to regulation by the Division of Land Use Regulation (see www.nj.gov/dep/landuse/ for more information).

Street Sweepings, Catch Basin Clean Out, and Other Material Storage

1. For the purposes of this permit, this BMP is intended for road cleanup materials as well as other similar materials. Road cleanup materials may include but are not limited to street sweepings, storm sewer clean out materials, stormwater basin clean out materials and other similar materials that may be collected during road cleanup operations. These BMPs do not cover materials such as liquids, wastes which are removed from municipal sanitary sewer systems or material which constitutes hazardous waste in accordance with N.J.A.C. 7:26G-1.1 et seq.
2. Road cleanup materials must be ultimately disposed of in accordance with N.J.A.C. 7:26-1.1 et seq. See the “Guidance Document for the Management of Street Sweepings and Other Road Cleanup Materials” (www.nj.gov/dep/dshw/rrtp/sweeping.htm).
3. Road cleanup materials placed into storage must be, at a minimum:
 - a. Stored in leak-proof containers or on an impervious surface that is contained (e.g. bermed) to control leachate and litter; and
 - b. Removed for disposal (in accordance with 2, above) within six (6) months of placement into storage.

Yard Trimmings and Wood Waste Management Sites

1. These practices are applicable to any yard trimmings or wood waste management site:
 - a. Owned and operated by the Tier A Municipality;
 - i. For staging, storing, composting or otherwise managing yard trimmings, or
 - ii. For staging, storing or otherwise managing wood waste, and
 - b. Operated in compliance with the Recycling Rules found at N.J.A.C. 7:26A.
2. Yard trimmings or wood waste management sites must be operated in a manner that:
 - a. Diverts stormwater away from yard trimmings and wood waste management operations; and
 - b. Minimizes or eliminates the exposure of yard trimmings, wood waste and related materials to stormwater.
3. Yard trimmings and wood waste management site specific practices:
 - a. Construct windrows, staging and storage piles:
 - i. In such a manner that materials contained in the windrows, staging and storage piles (processed and unprocessed) do not enter waterways of the State;
 - ii. On ground which is not susceptible to seasonal flooding;
 - iii. In such a manner that prevents stormwater run-on and leachate run-off (e.g. use of covered areas, diversion swales, ditches or other designs to divert stormwater from contacting yard trimmings and wood waste).
 - b. Maintain perimeter controls such as curbs, berms, hay bales, silt fences, jersey barriers or setbacks, to eliminate the discharge of stormwater runoff carrying leachate or litter from the site to storm sewer inlets or to surface waters of the State.
 - c. Prevent on-site storm drain inlets from siltation using controls such as hay bales, silt fences, or filter fabric inlet protection.
 - d. Dry weather run-off that reaches a municipal stormwater sewer system is an illicit discharge. Possible sources of dry weather run-off include wetting of piles by the site operator; uncontrolled pile leachate or uncontrolled leachate from other materials stored at the site.
 - e. Remove trash from yard trimmings and wood waste upon receipt.
 - f. Monitor site for trash on a routine basis.
 - g. Store trash in leak-proof containers or on an impervious surface that is contained (e.g. bermed) to control leachate and litter;
 - h. Dispose of collected trash at a permitted solid waste facility.
 - i. Employ preventative tracking measures, such as gravel, quarry blend, or rumble strips at exits.

Roadside Vegetation Management

1. Tier A Municipalities shall restrict the application of herbicides along roadsides in order to prevent it from being washed by stormwater into the waters of the State and to prevent erosion caused by de-vegetation, as follows: Tier A Municipalities shall not apply herbicides on or adjacent to storm drain inlets, on steeply sloping ground, along curb lines, and along unobstructed shoulders. Tier A Municipalities shall only apply herbicides within a 2 foot radius around structures where overgrowth presents a safety hazard and where it is unsafe to mow.

**ENGINEERS CERTIFICATION OF ANNUAL INSPECTION OF EQUIPMENT
AND VEHICLE WASH WASTEWATER CONTAINMENT STRUCTURE**
(Complete a separate form for each vehicle wash wastewater containment structure)

Permittee: _____

NJPDES Permit No: _____

Containment Structure Location: _____

The annual inspection of the above referenced vehicle wash wastewater containment structure was conducted on _____ (date). The containment structure and appurtenances have been inspected for:

1. The integrity of the structure including walls, floors, joints, seams, pumps and pipe connections
2. Leakage from the structure's piping, vacuum hose connections, etc.
2. Bursting potential of tank.
3. Transfer equipment
4. Venting
5. Overflow, spill control and maintenance.
6. Corrosion, splits, and perforations to tank, piping and vacuum hoses

The tank and appurtenances have been inspected for all of the above and have been determined to be:

Acceptable _____

Unacceptable _____

Conditionally Acceptable _____

List necessary repairs and other conditions: _____

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment (N.J.A.C. 7:14A-2.4(d)).

Name (print): _____ Seal: _____

Signature: _____

Date: _____

Underground Vehicle Wash Water Storage Tank Use Log

Name and Address of Facility _____

Facility Permit Number _____

Tank ID Number _____

Tank Location _____

Tank Volume _____ gallons

Tank Height _____ inches

95% Volume _____ gallons

95% Volume _____ inches

<u>Date and Time</u>	<u>Inspector</u>	<u>Height of Product Before Introducing Liquid (inches)</u>	<u>Is Tank Less Than 95% Full? (Y/N)</u>	<u>Visual Inspection Pass? (Y/N)</u>	<u>Comments</u>

Notes: The volume of liquid in the tank should be measured **before** each use.

Liquid **should not be introduced** if the tank contains liquid at 95% of the capacity or greater.

A visual inspection of all exposed portions of the collection system should be performed before each use. Use the comments column to document the inspection and any repairs.

Underground Vehicle Wash Water Storage Tank Pump Out Log

Name and Address of Facility _____

Facility Permit Number _____

Tank ID Number _____

Tank Location _____

Tank Volume _____ gallons

<u>Date and Time of Pump Out</u>	<u>Volume of Liquid Removed</u>	<u>Waste Hauler *</u>	<u>Destination of the Liquid Disposal *</u>

*** The Permittee must maintain copies of all hauling and disposal records and make them available for inspection**

B. Adopted Stormwater Control Ordinance

MUNICIPAL STORM WATER MANAGEMENT ORDINANCE

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ELIZABETH:

Section 1: Scope and Purpose

A. 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.

B. Purpose

It is the purpose of this ordinance to establish minimum stormwater management requirements and controls for "major development," as defined in Section 2.

C. 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 City of Elizabeth.

D. 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.

PRESENTED to the Mayor for
APPROVAL or DISAPPROVAL on

AUG 23 2006

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 definitions below are the same as or based on the corresponding definitions in the Stormwater Management Rules at N.J.A.C. 7:8-1.2.

“CAFRA 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.

“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 is the Hudson County Division of Planning.

“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.

“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.

“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.

“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 Nongame Species Program.

“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.

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

- “Impervious surface” means a surface that has been covered with a layer of material so that it is highly resistant to infiltration by water.
- “Infiltration” is the process by which water seeps into the soil from precipitation.
- “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.
- “Municipality” means the City of Elizabeth.
- “Node” means an area designated by the State Planning Commission concentrating facilities and activities, which are not organized in a compact form.
- “Nutrient” means a chemical element or compound, such as nitrogen or phosphorus, which is essential to and promotes the development of organisms.
- “Person” means any individual, corporation, company, partnership, firm, association, the City of Elizabeth, 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.
- “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 nonhazardous pollutants.
- “Recharge” means the amount of water from precipitation that infiltrates into the ground and is not evapotranspired.
- “Sediment” means solid material, mineral or organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water or gravity as a product of erosion.
- “Site” means the lot or lots upon which a major development is to occur or has occurred.
- “Soil” means all unconsolidated mineral and organic material of any origin.
- “State Development and Redevelopment Plan Metropolitan Planning Area (PA1)” means an area delineated on the State Plan Policy Map and adopted by the State Planning Commission that is intended to be the focus for much of the state’s future redevelopment and revitalization efforts.
- “State Plan Policy Map” is defined as the geographic application of the State Development and Redevelopment Plan’s goals and statewide policies, and the official map of these goals and policies.
- “Stormwater” means water resulting from precipitation (including rain and snow) that runs off the land’s surface, is transmitted to the subsurface, or is captured by separate storm sewers or other sewage or drainage facilities, or conveyed by snow removal equipment.
- “Stormwater runoff” means water 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.

“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.

“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 Standards

A. Design and Performance Standards for Stormwater Management Measures

1. 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.
2. 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 provided that any alternative standards 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.

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's Landscape Project or Natural Heritage Database established under N.J.S.A. 13:1B-147 through 15.150.
- C. The following linear development projects are exempt from the groundwater recharge, stormwater runoff quantity, and stormwater runoff quality requirements of Sections 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 Sections 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 Sections 4.F and 4.G to the maximum extent practicable;
 3. The applicant demonstrates that, in order to meet the requirements of Sections 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 D.3 above within the upstream drainage area of the receiving stream, that would provide additional opportunities to mitigate the requirements of Sections 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 Sections 4.F and 4.G shall be met by incorporating nonstructural stormwater management strategies set forth at Section 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 Section 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 Section 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 Section 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 City Engineer 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 Section 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 Section 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 Sections 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

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) Storm water from areas of high pollutant loading. High pollutant loading areas are areas in industrial and commercial developments where solvents and/or petroleum products are loaded/unloaded, stored, or applied, areas where pesticides are loaded/unloaded or stored; areas where hazardous materials are expected to be present in greater than "reportable quantities" as defined by the United States Environmental Protection Agency (EPA) at 40 CFR 302.4; areas where recharge would be inconsistent with Department approved remedial action work plan or landfill closure plan and areas with high risks for spills of toxic materials, such as gas stations and vehicle maintenance facilities; and
 - (b) Industrial stormwater exposed to "source material." "Source material" means any material(s) or machinery, located at an industrial facility that is directly or indirectly related to process, manufacturing or other industrial activities, which could be a source of pollutants in any industrial stormwater discharge to groundwater. Source materials include, but are not limited to, raw materials; intermediate products; final products; waste materials; by-products; industrial machinery and fuels, and lubricants, solvents,

and detergents that are related to process, manufacturing, or other industrial activities that are exposed to stormwater.

- (4) The design engineer shall assess the hydraulic impact on the groundwater table and design the site so as to avoid adverse hydraulic impacts. Potential adverse hydraulic impacts include, but are not limited to, exacerbating a naturally or seasonally high water table so as to cause surficial ponding, flooding of basements, or interference with the proper operation of subsurface sewage disposal systems and other subsurface structures in the vicinity or downgradient of the groundwater recharge area.
- c. In order to control stormwater runoff quantity impacts, the design engineer shall, using the assumptions and factors for stormwater runoff calculations at Section 5, complete one of the following:
 - (1) Demonstrate through hydrologic and hydraulic analysis that for stormwater leaving the site, post-construction runoff hydrographs for the two, 10, and 100-year storm events do not exceed, at any point in time, the pre-construction runoff hydrographs for the same storm events;
 - (2) Demonstrate through hydrologic and hydraulic analysis that there is no increase, as compared to the pre-construction condition, in the peak runoff rates of stormwater leaving the site for the two, 10, and 100-year storm events and that the increased volume or change in timing of stormwater runoff will not increase flood damage at or downstream of the site. This analysis shall include the analysis of impacts of existing land uses and projected land uses assuming full development under existing zoning and land use ordinances in the drainage area;
 - (3) Design stormwater management measures so that the post-construction peak runoff rates for the 2, 10 and 100 year storm events are 50, 75 and 80 percent, respectively, of the pre-construction peak runoff rates. The percentages apply only to the post-construction stormwater runoff that is attributable to the portion of the site on which the proposed development or project is to be constructed. The percentages shall not be applied to post-construction stormwater runoff into tidal flood hazard areas if the increased volume of stormwater runoff will not increase flood damages below the point of discharge; or
- (4) In tidal flood hazard areas, stormwater runoff quantity analysis in accordance with (1), (2) and (3) above shall only be applied if:
 - a. required by the City Engineer to reduce stormwater impacts to existing drainage facilities including segments of the combined sewer system, and
 - b. the increased volume of stormwater runoff could increase flood damages below the point of discharge.

