



Deep River, Connecticut

2017 Stormwater Management Plan

**General Permit for the Discharge of Stormwater
from Small Municipal Separate Storm Sewer Systems**

Permit Number GSM000075

Permit Issuance Date: January 20, 2016

Effective Date: July 1, 2017

Expiration Date: June 30, 2022

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General Permit for the Discharge of Stormwater from Small Municipal
Separate Storm Sewer Systems (MS4s)
2017 Stormwater Management Plan
Deep River, Connecticut
Permit Number GSM000075

General Town Information

Chief Elected Official: Principal Executive Officer

First Selectman:	Angus L. McDonald, Jr.
Office:	860.526.6020 X224
Fax:	860.526.6023
E-mail:	AMcDonald@deepriverct.us
Mailing Address:	Town Hall 174 Main Street Deep River, CT 06417

MCM No. 5 and MCM No. 6 BMP Implementation

Highway Department Foreman	Edward Field
Office	860.526.6032
Mobile:	860.
E-mail:	
Mailing Address:	Town Highway Garage 206 Winthrop Road Deep River, CT 06417
Town Website:	http://www.deepriverct.us

Stormwater Compliance

Nathan L. Jacobson & Associates, Inc.	Geoffrey L. Jacobson, P.E.
E-mail:	gjacobson@nlja.com Wade M. Thomas, CPESC, CPSWQ
E-mail:	wthomas@nlja.com
Office:	860.526.9591
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Mailing Address:	86 Main Street, P.O. Box 337 Chester, CT 06412-0337

Receiving Water Table

Receiving Stream, Watershed or Waterbody Watershed		Basin ID No.	Impairment
Falls River	3,958.2 Acres	4019	None
Deep River	3,275.7 Acres	4018	None
Connecticut River	1,702.7 Acres	4000	PCBs
Chester Creek	3.0 Acres	4017	None

Waterbody Impairment Designation Reference:

UConn CLEAR MS4 Resources Webpage
Based on CT DEEP 2014 Integrated Water Quality Report

Subregional Basin Area Reference:

CT DEEP Website
Connecticut Town Subregional Basins and Surface Water Flow Directions

Town Area, Improved Road Miles, and Stormwater Management Infrastructure

Town Area (Square Miles):	14.13
Town Area (Acres):	9,044.43
Miles of Improved Roads	32.79
Approximate Number of Catch Basins	740±
Number of MS4 Stormwater Outfalls	188
Number of Stormwater Outfalls Discharging Directly to Watercourses or Water Bodies	TBD

The Stormwater Management (SMP) and the 2016 Annual Report are available for public review and comment at the following Town URL internet address:

<http://www.deepriverct.us>

To satisfy public notice requirements, and to solicit comments from the public, the Stormwater Management Plan (SMP) will be available on the Town website on or before April 1, 2017.

To satisfy public notice requirements and to solicit comments from the public, the MS4 Annual Report will be available on the Town website a minimum of 45-days prior to submission of the MS4 Annual Report, or before May 15th, of each calendar year.

A 1:24,000 scale (1" = 2,000') electronic map of the Town has been compiled from the following 1:24,000 scale USGS 7.5 minute quadrangle maps:

Essex, Connecticut Quadrangle
Deep River, Connecticut Quadrangle
Clinton, Connecticut Quadrangle
Haddam, Connecticut Quadrangle

The map has been annotated to identify the Town boundaries and the limit of the municipal separate storm sewer system. A pdf of the electronic map follows and will also be submitted with the General Permit Registration Form for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems hard copy submission to the CT DEEP Central Permit Processing Unit.

In accordance with Section 3(b) of the 2017 CT DEEP MS4 Stormwater General Permit, the Town of Deep River SMP is consistent with the following provisions of State statutes and regulations, where applicable:

1. The Deep River SMP addresses the applicable goals and policies of Connecticut General Statutes (CGS) and will not cause adverse impacts to coastal resources as defined in the CGS Section 22a-93(15).
2. The Deep River SMP will not threaten the continued existence of any endangered or threatened species listed pursuant to the CGS Section 26-306 and will not result in the deterioration or adverse modification of endangered or threatened species habitat.
3. The Deep River SMP has been reviewed for consistency with State Historic Preservation statutes, regulation and policies including identification of any potential impacts on property listed on the Connecticut Register of Historic Places.

4. The Deep River SMP appropriately addresses new or increased discharges to high quality waters as specified in Section 3(b)(6) of the 2017 CT DEEP MS4 Stormwater General Permit.
5. The Deep River SMP appropriately addresses new or increased discharges to impaired waters as specified in Section 3(b)(7) of the 2017 CT DEEP MS4 Stormwater General Permit.

The certification requirements are at the end of the SMP.

Minimum Control Measures

For each Minimum Control Measure (MCM), the Town will define the appropriate Best Management Practice (BMP); designate responsible personnel and job title for each BMP; define a time line for implementation of each BMP; where appropriate, identify the location, including the address and latitude and longitude, for each BMP; and define measurable goals for each BMP.

The Town will at all times continue to meet the requirements for authorization set forth in Section 3 of this general permit. In addition, the Town will ensure that authorized activities are conducted in accordance with the following conditions:

Conditions Applicable for Certain Discharges

1. If the Town initiates, creates, or originates a discharge of stormwater which is located less than 500 feet from a tidal wetland that is not a fresh-tidal wetland, such discharge will flow through a system designed to retain the Water Quality Volume (WQV), as defined in Section 2 of the 2017 CT DEEP MS4 Stormwater General Permit.
2. If the Town wishes to initiate, create, or originate a discharge of stormwater below the coastal jurisdiction line into coastal, tidal, or navigable waters for which a permit is required under the Structures and Dredging Act in accordance with Section 22a-361(a) of the CGS or into tidal wetlands for which a permit is required under the Tidal Wetlands Act in accordance with Section 22a-32 of the CGS, the Town will obtain such permit(s) from the CT DEEP Commissioner prior to initiating, creating or originating such discharge.
3. There will be no distinctly visible floating scum, oil or other matter contained in the stormwater discharge (excluded from this are naturally occurring substances such as leaves and twigs provided no person has placed such substances in or near the discharge).
4. The stormwater discharge will not result in pollution that may cause or contribute to acute or chronic toxicity to aquatic life, impair the biological integrity of aquatic or marine ecosystems, or result in an unacceptable risk to human health.
5. The stormwater discharge will not cause or contribute to an exceedance of the applicable Water Quality Standards in the receiving water.
6. Any new stormwater discharge to high quality waters (as identified by the CT DEEP Commissioner consistent with the Water Quality Standards) will be discharged in accordance with the Connecticut Anti-Degradation Implementation Policy in the Water Quality Standards Manual. At a minimum, the Town will evaluate and implement to the

Maximum Extent Practicable practices that will prevent the discharge of the Water Quality Volume to a surface water body or other practices necessary to protect and maintain designated uses and meet standards and criteria contained in the Water Quality Standards.

7. Any stormwater discharge to the waters identified in Appendix D of the 2017 CT DEEP MS4 Stormwater General Permit will be managed for the Stormwater Pollutant of Concern identified in the appendix consistent with the requirements in Section 6 of this permit.

Minimum Control Measure No. 1 Public Education and Outreach

1.1 Implement Public Education Program

The Town will continue its public education program to distribute educational materials to the Town community or conduct equivalent outreach activities about the sources and impacts of stormwater discharges on waterbodies and the steps that the public can take to reduce pollutants in stormwater runoff.

