

As approved by Town Council on February 17, 2010

**Proposed Amendments to the West Greenwich Storm Water Management
Program Plan
To comply with comments from January 13, 2006 letter from RIDEM**

RIDEM General Comments:

Implementation Schedule: RIDEM requires actual dates for implementation

Town Response: The plan will be amended to include actual dates. For example, all “Year 1” will be changed to “by end of December 2004,” etc. All other implementation requirements, such as the BMP identification numbers and start and end dates, will be included in a comprehensive Implementation Schedule at the end of the document, using the format provided by RIDEM in the Guidance and Example documents for “Implementation Scheduling.”

RIDEM Review Checklist for Municipal Storm Water Management Program Plans (SWMPP):

IV. Illicit Discharge Detection and Elimination

Prohibiting Illicit Discharge

- If the regulatory mechanism is not in place, describe in the SWMPP the Process and schedule to develop the regulatory mechanism. **Required Measurable Goal:**
Introduction of ordinance must be completed within the first year and adoption by the second year.

Town Response: The Town will propose amendments to the SWMPP as follows:

Page 5-6, item 5.3.2 Potential Illicit Discharge from Other Sources
Renumber items and make item I. to read, “Adopt Illicit Discharge Detection and Elimination Ordinance”

Page 5-7, Renumber sections and create new discussion section, add
“I. Adopt Illicit Discharge Detection and Elimination Ordinance

“An ordinance will be developed and adopted in order to detect, eliminate, prohibit, and enforce illicit non-stormwater discharges into the MS4, including discharges from illegal dumping, hazardous waste/material spills, and On-site Wastewater Treatment System (OWTS). The ordinance will also address pet waste, litter, yard waste, and other waste (such as household hazardous wastes); and those allowable non-stormwater discharges as listed in Part I.B.3 of The General Permit, if they are identified as being significant contributors of pollutants. The ordinance will contain enforcement procedures and actions, and sanctions for non-compliance. The ordinance will include provisions for authority to enter onto private property in order to conduct inspections, testing, and sampling. The ordinance will specify the land owner and/or the

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owner of the illicit discharge and/or connection as the responsible party for removing the violation and all costs associated with removing the violation. An escalating enforcement approach will be incorporated, including education, warnings, voluntary compliance, fines, and other means as determined during ordinance development.

“An ordinance will be used because it is a regulatory mechanism that the Town Council of the Town of West Greenwich has the legislative power to enact, as granted through the Town of West Greenwich Town Charter, as adopted November 5, 1996. Existing model IDDE ordinances, such as the “Model Illicit Discharge and Connection Ordinance” by the Center for Watershed Protection, will be reviewed and tailored to the Town of West Greenwich. The development and adoption of the ordinance will be by standard Town procedure, which involves readings at two Town Council meetings and posting of notice and summary of ordinance in a local paper prior to the second hearing. The Town Planner will be responsible for drafting the ordinance within the first year of the permit, and presenting it to the Town Council for adoption within the second year of the permit (2005).”

Page 5-11, Amend Table 5-2 Measurable Goals to add:

Target Year	Activity/Measurable Goal	Town Department Responsible
December 2004	Develop IDDE Ordinance	Town Planner
December 2005	Adopt IDDE Ordinance	Town Council

Detection and Elimination Program

- Investigation of complaints.

Town Response: The Town will propose amendments to the SWMPP as follows:

Page 5-7 to add item “VI. Identify Contact Person to Receive and Investigate Complaints.”

Page 5-11 to add section, “VI. Identify Contact Person to Receive and Investigate Complaints

The Town will designate the Town Planner as the contact person to receive and act on illegal dumping and stormwater pollution complaints. This will be posted on the Town’s Storm Water website, and will be added to all locally distributed stormwater education pamphlets and flyers. The proposed ‘10 Simple Things’ brochure in Appendix A includes contact information to file a complaint with RIDEM, and will be modified to include the West Greenwich Town Planner. The Town Planner will field investigate storm water pollution complaints accompanied by either the Building Official or the Director of Public Works, as appropriate. The Town may consider hiring a trained professional, or contacting RIDEM to help investigate certain complaints. In the event that a violation of the IDDE Ordinance is determined, action will be taken in accordance with the enforcement provisions of the ordinance. All complaints and all incidents will be tracked for annual reporting on an Excel Spreadsheet.”

Page 5-11, Amend Table 5-2 Measurable Goals to add:

Target Year	Activity/Measurable Goal	Town Department Responsible
December 2004	Include Town Planner contact information on all printed and web-based material to receive complaints pertaining to stormwater pollution	Town Planner

Catch basin and manhole inspections for illicit connections. **Required Measurable Goal: Inspect all catch basins and manholes at least once by fourth year.**

COMMENT: The pollution prevention and good housekeeping minimum measure appears to indicate that all catch basins are inspected and cleaned presently. However, the Plan must contain a measurable goal of inspecting all catch basins and manholes **for illicit connections** at least once by fourth year of the permit. These inspections should be coordinated with the inspections required under the pollution prevention and good housekeeping minimum measure.