G. Stormwater Runoff Quality Standards

1. Stormwater management measures shall be designed to reduce the post-construction load of total suspended solids (TSS) in stormwater runoff by 80 percent of the anticipated load from the developed site, expressed as an annual average. Stormwater management measures shall only be required for water quality control if an additional $\frac{1}{4}$ acre of impervious surface is being proposed on a development site. The requirement to reduce TSS does not apply to combined sewers or any

stormwater runoff in a discharge regulated under a numeric effluent limitation for TSS imposed under the New Jersey Pollution Discharge Elimination System (NJPDES) rules, N.J.A.C. 7:14A, or in a discharge specifically exempt under a NJPDES permit from this requirement. The water quality design storm is 1.25 inches of rainfall in two hours. Water quality calculations shall take into account the distribution of rain from the water quality design storm, as reflected in Table 1. The calculation of the volume of runoff may take into account the implementation of non-structural and structural stormwater management measures.

Table 1: Water Quality Design Storm Distribution

Time (Minutes)	Cumulative Rainfall (Inches)	Time (Minutes)	Cumulative Rainfall (Inches)
0	0.0000	65	0.8917
5	0.0083	70	0.9917
10	0.0166	75	1.0500
15	0.0250	80	1.0840
20	0.0500	85	1.1170
25	0.0750	90	1.1500
30	0.1000	95	1.1750
35	0.1330	100	1.2000
40	0.1660	105	1.2250
45	0.2000	110	1.2334
50	0.2583	115	1.2417
55	0.3583	120	1.2500
60	0.6250		

2. For purposes of TSS reduction calculations, Table 2 below presents the presumed removal rates for certain BMPs designed in accordance with 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. The BMP Manual and other sources of technical guidance are listed in Section 7. TSS reduction shall be calculated based on the removal rates for the BMPs in Table 2 below. Alternative removal rates and methods of calculating removal rates may be used if the design engineer provides documentation demonstrating the capability of these alternative rates and methods to the review agency. A copy of any approved alternative rate or method of calculating the removal rate shall be provided to the Department for approval at the following address: Division of Watershed Management, New Jersey Department of Environmental Protection, PO Box 418 Trenton, New Jersey, 08625-0418.
3. If more than one BMP in series is necessary to achieve the required 80 percent TSS reduction for a site, the applicant shall utilize the following formula to calculate TSS reduction:

$$R = A + B - (AXB)/100$$

Where

R = total TSS percent load removal from application of both BMPs, and

A = the TSS percent removal rate applicable to the first BMP

B = the TSS percent removal rate applicable to the second BMP

Table 2: TSS Removal Rates for BMPs

Best Management Practice	TSS Percent Removal Rate
Bioretention Systems	90
Constructed Stormwater Wetland	90
Extended Detention Basin	40-60
Infiltration Structure	80
Manufactured Treatment Device	See Section 6.C
Sand Filter	80
Vegetative Filter Strip	60-80
Wet Pond	50-90

4. If there is more than one onsite drainage area, the 80 percent TSS removal rate shall apply to each drainage area, unless the runoff from the subareas converge on site in which case the removal rate can be demonstrated through a calculation using a weighted average.
5. Stormwater management measures shall also be designed to reduce, to the maximum extent feasible, the post-construction nutrient load of the anticipated load from the developed site in stormwater runoff generated from the water quality design storm. In achieving reduction of nutrients to the maximum extent feasible, the design of the site shall include nonstructural strategies and structural measures that optimize nutrient removal while still achieving the performance standards in Sections 4.F and 4.G.
6. Additional information and examples are contained in the New Jersey Stormwater Best Management Practices Manual, which may be obtained from the address identified in Section 7.

Section 5: Calculation of Stormwater Runoff and Groundwater Recharge

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

1. The design engineer shall calculate runoff using one of the following methods:
 - a. The USDA Natural Resources Conservation Service (NRCS) methodology, including the NRCS Runoff Equation and Dimensionless Unit Hydrograph, as described in the NRCS

- b. The Rational Method for peak flow and the Modified Rational Method for hydrograph computations.
 2. For the purpose of calculating runoff coefficients and groundwater recharge, there is a presumption that the pre-construction condition of a site or portion thereof is a wooded land use with good hydrologic condition. The term “runoff coefficient” applies to both the NRCS methodology at Section 5.A.1.a and the Rational and Modified Rational Methods at Section 5.A.1.b. A runoff coefficient or a groundwater recharge land cover for an existing condition may be used on all or a portion of the site if the design engineer verifies that the hydrologic condition has existed on the site or portion of the site for at least five years without interruption prior to the time of application. If more than one land cover have existed on the site during the five years immediately prior to the time of application, the land cover with the lowest runoff potential shall be used for the computations. In addition, there is the presumption that the site is in good hydrologic condition (if the land use type is pasture, lawn, or park), with good cover (if the land use type is woods), or with good hydrologic condition and conservation treatment (if the land use type is cultivation).
 3. In computing pre-construction stormwater runoff, the design engineer shall account for all significant land features and structures, such as ponds, wetlands, depressions, hedgerows, or culverts, that may reduce pre-construction stormwater runoff rates and volumes.
 4. In computing stormwater runoff from all design storms, the design engineer shall consider the relative stormwater runoff rates and/or volumes of pervious and impervious surfaces separately to accurately compute the rates and volume of stormwater runoff from the site. To calculate runoff from unconnected impervious cover, urban impervious area modifications as described in the NRCS Technical Release 55 – Urban Hydrology for Small Watersheds and other methods may be employed.
 5. If the invert of the outlet structure of a stormwater management measure is below the flood hazard design flood elevation as defined at N.J.A.C. 7:13, the design engineer shall take into account the effects of tailwater in the design of structural stormwater management measures.
- B. Groundwater recharge, where required, may be calculated in accordance with the following:
1. The New Jersey Geological Survey Report GSR-32 A Method for Evaluating Ground-Water Recharge Areas in New Jersey, incorporated herein by reference as amended and supplemented. Information regarding the methodology is available from the New Jersey Stormwater Best Management Practices Manual; at <http://www.state.nj.us/dep/njgs/>; or at New Jersey Geological Survey, 29 Arctic Parkway, P.O. Box 427 Trenton, New Jersey 08625-0427; (609) 984-6587.

Section 6: Standards for Structural Stormwater Management Measures

A. Standards for structural stormwater management measures are as follows:

1. Structural stormwater management measures shall be designed to take into account the existing site conditions, including, for example, environmentally critical areas, wetlands; flood-prone

areas; slopes; depth to seasonal high water table; soil type; permeability and texture; drainage area and drainage patterns; and the presence of solution-prone carbonate rocks (limestone).

2. Structural stormwater management measures shall be designed to minimize maintenance, facilitate maintenance and repairs, and ensure proper functioning. Trash racks shall be installed at the intake to the outlet structure as appropriate, and shall have parallel bars with one-inch (1") spacing between the bars to the elevation of the water quality design storm. For elevations higher than the water quality design storm, the parallel bars at the outlet structure shall be spaced no greater than one-third (1/3) the width of the diameter of the orifice or one-third (1/3) the width of the weir, with a minimum spacing between bars of one-inch and a maximum spacing between bars of six inches. In addition, the design of trash racks must comply with the requirements of Section 8.D.
 3. Structural stormwater management measures shall be designed, constructed, and installed to be strong, durable, and corrosion resistant. Measures that are consistent with the relevant portions of the Residential Site Improvement Standards at N.J.A.C. 5:21-7.3, 7.4, and 7.5 shall be deemed to meet this requirement.
 4. At the intake to the outlet from the stormwater management basin, the orifice size shall be a minimum of two and one-half inches in diameter.
 5. Stormwater management basins shall be designed to meet the minimum safety standards for stormwater management basins at Section 8.
- B. Stormwater management measure guidelines are available in the New Jersey Stormwater Best Management Practices Manual. Other stormwater management measures may be utilized provided the design engineer demonstrates that the proposed measure and its design will accomplish the required water quantity, groundwater recharge and water quality design and performance standards established by Section 4 of this ordinance.
- C. Manufactured treatment devices may be used to meet the requirements of Section 4 of this ordinance, provided the pollutant removal rates are verified by the New Jersey Corporation for Advanced Technology and certified by the Department.

Section 7: Sources for Technical Guidance

- A. Technical guidance for stormwater management measures can be found in the documents listed at 1 and 2 below, which are available from Maps and Publications, New Jersey Department of Environmental Protection, 428 East State Street, P.O. Box 420, Trenton, New Jersey, 08625; telephone (609) 777-1038.
1. Guidelines for stormwater management measures are contained in the New Jersey Stormwater Best Management Practices Manual, as amended. Information is provided on stormwater management measures such as: bioretention systems, constructed stormwater wetlands, dry wells, extended detention basins, infiltration structures, manufactured treatment devices, pervious paving, sand filters, vegetative filter strips, and wet ponds.
 2. The New Jersey Department of Environmental Protection Stormwater Management Facilities Maintenance Manual, as amended.

B. Additional technical guidance for stormwater management measures can be obtained from the following:

1. The "Standards for Soil Erosion and Sediment Control in New Jersey" promulgated by the State Soil Conservation Committee and incorporated into N.J.A.C. 2:90. Copies of these standards may be obtained by contacting the State Soil Conservation Committee or any of the Soil Conservation Districts listed in N.J.A.C. 2:90-1.3(a)4. The location, address, and telephone number of each Soil Conservation District may be obtained from the State Soil Conservation Committee, P.O. Box 330, Trenton, New Jersey 08625; (609) 292-5540;
2. The Rutgers Cooperative Extension Service, 732-932-9306; and
3. The Soil Conservation Districts listed in N.J.A.C. 2:90-1.3(a)4. The location, address, and telephone number of each Soil Conservation District may be obtained from the State Soil Conservation Committee, P.O. Box 330, Trenton, New Jersey, 08625, (609) 292-5540.

Section 8: Safety Standards for Stormwater Management Basins

A. This section sets forth requirements to protect public safety through the proper design and operation of stormwater management basins. This section applies to all existing and new stormwater management basins.

B. Requirements for Trash Racks, Overflow Grates and Escape Provisions

1. A trash rack is a device designed to catch trash and debris and prevent the clogging of outlet structures. Trash racks shall be installed at the intake to the outlet from the stormwater management basin to ensure proper functioning of the basin outlets in accordance with the following:
 - a. The trash rack shall have parallel bars, with no greater than six inch spacing between the bars.
 - b. The trash rack shall be designed so as not to adversely affect the hydraulic performance of the outlet pipe or structure.
 - c. The average velocity of flow through a clean trash rack is not to exceed 2.5 feet per second under the full range of stage and discharge. Velocity is to be computed on the basis of the net area of opening through the rack.
 - d. The trash rack shall be constructed and installed to be rigid, durable, and corrosion resistant, and shall be designed to withstand a perpendicular live loading of 300 lbs/ft sq.
2. An overflow grate is designed to prevent obstruction of the overflow structure. If an outlet structure has an overflow grate, such grate shall meet the following requirements:
 - a. The overflow grate shall be secured to the outlet structure but removable for emergencies and maintenance.
 - b. The overflow grate spacing shall be no less than two inches across the smallest dimension.

