



Checklist for Stormwater Report

A. Introduction

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the [Massachusetts Stormwater Handbook](#). The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.¹ This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8²
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

¹ The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

² For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.



Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



Susan E. Nilson 11/16/15
Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

- ☐ New development
- ☒ Redevelopment
- ☐ Mix of New Development and Redevelopment



Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- ☐ No disturbance to any Wetland Resource Areas
- ☐ Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- ☐ Reduced Impervious Area (Redevelopment Only)
- ☒ Minimizing disturbance to existing trees and shrubs
- ☐ LID Site Design Credit Requested:
 - ☐ Credit 1
 - ☐ Credit 2
 - ☐ Credit 3
- ☒ Use of “country drainage” versus curb and gutter conveyance and pipe
- ☒ Bioretention Cells (includes Rain Gardens)
- ☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- ☐ Treebox Filter
- ☒ Water Quality Swale
- ☐ Grass Channel
- ☐ Green Roof
- ☒ Other (describe): Bioretention Basin

Standard 1: No New Untreated Discharges

- ☒ No new untreated discharges
- ☐ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- ☐ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.



Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

- ☒ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.
- ☐ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.
- ☐ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

- ☐ Soil Analysis provided.
- ☐ Required Recharge Volume calculation provided.
- ☐ Required Recharge volume reduced through use of the LID site Design Credits.
- ☐ Sizing the infiltration, BMPs is based on the following method: Check the method used.
 - ☐ Static
 - ☐ Simple Dynamic
 - ☐ Dynamic Field¹
- ☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.
- ☐ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.
- ☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.
- ☒ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:
 - ☐ Site is comprised solely of C and D soils and/or bedrock at the land surface
 - ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
 - ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
 - ☒ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.
- ☐ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.
- ☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

¹ 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.



Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

- ☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.
- ☐ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
 - Provisions for storing materials and waste products inside or under cover;
 - Vehicle washing controls;
 - Requirements for routine inspections and maintenance of stormwater BMPs;
 - Spill prevention and response plans;
 - Provisions for maintenance of lawns, gardens, and other landscaped areas;
 - Requirements for storage and use of fertilizers, herbicides, and pesticides;
 - Pet waste management provisions;
 - Provisions for operation and management of septic systems;
 - Provisions for solid waste management;
 - Snow disposal and plowing plans relative to Wetland Resource Areas;
 - Winter Road Salt and/or Sand Use and Storage restrictions;
 - Street sweeping schedules;
 - Provisions for prevention of illicit discharges to the stormwater management system;
 - Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
 - Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
 - List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.
- ☐ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.
 - ☐ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:
 - ☐ is within the Zone II or Interim Wellhead Protection Area
 - ☐ is near or to other critical areas
 - ☐ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
 - ☐ involves runoff from land uses with higher potential pollutant loads.
 - ☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.
 - ☐ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.



Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

- ☒ The BMP is sized (and calculations provided) based on:
 - Note: Sediment forebay designed to hold 0.1" /impervious acre per
 - ☒ The ½" or 1" Water Quality Volume or MA DEP Stormwater Management Standards
 - ☐ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.
- ☐ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.
- ☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

- ☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.
- ☐ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted **prior to** the discharge of stormwater to the post-construction stormwater BMPs.
- ☒ The NPDES Multi-Sector General Permit does **not** cover the land use.
- ☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.
- ☐ All exposure has been eliminated.
- ☐ All exposure has **not** been eliminated and all BMPs selected are on MassDEP LUHPPL list.
- ☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

- ☐ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.
- ☒ Critical areas and BMPs are identified in the Stormwater Report.



Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

- ☒ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:
 - ☐ Limited Project
 - ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
 - ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
 - ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
 - ☐ Bike Path and/or Foot Path
- ☒ Redevelopment Project
- ☐ Redevelopment portion of mix of new and redevelopment.
- ☒ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.
- ☒ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
 - Construction Period Operation and Maintenance Plan;
 - Names of Persons or Entity Responsible for Plan Compliance;
 - Construction Period Pollution Prevention Measures;
 - Erosion and Sedimentation Control Plan Drawings;
 - Detail drawings and specifications for erosion control BMPs, including sizing calculations;
 - Vegetation Planning;
 - Site Development Plan;
 - Construction Sequencing Plan;
 - Sequencing of Erosion and Sedimentation Controls;
 - Operation and Maintenance of Erosion and Sedimentation Controls;
 - Inspection Schedule;
 - Maintenance Schedule;
 - Inspection and Maintenance Log Form.
- ☒ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.



Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

- ☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has **not** been included in the Stormwater Report but will be submitted **before** land disturbance begins.
- ☒ The project is **not** covered by a NPDES Construction General Permit.
- ☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.
- ☐ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

- ☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:
 - ☒ Name of the stormwater management system owners;
 - ☒ Party responsible for operation and maintenance;
 - ☒ Schedule for implementation of routine and non-routine maintenance tasks;
 - ☒ Plan showing the location of all stormwater BMPs maintenance access areas;
 - ☐ Description and delineation of public safety features;
 - ☐ Estimated operation and maintenance budget; and
 - ☒ Operation and Maintenance Log Form.
- ☐ The responsible party is **not** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:
 - ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
 - ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

- ☐ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;
- ☒ An Illicit Discharge Compliance Statement is attached;
- ☐ NO Illicit Discharge Compliance Statement is attached but will be submitted **prior to** the discharge of any stormwater to post-construction BMPs.

VVK Realty, LLC
Proposed Redevelopment
(No Increase in Impervious Area)

1494 E. Rodney French Blvd, New Bedford, MA

STORM WATER DRAINAGE SYSTEM DESIGN

On behalf of VVK Realty, LLC (VVK), CLE Engineering, Inc. (CLE) has designed a stormwater filtration system to address the stormwater runoff generated as a result of the existing impervious area of the project site. The stormwater management system was designed in compliance with the Massachusetts Department of Environmental Protection (DEP) Stormwater Regulations (Regulations) that became effective on January 2, 2008. The intent of the Regulations is to protect groundwater and surface water quality and to maintain ground water recharge rates to the maximum extent practicable. The Regulations require consideration of a number of site specific conditions such as soil permeability, depth to groundwater, proximity to sensitive receptors and proposed land use. For redevelopment projects, Stormwater Management Standards 2 and 3, and pretreatment and structural best management practice requirements of Standards 4, 5 and 6 shall apply “to the maximum extent practicable”. The system proposed for 1494 E. Rodney French Blvd. is a redevelopment project with no increase in impervious area. Stormwater improvements consist of a sediment forebay installed along the eastern (seaward) side of the existing parking lot, adjacent to an existing lawn area to be tilled and reseeded for use as a vegetated filter strip (greater than 50 feet wide). CLE considered a number of stormwater system designs before determining that the proposed design complies with the Regulations to the maximum extent practicable considering the redevelopment site conditions.

EXISTING IMPERVIOUS AREA RUNOFF

The project site, previously occupied by “The Smuggler’s Den” restaurant, has been vacant for several years and VVK is planning to renovate the existing building as a waterfront event venue and restaurant/bar. As part of the renovation, VVK is proposing to resurface the existing bituminous area of the site with no increase in paved area. Under existing site conditions, stormwater runoff flows easterly over existing lawn area and stone revetment before entering Buzzards Bay, or westerly to E. Rodney French Blvd. before entering the City’s municipal catch basin system.

The existing site outside the areas of existing pavement is almost entirely historically filled tidelands. It is classified as urban land by the USGS soil survey. The existing grade of the site is between 7 and 9 ft above mean low water (mlw). Mean high water is 3.6 ft above mlw, therefore it is expected that groundwater is influenced by the tide cycles and limits any infiltration options requiring separation from groundwater. As part of its good housekeeping program, VVK Realty, LLC will not sand or salt the pavement area on site and will inspect and perform maintenance on the sediment forebay once per year each spring. Resurfacing of the existing bituminous area will be performed such that the stormwater runoff will be directed easterly to the proposed sediment forebay to the maximum extent practicable. The proposed “treatment train” is as follows: the

stormwater will flow into the sediment forebay where approximately 25% of TSS will be removed, after overtopping the sediment forebay the stormwater will flow over a lawn area for approximately 50 to 175 feet, providing removal of an additional 45% of the remaining TSS. Stormwater runoff will infiltrate or enter Buzzard's Bay as it does under existing conditions.