Town Response: The Town will propose amendments to the SWMPP as follows:

Page 5-11, add new 5.4 to read, “Standard Operating Procedures for IDDE” and renumber remaining sections. Add section content as follows,

“5.4.1. Methods for Detecting Illicit Discharges

“Methods for detecting illicit discharges will be carried out through the following 5 processes:

1. Investigation of complaints
2. Inspection of catchbasins for illicit connections during regularly scheduled cleaning and maintenance (required at least once by fourth year of permit).
3. Inspection of drainage manholes for illicit connections during regularly scheduled cleaning and maintenance (required at least once by fourth year of permit).
4. Inspection of outfalls during dry weather screening for signs of illicit connections
5. Inspection of outfalls during mapping and inventory for signs of illicit connections

“5.4.2. Methods for Tracing and Locating the Source of the Discharge

In addition to the procedures in 5.3.2., methods for tracing and locating the source of the discharge, removing the illicit discharge, documenting inspections and actions, and evaluating impacts on the storm drain system and affected water body after the removal of the illicit connection will be carried out in accordance with the manual entitled, “Illicit Discharge

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Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments,” by the Center for Watershed Protection and Robert Pitt, University of Alabama, October 2004.” The above methods for detecting illicit discharges lend themselves to a format for record keeping. Complaint and inspection forms will be submitted with the required Annual Reports.”

Page 5-11, Amend Table 5-2 Measurable Goals to add:

Target Year	Activity/ Measurable Goals	Town Department Responsible
December 2007	Inspection of all Catch Basins for Illicit connections during regularly scheduled annual cleaning at least once before the fourth year.	Public Works
December 2007	Inspection of all Drainage Manholes for Illicit connections at least once before the fourth year.	Public Works

Removing the source of the illicit discharge including: Enforcement process

Town Response: see enforcement provision under IDDE ordinance above. Also, amend page 5-11, 5.3.2. III., third and fourth sentences to read, “The Town of West Greenwich will use this regulation in conjunction with ~~a new Storm Water~~the IDDE Ordinance to require the owner to remove the discharge from the storm sewer system. ~~A copy of the draft Storm Water Ordinance is provided in Appendix F.~~”

Dry weather flows from outfalls analyzed for:

- Temperature,
- Conductivity,
- pH, and
- bacteria.
- Flow measurements (recommended)

COMMENT: The Plan, page 5-7, states that dry weather flows that cannot be attributed to an obvious source shall be sampled for the above listed parameters. The permit requires that measurements for temperature, conductivity and pH, and analysis of bacteria be conducted on all outfalls where dry weather flows are observed.

Town Response: Amend Plan, page 5-7, 5.3.2 I, add this new paragraph before the last paragraph, “All dry weather flows from outfalls will be collected and analyzed for the following:

- temperature,
- conductivity,

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- pH, and
- bacteria.

In addition, other observable properties shall be identified, including a relative measurement of the flow, and the presence and description of odors, sheen, stressed vegetation, coloration/staining, algae growth, sedimentation, and/or scouring in the vicinity of the outfalls. These dry weather surveys must be performed at least twice by the fourth year of the Permit- one to be conducted between the January 1st and April 30th dry weather season, and one to be conducted between July 1st and October 31st dry weather season.”

Then add to end of last paragraph, “...additional investigation will be required, as noted in II. 2. below.

Page 5-11, Amend Table 5-2 Measurable Goals add:

Target Year	Activity/ Measureable Goals	Town Department Responsible
April 30, 2007	Testing of all dry weather outfall flows required to be tested between b/t January 1 and April 30 completed	Public Works with aid from Planning Department
October 31 2007	Testing of all dry weather outfall flows required to be tested between b/t July 1 and October 31 completed	Public Works with aid from Planning Department

If visual observations indicate the presence of illicit discharge additional sampling and analysis for any other parameters that may be useful in the identification of the illicit discharge must be performed as warranted.

COMMENT: The Plan must state that additional sampling and analysis for any other parameters that may be helpful in the identification of the source of the illicit discharge will be performed as warranted. Conducting field tests of other parameters such as ammonia may help in the prioritization for the detection and elimination of illicit discharges and a determination on the source of the discharge.

Town Response: Town will propose amendments to the SWMPP as follows:

page 5-7, 5.3.2. II. 2., first sentence, will be changed to read, “During the required dry weather flow testing, if the visual observations indicate the presence of an illicit discharge, in order to help pinpoint the source of the illicit discharge, additional sampling and analysis for any other parameters that may be useful in the identification of the source must be performed as warranted. Some examples of indicator parameters for additional testing are shown in Table 39 (page 122) in the IDDE Guidance Manual by CWP.”