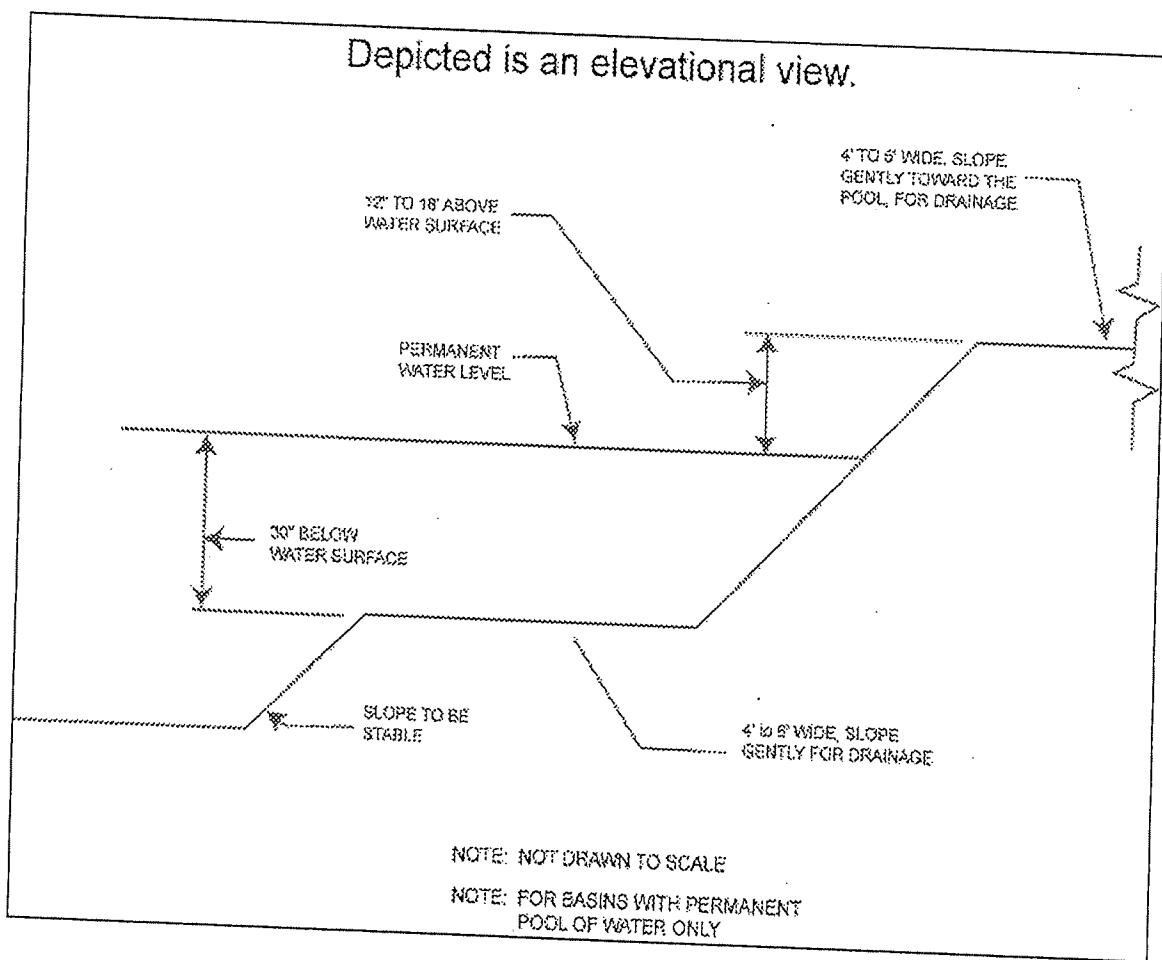
- c. The overflow grate shall be constructed and installed to be rigid, durable, and corrosion resistant, and shall be designed to withstand a perpendicular live loading of 300 lbs./ft sq.
- 3. For purposes of this paragraph 3, escape provisions means the permanent installation of ladders, steps, rungs, or other features that provide easily accessible means of egress from stormwater management basins. Stormwater management basins shall include escape provisions as follows:
 - a. If a stormwater management basin has an outlet structure, escape provisions shall be incorporated in or on the structure. With the prior approval of the reviewing agency identified in Section 8.C a free-standing outlet structure may be exempted from this requirement.
 - b. Safety ledges shall be constructed on the slopes of all new stormwater management basins having a permanent pool of water deeper than two and one-half feet. Such safety ledges shall be comprised of two steps. Each step shall be four to six feet in width. One step shall be located approximately two and one-half feet below the permanent water surface, and the second step shall be located one to one and one-half feet above the permanent water surface. See Section 8.D for an illustration of safety ledges in a stormwater management basin.
 - c. In new stormwater management basins, the maximum interior slope for an earthen dam, embankment, or berm shall not be steeper than 3 horizontal to 1 vertical.

C. Variance or Exemption from Safety Standards

- 1. A variance or exemption from the safety standards for stormwater management basins may be granted only upon a written finding by the appropriate reviewing agency (City of Elizabeth, Hudson County, or the NJDEP) that the variance or exemption will not constitute a threat to public safety.

D. Illustration of Safety Ledges in a New Stormwater Management Basin

Depicted is an elevational view.



Section 9: Requirements for a Site Development Stormwater Plan

A. Submission of Site Development Stormwater Plan

1. Whenever an applicant seeks municipal approval of a development subject to this ordinance, the applicant shall submit all of the required components of the Checklist for the Site Development Stormwater Plan at Section 9.C below as part of the submission of the applicant's application for subdivision or site plan approval.
2. The applicant shall demonstrate that the project meets the standards set forth in this ordinance.
3. The applicant shall establish a funding mechanism for maintenance of proposed stormwater control facilities.
4. The applicant shall submit [*specify number*] copies of the materials listed in the checklist for site development stormwater plans in accordance with Section 9.C of this ordinance.

B. Site Development Stormwater Plan Approval

The applicant's Site Development project shall be reviewed as a part of the subdivision or site plan review process by the municipal board or official from which municipal approval is sought. That municipal board or official shall consult the engineer retained by the Planning and/or Zoning Board (as appropriate) to determine if all of the checklist requirements have been satisfied and to determine if the project meets the standards set forth in this ordinance.

C. Checklist Requirements

The following information shall be required:

1. Topographic Base Map

The reviewing engineer may require upstream tributary drainage system information as necessary. It is recommended that the topographic base map of the site be submitted which extends a minimum of 200 feet beyond the limits of the proposed development, at a scale of 1"=200' or greater, showing 2-foot contour intervals. The map as appropriate may indicate the following: existing surface water drainage, shorelines, steep slopes, soils, erodible soils, perennial or intermittent streams that drain into or upstream of the Category One waters, wetlands and flood plains along with their appropriate buffer strips, marshlands and other wetlands, pervious or vegetative surfaces, existing man-made structures, roads, bearing and distances of property lines, and significant natural and manmade features not otherwise shown.

2. Environmental Site Analysis

A written and graphic description of the natural and man-made features of the site and its environs. This description should include a discussion of soil conditions, slopes, wetlands, waterways and vegetation on the site. Particular attention should be given to unique, unusual, or environmentally sensitive features and to those that provide particular opportunities or constraints for development.

3. Project Description and Site Plan(s)

A map (or maps) at the scale of the topographical base map indicating the location of existing and proposed buildings, roads, parking areas, utilities, structural facilities for stormwater management and sediment control, and other permanent structures. The map(s) shall also clearly show areas where alterations occur in the natural terrain and cover, including lawns and other landscaping, and seasonal high ground water elevations. A written description of the site plan and justification of proposed changes in natural conditions may also be provided.

4. Land Use Planning and Source Control Plan

This plan shall provide a demonstration of how the goals and standards of Sections 3 through 6 are being met. The focus of this plan shall be to describe how the site is being developed to meet the objective of controlling groundwater recharge, stormwater quality and stormwater quantity problems at the source by land management and source controls whenever possible.

5. Stormwater Management Facilities Map

The following information, illustrated on a map of the same scale as the topographic base map, shall be included:

- a. Total area to be paved or built upon, proposed surface contours, land area to be occupied by the stormwater management facilities and the type of vegetation thereon, and details of the proposed plan to control and dispose of stormwater.
- b. Details of all stormwater management facility designs, during and after construction, including discharge provisions, discharge capacity for each outlet at different levels of detention and emergency spillway provisions with maximum discharge capacity of each spillway.

6. Calculations

- a. Comprehensive hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in Section 4 of this ordinance.
- b. When the proposed stormwater management control measures (e.g., infiltration basins) depends on the hydrologic properties of soils, then a soils report shall be submitted. The soils report shall be based on onsite boring logs or soil pit profiles. The number and location of required soil borings or soil pits shall be determined based on what is needed to determine the suitability and distribution of soils present at the location of the control measure.

7. Maintenance and Repair Plan

The design and planning of the stormwater management facility shall meet the maintenance requirements of Section 10.

8. Waiver from Submission Requirements

The municipal official or board reviewing an application under this ordinance may, in consultation with the municipal engineer, waive submission of any of the requirements in Sections 9.C.1 through 9.C.6 of this ordinance when it can be demonstrated that the information requested is impossible to obtain or it would create a hardship on the applicant to obtain and its absence will not materially affect the review process.

Section 10: Maintenance and Repair

A. Applicability

1. Projects subject to review as in Section 1.C of this ordinance shall comply with the requirements of Sections 10.B and 10.C.

B. General Maintenance

1. The design engineer shall prepare a maintenance plan for the stormwater management measures incorporated into the design of a major development and the developer shall establish a mechanism for funding in compliance with this ordinance.
2. The maintenance plan shall contain specific preventative maintenance tasks and schedules; cost estimates, including estimated cost of sediment, debris, or trash removal; and the name, address, and telephone number of the person or persons responsible for preventative and corrective maintenance (including replacement). Maintenance guidelines for stormwater management measures are available in the New Jersey Stormwater Best Management Practices Manual. If the maintenance plan identifies a person other than the developer (for example, a public agency or homeowners' association) as having the responsibility for maintenance, the plan shall include documentation of such person's agreement to assume this responsibility, or of the developer's obligation to dedicate a stormwater management facility to such person under an applicable ordinance or regulation.
3. Responsibility for maintenance shall not be assigned or transferred to the owner or tenant of an individual property in a residential development or project, unless such owner or tenant owns or leases the entire residential development or project.
4. If the person responsible for maintenance identified under Section 10.B.2 above is not a public agency, the maintenance plan and any future revisions based on Section 10.B.7 below shall be recorded upon the deed of record for each property on which the maintenance described in the maintenance plan must be undertaken.
5. Preventative and corrective maintenance shall be performed to maintain the function of the stormwater management measure, including repairs or replacement to the structure; removal of sediment, debris, or trash; restoration of eroded areas; snow and ice removal; fence repair or replacement; restoration of vegetation; and repair or replacement of nonvegetated linings.
6. The person responsible for maintenance identified under Section 10.B.2 above shall maintain a detailed log of all preventative and corrective maintenance for the structural stormwater management measures incorporated into the design of the development, including a record of all inspections and copies of all maintenance-related work orders.
7. The person responsible for maintenance identified under Section 10.B.2 above shall evaluate the effectiveness of the maintenance plan at least once per year and adjust the plan and the deed as needed.
8. The person responsible for maintenance identified under Section 10.B.2 above shall retain and make available, upon request by any public entity with administrative, health, environmental, or safety authority over the site, the maintenance plan and the documentation required by Sections 10.B.6 and 10.B.7 above.

9. The requirements of Sections 10.B.3 and 10.B.4 do not apply to stormwater management facilities that are dedicated to and accepted by the municipality or another governmental agency.
 10. 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 or repair, 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 his designee. The municipality, in its discretion, may extend the time allowed for effecting maintenance and repair for good cause. If the responsible person fails or refuses to perform such maintenance and repair, the municipality or County may immediately proceed to do so and shall bill the cost thereof to the responsible person.
- B. Nothing in this section shall preclude the municipality in which the major development is located from requiring the posting of a performance or maintenance guarantee in accordance with N.J.S.A. 40:55D-53.