COMPLIANCE WITH STORMWATER STANDARD 1: *No Discharge of Untreated Runoff*

The proposed stormwater management system serves to filter the stormwater discharge which is currently untreated. The proposed stormwater management system provides treatment of stormwater runoff to the maximum extent practicable.

COMPLIANCE WITH STORMWATER STANDARD 2: *Pre-Development Peak Flow Not to Exceed Post-Development Peak Flow*

No increase in impervious area is proposed and thus the pre-development peak flow will not exceed post-development peak flow. Further, this Standard may be waived for sites in Land Subject to Coastal Storm Flowage (LSCSF); this site is entirely within LSCSF.

COMPLIANCE WITH STORMWATER STANDARD 3: *Stormwater Recharge*

The existing and proposed grades within the project site do not allow for adequate separation of an infiltration BMP to the tidally influenced groundwater table. The project site is within land subject to coastal storm flowage and is not significant to the base flow of a stream or river system, therefore a recharge component provides no significant environmental benefit and is not included for this system.

COMPLIANCE WITH STORMWATER STANDARD 4: *Removal of 80% Total Suspended Solids (TSS)*

As shown on the attached worksheet, the TSS removal standard of 80% has not been met by the BMP treatment train proposed to handle runoff from the proposed impervious areas. However, the proposed stormwater management system provides removal of 59% of TSS, which is a significant improvement over existing conditions and falls within the "maximum extent practicable" required for redevelopment projects.

COMPLIANCE WITH STORMWATER STANDARD 5: *Land Uses with Higher Potential Pollutant Loads*

The land use of the proposed project is not covered under the NPDES Multi-Sector General Permit, and is not considered a land use with higher potential pollutant loads (LUHPPL).

COMPLIANCE WITH STORMWATER STANDARD 6: *Stormwater Discharges Near Critical Areas*

Shellfish growing areas such as the land under the ocean adjacent to the site are considered Critical Areas for which specific BMP's are required. Under existing conditions, stormwater runoff flows unimpeded into Buzzard's Bay. The proposed project represents a significant improvement to the stormwater management approach by providing treatment prior to entering Buzzard's Bay.

COMPLIANCE WITH STORMWATER STANDARD 7: *Redevelopment Areas*

This project is a redevelopment project. There is no proposed increase in impervious area.

COMPLIANCE WITH STORMWATER STANDARD 8: *Control of Construction Related Impacts*

- VVK shall be responsible for compliance with the Construction Period Pollution Prevention Measures.
- The Contractor will be responsible for installation of the straw wattles in the location shown on the plan.
- The erosion control will be inspected daily during construction of the drainage system by the Owner and/or Contractor.

COMPLIANCE WITH STORMWATER STANDARD 9: *Long Term Operation and Maintenance Plan*

- See attached Operations and Maintenance Plan

The Inspection Form for use and inclusion in the Maintenance Log is provided.

STANDARD 10: PROHIBITION OF ILLICIT DISCHARGES

The routine inspections of the stormwater drainage system described in the Operations and Maintenance Plan will ensure that there are no illicit discharges to the system. An Illicit Discharge Compliance Statement is attached.

CONCLUSION:

The stormwater drainage system is designed to comply with DEP Regulations while addressing the goal of VVK Realty, LLC to re-establish the site as a venue with improved access between the site and navigable waters of Buzzards Bay. There is currently no treatment system for the existing impervious area. By developing this sediment forebay and vegetated filter strip, stormwater will be treated prior to the discharge to the waters of Buzzard's Bay, a significant improvement given the limitations of the site.

INSTRUCTIONS:

1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Version 1, Automated: Mar. 4, 2008

Location: 1494 E. Rodney French Blvd, New Bedford

TSS Removal Calculation Worksheet	B	C	D	E	F
	BMP ¹	TSS Removal Rate ¹	Starting TSS Load*	Amount Removed (C*D)	Remaining Load (D-E)
	Sediment Forebay	0.25	1.00	0.25	0.75
	Vegetated Filter Strip >50 feet	0.45	0.75	0.34	0.41
		0.00	0.41	0.00	0.41
		0.00	0.41	0.00	0.41
		0.00	0.41	0.00	0.41