The education program will include, but not be limited to, information on management of pet waste, application of fertilizers, herbicides, and pesticides, impervious cover and impacts of illicit discharges and improper disposal of waste into the MS4. The form and content of the education program will be dependent on the audience and identified areas of concern.

The Town may join other towns in the same region to develop and implement a public education program. Educational information may be developed or acquired from other towns, governmental agencies, community and non-governmental organizations, councils of government, academia, and/or environmental advocacy organizations and may be disseminated with flyers, brochures, door hangers, television public service announcements, and/or web based tools.

The goals of this minimum control measure are:

- To raise awareness that polluted stormwater runoff is the most significant source of water quality problems;
- To motivate residents to use Best Management Practices (BMPs) which reduce polluted stormwater runoff; and
- To reduce polluted stormwater runoff as a result of increased awareness and utilization of BMPs.

Personnel Responsible for Implementing and Maintaining the BMP:

Angus L. McDonald, Jr., First Selectman

Nathan L. Jacobson & Associates, Inc., Consulting Town Engineer

Anticipated Date of BMP Implementation:

Continuing

BMP Implementation Measurable Goal:

To be included in each Annual Report.

1.2 Implement Public Education and Outreach Program

To implement a public education and outreach program targeting pollutants of concern by June 30, 2018, the Town will develop or acquire current educational material from CT DEEP and other sources that identifies the pollutants (such as pathogens, bacteria, nitrogen, phosphorus, sediments, metals, oils & greases) associated with stormwater discharges, the potential sources of the pollutants, the environmental impacts of these pollutants, and related pollution reduction practices.

Personnel Responsible for Implementing and Maintaining the BMP:

Angus L. McDonald, Jr., First Selectman

Nathan L. Jacobson & Associates, Inc., Consulting Town Engineer

Anticipated Date of BMP Implementation:

By June 30, 2018

BMP Implementation Measurable Goal:

To be included in the 2017 Annual Report.

1.3 Additional Measures for Stormwater Pollutants of Concern

These measures may be implemented solely by the Town or as part of a collaborative regional or statewide program to address the issue. However, the Town retains sole responsibility for compliance with this section.

1. Waters for which Bacteria is a Stormwater Pollutant of Concern, educational materials will be specifically tailored and targeted to educate on the sources, impacts, and available pollution reduction practices from the following:
 - A. Septic systems
 - B. Sanitary cross connections
 - C. Waterfowl
 - D. Pet waste
 - E. Manure piles associated with livestock and horses

Personnel Responsible for Implementing and Maintaining the BMP:

Angus L. McDonald, Jr., First Selectman

Nathan L. Jacobson & Associates, Inc., Consulting Town Engineer

Anticipated Date of BMP Implementation:

By June 30, 2018

BMP Implementation Measurable Goal:

To be included in the applicable Annual Report.

1.4 Suggested Strategies

1. The Town will direct its outreach program and/or materials at specific groups, such as school age children, farmers, landscaping companies, retail businesses with large parking lots, pet owners and residents and urban populations. Educational material for each Stormwater Pollutant of Concern noted above will be acquired from the CT DEEP.
2. The Town may partner in its outreach efforts with local organizations that can help disseminate the stormwater message.

Personnel Responsible for Implementing and Maintaining the BMP:

Angus L. McDonald, Jr., First Selectman

Nathan L. Jacobson & Associates, Inc., Consulting Town Engineer

Anticipated Date of BMP Implementation:

By June 30, 2018

BMP Implementation Measurable Goal:

To be included in the applicable Annual Report.

Minimum Control Measure No. 2 Public Involvement/Participation

The Town will provide opportunities for the community to participate in the review and implementation of the SMP.

2.1 Publish a Public Notice

The Town will publish a notice on its website, at <http://www.deepriverct.us> to inform the public of the SMP and the Annual Reports required by Section 6(j) of the 2017 CT DEEP MS4 Stormwater General Permit and to solicit comments on the SMP and Annual Reports. The notice will provide a contact name (with phone number, address, and email) to whom the public can send comments and a location at Town Hall and a URL where the SMP and Annual Reports are available for review and/or download. The public notice for the SMP will allow for at least a 90-day comment period. The Town will publish this public notice annually no later than April 1, 2017. The public notice for the Annual Report will allow for at least a 45-day comment period. The Town will publish this public notice annually no later than February 14th of every year for the duration of the General Permit.

Personnel Responsible for Implementing and Maintaining the BMP:

Angus L. McDonald, Jr., First Selectman

Anticipated Date of BMP Implementation:

By April 1, 2017 for the SMP

By February 14th of each year for the Annual Report

BMP Implementation Measurable Goal:

To be included in the applicable Annual Report.

2.2 Enlist Local Organizations

The Town will enlist local organizations to help implement the elements of its SMP recognizing, however, that it retains sole responsibility for permit compliance.

Personnel Responsible for Implementing and Maintaining the BMP:

Angus L. McDonald, Jr., First Selectman

Commission and Board Members

Anticipated Date of BMP Implementation:

By June 30, 2018

BMP Implementation Measurable Goal:

To be included in the applicable Annual Report.

Minimum Control Measure No. 3 Illicit Discharge Detection and Elimination (IDDE)

By June 30, 2018, the Town will develop a written Illicit Discharge Detection and Elimination (IDDE) program designed to: provide the legal authority to prohibit and eliminate illicit discharges (as defined in Section 2 except for those discharges noted in the Section 3(a)(2) of the 2017 CT DEEP MS4 Stormwater General Permit) to the MS4; find the source of any illicit discharges; eliminate those illicit discharges; and ensure ongoing screening and tracking to prevent and/or eliminate future illicit discharges. Failure to implement all elements of the IDDE program to the Maximum Extent Practicable (MEP) constitutes a violation of the 2017 CT DEEP MS4 Stormwater General Permit.

3.1 IDDE Program Elements

1. The Town will, at a minimum, implement the IDDE program elements in this section and the IDDE protocol in Appendix B of the MS4 Stormwater General Permit within the Urbanized Area and those catchment areas of the MS4 with either Directly Connected Impervious Area (DCIA) of greater than 11% (as identified on maps available at www.ct.gov/deep/municipalstormwater) or which discharge to impaired waters ("priority" areas). The Town is encouraged to develop a prioritizing strategy to identify areas outside these identified areas to further implement these IDDE measures. This prioritizing strategy should utilize the prioritizing elements included in Section (A)(7)(c) of Appendix B of the MS4 Stormwater General Permit.
2. Illicit discharges to the MS4 by any person are prohibited, and any such discharges are not authorized by the general permit, are unlawful, and remain unlawful until they are eliminated. The Town will prohibit all illicit discharges from entering its MS4. Upon detection, the Town will eliminate illicit discharges as soon as possible and require the immediate cessation of such discharges upon confirmation of responsible parties in accordance with its enforceable legal authorities established pursuant to subsection (B) below. Where elimination of an illicit discharge within sixty (60) days of its confirmation is not possible, the Town will establish a schedule for its elimination not to exceed 180-days (six months). The Town will immediately commence actions necessary for elimination. The Town will diligently pursue elimination of all illicit discharges. In the interim, the Town will take all reasonable and prudent measures to minimize the discharge of pollutants to its MS4.
3. The Town will develop a program for citizen reporting of illicit discharges. This may include maintaining a website, email list or mailing program that provides clear instructions for the public describing how citizens can submit an illicit discharge report. The reporting program will provide an email address and/or a phone number or other means for submissions. The Town will affirmatively investigate and eliminate any illicit discharges reported to it by any citizen or organization, provided that such report incorporates at least a time and location of an observed discharge. The Town will commence inspection of such a reported outfall or manhole promptly after receiving such a report, and incorporate those reported outfalls into its IDDE program subject to all provisions of this subsection (3) and of Appendix B. All citizen reports and the responds to those reports will be included in the Annual Report.

