

Introduction 2010 MS4 Stormwater Report

This Stormwater Management Plan has been prepared to comply with the Connecticut Department of Environmental Protection (CTDEP) *General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems* dated January 9, 2004. In the sections that follow, language from the General Permit is provided (italics), followed by the Best Management Practices (BMPs), as listed in the Part B registration. In addition to these BMPs, the Town is required to conduct annual storm water monitoring as specified in the General Permit.

Section 1. Development of Stormwater Management Plan

The Stormwater Management Plan (the Plan) shall address the Minimum Control Measures as indicated in this section. Those measures indicated as required within the Urbanized Area portion of the Regulated Small MS4 shall be implemented, at a minimum, within those areas. At the discretion of the permittee, the Minimum Control Measures required within the Urbanized Areas may also be applied to any MS4 outside of the Urbanized Area. Those measures indicated as required throughout the municipality shall be implemented for all areas of the municipality regardless of Urbanized Area.

(a) Minimum Control Measures

For each Minimum Control Measure, the permittee shall: define appropriate BMPs; designate a person(s) and job title responsible for each BMP; define a time line for implementation of each BMP; and define measurable goals for each BMP. The Minimum Control Measures in the Stormwater Management Plan include, but are not limited to those in the following sections.

Section 2. Public Education and Outreach on Stormwater Impacts

(A) *Required throughout the municipality:*

- (i) *implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on waterbodies and the steps that the public can take to reduce pollutants in stormwater runoff.*

The following BMPs have been developed; refer to the pages that follow for details.

- Stormwater Educational Materials
- Education/Outreach for Commercial Activities
- Proper Disposal of Household Hazardous Waste

Details of BMPs

Public Education

Storm Water Educational Materials

Responsible Party: **First Selectman and Town Planner**

Start Date: **1/2009**

End Date: **Ongoing**

Permits Years during which activities are scheduled:

Year 1 X Year 2 X

Name of Separate Implementing Entity: **Town of Griswold - Town Planner**

BMP Description:

- **Post Link on web site.**

<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm>

- **Evaluate mailer provided in tax bills.**

Has Goal Been Accomplished: **Yes. BMP website link established in calendar 2007 and will be continued and updated as necessary ; Mailer sent out in 2008 to urbanized area plus.**

Work Performed

Date: June 30, 2008

Responsible Party: Town Planner and Paul Burgess LLC

Description:

1900 copies of "Step by Step" A Citizen's Guide to Curbing Polluted Runoff were sent to citizens in voting district 1 including all of the urbanized area and significant contiguous non-urbanized area. No contact or inquiries were generated from this pamphlet so it was not considered a successful or cost effective way to inform the public. At this point, Griswold is not considering remailing any pamphlet to all citizens in 2010 or in subsequent years based on the lack of interest generated by this mailing.

Details of BMPs

Public Education

Education/Outreach for Commercial Activities

Responsible Party: **First Selectman and Town Planner**

Start Date: **1/2009**

End Date: **Ongoing**

Permits Years during which activities are scheduled:

Year 1 X Year 2 X

Name of Separate Implementing Entity: **Town of Griswold**

BMP Description:

- **Post Link on web site.**

<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Button=detail&bmp=6>

- **Evaluate mailer to businesses.**

Has Goal Been Accomplished: **Partially, BMP link established and continues; Business mailer was sent or hand-delivered to businesses during 2010 especially in the urbanized area.**

Work Performed

Date: June 30, 2008

Responsible Party: Town Planner and Paul Burgess LLC

Description:

Evaluate feasibility of Stormwater mailer to local businesses. In 2010, "Step by Step" pamphlets were hand-delivered or mailed to a list of current local businesses in Jewett City and Griswold. A selective re-mail effort will be planned for 2011.

Details of BMPs

Public Education

Proper Disposal of Household Hazardous Waste

Responsible Party: **First Selectman and Town Planner**

Start Date: **1/2009**

End Date: **Ongoing**

Permits Years during which activities are scheduled:

Year 1 X Year 2 X

Name of Separate Implementing Entity: **Town of Griswold**

BMP Description:

- **Post link on town web site to USEPA website materials**

<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Button=detail&bmp=3>

- **Provide information on website regarding hazardous waste collection locations and dates.**
- **Evaluate feasibility of mailers to taxpayers.**

Has Goal Been Accomplished: **BMP link established. Pamphlets sent to urbanized area**

Work Performed

Date: June 30, 2008

Responsible Party: Town Planner

Description:

Link to USEPA website materials is being maintained and updated on the Town website.