Section 11: Penalties

Any person who erects, constructs, alters, repairs, converts, maintains, or uses any building, structure or land in violation of this ordinance shall be subject to a fine of not more than Two Thousand Dollars (\$2,000.00), or confinement in the Union County Jail for a period not to exceed ninety (90) days or community service for a period not to exceed ninety (90) days. If convicted and fined for the same offense within one year of the date of a previous violation of said ordinance, the owner shall be subject to an additional fine as a repeat offender. The additional fine shall not exceed \$1,250.00, and shall be calculated separately, and in addition to, the fine imposed for violating the ordinance.

Section 12:

All ordinances or parts of ordinances inconsistent with the provisions of this ordinance be and the same are hereby repealed.

Section 13:

If any portion or clause of this ordinance declared invalid for any reasons whatsoever, same shall not affect the validity or constitutionality of any other part or portion of this ordinance.

Section 14:

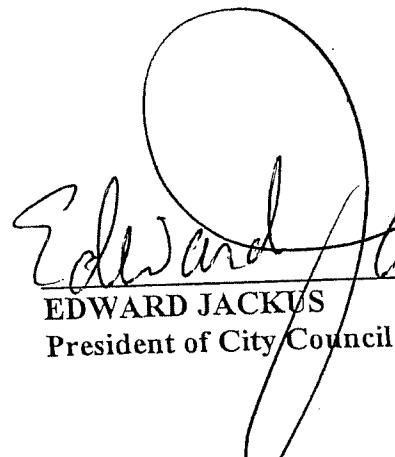
The effective date of this ordinance shall be twenty (20) days after its final passage by City Council and approval by the Mayor at the time and in the manner provided by law and upon the approval by the county review agency or sixty (60) days from the receipt of the ordinance by the county review agency if the county review agency should fail to act.

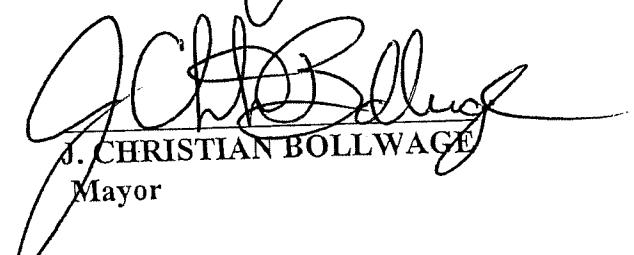
PASSED:

8/22/06

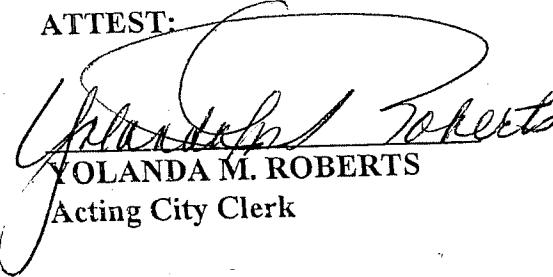
APPROVED:

8/24/06


EDWARD JACKUS
President of City Council


J. CHRISTIAN BOLLWAGE
Mayor

ATTEST:


YOLANDA M. ROBERTS

Acting City Clerk

ORDINANCE NO. 3860

**AN ORDINANCE TO AMEND ORDINANCE NO. 3844, ENTITLED
"MUNICIPAL STORM WATER MANAGEMENT".**

WHEREAS, the Director of Public Works has advised that the County of Union has reviewed Ordinance No. 3844 and has requested that the City of Elizabeth make certain amendments to said Ordinance; now, therefore,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ELIZABETH:

SECTION 1. - That Ordinance No. 3844 be amended as follows:

Section 8. - entitled "Safety Standards for Stormwater Management Basins"
Subsection C (1) - A variance or exemption from the safety standards for stormwater management basins may be granted only upon a written finding by the appropriate reviewing agency (City of Elizabeth, Union County, or the NJDEP) that the variance or exemption will not constitute a threat to public safety.

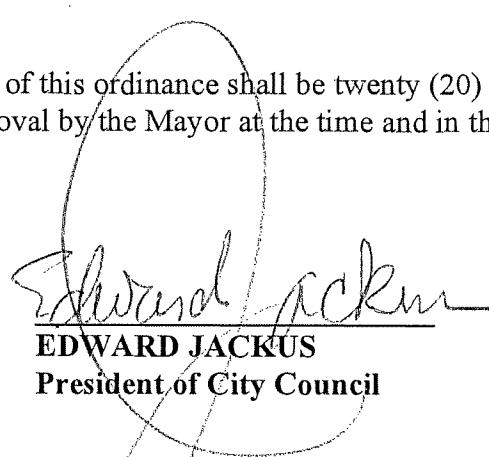
Section 9. - entitled "Requirements for a Site Development Stormwater Plan"
Subsection A (4) - The applicant shall submit four (4) copies of the material listed in the checklist for site development stormwater plans in accordance with Section 9.C of this ordinance.

SECTION 2. - All ordinances or parts of ordinances inconsistent with the provisions of this ordinance be and the same are hereby repealed.

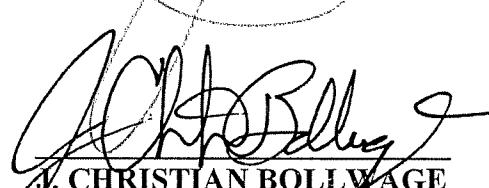
SECTION 3. - If any portion or clause of this ordinance is declared invalid for any reason whatsoever, same shall not affect the validity or constitutionality of any other part or portion of this ordinance.

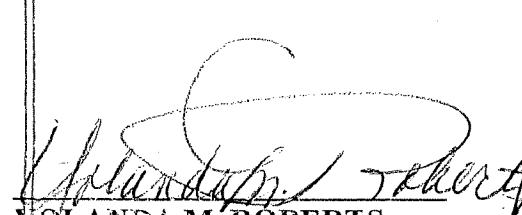
SECTION 4. - The effective date of this ordinance shall be twenty (20) days after its final passage by City Council and approval by the Mayor at the time and in the manner provided by law.

PASSED: 11/14/06


EDWARD JACKUS
President of City Council

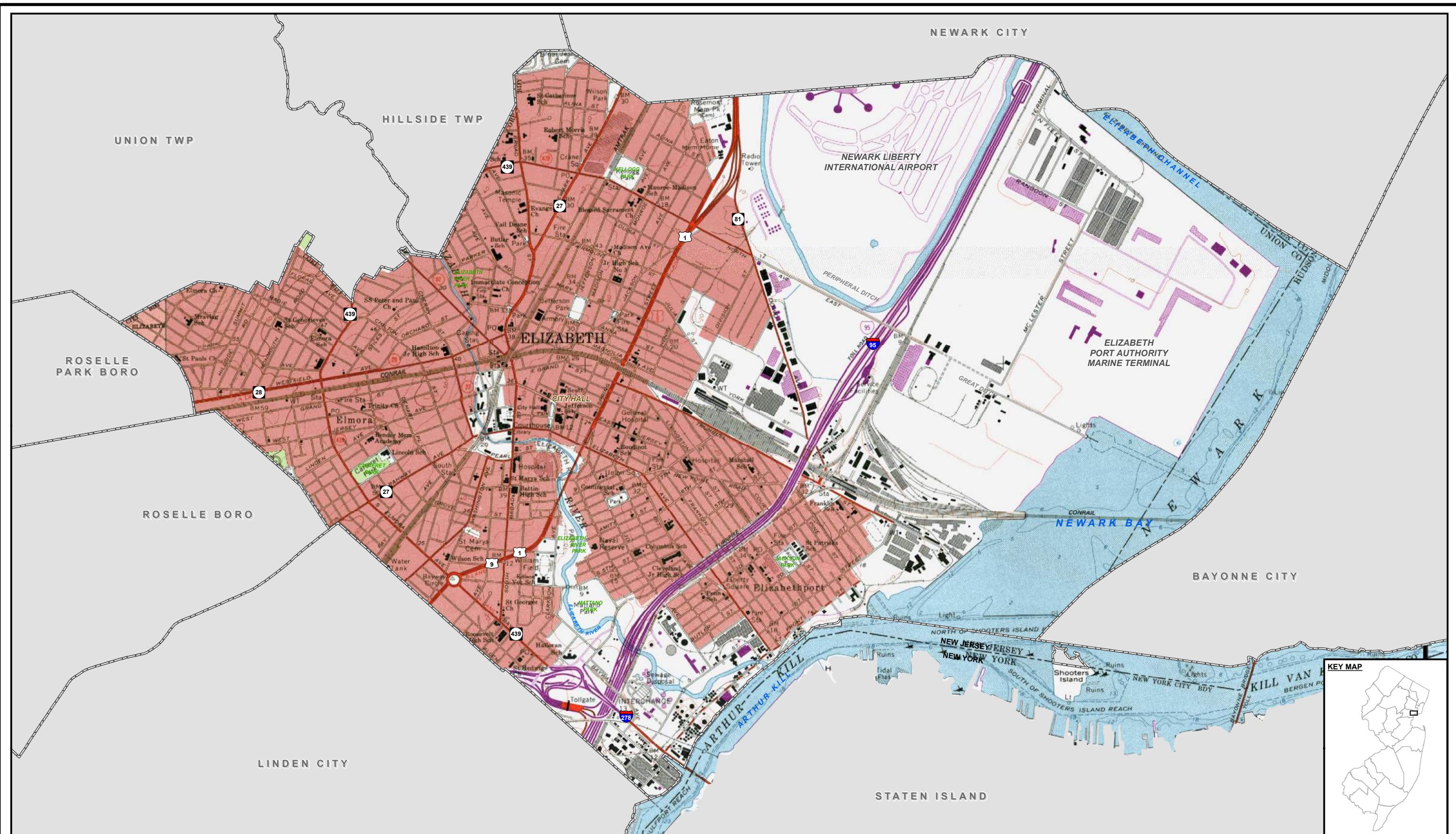
APPROVED: 11/20/06


J. CHRISTIAN BOLLWAGE
Mayor


YOLANDA M. ROBERTS
Acting City Clerk

C. Additional Figures

- Figure 1 Administrative Boundaries**
- Figure 2 Land Use Classification 2012**
- Figure 3 Topography**
- Figure 4 Water Bodies**
- Figure 5 Total Maximum Daily Load Segment Drainage Area Map**
- Figure 6 Wellhead Protection Areas**
- Figure 7 Groundwater Recharge Areas**
- Figure 8 Combined and Separate Storm Sewer Areas**
- Figure 9 FEMA Flood Hazard Areas Map**
- Figure 10 Soils and Underlying Geology**