4. The Town will implement outfall screening and an illicit discharge detection protocol pursuant to Appendix B of the 2017 MS4 Stormwater General Permit to identify, prioritize, and investigate separate storm sewer catchments for suspected illicit discharges of pollutants.
5. The Town will maintain a record of illicit discharge abatement activities including, at a minimum: location (identified with an address or latitude and longitude), description, date(s) of inspection, sampling data (if applicable), action(s) taken, date of removal or repair and responsible party(ies). This information will be included in the Annual Reports pursuant to the Section 6(j) of the 2017 MS4 Stormwater General Permit.
6. The Town will implement IDDE program elements in accordance with the schedules included in this section and in Appendix B of the 2017 MS4 Stormwater General Permit.

Personnel Responsible for Implementing and Maintaining the BMP:

Board of Selectmen

Water Pollution Control Authority

Connecticut River Area Health District (CRAHD)

Nathan L. Jacobson & Associates, Inc., Consulting Town Engineer

Anticipated Date of BMP Implementation:

By June 30, 2018

BMP Implementation Measurable Goal:

To be included in the applicable Annual Report.

3.2 Establish Necessary and Enforceable Legal Authority

On December 14, 2010, the Town established the necessary and enforceable legal authority to eliminate illicit discharges.

1. Section 14 - Utilities (Vol. 8 Pages 400-409) of the Town Ordinances:
 - A. Prohibits illicit discharges to its storm sewer system and require removal of such discharges consistent with 3.1, above; and
 - B. Controls the discharge of spills and prohibit the dumping or disposal of materials including, but not limited to, residential, industrial and commercial wastes, trash, used motor vehicle fluids, pesticides, fertilizers, food preparation waste, leaf litter, grass clippings, and animal wastes into its MS4; and
 - C. Authorizes fines or penalties and/or recoup costs incurred by the Town from anyone creating an illicit discharge or spilling or dumping as specified in 3.1, above.
 - D. Provide any additional legal authorities specified in Section (A)(7)(a) of Appendix B of the 2017 MS4 Stormwater General Permit.

Personnel Responsible for Implementing and Maintaining the BMP:

Board of Selectmen

Water Pollution Control Authority

Connecticut River Area Health District (CRAHD)

Date of BMP Implementation:

Implemented at the June 26, 2012 Town Meeting

BMP Implementation Measurable Goal:

To be included in each Annual Report.

3.3 Development of Data

The Town will maintain a list and map, or series of maps, at a minimum scale of 1"=2000' and maximum scale of 1"=100' showing all stormwater discharges from a pipe or conduit located within and owned or operated by the Town and all interconnections with other MS4s. The map will be developed in a GIS format.

1. The list and map(s) will include for each discharge:
 - A. Type, material, size, and location (identified with a latitude and longitude) of conveyance, outfall or channelized flow (e.g. 24" diameter round concrete pipe);
 - B. The name, water body ID and Surface Water Quality Classification of the immediate surface waterbody or wetland to which the stormwater runoff discharges;
 - C. If the outfall does not discharge directly to a named waterbody, the name and water body ID of the nearest named waterbody to which the outfall eventually discharges;
 - D. The name of the watershed, including the subregional drainage basin number in which the discharge is located; and
 - E. The spreadsheet or database will be prepared in a format compatible with Microsoft Excel.

Personnel Responsible for Implementing and Maintaining the BMP:

Land Survey & Technical Services, Inc.

Nathan L. Jacobson & Associates, Inc.

Anticipated Date of BMP Implementation:

The majority of the MS4 outfall mapping for the entire town was conducted during the 2007 calendar year and a draft copy of the Stormwater Infrastructure Mapping Project was completed in April 2015. A quality control check of the mapping is anticipated to be completed by June 30, 2018.

BMP Implementation Measurable Goal:

To be included in the applicable Annual Report.

3.4 Additional Measures for Stormwater Pollutants of Concern

1. To address septic system failures, the IDDE program will give highest priority to areas with the highest potential to discharge bacteria, phosphorus, and nitrogen to the MS4. These areas have been identified by the WPCA based on assessment of the following criteria: historic on-site sanitary system failures, proximity to bacteria impaired waters, low infiltrative soils, and shallow depth to groundwater.

Personnel Responsible for Implementing and Maintaining the BMP:

WPCA

Anticipated Date of BMP Implementation:

By June 30, 2018

BMP Implementation Measurable Goal:

The Annual Report will include a summary of the program, the number of areas identified with failing subsurface sewage disposal systems, actions taken by the Town to respond to and address the failures, and anticipated pollutant load reductions.

Minimum Control Measure No. 4 Construction Site Stormwater Runoff Control

The Town will implement and enforce a program to control stormwater discharges (to its MS4) associated with land disturbance or development (including re-development) activities from sites as defined in the CT DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities with one acre or more of soil disturbance, whether considered individually or collectively as part of a larger common plan. The program will include the following elements:

4.1 Legal Authority

1. The Town has established an ordinance, regulations and standard conditions of approval that requires:
 - A. Developers, construction site operators, or contractors to maintain consistency with the 2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control, as amended, the CT DEEP 2004 Connecticut Stormwater Quality Manual, and all stormwater discharge permits issued by the DEEP within the municipal or institutional boundary pursuant to CGS 22a-430 and 22a-430b;
 - B. The implementation of additional measures to protect/improve water quality (in addition to the above requirements) as deemed necessary by the Town or institution;
 - C. The Town to carry out all inspection, surveillance and monitoring procedures necessary to determine compliance with municipal regulations, ordinances or programs related to the management of the Town's MS4. Inspections will be conducted, where allowed, to inventory privately-owned retention ponds, detention ponds and other stormwater basins that discharge to or receive drainage from the Town's MS4;
 - D. The owner of a site seeking development approval from the Town to provide and comply with a long-term maintenance plan and schedule to ensure the performance and pollutant removal efficiency of privately-owned retention ponds, detention ponds and other stormwater basins that discharge to or receive discharge from the Town's MS4 including short-term and long-term inspection and maintenance measures to be implemented by the private owner;
 - E. The Town to control through interagency or inter-jurisdictional agreements, the contribution of pollutants between the Town's MS4 and MS4(s) owned or operated by others; and
 - F. The Town will continue to implement and enforce its land use regulations and construction requirements to meet the above requirements and will, if necessary, upgrade its land use regulations by June 30, 2019.

Personnel Responsible for Implementing and Maintaining the BMP:

Cathie Jefferson, Zoning Enforcement Officer

Nathan L. Jacobson & Associates, Inc.

Anticipated Date of BMP Implementation:

Land Use Regulations in place include the following:

- *Zoning Regulations of the Town of Deep River (January 01, 2017)*
- *Subdivision Regulations of the Town of Deep River*
- *Inland Wetland and Watercourses Regulations of the Town of Deep River
(December 12, 2007)*

BMP Implementation Measurable Goal:

To be included in the applicable Annual Report.

4.2 Interdepartmental Coordination

The Town coordinates the functions of all municipal departments and agencies with jurisdiction over the review, permitting, or approval of land disturbance and development projects within the MS4.