Provided annual information on website for location and dates of hazardous waste collections.

“Step by Step” pamphlets sent to citizens in voting district 1 including the entire urbanized area and significant portion of the non-urbanized area in 2008. Because no interest was generated in understanding the stormwater management program, the distribution of pamphlets to all citizens is not planned again.

Section 3. Public Involvement/Participation

(A) *Required throughout the municipality:*

- (i) *comply with state and local public notice and Freedom of Information requirements when implementing a public involvement/participation program. Where notice requirements are inconsistent, the notice provisions providing for the most notice and opportunity for public comment shall be followed.*
- (ii) *develop a public involvement/participation program that includes the public in developing, implementing, and reviewing your stormwater management plan.*

The following BMPs have been developed; refer to the pages that follow for details.

- Public Participation Program
- Public Notice and FOI Requirements
- Stormwater Stenciling- Borough
- Stream Cleanup

Details of BMPs

Public Participation

Public Participation Program

Responsible Party: **First Selectman and IWWC Commission**

Start Date: **1/2009**

End Date: **Ongoing**

Permits Years during which activities are scheduled:

Year 1 X Year 2 X

Name of Separate Implementing Entity: **Conservation Commission (IWWCC)**

BMP Description:

- **Assign Inland Wetland and Watercourses Conservation Commission responsibility for Public Participation.**
- **Post Stormwater Management Plan on Griswold web site for public review and comment.**

Has Goal Been Accomplished: **Yes; ongoing Annual Reports posted on website and taken to public hearing by IWWCC**

Work Performed

Date: Calendar 2008

Responsible Party: **Griswold IWWC Commission/ Town Planner**

Description:

As lead agency, IWWCC will continue to review draft Annual Report in public hearing during December for the calendar year and post annual reports/incremental progress on the website.

Public Hearing for 2010 Annual Report is scheduled for December 16, 2010 at 7:00 P.M in the first floor meeting room of Town Hall, 28 Main Street

Details of BMPs

Public Participation

Public Notice and FOI Requirements

Responsible Party: **First Selectman and IWWC Commission**

Start Date: **1/2009**

End Date: **Ongoing**

Permits Years during which activities are scheduled:

Year 1 X Year 2 X

Name of Separate Implementing Entity: **Town of Griswold Inland Wetlands and Watercourses Conservation Commission**

BMP Description:

- **Post Stormwater Management Plan on Griswold web site for public review and comment.**
- **Annual Stormwater Reports (see General Permit for report requirements) will be made available for public review 30 days in advance of submission to CTDEP. Availability will be posted on town web site and at Town Hall. Copies will be available at Town Hall (Planning Department).**
- **FOI requirements will be complied with.**

Has Goal Been Accomplished: **Yes. Plan and Annual Report Changes placed on website. Ongoing annual updates to be treated in same fashion for each reporting year.**

Work Performed

Date: **Ongoing**

Responsible Party: **Griswold IWWC Commission**

Description:

Plan and Annual Report Updates to the Plan placed on website each year and made available for public review in Planning Department/Town Clerk 30 days in advance of submission to CTDEP.

Public hearing notice provided in newspaper two times prior to December 16, 2010 public hearing.

Details of BMPs

Public Participation

Stormwater Stenciling- Borough

Responsible Party: **First Selectman and Highway Department**

Start Date: **1/2009**

End Date: **Ongoing**

Permits Years during which activities are scheduled:

Year 1 X Year 2 X

Name of Separate Implementing Entity: **Town of Griswold Highway Department**

BMP Description:

- **Highway Department to stencil no discharge notices on catch basins in Borough of Jewett City.**

Has Goal Been Accomplished: Yes, **Accomplished in calendar 2008, Maintenance as necessary in future years**

Work Performed

Date:

Responsible Party: **Highway Department Supervisor**

Description: Paul Burgess LLC located and marked about 200 catch basins in the urbanized area. These catch basins were marked with "No Dumping..Drains to River" medallions. In calendar 2009, these urbanized area catchbasins were revisited, located by GPS and mapped(or confirmed from planimetric data) on a GIS layer, and maintained/repared as necessary. Map provided as an exhibit. Labelling of catchbasins was not inspected and maintained in calendar 2010. This effort will be directed in 2011 using existing maps of the urbanized area and visiting the sites to inspect and maintain as necessary.