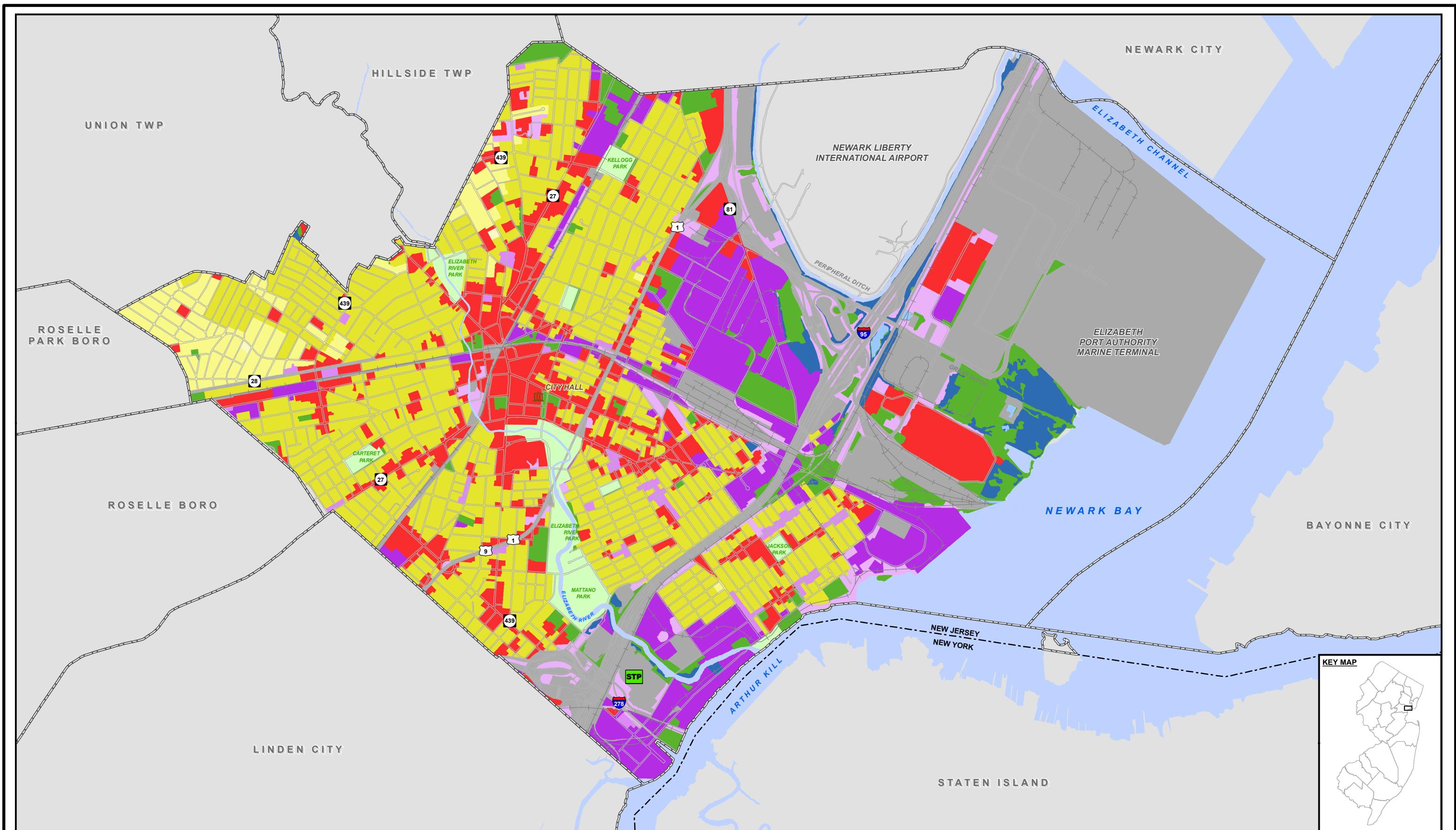

Legend

Municipal Boundary



0 2,500 5,000 Feet

 MOTT MACDONALD	CITY OF ELIZABETH UNION COUNTY, NEW JERSEY MUNICIPAL STORMWATER MANAGEMENT PLAN			
FIGURE 1 CITY OF ELIZABETH ADMINISTRATIVE BOUNDARIES				
111 Wood Avenue South Iselin, New Jersey 08830-4112				
Designed MM	Drawn MM	Checked ZS	Approved AG	Date 12/21/2016



Legend

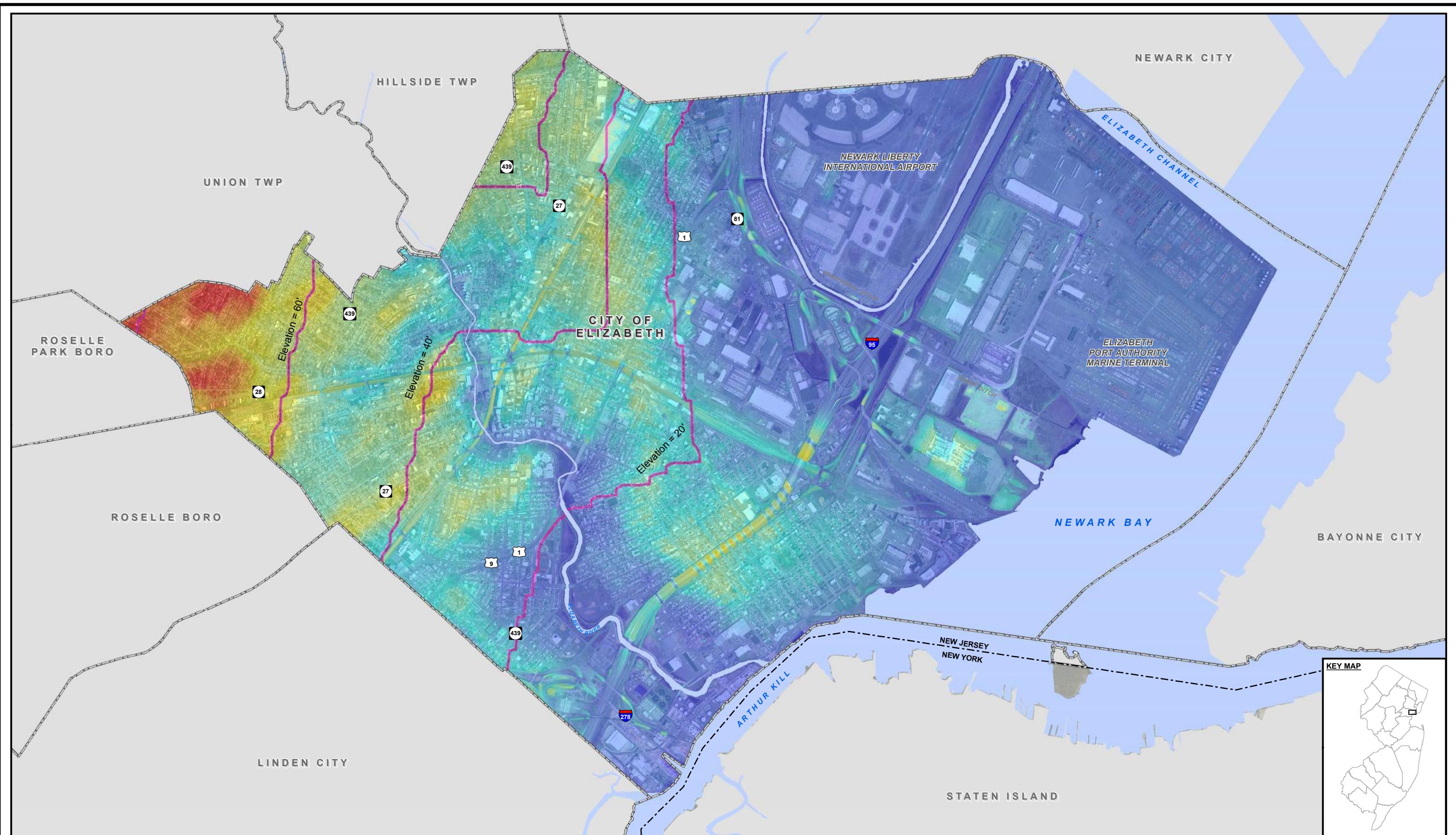
	JMEUC Treatment Plant
	Edge Of Pavement
	Elizabeth City Hall
	Municipal Boundary
	State Boundary
	Park
	Water Bodies
	COMMERCIAL/SERVICES
	INDUSTRIAL
	MIXED URBAN
	OPEN AREAS
	OTHER URBAN
	RESIDENTIAL HIGH DENSITY
	RESIDENTIAL LOW DENSITY
	RESIDENTIAL MEDIUM DENSITY
	TRANSPORTATION/COMMUNICATION/UTIL...
	WETLANDS

0 2,500 5,000
Feet



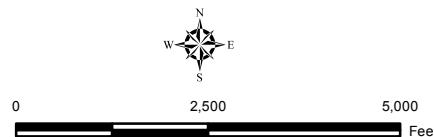
Map Document: (C:\Users\MAC82712\Desktop\Figure2_LandUse.mxd)
12/21/2018 10:36:26 AM mac82712

CITY OF ELIZABETH UNION COUNTY, NEW JERSEY		MUNICIPAL STORMWATER MANAGEMENT PLAN FIGURE 2 LAND USE CLASSIFICATION 2012			
111 Wood Avenue South Iselin, New Jersey 08830-4112		Designed AG Drawn MM Checked AG Approved AG Date 12/21/2018			
M MOTT MACDONALD					



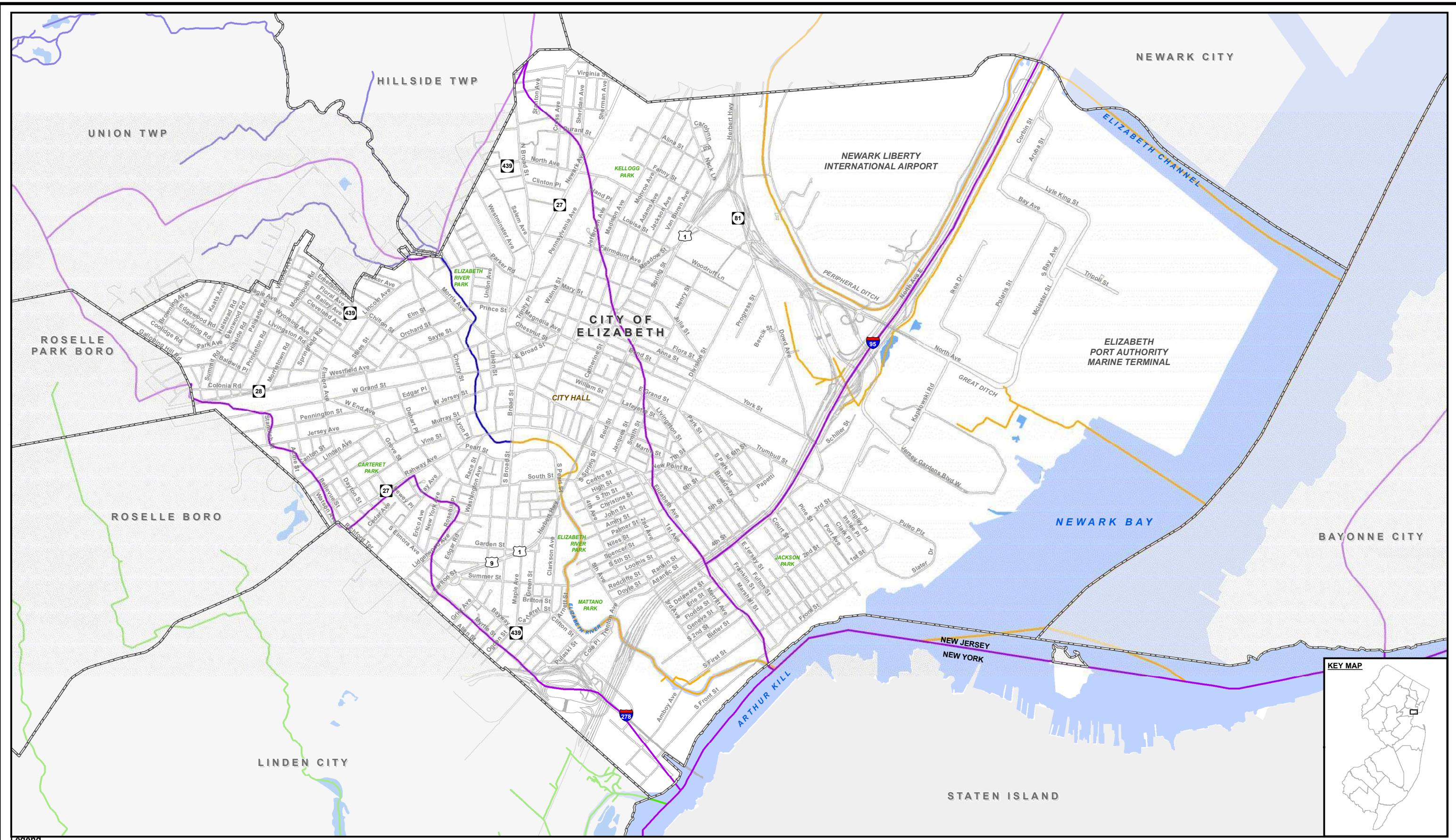
Legend

- | | |
|--------------------|----------------------|
| Road | — 20 Foot Contours |
| Major Road | — 20 Foot Contours |
| Lakes & Ponds | ■ Elevations (ft.) |
| Municipal Boundary | High : 80
Low : 0 |