Personnel Responsible for Implementing and Maintaining the BMP:

Land Use Office

Nathan L. Jacobson & Associates, Inc., Consulting Town Engineer

Anticipated Date of BMP Implementation:

Continuing

BMP Implementation Measurable Goal:

To be included in the 2017 Annual Report.

4.3 Site Plan Review and Construction Inspection

The Town will review site plans to ensure they include adequate stormwater controls and stormwater management practices to prevent or minimize impacts to water quality in the course of its permitting.

The Town will conduct site inspection(s) and enforcement to assess the adequacy of the installation, maintenance, operation, and repair of construction and post-construction stormwater control measures required per its permits.

Personnel Responsible for Implementing and Maintaining the BMP:

Cathie Jefferson Zoning Enforcement Officer

Nathan L. Jacobson & Associates, Inc., Consulting Town Engineer

Anticipated Date of BMP Implementation:

Continuing

BMP Implementation Measurable Goal:

To be included in the Annual Report.

4.4 Public Involvement

The Town will maintain its procedure for receipt and consideration of information submitted by the public concerning proposed and ongoing land disturbance and development activities.

Personnel responsible for implementing and maintaining the BMP:

Land Use Office

Cathie Jefferson, Zoning Enforcement Officer

Anticipated date of BMP implementation:

Continuing

BMP Implementation measurable goal:

To be included in the Annual Report.

4.5 State Permit Notification

The Town will implement a procedure for notifying developers (working in the municipality) or contractors (working for a municipality or an institution) of their potential obligation to obtain authorization under the CT DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities ("Construction Stormwater General Permit") if their development or redevelopment project disturbs one or more acres of land, either individually or collectively, as part of a larger common plan, and results in a point source discharge to the surface waters of the state directly or through the Town's MS4. The notification will include a provision informing the developer/contractor of their obligation to provide a copy of the Stormwater Pollution Control plan (SPCP) (required by the construction general permit) to the Town upon request.

Personnel responsible for implementing and maintaining the BMP:

Cathie Jefferson, Zoning Enforcement Officer

Nathan L. Jacobson & Associates, Inc., Consulting Town Engineer

Anticipated date of BMP implementation:

Continuing

BMP Implementation measurable goal:

To be included in the Annual Report.

Minimum Control Measure No. 5 Post-Construction Stormwater Management in New Development or Redevelopment

5.1 Legal Authority

1. The Town will establish an ordinance, bylaw, regulation, standard condition of approval or other appropriate legal authority that requires, to the Maximum Extent Practicable (MEP), that an applicant seeking land use approval from the Town will consider the use of Low Impact Development ("LID") and runoff reduction site planning and development practices prior to the consideration of other practices in the Town land use regulations (Subdivision Regulations, Regulations for Public Improvements, Zoning Regulations or Aquifer Protection Area Regulations), guidance or construction project requirements to meet or exceed those LID and runoff reduction practices identified in the 2004 Connecticut Stormwater Quality Manual.
2. Such legal authority will include the following standards:
 - A. For redevelopment of sites that are currently developed with Directly Connected Impervious Area (DCIA) of forty percent or more, retain on-site half the water quality volume for the site, or
 - B. For new development and redevelopment of sites with less than forty percent DCIA, retain the water quality volume for the site, or
 - C. An alternate retention/treatment standard as outlined below. The Town will identify and, where appropriate, reduce or eliminate existing local regulatory barriers to implementing LID and runoff reduction practices to the MEP. These may include site planning requirements, zoning regulations, street design regulations, or infrastructure specifications that address minimal dimensional criteria for the creation of roadways, parking lots, and other DCIA. If such barriers cannot be eliminated within the above timeframe, the Town will provide in the Annual Report(s) a justification and a revised schedule for implementation.
3. In establishing the legal authority, the Town will consider the following watershed protection elements to manage the impacts of stormwater on receiving waters, except where noted:
 - A. Minimize the amount of impervious surfaces (roads, parking lots, roofs, etc.) within each Town by minimizing the creation, extension, and widening of parking lots, roads, and associated development and encourage the use of Low Impact Development (LID) or Green Infrastructure (GI) practices.
 - B. Preserve, protect, create and restore ecologically sensitive areas that provide water quality benefits and serve critical watershed functions. These areas may include, but are not limited to; riparian corridors, headwaters, floodplains and wetlands.
 - C. Implement stormwater management practices that prevent or reduce thermal impacts to streams, including requiring vegetated buffers along waterways, and disconnecting discharges to surface waters from impervious surfaces such as parking lots.

- D. Seek to avoid or prevent hydromodification of streams and other water bodies caused by development, including roads, highways, and bridges.
- E. Implement standards to protect trees, and other vegetation with important evapotranspiration qualities.
- F. Implement policies to protect native soils, prevent topsoil stripping, and prevent compaction of soils.

Personnel responsible for implementing and maintaining the BMP:

Land Use Office

Land Use Commission(s) Legal Counsel(s)

Anticipated date of BMP implementation:

By June 30, 2021

BMP Implementation measurable goal:

To be included in the applicable Annual Report.

5.2 Runoff Reduction Low Impact Development (LID) Measures

1. Pursuant to the requirements of subsection 5(A)(i) above, by June 30, 2019, the Town will require the party responsible (i.e. a developer within a municipal boundary or a developer/contractor with the institution) for development and redevelopment projects within its MS4 to:
 - A. For development or redevelopment of sites that are currently developed with Directly Connected Impervious Area (DCIA) of forty percent or more, retain on-site half the water quality volume for the site. In cases where this entire amount cannot be retained, the Town will require the responsible party to retain runoff volume to the maximum extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice. In such cases, additional stormwater treatment, to the maximum extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice, will be required for sediment, floatables and nutrients for the volume above that which can be retained up to the water quality volume. In cases where the runoff reduction requirement cannot be met, the developer/contractor will submit, for the Town to review, a report detailing factors limiting the capability of achieving this goal. In such cases, the Town will approve a stormwater mitigation project on another site proposed by the developer/contractor or approve a fee to be deposited into a dedicated account of the Town for use by the Town to fund in whole or in part the retrofit of one or more existing DCIA. Unless such fee is established by DEEP, the fee proposed by the developer/contractor should be set in amount approved by the Town as calculated based on an estimate of the cost necessary to implement the retrofit to achieve a similar amount of runoff reduction to the amount by which the actual amount of runoff reduced fails to achieve the requirement to retain the water quality volume for the site. The report will include: the measures taken to maximize runoff reduction practices on the

site; the reasons why those practices constitute the maximum extent achievable; the alternative retention volume; and a description of the measures used to provide additional stormwater treatment above the alternate volume up to the water quality volume. In the case of linear redevelopment projects (e.g. roadway reconstruction or widening) for the developed portion of the right of way: (1) for projects that may be unable to comply with the full retention standard, the alternate retention and treatment provisions may also be applied as specified above, or (2) for projects that will not increase the DCIA within a given watershed, the developer/contractor will implement the additional stormwater treatment measures referenced above, but will not be required to retain half of the water quality volume.