Details of BMPs

Public Participation

Stream Cleanup

Responsible Party: **First Selectman and IWWC Commission**

Start Date: **1/2009**

End Date: **Ongoing**

Permits Years during which activities are scheduled:

Year 1 X Year 2 X

Name of Separate Implementing Entity: **Volunteers**

BMP Description:

- **Annual cleaning of accessible trash from Ashland Pond and Pachaug River in Borough.**

Has Goal Been Accomplished: **2010....No**

Work Performed

Date: Calendar 2008

Responsible Party: **Griswold IWWC Commission/ Town Planner**

Description: During calendar 2009, the Town Planner and one volunteer each cleaned up a total of two trash bags from the shores of Ashland Pond. We expect to perform this annually from the water side, including 2010. In 2010 early spring, there was the near equivalent of a 100-year flood which prevented this clean up in the early spring. Cleanup will be attempted in 2011, Private property access and liability are an issue from the land side.

Section 4. Illicit Discharge Detection and Elimination

(A) Required throughout the municipality:

- (i) implement an ordinance or other regulatory mechanism to effectively prohibit non-stormwater discharges, except as provided in Section 3(a)(2)- General Permit-, into the MS4, as well as sanctions to ensure compliance, to the extent allowable under State or local law;*
- (ii) inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste; and*
- (iii) by the end of the third year of the general permit, expand the map required by subsection (B)(i) below to identify on such map all outfalls of 15" or greater where such outfalls are located anywhere within each municipality;*

(B) Required within the Urbanized Area:

- (i) by the end of the second year of the general permit, develop a 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 with a diameter of 15" or greater (or equivalent cross-sectional area) owned or operated by the municipality. For each discharge the following information shall be included:
 - a. Type, material, and size of conveyance, outfall or channelized flow (e.g. 24" concrete pipe);*
 - b. The name 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 of the nearest named waterbody to which the outfall eventually discharges;*
 - d. The name of the watershed in which the discharge is located.**
- (ii) By the end of the fourth year of the general permit, expand the map required by subsection (B)(i) above to identify on the map all outfalls of 12" or greater that are located within an urbanized area;*
- (iii) develop, implement and enforce a program to detect and eliminate existing illicit discharges, as defined in 40CFR 122.26(b)(2), into the MS4; and*
- (iv) develop and implement a plan to detect and address future non-stormwater discharges, including illegal dumping, to the MS4.*

The following BMPs have been developed; refer to the pages that follow for details.

- Map Outfalls in Borough(urbanized area)
- Illicit Discharge Elimination Program
- Map Outfalls Townwide

Details of BMPs	
Illicit Discharge Detection & Elimination	
Map Outfalls in Borough (Urbanized Area)	
Responsible Party: First Selectman and Town Planner	
Start Date: 1/2009	End Date: 1/2011
Permits Years during which activities are scheduled: <div style="text-align: center;">Year 1 X Year 2 X</div>	
Name of Separate Implementing Entity: Originally GEI, now Paul Burgess LLC/Designate	
BMP Description: <ul style="list-style-type: none"> • Inspect and map all storm water pipe discharges (12 inches diameter and greater) in Borough (urbanized area). 	
Has Goal Been Accomplished: 2006 – Yes	
Work Performed	
Date: May 2006	Responsible Party: First Selectman and Town Planner
Description: <ul style="list-style-type: none"> • Work was completed by GEI in May 2006 and a map and spreadsheet produced. Information on pipe material and size was obtained and recorded. 	

Details of BMPs	
Illicit Discharge Detection & Elimination	
Illicit Discharge Elimination Program	
Responsible Party: First Selectman and Town Planner	
Start Date: 1/2009	End Date: Ongoing
Permits Years during which activities are scheduled: Year 1 x Year 2	
Name of Separate Implementing Entity: GEI Consultants, Inc.; Paul Burgess LLC	
BMP Description: <ul style="list-style-type: none"> • All storm water pipes in Borough (urbanized area) to be inspected dry (no flow) conditions to identify illicit discharges. • Develop ordinance to eliminate illicit discharges or to prevent their future initiation. 	
Has Goal Been Accomplished: 2006 pipes located; 2008 draft illicit discharge ordinance revised for submission to Board of Selectman; and ordinance enacted in calendar 2009	
Work Performed	
Date: See below	Responsible Party: First Selectman and Town Planner
BMP Description: <ul style="list-style-type: none"> • All storm drain outfalls were inspected in both urbanized areas and non-urbanized areas and no illicit discharges were observed. Work was completed by GEI in May 2006 and Paul Burgess LLC in 2007. <p style="text-align: center;">Illicit Discharge Ordinance was reviewed and revised in calendar 2008 and was implemented by Board of Selectmen and Town Meeting in calendar 2009.</p>	