Map Document (C:\Users\MAC8271\Desktop\Figure3_Topo.mxd)
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 MOTT MACDONALD	CITY OF ELIZABETH UNION COUNTY, NEW JERSEY MUNICIPAL STORMWATER MANAGEMENT PLAN		
FIGURE 3 TOPOGRAPHY			
111 Wood Avenue South Iselin, New Jersey 08830-4112	Designed MM	Drawn MM	Checked ZS
Approved AG	Date 12/21/2018		



Road
Major Road
Water Bodies
Watershed Boundary (HUC14)

Surface Water Quality Standards

- FW2-NT
- FW2-NT/SE3
- SE3

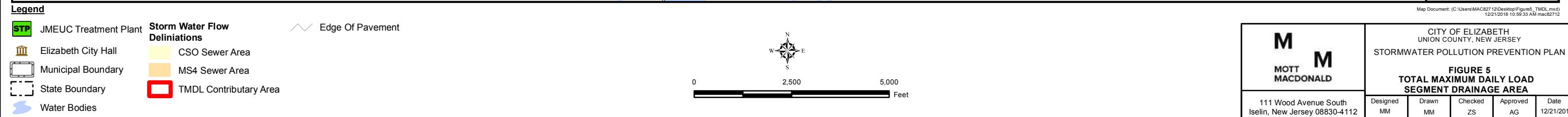
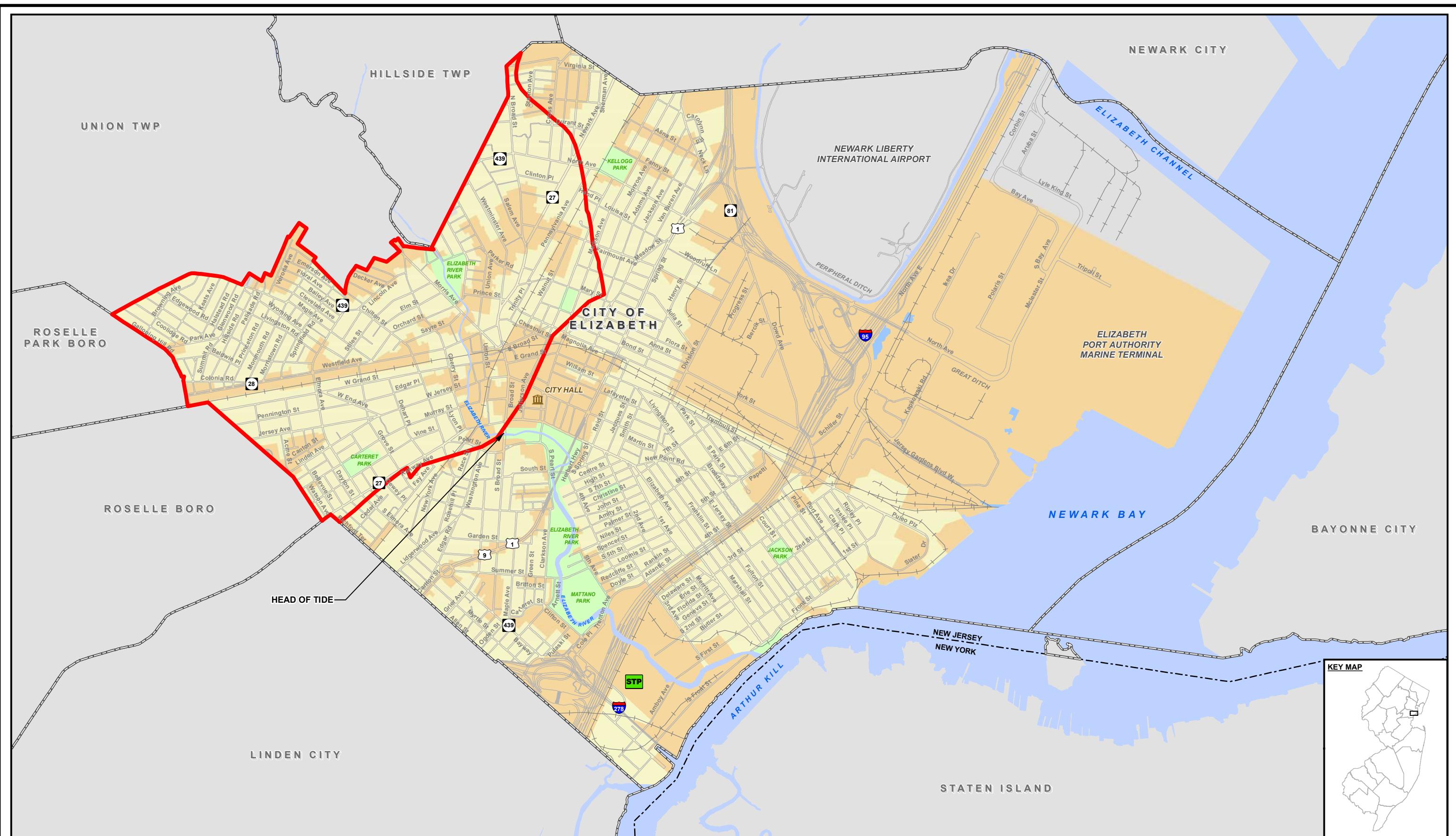


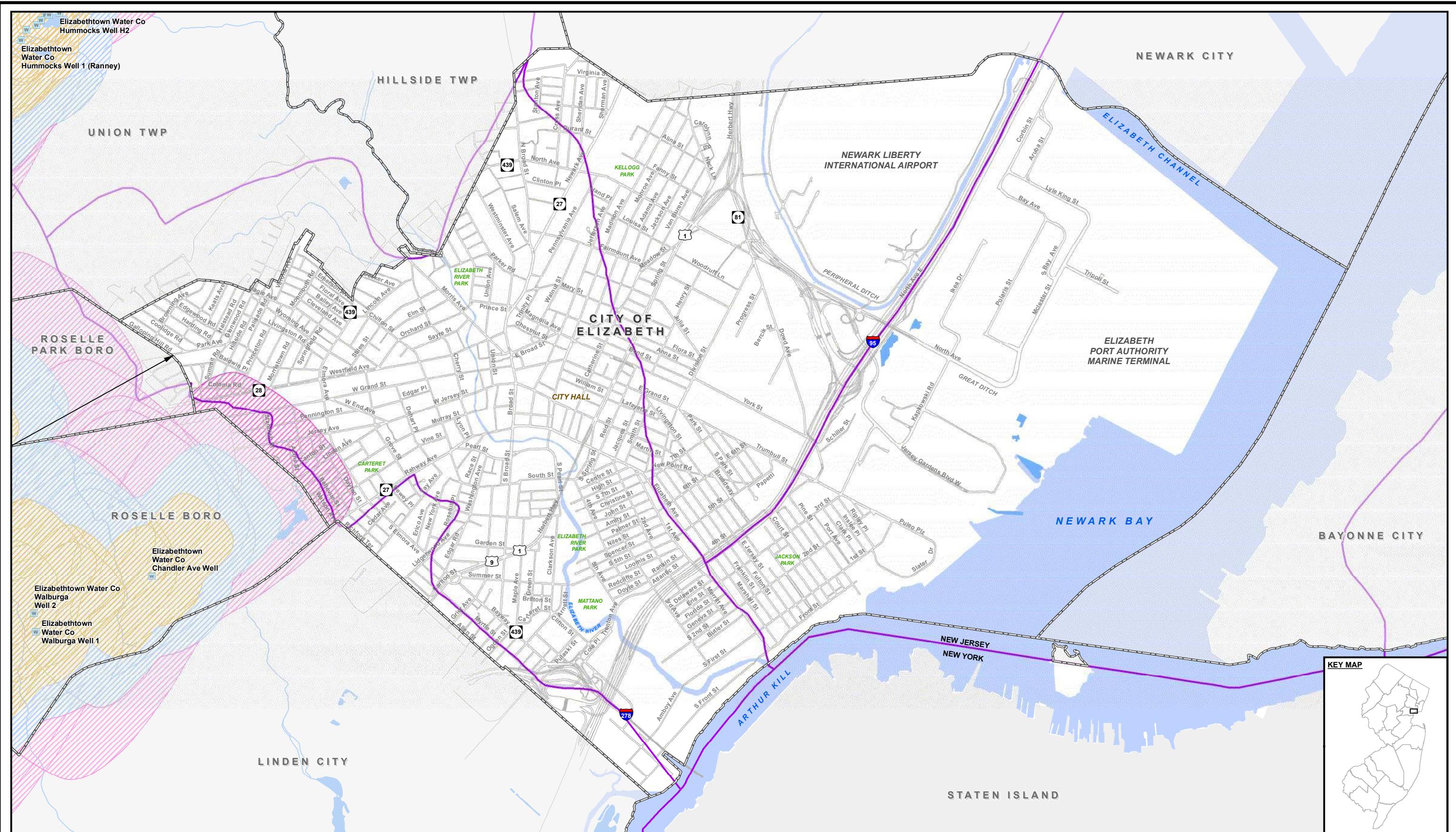
CITY OF ELIZABETH UNION COUNTY, NEW JERSEY
MUNICIPAL STORMWATER MANAGEMENT PLAN

FIGURE 4
MUNICIPAL WATER BODIES

111 Wood Avenue South
Iselin, New Jersey 08830-4112

Designed MM	Drawn MM	Checked ZS	Approved AG	Date 12/21/2016
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Legend

- Public Community Supply Well
- Water Bodies
- Road
- Major Road
- Rivers & Streams
- Watershed Boundary (HUC14)

- | | |
|--|---|
| Public Community Water Supply Wellhead Protection Area | Public Non-Community Water Supply Wellhead Protection Area |
| ■ 2 Year Time of Travel | ■ 2 Year Time of Travel |
| ■ 5 year Time of Travel | ■ 5 year Time of Travel |
| ■ 12 Year Time of Travel | ■ 12 Year Time of Travel |