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- Tracking of complaints and data required for program evaluation and assessment including documenting results and evaluating impact on sewer system subsequent to the removal. **Required Measurable Goal: If not already addressed, development of procedures to record and track all actions to detect and address illicit discharges.**

COMMENT: The Plan has no discussion on the tracking of complaints, as well as evaluation and verification of illicit discharge removal. The Plan must contain a measurable goal for the development of procedures for the tracking of complaints and all actions to detect and address illicit discharges, to be developed in the first year of the program. A copy of these procedures must be submitted with the copy of the 2004 Annual Report.

Town Response: A copy of the excel spreadsheet format for tracking complaints is enclosed, and will be included in the Plan as “Appendix J: Program Evaluation and Tracking.” Additionally, Figure 5-1 entitled, “Dry Weather Outfall Inspection Form” will be amended to include checkbox and fill-in sections for all other required testing (pH, temperature, etc.). Also, proposed amendments to the following sections will be as follows:

5.3.2 on page 5-11, III. Eliminate Illicit Discharges- add to end of paragraph, “The DPW will document all actions and enforcement measures taken to eliminate the discharge.”

5.3.2 on page 5-11, IV. Perform Follow up Inspections to Confirm Elimination of Discharges – change to read, “DPW staff ~~should will~~ inspect the storm sewer in the vicinity of the illicit discharge to confirm that it was properly removed from the system, and will document this through pictures, testing, and other record keeping means to demonstrate that the discharge was eliminated.”

To the new Section 5.4 Standard Operating Procedures for IDDE, add “5.4.4., Program Evaluation- The DPW will keep records in files on each illicit discharge and the process that was used to detect, eliminate, and confirm the elimination of each discharge. These records will be used for program evaluation and annual reporting to the State. Additional information to be included in the records are the costs involved to detect and eliminate each discharge, and the magnitude of each illicit discharge in comparison to the effectiveness of the elimination of the discharge. A brief narrative report will conclude each illicit discharge file. Evaluation of the files will be used to assess program effectiveness.”

- Procedures for coordinating with other physically interconnected MS4s, including State and federal owned or operated MS4s, when illicit discharges are detected or reported. **Required Measureable Goal: If not already addressed, development of strategies for coordination with physically interconnected MS4s by first year.**

COMMENT: The Plan must contain a description of how the Town plans to report and coordinate with other regulated MS4s, such as RIDOT, during the investigation of illicit discharges. Please clarify if the Town has already determined that interconnections with other regulated MS4s do not exist within the regulated areas.

Town Response: Town will propose amendments to the SWMPP as follows:

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To new section 5.4, add

“5.4.3 Coordination with Outside Agencies-

I. Interconnected MS4s

When suspected illicit discharges are detected at outfalls known to be part of a State or Federally owned or operated MS4, or that of an abutting town, the DPW will contact the owner by phone and in writing to inform them of the situation. Depending on the circumstance, the Town will either coordinate with the other MS4, or turn the case over to the owner, to continue the investigation and elimination of the discharge. The Town is aware of outfalls from State and Federal highways; however these outfalls may or may not be interconnected to a Town system. Interconnectivity and responsibility will be evaluated during outfall inspections.”

- Procedures for referral to RIDEM on non-storm water discharges not authorized which the operator has deemed appropriate to continue discharging to the MS4, for consideration of an appropriate permit. **Required Measureable Goal: If not already addressed, development of strategies for referral to DEM and tracking actions by first year.**

COMMENT: A measurable goal of developing in the first year procedures for referral to RIDEM on not authorized non-storm water discharges which the operator has deemed appropriate to continue discharging to the MS4 must be included in the plan. A description of these procedures must have been submitted to the Department in March of 2005. A copy of these procedures must be submitted to the Department with the copy of the 2004 Annual Report.

Town Response: The Town will propose amendments to the SWMPP as follows:

To new section 5.4, add to 5.4.3 Coordination with Outside Agencies-

“II. Non-Permitted Discharges

When the Town detects non-storm water discharges that are found to not be permitted through RIDEM RIPDES, and not otherwise authorized under Part I.B. 3 of the General Permit, yet determined not to be an illicit discharge, the Town will refer the matter to RIDEM by phone and in writing. RIDEM should require the owner to apply for an appropriate permit if the discharge is found to be appropriate to continue.”

- Include a description on how this plan will be coordinated with the public education minimum measure and the pollution prevention/good housekeeping minimum measure programs.