Details of BMPs	
Illicit Discharge Detection & Elimination	
Map Outfalls Townwide	
Responsible Party: First Selectman and Town Planner	
Start Date: 1/2009	End Date: Ongoing Updates
Permits Years during which activities are scheduled: <div style="text-align: center;"> Year 1 X Year 2 X </div>	
Name of Separate Implementing Entity: Paul Burgess LLC/designate	
BMP Description: <ul style="list-style-type: none"> • Inspect and map all remaining storm water pipe (15 inches or greater) discharges in Town of Griswold by end of 2008; new discharges located and added annually to GIS map. 	
Has Goal Been Accomplished: Yes, during 2007-2008, better map provided in 2009 and updates were done in calendar 2010	
Work Performed	
Date: Calendar 2009	Responsible Party: First Selectman, Town Planner, Paul Burgess LLC, Public Works Director
Description: Paul Burgess LLC to inspected and mapped the stormwater discharges 15 inches or greater in the Town of Griswold as well as many cross-culverts in 2007-2008. Earlier reports exhibited the column data for this effort. In 2009, a better GIS map layer of the stormwater discharges in the non-urbanized area (and also cross-culverts) was attached as an exhibit. Newer roads and large municipal projects were added in calendar 2010. No additional discharge pipes are expected to be added during 2011 to the municipal stormwater system.	

Section 5. Construction Site Stormwater Runoff Control

(A) *Required throughout the municipality:*

- (i) *develop, implement, and enforce a program, or modify an existing program, to reduce pollutants in any stormwater runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre shall be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. The program shall include, but not be limited to, the development and implementation of an ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions for non-compliance, to the extent allowable under state or local law;*
 - a. *procedures for notifying construction site developers and operators of the requirements for registration under the General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities;*
 - b. *requirements for construction site operators to implement appropriate erosion and sediment control best management practices in accordance with the Guidelines;*
 - c. *requirements for construction site operators to control waste at the site such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste that may cause adverse impacts to water quality;*
 - d. *procedures for site plan review which incorporate consideration of potential water quality impacts;*
 - e. *procedures for receipt and consideration of information submitted by the public; and*
 - f. *procedures for site inspection and enforcement of control measures.*

Section 6. Post-Construction Stormwater Management in New Development and Redevelopment

(A) *Required throughout the municipality:*

- (i) *develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the MS4 or directly to waters of the State. This program shall ensure that controls are implemented to require appropriate infiltration practices, reduction of impervious surface, creation of or conversion to sheet flow, measures and/or structures to reduce sediment discharge and any other innovative measures that will prevent or minimize water quality impacts;*
- (ii) *develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for your municipality;*
- (iii) *use an ordinance or other regulatory mechanism to address the elements of subsection (i) above regarding post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law; and*
- (iv) *ensure adequate long- term operation and maintenance of BMPs.*

The following BMPs have been developed; refer to the pages that follow for details.

- Land Use Regulations and Procedures

Details of BMPs	
Construction Site Stormwater Runoff Control	
Land Use Regulations and Procedures	
Responsible Party: First Selectman and Town Planner	
Start Date: 1/2009	End Date: Ongoing
Permits Years during which activities are scheduled: <div style="text-align: center;"> Year 1 X Year 2 X </div>	
Name of Separate Implementing Entity: Planning and Zoning Commission and Town Planner	
BMP Description: <ul style="list-style-type: none"> • Modify Borough Zoning Regulations to add similar Sediment and Erosion Control Requirements as Town Zoning Regulations. • Develop a procedure within Planning and Community Development Department to notify developers of CTDEP General Permit for Discharge of Stormwater and Dewatering Wastewater associated with Construction Activities. • Develop requirements for Developers to control waste at constructions sites. • Develop a procedure within Planning and Community Development Department for site inspection and enforcement of sediment and erosion control measures. • Town Planner, Wetlands Staff, Planning and Zoning Chairman and Inland Wetlands Commission Chairman should meet and discuss best method to implement these requirements. 	
Has Goal Been Accomplished: Substantial Progress in calendar 2009.	
Work Performed	
Date: Ongoing	Responsible Party: First Selectman and Town Planner
Description: <ul style="list-style-type: none"> o Borough Zoning Regulations for E and S (new section 13.9) were made effective on March 30, 2009. References to stormwater management policies, use of the 2004 CTDEP Stormwater Management Manual, and incorporation of varied LID (Low Impact Development) or BMP features into the regulatory process were accomplished in calendar 2009. Page changes from Griswold Zoning and Subdivision Regulations were made effective August 10, 2009 although they had essentially been in practice since 2008 as evidenced by permit site design. o ZEO/WEO inspects E and S controls on an ongoing and case by case basis. o Informal procedures implemented to make developers aware of General Permit requirements 	

were made including conditions on subdivision or special permit approvals and passing form/guidance manual for the General Permit to developers/builders of new town road or larger projects. Revisions to regulations in calendar 2009 made reference to the 2004 Stormwater Manual guidelines a more formal requirement.

o Requirements for Developers to control waste at construction sites and meeting to determine best methods to implement were not considered in the 2010 annual report. This will be shifted for action during the 2011 Annual Report year.