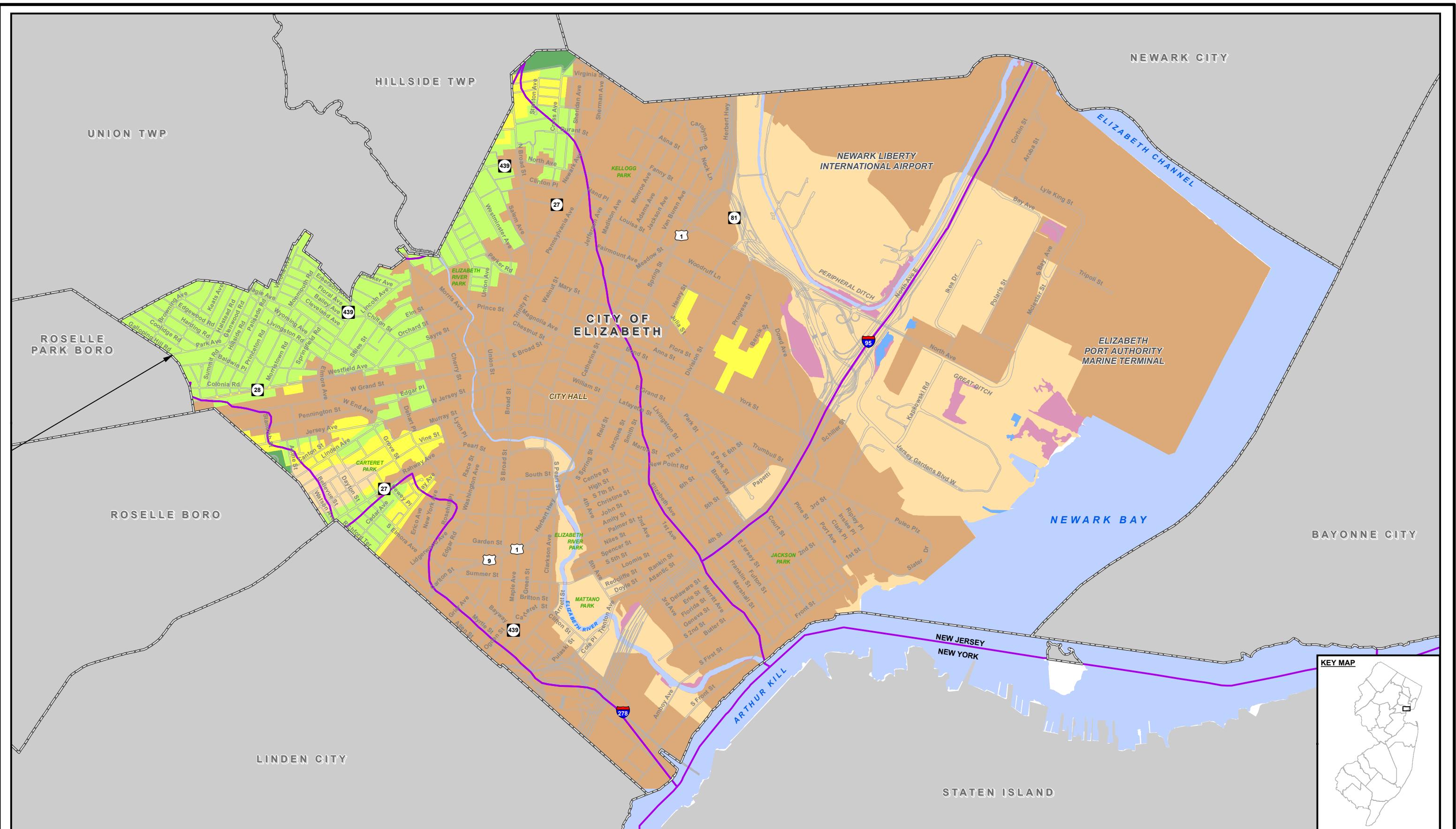
0 2,500 5,000 Feet



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 MOTT MACDONALD 111 Wood Avenue South Iselin, New Jersey 08830-4112	CITY OF ELIZABETH UNION COUNTY, NEW JERSEY MUNICIPAL STORMWATER MANAGEMENT PLAN
Designed MM Drawn MM Checked ZS Approved AG Date 12/21/2018	

FIGURE 6
WELLHEAD PROTECTION AREAS



N



0 2,500 5,000 Feet

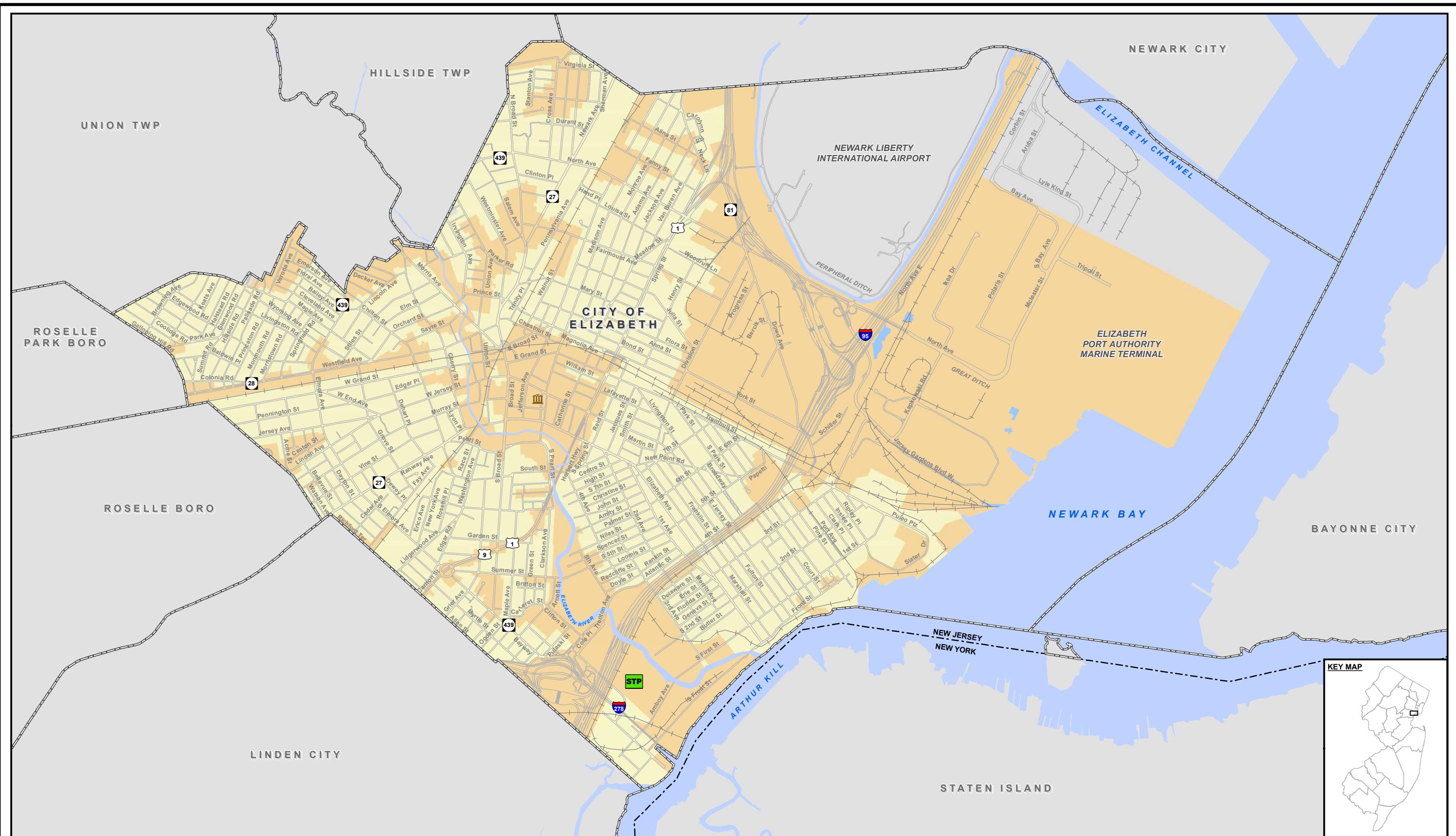
M
MOTT
MACDONALD

CITY OF ELIZABETH
UNION COUNTY, NEW JERSEY

MUNICIPAL STORMWATER MANAGEMENT PLAN

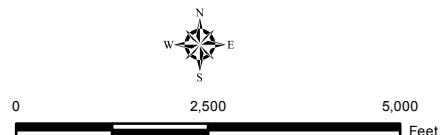
FIGURE 7
GROUNDWATER RECHARGE AREAS

Designed MM	Drawn MM	Checked ZS	Approved AG	Date 12/21/2018



Legend

- STP**: JMEUC Treatment Plant
- Storm Water Flow Deliniations**: Edge Of Pavement
- CSO Sewer Area**: Yellow shaded area
- MS4 Sewer Area**: Orange shaded area
- Municipal Boundary**: Black line
- State Boundary**: Dashed line
- Water Bodies**: Blue lines

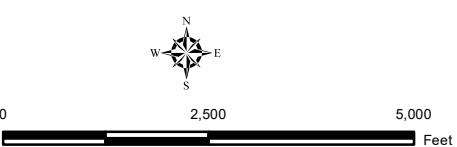
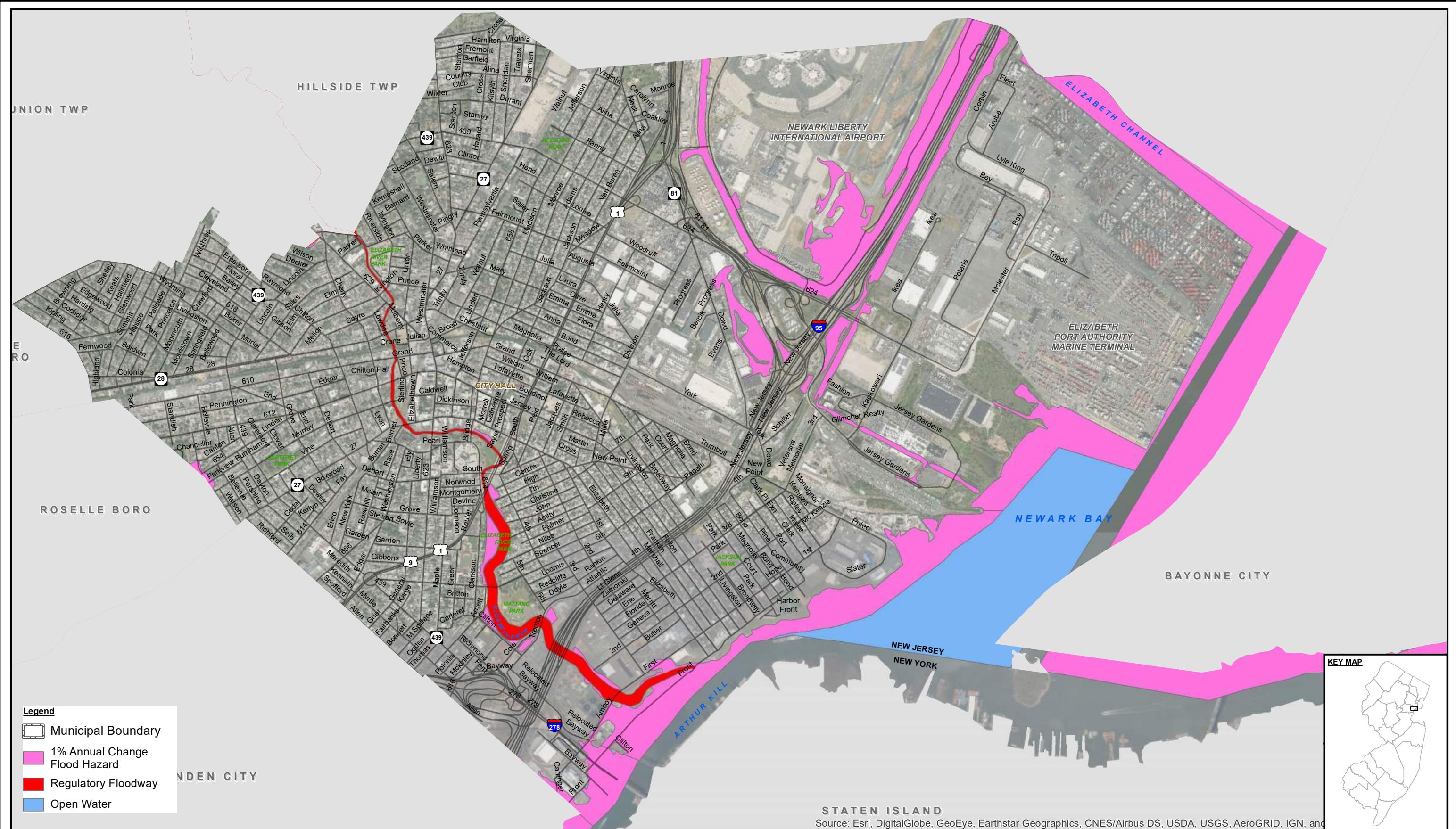