COMMENT: The Department recommends that inspection of catch basin required for the detection of illicit discharges be coordinated with the cleaning of catch basins. (*Possibly misplaced comment?*)

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Town Response: The Town will propose amendments to the SWMPP as follows:

Add new section, “5.5 IDDE Public Education and Pollution Prevention/ Good Housekeeping”
Renumber Measurable Goals section to 5.6.

Under new 5.5 add,

“Methods for informing public employees, the general public, and businesses of the hazards associated with illegal discharges and improper disposal of waste, as well as the affects of allowable discharges that are significant contributors of pollutants have been discussed in Public Education and Outreach Sections 3.2 and 3.5, particularly the URI Nonpoint Education for Municipal Officials (NEMO), the educational brochure “10 Simple Things You Can Do to Help Clean West Greenwich Waters (Appendix A in the Plan), the Storm Water Web Page, and targeting auto salvage yards for distribution of EPA educational materials. Additionally, the availability of the Stormwater Pollution Complaint contact person identified in Section 5.3.2, and the volunteer opportunities and public participation strategies noted in Public Participation Sections 4.2 and 4.3, particularly storm drain marking and Town co-sponsored clean-ups, are ways for the public to become aware of illicit discharges.

“The Pollution Prevention and Good Housekeeping in Municipal Operations Minimum Control Measures will also be coordinated with the IDDE program goal to eliminate pollutant discharges or flows through the following practices:

1. Operation and Maintenance Program- Addresses inspections and maintenance of Town facilities and structural BMP’s; proper disposal of waste generated from storm drain cleaning and other municipal operations; and activities that have the potential to introduce pollutants into storm water runoff.
2. Employee Training – Addresses pollution prevention and good housekeeping techniques for municipal operations.”

Page 3-6, Section 3.5.1 Storm Water Outreach Materials, first paragraph, line 7, add as follows,

“...information on reducing storm water runoff pollution and improving water quality, as well as contact information to file a complaint of illegal dumping or discharges.”

Amend Table 5-2 to add,

Target Year	Activity/ Measureable Goals	Town Department Responsible
	IDDE coordinated with Public Education Measure: education for municipal employees	Refer to Table 3-1
	IDDE coordinated with Public Education Measure: education	Refer to Table 3-1

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	for general public	
	IDDE coordinated with Public Education Measure: education for (targeted) businesses	Refer to Table 3-1
	IDDE coordinated with Pollution Prevention/ Good Housekeeping Measures: training for appropriate employees	Refer to Table 8-1

Amend Table 3-1 to add:

Target Year	Activity/ Measureable Goals	Town Department Responsible
Fill in dates as appropriate	IDDE education for municipal employees	Director of Public Works
	IDDE education for general public	Town Planner
	IDDE education for (targeted) businesses	Town Planner

Amend Table 8-1 to add,

Target Year	Activity/ Measureable Goals	Town Department Responsible
Fill in dates as appropriate	IDDE training for appropriate employees completed	Director of Public Works

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RIDEM GENERAL COMMENTS:

1. The Plan does not clearly identify the person(s) responsible for the implementation of many of the BMP's and measurable goals.
2. The Plan does not contain a schedule for the implementation of many of the procedures and/or requirements of the permit. The schedule of implementation presented in the Plan must be consistent with the requirements of the General Permit

Town Responses:

1. The persons responsible are identified on page 1-3 of the Plan, see also footnote to Table 3-1 on page 3-8. All tables in the Plan will be amended to change the "Department" to the "Department Head", and specify, "Town Planner," "Director of DPW," "Building/Zoning Official."
2. The plan will be amended to include actual dates. For example, all "Year 1" will be changed to "by December 2004," etc., and will be consistent with the schedule required by the Permit.

VI. Post Construction Storm Water Management in New Development/Redevelopment

Required Measurable Goals for this Minimum Measure

Develop strategies and procedure for program consistency with RI Storm Water Design Manual, pre-application meetings, coordination with existing State programs, referral of new industrial activity discharges, post-construction inspection of BMP's, identifying existing structural BMP's within the first year.

COMMENT: The Plan does not contain a description of procedures that will ensure that the post-construction program is consistent with the State of Rhode Island Storm Water Design and Installation Manual.

Town Response: Proposed amendments to the Plan will be as follows:

7.3 Recommended Modifications

Add new first bullet:

- "Amend the Land Development and Subdivision Regulations to cross-reference and incorporate the, 'most current edition of the *State of Rhode Island Storm Water Design and Installation Standards Manual*' into the Stormwater Management section of Article XIII. Physical Design Requirements and Public Improvement Standards, in order to ensure that the post-construction program is consistent with this manual.