- B. For all new development and for redevelopment of sites with less than forty percent DCIA, retain the water quality volume for the site. If there are site constraints that would prevent retention of this volume on-site (e.g. brownfields, capped landfills, bedrock, elevated groundwater, etc.), documentation must be submitted, to the Town for review and written approval, which: explains the site limitations; provides a description of the runoff reduction practices implemented; provides an explanation of why this constitutes the maximum extent achievable; offers an alternative retention volume; and provides a description of the measures used to provide additional stormwater treatment for sediment, floatables and nutrients above the alternate volume up to the water quality volume. In such cases, the Town will approve a stormwater mitigation project on another site proposed by the developer/contractor or approve a fee to be deposited into a dedicated account of the Town for use by the Town to fund in whole or in part the retrofit of one or more existing DCIA. Unless such fee is established by the CT DEEP, the fee proposed by the developer/contractor should be set in amount approved by the Town as calculated based on an estimate of the cost necessary to implement the retrofit to achieve a similar amount of runoff reduction to the amount by which the actual amount of runoff reduced fails to achieve the requirement to retain the water quality volume for the site. Any such treatment will otherwise be designed, installed and maintained consistent with the 2004 Connecticut Stormwater Quality Manual. In the case of linear projects that do not involve impervious surfaces (e.g. electrical transmission rights-of-way or natural gas pipelines), retention of the water quality volume is not required as long as the post-development runoff characteristics do not differ significantly from pre-development conditions.
- C. Consider the limitation of turf areas to those areas necessary to construct buildings, utilities, stormwater management measures, parking, access ways, reasonable lawn areas and contouring necessary to prevent future site erosion.
- D. Maintain consistency with the CT DEEP 2004 Connecticut Stormwater Quality Manual, or if inconsistent, provide an explanation of why consistency is not feasible or practicable and information that the proposed SMP of development is adequately protective.
- E. In areas served by on-site sewage disposal (septic) systems, the Town should coordinate with the state or local health official, as appropriate, to confirm that

any infiltration measures are appropriately sized, located and constructed in a manner consistent with the Connecticut Department of Public Health Technical Standards for Subsurface Sewage Disposal Systems, Section 19-13-B100A of the Regulations of Connecticut State Agencies and/or CT DEEP requirements for on-site sewage disposal systems.

Personnel responsible for implementing and maintaining the BMP:

Planning & Zoning Commission Legal Counsel

Cathie Jefferson, Zoning Enforcement Officer

Nathan L. Jacobson & Associates, Inc., Consulting Town Engineer

Anticipated date of BMP implementation:

By June 30, 2019

BMP Implementation measurable goal:

To be included in the applicable Annual Report.

5.3 Directly Connected Impervious Area (DCIA)

The Town will calculate the Directly Connected Impervious Area (DCIA) that contributes stormwater runoff to each of its MS4 outfalls (i.e. catchment area). The DCIA calculation will be based upon the methodology developed by the Connecticut NEMO MS4 program. Each Annual Report will document the progress of this task until its completion. The Town will revise its DCIA estimate as development, redevelopment, or retrofit projects effectively add or remove DCIA to/from the MS4.

Personnel responsible for implementing and maintaining the BMP:

Nathan L. Jacobson & Associates, Inc., Consulting Town Engineer

Anticipated date of BMP implementation:

By June 30, 2018

BMP Implementation measurable goal:

To be included in the applicable Annual Report.

5.4 Long Term Maintenance

The Town will implement a maintenance SMP for ensuring the long-term effectiveness of retention or detention pond located in the Urbanized Area and those catchment areas of the MS4 with either DCIA of greater than 11% or which discharge to impaired waters and which discharge to, or receive stormwater from, its MS4. This will include such ponds that are owned by the Town and all privately-owned ponds where the Town maintains an easement or other legal authority pursuant to Section 6(a)(4)(A)(i) of the 2017 CT DEEP MS4 Stormwater General Permit. At a minimum, the Town will annually inspect all such retention or detention ponds and remove accumulated sediment to restore full solids capture design capacity where found to be in excess of 50% design capacity.

The Town will implement a Maintenance Plan for ensuring the long-term effectiveness of stormwater treatment structures or measures (such as swirl concentrators, oil/grit separators, water quality wetlands or swales, etc.) installed within the Urbanized Area and those catchment areas of the MS4 with either DCIA of greater than 11% or which discharge to impaired waters. This will include structures that are owned by the Town or those for which the Town maintains an easement or other legal authority pursuant to Section 6(a)(4)(A)(i) of the CT DEEP MS4 Stormwater General Permit. At a minimum, the Town will annually inspect all such structures/measures and remove accumulated pollutants (such as sediment, oils, leaves, litter, etc.) to restore full solids capture design capacity where found to be in excess of 50% design capacity.

Personnel responsible for implementing and maintaining the BMP:

Edward Field, Foreman, Highway Department

Nathan L. Jacobson & Associates, Inc., Consulting Town Engineer

Anticipated date of BMP implementation:

By June 30, 2019

BMP Implementation measurable goal:

To be included in the applicable Annual Report.

5.5 Additional Measures for Discharges to Impaired Waters (with or without a TMDL)

Waters for which Nitrogen, Phosphorus or Bacteria is a Stormwater Pollutant of Concern:

To address erosion and sediment problems noted during the course of conducting the inspections required by subsection D of the 2017 CT DEEP MS4 Stormwater General Permit and identified by other means, the Town will develop, fund, implement, and prioritize these problems under the Retrofit program specified in Section 6(a)(6)(B) of the 2017 CT DEEP MS4 Stormwater General Permit to correct the problem(s) in a specific timeframe and to establish short term and long term maintenance. Each annual report will include which problem areas were retrofitted, the cost of the retrofit, and the anticipated pollutant reduction.

Personnel responsible for implementing and maintaining the BMP:

Edward Field, Foreman, Highway Department

Board of Selectmen

Anticipated date of BMP implementation:

By July 01, 2017

BMP Implementation measurable goal:

To be included in the applicable Annual Report.

Minimum Control Measure No. 6 Pollution Prevention/Good Housekeeping

The Town will continue its operations and maintenance program for Town owned or operated MS4s that has a goal of preventing or reducing pollutant runoff and protecting water quality from the Town MS4.

6.1 Employee Training

The Town will continue a formal employee training program to increase awareness of water quality related issues in management of its MS4. In addition to providing key staff with topical training regarding standard operating procedures and other activities necessary to comply with the provisions of the 2017 CT DEEP MS4 Stormwater General Permit, the training program will include establishing an awareness of the general goals and objectives of the SMP; identification and reporting of illicit discharges and improper disposal; and spill response protocols and respective responsibilities of involved personnel.

Personnel responsible for implementing and maintaining the BMP:

Edward Field, Foreman, Highway Department

Highway Department Employees

Board of Selectman

Cathie Jefferson, Zoning Enforcement Officer

Anticipated date of BMP implementation:

Continuing

BMP Implementation measurable goal:

Included in previous MS4 Annual Reports.

To be included in each Annual Report.

6.2 Infrastructure Repair, Rehabilitation and Retrofit

1. Repair and Rehabilitation Program

The Town will repair and rehabilitate its MS4 infrastructure in a timely manner to reduce or eliminate the discharge of pollutants from its MS4 to receiving waters. Priority for repair and rehabilitation will be based on the following:

The Town will utilize the information developed pursuant to Section 6(a)(6)(A)(v) of the 2004 CT DEEP MS4 Stormwater General Permit to fund and implement a program for repairing, retrofitting or upgrading the conveyances, structures and outfalls of the MS4. This program will be updated based on new information on outfalls discharging pollutants, impaired waters, inspection observations or observations made during outfall mapping pursuant to Section 6(a)(3)(C) of the 2017 CT DEEP MS4 Stormwater General Permit.