**CITY OF ELIZABETH
UNION COUNTY, NEW JERSEY**
STORMWATER POLLUTION PREVENTION PLAN

FIGURE 8
**COMBINED & SEPERATE
SEWER SYSTEM AREAS**

111 Wood Avenue South
Iselin, New Jersey 08830-4112

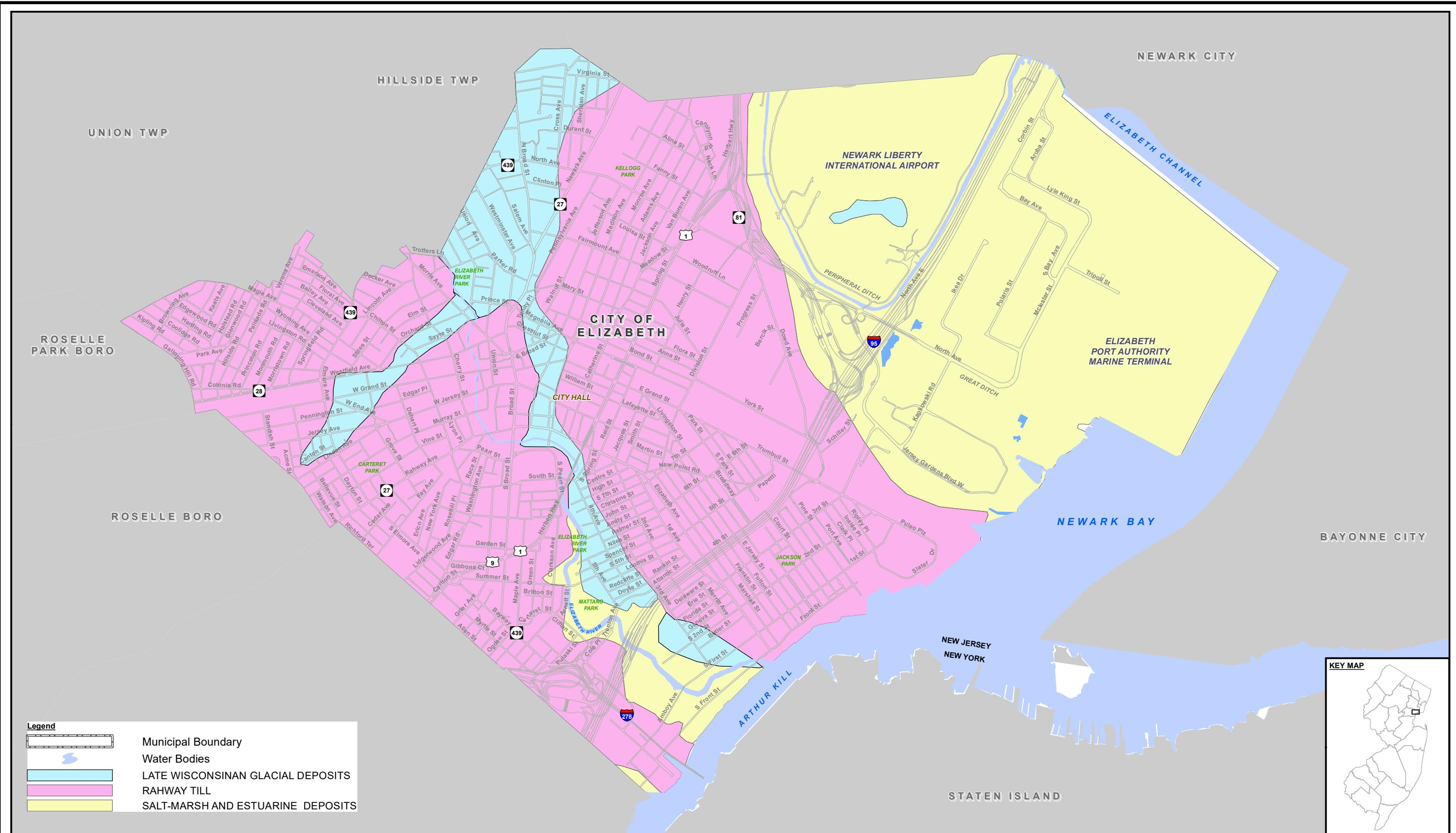
Designed MM	Drawn MM	Checked ZS	Approved AG	Date 12/21/2016
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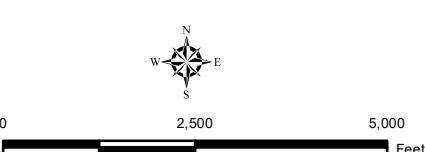
**CITY OF ELIZABETH
UNION COUNTY, NEW JERSEY**
MUNICIPAL STORMWATER MANAGEMENT PLAN

**FIGURE 9
CITY OF ELIZABETH
FEMA FLOOD HAZARD AREA MAP**

M MOTT MACDONALD	111 Wood Avenue South Iselin, New Jersey 08830-4112
Designed MM	Drawn MM
Checked ZS	Approved AG
Date 12/24/2018	



Map Document: (P:\393564\MSWMP 2018 Update\GIS\Figure10_GEO.mxd)
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**CITY OF ELIZABETH
UNION COUNTY, NEW JERSEY**


MUNICIPAL STORMWATER MANAGEMENT PLAN

FIGURE 10
Soils and Underlying Geology

M MOTT MACDONALD	111 Wood Avenue South Iselin, New Jersey 08830-4112
Designed MM	Drawn MM
Checked ZS	Approved AG
Date 12/31/2018	

D. Maps

Map A **Sewer System Overall Map**

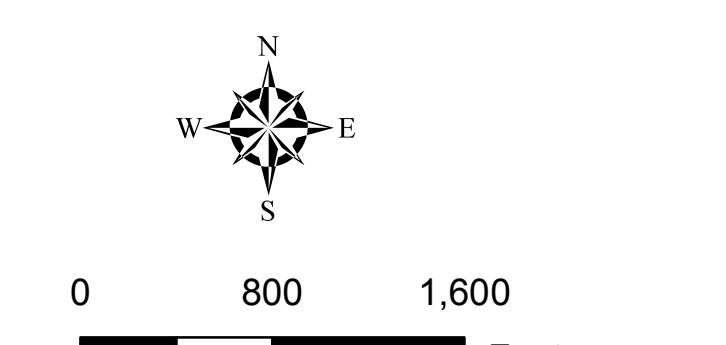


Legend

- | | | |
|--------------------------------|----------------------------|------------------------------|
| ● Significant Industrial Users | ■ Elizabeth City Hall | — Combined Sewer |
| * Storm Water Outfall | ··· Trunk Sewer Alignments | — Separate Sanitary Sewer |
| ■ JMEUC Treatment Plant | — CSO Outfall | — Separate Storm Sewer (MS4) |
| ■ Pumping Station | ··· Force Main Alignment | — JMEUC Trunk Sewer |
| ★ CSO Discharge | ··· Edge of Pavement | — Municipal Boundary |
| ■ Regulator | ··· Siphon Main | ■ Water Bodies |

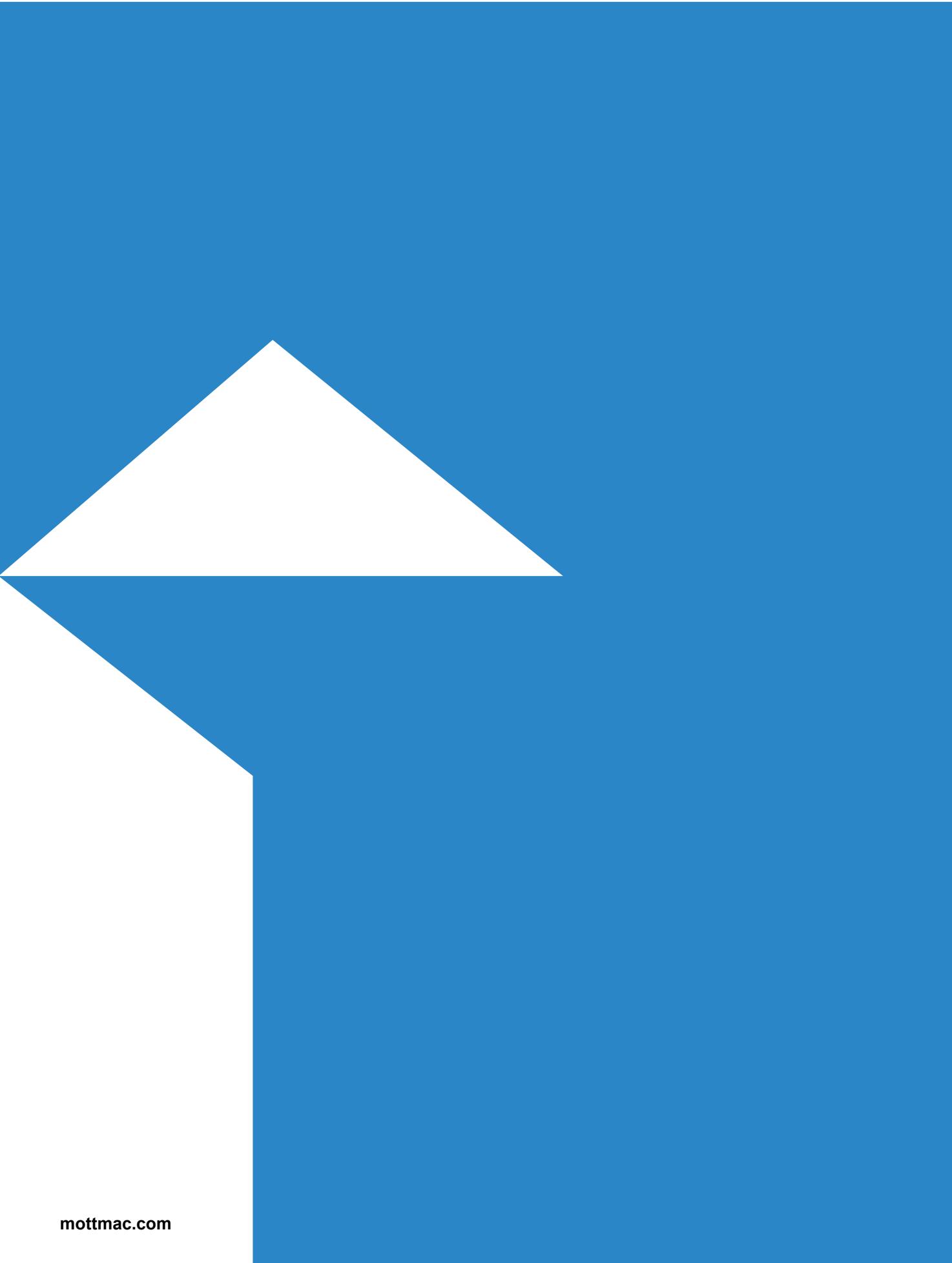
Storm Water Flow Deliniations

- CSO Sewer Area
- MS4 Sewer Area



Map Document: (C:/Users/MAC8271/Desktop/Appendix_D_OverallSewerMap.mxd)
12/24/2018 11:21:05 AM mac8271

MOTT MACDONALD		CITY OF ELIZABETH UNION COUNTY, NEW JERSEY STORMWATER MANAGEMENT PLAN			
SEWER SYSTEM OVERALL MAP					
Designed MM	Drawn MM	Checked ZS	Approved AG	Date	12/24/2018

The logo consists of a large blue square containing a white stylized 'M' shape. This 'M' shape is formed by two thick, white, downward-sloping lines that meet at a point on the left side of the square. From this meeting point, a single thick, white, horizontal line extends towards the right, creating a shape reminiscent of an envelope flap or a chevron.

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