VII. Pollution Prevention and Good House Keeping in Municipal Operations

O&M Program for MS4

- Develop strategies and procedures for inspections/cleaning and repair of BMP's, storm sewers, and catch basins. **Required Measureable Goals: If not already addressed, develop strategies and procedures for inspections and repair within the first year.**

Town Response: The Town will propose amendments to the SWMPP as follows:

8.2.1 Storm Drainage System Inspection and Maintenance

A majority of the Town's storm drainage system is open in nature, consisting of swales, roadside ditches and detention basins. Piped systems are located in a few limited areas within the Town including the Mishnock Lake and Bailey Pond neighborhoods and within the newer subdivisions. ~~The Town's storm drainage system inspection and maintenance program consists of inspecting catch basins throughout these areas and cleaning them as required.~~ The Town currently inspects, cleans, and repairs the storm drain systems, including BMP's, storm sewers, and catch basins. The strategy and procedure that the Department of Public Works currently uses is to check on the system components every day they are in the field. This is a constant process. When cleaning and repair needs are detected, the work is performed on an as-needed basis. The DPW designates at least one man for one whole day every week to clean drainage infrastructure throughout Town with a shovel. When jobs needing a backhoe are detected during this process, the backhoe is sent out another day to clean. The DPW knows of certain areas in Town that need more frequent cleanings and attention than others. The DPW repairs catch basins as time permits, unless it is an emergency repair. Also, on rainy days, 2 crews of 2 men each are sent out to check all the drains to make sure the stormwater is running properly.

The Town's Highway Superintendent keeps a spreadsheet of the streets in Town that contain catch basins and the dates the catch basins are cleaned. These records date back to 1997. Once snow season ends, street sweeping and catch basin cleaning begins. Catch basins are cleaned by a private contractor, who is always accompanied by a DPW employee, using a dump truck equipped with a clam shell attachment. The DPW employee currently inspects all catch basins for any signs of leaks, disrepair, or other unusual things like illegal connections. This is a visual inspection that involves entering his head into the catch basin. For deep catch basins, a ladder is used to go down into the basin. The trash and debris removed from the catch basins is sent to the Central Landfill in Johnston, RI. The most common types of debris found in the catch basins are leaves, pine needles, toys, and plastic water bottles. Sediment removed from catch basins is stockpiled and used for road fill. The swales and roadside ditches are maintained by cutting excess vegetation and cleaning as necessary.

There are numerous detention basins located throughout West Greenwich. Most of the basins are located on private property, and most are Town maintained. The Town has maintenance easements to ensure access to the structures located on private property. No written records are kept regarding detention basin cleaning. The DPW keeps a daily log of activities performed. It is

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recommended that the DPW keep records pertaining to SWMPP requirements in a format for easy reporting of these activities to the State.

- Describe coordination of inspection of catch basins for maintenance and inspection for illicit discharge detection. **Required Measurable Goal: If not already addressed, develop strategies and procedures to coordinate maintenance and IDDE inspections within the first year.**

COMMENT: It is not clear from the Plan if during the cleaning of catch basins, these structures will be inspected for illicit discharges and whether notes and records of illicit discharges will be tracked and reported to the Town. Please clarify if procedures have been developed and the contractor responsible for the cleaning of the structures has been instructed to look for and report illicit discharges. A more detailed description of this activity must be included in the amended Plan.

Town Response: Plan will be amended as follows:

8.2.1, add new section before last paragraph:

“Catch basin cleaning and inspections is an opportunity for the Town to use this time to also detect illicit discharges that may be connected to the system. Record keeping specifically for detected illicit discharges is not currently documented; though cleaning of catch basins is already tracked on a spreadsheet. A check box can be added to this spreadsheet to note if an illicit connection is detected, and to identify the catch basin(s) to come back to for further investigation.”

- Description of maintenance activities, maintenance schedules, and long-term inspection procedures for controls to reduce floatables and other pollutants from the MS4. **Required Measurable Goal: If not already addressed, develop strategies and procedures for control of floatables within the first year.**

COMMENT: Copies of the procedures must be submitted to the Department in the Annual Report for calendar year 2004.

Town Response: The Town will propose amendments to the SWMPP as follows:

8.2.1, add new section after last paragraph:

“The DPW has made, and will continue to make efforts to reduce the amount of floatables and other pollutants from entering the drainage infrastructure. For instance, the only locations where trash debris (identified above as commonly toys and plastic water bottles) enters the system is at the few open-curbing type of catch basin inlets. There are not many of these and the DPW plans to add grates to some of these, and/or removing these types of drainage inlets. Some have already been replaced. Other sources of floatables to the system could include oils. The strategy to address this type of pollutant will be education and awareness under the Public Education and Outreach measure. Also, toys, grass clippings and leaves, and other yard debris may be found

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within the detention ponds. Again, public education to the general public is the strategy to address reducing these pollutants within the system. Additionally, the DPW employees currently contact the apparent offending homeowner directly and ask them not to dump stuff in the drainage pond (which is usually on the homeowner's property). Littering and dumping on roadsides are other sources of trash that can affect water quality and/or enter the storm drainage system. The Town should consider posting "No Littering/No Dumping" signs in problem areas and enforcing fines, etc. in accordance with existing Town Dumping Ordinance #28."