Section 7. Pollution Prevention/Good Housekeeping for Municipal Operations

(A) *Required throughout the municipality:*

- (i) *develop and implement an operation and maintenance program that includes a training component for municipal employees and contractors and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations;*
- (ii) *using training materials that are available from the EPA, the State or other organizations, this program shall include employee training to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance;*
- (iii) *develop and implement a program to sweep all streets at least once a year as soon as possible after snowmelt;*
- (iv) *develop and implement a program to evaluate and, if necessary, clean catch basins and other stormwater structures that accumulate sediment at least once a year, including a provision to identify and prioritize those structures that may require cleaning more than once a year; and*
- (v) *develop and implement a program to evaluate and, if necessary, prioritize for repairing, retrofitting or upgrading the conveyances, structures and outfalls of the MS4.*

(B) *Required within the Urbanized Area:*

- (i) *develop and implement a program to evaluate and prioritize those streets that may require sweeping more than once a year.*

The following BMPs have been developed; refer to the pages that follow for details.

- Pollution Prevention - Municipal Operations
- Street Sweeping and Catch basin Cleaning

Details of BMPs

Pollution Prevention – Municipal Operations

Training

Responsible Party: **First Selectman and Highway Supervisor**

Start Date: **1/2009**

End Date: **Ongoing**

Permits Years during which activities are scheduled:

	Year 1	X	Year 2	X						
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Name of Separate Implementing Entity: **Town of Griswold**

BMP Description:

- **Develop a training program for municipal employees (Highway Department).**

http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=6
- **It is recommended that the Highway Department review their various activities and develop topics for training.**

Has Goal Been Accomplished: **Yes, training program delivered to Highway Employees in 2008**

Work Performed

Date: 2008

Responsible Party: **First Selectman, Highway Supervisor, Paul Burgess LLC**

Description:

Paul Burgess LLC/Town Planner developed a custom training program/presentations for use by Griswold Highway Department in training or refresher training its employees in best management practices they could employ in highway maintenance.

Details of BMPs	
Pollution Prevention – Municipal Operations	
Street Sweeping and Catch Basin Cleaning	
Responsible Party: First Selectman and Highway Supervisor	
Start Date: 1/2009	End Date: Ongoing
Year 1	X
Year 2	X
Name of Separate Implementing Entity: Town of Griswold	
BMP Description:	
<ul style="list-style-type: none"> • Sweep all in streets in town once per year as soon as possible after snow melt. • Determine if streets in the urbanized area require sweeping more than once per year. • Develop and implement a program to evaluate, and if necessary, clean catch basins at least once per year. 	
Has Goal Been Accomplished: Yes, streets swept and catch-basins cleaned at least once per year. Streets in urbanized area (Jewett City) do not appear to require sweeping more than once per year.	
Work Performed	
Date: Ongoing	Responsible Party: First Selectman and Highway Supervisor
BMP Description:	
<ul style="list-style-type: none"> • Generally all streets in the Borough and others streets in town with curbing are swept once per year in the spring. Streets are monitored and they have not required sweeping more than once per year. In 2007, GEI Consultants investigated whether streets should be swept more than once and concluded by attached letter that there was no need for greater frequency street sweeping. • Catch basins townwide and in the Borough are cleaned once per year • During 2009, Paul Burgess LLC conducted an inspection and review of practices and conditions at the Town Public Works and Transfer Station facility for compliance to the Stormwater Pollution Prevention Plan submitted in 2000 . A letter dated March 24, 2009 was attached to the 2009 Annual Report. During 2011, Paul Burgess LLC we reinspect the Highway Garage and Transfer Station for compliance to stormwater plan and make recommendations. • During 2009, marked catch-basins in the urbanized area were located by GPS and 	

added to a planimetric GIS map; catchbasin markers were also maintained if necessary. This will be part of a future annual maintenance plan so marker maintenance in urbanized area catchbasins will appear as an item in calendar 2011 annual stormwater report.