2. Retrofit Program

The goal of the retrofit program is to "disconnect" existing Directly Connected Impervious Areas (DCIA). An area of DCIA is considered disconnected when the

appropriate portion of the Water Quality Volume has been retained in accordance with the requirements of Section 6(a)(5)(B)(i) or (ii) of the 2017 CT DEEP MS4 Stormwater General Permit. This may be accomplished through retrofits or redevelopment projects (public or private) that utilize Low Impact Development (LID) and runoff reduction measures or any other means by which stormwater is infiltrated into the ground or reused for other purposes without a surface or storm sewer discharge. A redevelopment project, as that term is used here and in Section 6(a)(5)(B)(i) of the 2017 CT DEEP MS4 Stormwater General Permit and (ii), is one that modifies an existing developed site for the purpose of enhancing, expanding or otherwise modifying its function or purpose. A retrofit project is one that modifies an existing developed site for the primary purpose of disconnecting DCIA. The DCIA calculation performed pursuant to Section 6(a)(5)(C) of the 2017 CT DEEP MS4 Stormwater General Permit will serve as the baseline for the retrofit program required in this section.

A. DCIA Disconnection Tracking

Beginning on July 01, 2017, the Town will track on an annual basis the total acreage of DCIA that is disconnected as a result of redevelopment or retrofit projects within the MS4. Tracking the disconnection of DCIA means documenting within a given redevelopment, or retrofit project, the amount of existing DCIA that is modified such that it is disconnected. This tracking may include disconnections of DCIA from redevelopment or retrofit projects implemented as early as July 01, 2012. Any redevelopment or retrofit of an existing developed site, whether public (municipal, state or federal) or private (residential, commercial or industrial) will be included in this tracking. Tracking the disconnection of DCIA does not apply for sites that were previously undeveloped as there were no existing impervious surfaces on those sites. The total amount of DCIA that has been disconnected during a given year will be reported in the Annual Report for that year

B. Retrofit Planning

By June 30, 2020, the Town will develop a plan to implement retrofit projects to meet the goals of this section. The Town will identify and prioritize sites that may be suitable for retrofit. Considerations for prioritizing retrofit projects may include outfall catchment areas that discharge to impaired waters, areas within the Urbanized Area of the MS4 or catchment areas with greater than eleven percent (11%) DCIA. The Town will select from the list of prioritized projects those that it will implement to meet the goals in subparagraph (C) below. In the 2019 Annual Report the Town will report on identification and prioritization process, the selection of the projects to be implemented, the rationale for the selection of those projects and the total DCIA to be disconnected upon implementation of the projects.

C. Retrofit Schedule

By June 30, 2022, the Town will commence the implementation of the retrofit projects identified in subparagraph (B), above, with a goal of disconnecting one percent (1%) per year of the Town DCIA in 2020 and 2021, or a total of 2%, to the MEP. The two percent (2%) goal may be achieved by compiling the total disconnected DCIA tracked pursuant to subparagraph (A), above, or the retrofit projects designated in subparagraph (B), above, or a combination of the two. If the two percent (2%) goal will not be met, the Town will include in the Annual Report a discussion of what percentage of DCIA will actually be disconnected and why the remainder of the two percent (2%) goal could not be achieved based on the MEP standard outlined in Section 5(b) of the 2017 CT DEEP MS4 Stormwater General Permit. The Town will also provide in the 2022 Annual Report for continuation of the retrofit program and continue such program with a goal to disconnect one percent (1%) of DCIA in each year thereafter.

Personnel responsible for implementing and maintaining the BMP:

Board of Selectmen

Edward Field, Foreman, Highway Department

Nathan L. Jacobson & Associates, Inc., Consulting Town Engineer

Anticipated date of BMP implementation:

By June 30, 2020 and June 30, 2022

BMP Implementation measurable goal:

To be included in the applicable Annual Report.

6.3 MS4 Property and Operations Maintenance

Town-owned or operated properties, parks, and other facilities that are owned, operated, or otherwise the legal responsibility of the Town will be maintained so as to minimize the discharge of pollutants to its MS4. Such maintenance will include, but not be limited to:

1. Parks and Open Space

The Town will optimize the application of fertilizers by municipal employees, institutional staff, or private contractors on lands and easements for which it is responsible for maintenance. Optimization practices considered may include conducting soil testing and analysis to determine soil phosphorus levels, the reduction or elimination of fertilizers, reduction of usage by adhering to the manufacturers' instructions, and use of alternative fertilizers forms (i.e. products with reduced, slow-releasing, or insoluble phosphorus compositions). Additional optimization practices to be considered include: proper storage and application practices (i.e. avoid impervious surfaces), application schedule (i.e. appropriate season or month) and timing (i.e. coordinated with climatic conditions to minimize runoff potential); develop and implement standard operating practices for the handling, storage, application, and disposal of pesticides and herbicides in compliance with applicable state and federal laws; evaluate lawn maintenance and landscaping activities to

promote water quality (protective practices include reduced mowing frequencies, proper disposal of lawn clippings, and use of alternative landscaping materials like drought resistant and native plantings); and establish procedures for management of trash containers at parks (scheduled cleanings; sufficient number). The Town will establish practices for the proper disposal of grass clippings and leaves at Town-owned lands. Clippings will be composted or otherwise appropriately disposed. Clippings should not enter the MS4 system or waters of the state.

2. Pet Waste Management

The Town will identify locations within its community/institution where inappropriate pet waste management practices are immediately apparent and pose a threat to receiving water quality due to proximity and potential for direct conveyance of waste to its storm system and waters. In such areas, the Town will, implement targeted management efforts such as public education and enforcement (e.g. increased patrol for violators). In Town-owned recreational areas where dog walking is allowed, the Town will install educational signage, pet waste baggies, and disposal receptacles (or require carry-out). The Town will document its efforts in its annual reports. The Town should consider including information regarding the scope and extent of its education, compliance, and enforcement efforts (including the number of violations pursued and fines levied or other enforcement taken).

3. Waterfowl Management

Identify lands where waterfowl congregate and feeding by the public or institutional staff/residents occurs. To raise awareness regarding the water quality impacts, the Town will install signage or use other targeted techniques to educate the public about the detrimental impacts of feeding waterfowl (including the resulting feces deposition) and discourage such feeding practices. The Town will also implement practices that discourage the undesirable congregation of waterfowl in these areas, or otherwise isolate the direct drainage from these areas away from its storm system and waters.

4. Buildings and facilities (schools under the jurisdiction of the Town, Town offices, police and fire stations, pools, parking garages and other Town-owned or operated buildings or utilities).

Evaluate the use, storage, and disposal of both petroleum and non-petroleum products; ensure, through employee training, that those responsible for handling these products know proper procedures; ensure that Spill Prevention Management Plans (SPMPs) are in place, if applicable, and coordinate with the Fire Department as necessary; develop management procedures for dumpsters and other waste management equipment; sweep parking lots and keep areas surrounding the facilities clean to minimize runoff of pollutants; and ensure that all interior building floor drains are not connected to the MS4. The 2004 or 2017 CT DEEP MS4 Stormwater General Permit does not authorize such discharges; wastewaters from interior floor drains must be appropriately permitted.

5. Vehicles and Equipment

Establish procedures for the storage of Town-owned or operated vehicles; require vehicles with fluid leaks to be stored indoors or in contained areas until repaired; evaluate fueling areas owned by the Town and used by Town-owned or operated vehicles and if possible, place fueling areas under cover in order to minimize exposure; establish procedures to ensure that vehicle wash waters are not discharged to the municipal storm sewer system or to surface waters.