- Procedures to minimize erosion of road shoulders and roadside ditches by requiring stabilization of those areas. **Required Measurable Goal: If not already addressed, develop strategies and procedures for minimizing erosion of road shoulders and ditches within the first year.**

COMMENT: Copies of the procedures must be submitted to the Department in the Annual Report for calendar year 2004.

Town Response: The Town will propose amendments to the SWMPP as follows:

Add new section "8.2.8 Road Maintenance and New Construction/ Redevelopment of Town Facilities

"During road maintenance, the DPW inspects the shoulders of the roads to detect areas of erosion. Methods used to control runoff and stop or prevent erosion have included installing Cape Cod berms, installing crushed stone behind berms and to swales, and installing check dams. Where erosion problems could not be controlled using these simple methods, the DPW has redirected some of the runoff by installing extra catch basins and/or culverts to reduce flow. In addition to these methods, the Department of Public Works will consider other road shoulder and roadside ditch stabilization methods as noted in the *RI Soil Erosion and Sediment Control Handbook*, such as vegetative measures, where possible."

- Procedures to identify and report known discharges causing scouring at outfall pipes or outfalls with excessive sedimentation for the Department to determine on a case by case basis if the scouring or sedimentation is a significant and continuous source of sediments. **Required Measureable Goal: If not already addressed, develop strategies and procedures to identify and report known discharges causing scouring or excessive sedimentation within the first year. Required Measureable Goal: Report annually known discharges causing scouring at outfall pipes or outfalls with excessive sedimentation as part of annual report submitted to the Department.**

COMMENT: Procedures must be submitted to the Department in the Annual Report for calendar year 2004. Discharges observed as causing scouring or excessive sedimentation must be referred to the Department as part of the Annual Report.

Town Response: The Town will propose amendments to the SWMPP as follows:

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8.2.1, add another new paragraph to end of section as follows:

“The DPW also cleans outfalls as needed, but does not keep records of these inspections or the magnitude of any scouring or sediment loads. The Director of Public Works has reported that, in his experience, nine times out of ten, the sediment is derived from road sand. If the problem is on-going, the DPW goes up-stream to find and fix the problem. Sometimes, with heavy rains, residents’ gravel driveways wash out. On serious problems associated with land disturbing activities, the DPW has contacted RIDEM by phone. It is more practical for the DPW to fix the small problems themselves, rather than involve RIDEM. From this point on, the Town will, however, refer all points of outfall that appear to have an excessive scouring and/or sedimentation load to RIDEM for its own determination. The procedure that will be used to identify and report outfalls with scouring or excessive sedimentation will be that the DPW will inspect each outfall during the outfall inspections scheduled for IDDE for signs of scouring or excessive sedimentation, and will include this information on the IDDE Outfall inspection reports for reporting to RIDEM as part of the Annual Reports. A box for this measure is included on Figure 5-1”

Amend Figure 5-1 as follows: under cells for Pipe material and Condition of Pipe, add:

<p>Is scouring evident at outfall? (Circle One) Yes No If yes, flag this report form and submit to RIDEM with Annual Report</p>	<p>Is excessive sediment present at outfall? (Circle One) Yes No If yes, flag this report form and submit to RIDEM with Annual Report</p>

Industrial and Non-Industrial Facilities

- For each facility or activity, a brief narrative description of the facility and activity, including existing conditions and strategies and procedures to reduce or eliminate the discharge of pollutants and reduce runoff volumes:
 - Assessment of potential pollutants
 - Structural controls
 - Preventative maintenance
 - Inspection of BMP’s
 - Chemical and material storage practices
 - Spill and leak prevention and response procedures
 - Vehicle maintenance, fueling, and washing
 - Employee training
 - Strategies to reduce runoff volumes such as reducing impervious surfaces and infiltration of storm water

Required Measureable Goals: The plan must include an evaluation of the existing conditions and identify proposed strategies and procedures to reduce or eliminate the discharge of pollutants and reduce runoff volumes. The Plan must contain a measureable goal of implementing all the recommended BMPs by the fourth year.

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Town Response: The Town will propose amendments to the SWMPP as follows:

Add new Section “8.3 Industrial and Non-Industrial Facilities”
Renumber remaining sections

Under new Section 8.3, add,

“Town owned and operated facilities and activities have the potential to produce pollutants that can enter the watershed and affect water quality, whether there is a point source, or the potential for a point source discharge of storm water. In order to obtain coverage under the General Permit for these Town owned and operated facilities, the Town must develop and implement a program to prevent and reduce pollutant runoff and runoff volumes, and this program must include an employee training component. For any facility that is identified to have a storm water discharge that is associated with industrial activity, a site-specific SWMPP must be implemented.