Total TSS Removal =

59%

Separate Form Needs to
be Completed for Each
Outlet or BMP Train

Project: VVK Realty, LLC
 Prepared By: CLE
 Date: 11/11/2015

*Equals remaining load from previous BMP (E)
 which enters the BMP

Sediment Forebay: 0.1 inch
Water Quality Depth : 1 inch

Area	Existing area (sf)	1" Runoff volume from total impervious area (cubic feet)	0.1" Runoff volume from total impervious area (cubic feet)
Existing parking area	38,985	3,249	325
Net increase in pavement (impervious)	0		
Totals:	38,985	3,249	325
	Length (ft)	Cross Sectional Area (sf)	Volume (cf) (Assume 40% void space)
Sediment Forebay Available treatment volume	290	4	464
Available treatment volume compared with required volume for 0.1" over ex. pavement:			143%

VVK Realty, LLC

1494 E. Rodney French Blvd. Operation and Maintenance Plan

November 13, 2015

This Operation and Maintenance Plan for the Sediment Forebay / Vegetated Filter Strip (greater than 50') stormwater management system at 1494 E. Rodney French Blvd. has been prepared in accordance the Massachusetts Department of Environmental Protection Stormwater Management Policy. The Plan contains the following required information:

- Stormwater management system owner
- Party or parties responsible for operation and maintenance
- A schedule for inspection and maintenance
- The routine and non-routine maintenance tasks to be undertaken

Stormwater Management System Owner: VVK Realty, LLC shall be the stormwater management system owner. The system lies entirely on property owned by VVK Realty, LLC.

Parties Responsible for Operation and Maintenance: VVK Realty, LLC shall be responsible for the operation and maintenance of the stormwater management system.

Inspection and Maintenance Schedule:

- The Sediment Forebay and Vegetated Filter Strip (lawn area) at the eastern edge of the parking lot will be inspected upon completion of their construction and every 4 months during the first year of operation. After the first year, the frequency of inspection will be once per year and after each major storm event. Inspections shall include noting accumulation of sediment in Sediment Forebay, condition of the vegetation, and the degree of soil erosion.
- Maintenance of the Sediment Forebay will consists of removal of accumulated sand and replenishment of crushed stone, as necessary.
- Maintenance of the Vegetated Filter Strip consists of reseeding as necessary to maintain a healthy lawn cover.
- Sediment build up in the Sediment Forebay will be removed and disposed of off-site.

Routine and Non-Routine Maintenance: Trash and litter that collects in the Sediment Forebay will be removed during routine maintenance. Vegetated Filter Strip will be inspected for slope integrity, soil stability and compaction, plant health, ponding and sedimentation. Vegetation within the Vegetated Filter Strip will be maintained at approximately 3" to ensure efficient flow and sediment removal.

VVK Realty, LLC
1494 E. Rodney French Blvd.

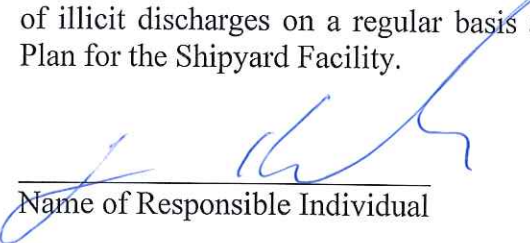
INSPECTION FORM

AREA	FREQUENCY	ACTION	DATE	INITIALS
Sediment Forebay	Yearly (Spring)	Remove accumulated sediment, replenish crushed stone as necessary.		

VVK Realty, LLC
1494 E. Rodney French Blvd, New Bedford, MA
ILLCIT DISCHARGE COMPLIANCE STATEMENT

I hereby certify that to the best of my knowledge there are no known discharges of wastewater or stormwater contaminated by contact with process wastes, raw materials, toxic pollutants, hazardous substances, oil or grease into the existing or proposed stormwater drainage system for the property located at 1494 E. Rodney French Blvd, New Bedford, MA.

It is our intention that the stormwater drainage system will be inspected for the presence of illicit discharges on a regular basis as described in the Operations and Maintenance Plan for the Shipyard Facility.



Name of Responsible Individual

11/12/15

Date

OWNER - V.V.K.

Title