The 2017 CT DEEP MS4 Stormwater General Permit does not authorize such discharges; wastewaters from interior floor drains must be appropriately permitted by the General Permit for the Discharge of Vehicle Maintenance Wastewater.

6. Leaf Management

The Town will establish and implement procedures to minimize or prevent the deposition of leaves in catch basins, streets, parking lots, driveways, sidewalks or other paved surfaces that discharge to the MS4. Such procedures will also apply to leaves collected by the Town.

Personnel responsible for implementing and maintaining the BMP:

Edward Field, Foreman, Highway Department

Board of Selectmen

Carol Jones, Director, Parks and Recreation

Animal Control Officer

Town Residents

Anticipated date of BMP implementation:

By July 01, 2017

BMP Implementation measurable goal:

To be included in the applicable Annual Report.

6.4 Street, Parking & MS4 Maintenance

The Town will continue its program to provide for regular inspection and maintenance of Town streets, parking areas and other MS4 infrastructure.

1. Sweeping

- A. Establish and implement procedures for sweeping Town-owned or operated streets and parking lots. All streets and parking lots within the Urbanized Area of the MS4, and outside the Urbanized Area within the catchment areas of the MS4 with either DCIA of greater than 11% or which discharge to impaired waters, will be inspected, swept and/or cleaned (as necessary) with a minimum frequency of once per year in the spring following the cessation of winter maintenance activities (i.e. sanding, deicing, etc.). The procedures will also include more frequent inspections, cleaning and/or sweeping of targeted areas determined by the Town to have increased pollutant potential based on the presence of active construction activity or other potential pollutant sources.

- B. The Town will identify such potential pollutant sources based upon surface inspections, catch basin cleaning or inspection results, land use, winter road deicing and/or sand application, impaired or TMDL waters or other relevant factors as determined by the Town. If wet dust suppression is conducted, the use of water should be minimized such that a discharge of excess water to surface waters and/or the storm sewer system does not occur.
 - C. For streets and parking lots outside the Urbanized Area and outside the catchment areas of the MS4 with either DCIA of greater than 11% or which discharge to impaired waters, including any rural uncurbed streets and parking lots with no catch basins, the Town will either meet the minimum frequencies above, or develop and implement an inspection, documentation and targeted sweeping and/or cleaning plan within one (1) year of the effective date of the general permit, and submit such plan with the Annual Report for that year. For new and redeveloped municipal parking lots, evaluate options from reducing stormwater runoff to surface waters and/or the storm sewer system by the installing pervious pavements and/or other measures to promote sheet flow of stormwater.
 - D. Ensure the proper disposal of street sweepings in accordance with Department policies, guidance and regulations. Sweepings will not be discharged back into the storm drain system and/or surface waters.
 - E. The Town will document results of its sweeping program in the Annual Report, including, at a minimum: a summary of inspection results, curb miles swept, dates of cleaning, volume or mass of material collected, and method(s) of reuse or disposal. The Town will also include documentation of any alternate sweeping plan for rural uncurbed streets and any runoff reduction measures implemented.
2. Catch Basin Cleaning

The Town will continue to conduct its routine cleaning of all catch basins and the Town will track catch basin inspection observations. Utilizing information compiled through its inventory of catch basins, operational staff and public complaints, the Town will optimize routine cleaning frequencies for particular structures or catchment areas as follows to maintain acceptable sediment removal efficiencies:

- A. By June 30, 2020 the Town will inspect all catch basins within the Urbanized Area of the MS4, and outside the Urbanized Area within the catchment areas of the MS4 with either DCIA of greater than 11% or which discharge to impaired waters at least once by the end of the third year following the effective date of this general permit. Catch basins outside the Urbanized Area and outside the catchment areas of the MS4 with either DCIA of greater than 11% or which discharge to impaired waters will be inspected by June 30, 2022.
- B. The Town will prioritize inspection and maintenance of Town-owned catch basins located near impaired waters and construction activities (roadway construction, residential, commercial, or industrial development or redevelopment). Clean catch basins in such areas more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings.

- C. The Town will maintain its schedule of routine cleaning and will ensure that no catch basin will be more than fifty (50) percent full.
- D. If a catch basin sump is more than fifty (50) percent full during two consecutive routine inspections or cleanings, the Town will document that finding, investigate the contributing drainage area for sources of excessive sediment loading, and to the maximum extent practicable, abate contributing sources. The Town will describe any actions taken in the Annual Report.
- E. For the purposes of this subsection, an excessive sediment or debris loading is a catch basin sump more than fifty (50) percent full (A catch basin sump is more than 50 percent full if the contents within the sump exceed one half the height between the interior base of the catch basin to the invert of the deepest invert elevation outlet of the catch basin).
- F. The Town will document in the SMP and in the Annual Reports its SMP for optimizing catch basin cleaning, inspection plans, or its schedule for gathering information to develop the optimization plan. Documentation will include metrics and other information used to reach the determination that the established plan for cleaning and maintenance is optimal for the MS4. The Town will keep a log of catch basins cleaned or inspected.
- G. The Town will report in each Annual Report the total number of catch basins cleaned, the number of catch basins inspected, the total volume or mass of material removed from all catch basins and, if practicable, the volume or mass of material removed from each catch basin draining to water quality limited waters.

Personnel responsible for implementing and maintaining the BMP:

Edward Field, Foreman, Highway Department

Anticipated date of BMP implementation:

By June 30, 2020 and June 30, 2022

BMP Implementation measurable goal:

To be included in the applicable Annual Report.

6.5 Snow Management Practices

1. Deicing Material Management

The Town will develop and implement standard operating practices for the use, handling, storage, application, and disposal of deicing products such as salt and sand to minimize exposure to stormwater; consider means to minimize the use and optimize the application of chloride-based or other salts or deicing product (while maintaining public safety) and consider opportunities for use of alternative materials; for any exterior containers of liquid deicing materials installed after the effective date of CT DEEP MS4 Stormwater General Permit, provide secondary containment of at least 110% of the largest container or 10% of the total volume of all containers, whichever is larger, without overflow from the containment area.

2. Snow and Ice Control Practices

The Town will implement and refine its standard operating practices regarding municipal road snow and ice control to minimize the discharge of sand, anti-icing or de-icing chemicals and other pollutants (while maintaining public safety). The Town will establish goals for the optimization of sand and/or chemical application rates through the use, where practicable, of automated application equipment (e.g. zero-velocity spreaders), anti-icing and pre-wetting techniques, implementation of pavement management systems, and alternate chemicals. The Town will maintain records of the application of sand, anti-icing and/or de-icing chemicals to document the reduction of chemicals to meet established goals. The Town will ensure the proper training for deicing applications for municipal employees, institutional staff, or private contractors on lands and easements for which it is responsible for maintenance.

3. The Town will manage and dispose of snow accumulations in accordance with CT DEEP's Best Management Practices for Disposal of Snow Accumulations from Roadways and Parking Lots (DEP-PED-GUID-002 Revised 2/4/11) and as amended (see link at: www.ct.gov/deep/stormwater). Each Annual Report will document the results of the snow removal program including, at a minimum: the type of staff training conducted on application methods and equipment, type(s) of deicing materials used; lane-miles treated; total amount of each deicing material used; type(s) of deicing equipment used; any changes in deicing practices (and the reasons for the change); and snow disposal methods.