“An analysis of each facility under the Town’s legal control is given below, along with recommended measures for reducing or eliminating the potential for contaminated runoff. These recommended BMP’s must be implemented by the end of the fourth year of the permit (by the end of 2007).

“It should be noted that the municipal facilities not included in the below list (local fire stations and schools) are not owned or operated by the Town.”

“8.3.1 Facilities that have Storm Water Discharges Associated with Industrial Activity:

Town Highway Garage

Determination of Industrial Activity

If the Highway Garage is determined to meet any of the 11 industrial categories of facilities considered to be engaged in industrial activity as defined in RIPDES Rule 31(b)(15)(i)-(ix) and (xi), and has storm water discharges associated with Industrial Activity, the garage would need to have its own, site-specific SWMPP. The Highway Garage does not meet any of these categories. The closest match for the Town’s Highway Garage is under Transportation Facilities for SIC 42, however, the facility does not meet this definition, and there is no point source discharge of stormwater from the Highway Garage facility; therefore, the Town seeks permit coverage under the General Permit.

Town Transfer Station

Determination of Industrial Activity

The Town Transfer Station does not accept industrial wastes, and does not have any point discharges of stormwater. No vehicles or handling equipment, with the exception of two compactors, are stored or maintained on site. Trash hauling vehicles are housed at the contractor's private site. The Transfer Station is a materials handling site that involves the short-term storage of residential solid wastes, and the loading, unloading, and transportation of these wastes. It is most accurately classified under NAICS Code 56211. (whereas SIC 4212 involves: trucking services collecting and transporting without storage; SIC 4953 involves disposal of refuse). The Town seeks permit coverage for the Transfer Station under the General Permit.

Old Landfill

Description:

The old town dump served the rural residential population of the Town between 1970 and 1977. It ceased to operate in 1977. This facility did not accept industrial wastes. The Town plans to proceed with the Landfill Closure Program administered under RIDEM's Office of Waste Management, which will include soil testing and groundwater monitoring wells. The old dump is adjacent to, and partially overlaps the new transfer station area, on the same 72 acre lot. The transfer station and the landfill together comprise about 5 acres of that. (2009 Update: All testing and capping of the former Town landfill has been completed and approved by RIDEM)

8.3.2 Facilities that have the Potential to Introduce Pollutants into Storm Water Runoff (Non-Industrial Facilities):

Town Highway Garage

Description

The Highway Garage houses the Highway and Public Works Department. The facility sits on the same lot with the Town Hall, Police Station, and Louttit Library. The total lot is 11.8 acres, approximately 3 acres of which are used for the Highway Garage. Surrounding the garage, there are approximately 1.25 acres of land left in its natural state. The building is 3,360 square feet, and there are two outside storage structures comprising about 2,000 square feet. Paved areas extend for 17,000 square feet, and the approximately remaining 1.3 acres of the site is a gravel surface.

The garage consists of 5 bays. The first bay also holds an office. The remaining bays are used for housing DPW vehicles, equipment, machinery, and tools. All vehicle maintenance is conducted by staff, including fueling, oil changes, washing, repairs, etc.

As approved by Town Council on February 17, 2010

On the grounds, gravel and fill is kept in a pile on a gravel area. Salt is stored in a contained area, and is covered when not in use. Recycled asphalt is not kept on site. DPW fuel tanks are single walled, but are in anti-spill cement secondary containment areas. The pumps have automatic shut-offs.

Assessment of potential pollutants

Typical materials stored at a highway garage are potential pollutants, including winter road salt; oils, grease, and fuel; other chemicals such as anti-freeze; and sediment from gravel and fill stock piles. Processes that occur at a highway garage that have the potential to introduce pollutants into a storm drain system are vehicle washing, spills, and leaks. If not properly managed, these sources could contribute sediment, nutrients, metals, hydrocarbons and toxins into the environment and local water bodies.