Personnel responsible for implementing and maintaining the BMP:

Edward Field, Foreman, Highway Department

Highway Department Employees

Anticipated date of BMP implementation:

Continuing

BMP Implementation measurable goal:

To be included in the applicable Annual Report.

6.6 Interconnected MS4s

As part of interagency agreements established pursuant to Section 6(c)(3) of the 2017 CT DEEP MS4 Stormwater General Permit, the Town will coordinate with operators of interconnected MS4s (neighboring municipalities and Conn DOT) regarding the contribution of potential pollutants from the storm sewer systems, contributing land use areas and stormwater control measures in the respective MS4s. This same coordination will be conducted regarding operation and maintenance procedures utilized in the respective systems.

Personnel responsible for implementing and maintaining the BMP:

Edward Field, Foreman, Highway Department

ConnDOT

Towns of Essex, Westbrook, Killingworth and Chester

Anticipated date of BMP implementation:

Continuing

BMP Implementation measurable goal:

To be included in the applicable Annual Report.

6.7 Sources contributing pollutants to the MS4

The Town will develop and implement a program to control the contribution of pollutants to its MS4 from commercial, industrial, municipal, institutional or other facilities, not otherwise authorized by permit issued pursuant to Sections 22a-430 or 22a-430b of the Connecticut General Statutes.

Personnel responsible for implementing and maintaining the BMP:

Board of Selectmen

Anticipated date of BMP implementation:

By July 01, 2017

BMP Implementation measurable goal:

To be included in the applicable Annual Report.

6.8 Additional Measures for Discharges to Impaired Waters (with or without a TMDL)

1. For waters for which Nitrogen or Phosphorus is a Stormwater Pollutant of Concern:

On Town-owned or operated lands with a high potential to contribute bacteria (such as dog parks, parks with open water, sites with failing septic systems), the Town will develop, fund, implement, and prioritize a retrofit or source management program to correct the problem(s) within a specific timeframe. Each Annual Report will identify problem areas for which a retrofit or source management program were developed, the location of the closest outfall monitored in accordance with Section 6(i), the cost of such retrofit or program, and the anticipated pollutant reduction.

2. For waters for which Bacteria is a Stormwater Pollutant of Concern:

On Town-owned or operated lands, with a high potential to contribute bacteria (such as dog parks, parks with open water, sites with failing septic systems), the Town will develop, find, implement, and prioritize a retrofit or source management program to correct the problem(s) within a specific timeframe. Each Annual Report will identify problem areas for which a retrofit or source management program were developed, the location of the closest outfall monitored in accordance with Section 6(i), the cost of such retrofit or program, and the anticipated pollutant reduction.

On Town-owned or operated lands, prohibit the feeding of geese or waterfowl and implement a program to manage geese and waterfowl populations. Each Annual Report will discuss the actions taken to implement this program.

Personnel responsible for implementing and maintaining the BMP:

Board of Selectmen

Anticipated date of BMP implementation:

By July 01, 2017

BMP Implementation measurable goal:

To be included in the applicable Annual Report.

Monitoring Requirements

The Town will conduct stormwater monitoring in accordance with the requirements of Section 6(i) Monitoring Requirements of the 2017 CT DEEP MS4 Stormwater General Permit.

Personnel responsible for implementing and maintaining the BMP:

Nathan L. Jacobson & Associates, Inc., Consulting Town Engineer

Anticipated date of BMP implementation:

Continuing

BMP Implementation measurable goal:

To be summarized in each Annual Report.

Reporting and Record Keeping Requirements

The Town will keep records and summarize the records in the calendar year Annual Report in accordance with the requirements of Section 6(j) Reporting & Record Keeping Requirements of the 2017 CT DEEP MS4 Stormwater General Permit.

Personnel responsible for implementing and maintaining the BMP:

Edward Field, Foreman, Highway Department

Nathan L. Jacobson & Associates, Inc., Consulting Town Engineer

Anticipated date of BMP implementation:

Continuing

BMP Implementation measurable goal:

To be summarized in each Annual Report.

Certification Requirements for Registrants and Other Individuals

The registrant and any other individual or individuals responsible for preparing the registration and signing the certification has completely and thoroughly reviewed, at a minimum, this general permit and the following regarding the activities to be authorized under such general permit: (i) all registration information provided in accordance with Section 4(c)(2) of such general permit, (ii) the Stormwater Management Plan, and (iii) any plans and specifications and any Department approvals regarding such Stormwater Management Plan.

The registrant and any other individual or individuals responsible for preparing the registration and signing the certification pursuant to this general permit has, based on the review described in Section 3(b)(8)(A) of this general permit, made an affirmative determination to: (i) comply with the terms and conditions of this general permit; (ii) maintain compliance with all plans and documents prepared pursuant to the general permit including, but not limited to, the Stormwater Management Plan; (iii) properly implement and maintain the elements of the Stormwater Management Plan and (iv) properly operate and maintain all stormwater management measures and systems in compliance with the terms and conditions of the general permit to protect the waters of the state from pollution.

"I hereby certify that I am making this certification in connection with a registration under the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems, submitted to the Commissioner by the Town of Deep River for an activity located at or within Deep River and that all terms and conditions of the general permit are being met for all discharges which have been created, initiated or maintained and such activity is eligible for authorization under such permit. I further certify that a system is in place to ensure that all terms and conditions of this general permit will continue to be met for all discharges authorized by the general permit at the site. I certify that I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(8)(A) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify that I have made an affirmative determination in accordance with Section 3(b)(8)(B) of the general permit. I understand that the registration filed in connection with the general permit is submitted in accordance with and will comply with the requirements of Section 22a-430b of Connecticut General Statutes, as amended by Public Act 12-172. I also understand that knowingly making any false statement made in the submitted information and in this certification, may be punishable as a criminal offense, including the possibility of fine and imprisonment, under Section 53a-157b of the Connecticut General Statutes and any other applicable law."

Registrant

Angus L. McDonald, Jr., First Selectman

Registration Preparer

Wade M. Thomas, CPESC, CPSWQ

Stormwater Management Plan Certification

I have completely and thoroughly reviewed the general permit and the following regarding the discharges to be authorized under such general permit: (i) all registration information provided in accordance with Section 4(c)(2) of the general permit, (ii) the Stormwater Management Plan, and (iii) all non-engineered and engineered stormwater management measures and systems, including any plans and specifications and any Department approvals regarding such stormwater management measures and systems.

I have made an affirmative determination, based on the review described in Section 3(b)(9)(A) of the general permit and on best engineering practices, that the Stormwater Management Plan and control measures therein are adequate to assure that the activity authorized under the general permit will comply with the terms and conditions of such general permit and all non-engineered and engineered stormwater management measures and systems: (i) have been designed in accordance with best engineering practices; (ii) will function properly as designed; (iii) are adequate to ensure compliance with the terms and conditions of this general permit; and (iv) will protect the waters of the state from pollution.

"I hereby certify that I am a qualified professional engineer, as defined in the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems. I am making this certification in connection with a registration under such general permit, submitted to the Commissioner by the Town of Deep River for an activity located at or within Deep River. I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(9)(A) of the general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify, based on my review of all information described in Section 3(b)(9)(A) of the general permit and on the standard of care for such projects, that I have made an affirmative determination in accordance with Section 3(b)(9)(B) of the general permit. I understand that this certification is part of a registration submitted in accordance with Section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under Section 53a-157b of the Connecticut General Statutes and any other applicable law."

Geoffrey L. Jacobson, P.E.

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