Strategies for Reducing the Discharge of Pollutants

The following strategies and procedures are in place to reduce or eliminate discharge of pollutants:

- Insurance inspection one to two times per year
- MSDS sheets are clearly visible in an open area for all to see
- All chemicals, including flammable materials are kept in fire proof storage boxes/ chemical storage cabinets
- Spill kits are on site, in the garage
- Owns 26 fire extinguishers for electrical and fire
- All used oil is temporarily stored inside the building in 55 gallon drums, that are pumped out by waste oil remover company, and are in secondary containment trays.
- Salt storage is within a contained area and is covered when not in use
- Mixed sand and salt is stored in a salt shed
- Inspections of BMPs at highway garage is on-going day to day
- The Highway Garage has passed EPA's follow-up inspection on floor-drain closure.
- Employee participation in Education and Training: 2 men have 40-hour OSHA chemical, spill and leak, and confined spaces training; Highway Supervisor attends as many Stormwater workshops as he can.
- Runoff volumes reduced by leaving majority of site in natural vegetated and/or graveled area. Also, DPW - installs riprap at runoff locations to slow flow to prevent scouring
- Fueling station: tanks in secondary containment, and has automatic shut-offs
- Vehicle maintenance: uses drip pans.
- Fleet and building maintenance- members of the highway department have been to various training workshops and classes put on by URI Technology Transfer (T2) Center and Beacon Mutual Insurance and the Interlocal Trust Insurance companies, pertaining to fleet maintenance and other DPW activities. (examples: welding classes, hazardous materials classes, etc.)
- New construction and land disturbances- Highway Superintendent has attended erosion control workshops, low impact development workshops, etc. put on by various groups and agencies (example, URI NEMO program)

As approved by Town Council on February 17, 2010

Recommendations:

Additional methods to reduce the risk of stormwater pollution at DPW facilities, and to aid in operations, include the following recommendations:

Apply for Non-Point Source Pollution Grants for: Upgraded vehicle washing station, street sweeper with current technology, a clamshell Stetco attachment for cleaning catch basins, a tall salt cover for over the containment area so that trucks can access the salt while still covered, etc.

DPW has requested to add an addition on to highway garage for more storage and organization of hazardous materials. This could be budgeted in the Town's Capital Improvement Plan.

Consider creating a stormwater quality basin or bioretention in a low area in order to provide general treatment of stormwater instead of letting it run off as overland flow.

Continue to attend workshops and classes, as available, for issues pertaining to DPW operations.

Town Transfer Station

Description

The Town Transfer Station has been in operation since 1977. The station is open for residential refuse only and does not accept commercial wastes. The yard contains two enclosed compactors for trash, and three covered containers for recyclables, separating cardboards, mixed containers, and paper. The refuse and recyclables are transported via a private waste hauler to come pick up the materials to bring to the RI Resource Recovery Corporation. The transfer station provides services for tires, batteries, waste oil igloo, propane tanks, and white goods such as refrigerators and air conditioners. There are open containers for disposal of wood, metals, tires, Christmas Trees and yard debris. The Town is looking into an e-waste program and a dumpster for electronics. The surface is crushed asphalt. Improvements to the transfer station are planned during the landfill closure program. The old dump is right next to the transfer station, on the same property. The transfer station is operated by private trash hauling contractors for 5 year contracts. The current contractor keeps the site very clean.

Assessment of potential pollutants

The Transfer Station Site collects refuse which can escape the containment area. Leaks of food and pet wastes can contribute nutrients and pathogens. Windblown or illegally dumped refuse creates litter and physical pollution to waterbodies.

Strategies for Reducing the Discharge of Pollutants

Existing efforts to reduce the risk of stormwater pollution are the use of enclosed compactors and covered recycle bins, and maintenance of the site.

As approved by Town Council on February 17, 2010

Recommendations:

- Consider installing netting to catch blown debris.
- Assess need for a runoff detention area to provide water quality treatment prior to travelling off
- If there are plans to pave the transfer station, incorporate stormwater quality BMP's

Town Hall, Police Station, and Louttit Library

Description

The Town Hall and Police Station are within the same building, which shares a parking lot with the Louttit Library and the Highway Garage on the same lot. As discussed above, the Highway Garage takes up 3 of the 11.8 acres of this site. The Town Hall, Police Station, and Library take up another 3 acres. The balance of the land is approximately 2 acres of natural vegetated state, and 4 acres of the soccer fields. There are no storm drains at these facilities.

Assessment of potential pollutants

From these facilities, the parking lot has the potential to introduce hydrocarbon, sediments, salt, metals and other toxins into the environment from leaking cars and car washing. The police wash the police cars behind the Town Hall. The Police vehicle fueling station is up at the DPW station, and their gasoline tank is self-contained. The dumpster could potentially also contribute leaks and litter into the stormwater.

Strategies for Reducing the Discharge of Pollutants

Currently, the parking lot is maintained with a sweeper. This dry method of cleaning is a preferred pollution prevention practice. The Town does not employ power washing or steam cleaning.

No fertilizers or pesticides are used in grounds maintenance, and there is no irrigation system or lawn watering program.

These facilities share a common dumpster location, which is enclosed in a 6 foot tall wooden stockade fence, and the dumpsters have lids. Fallen debris is contained within the fence area, and is picked up by the hauler. The dumpsters are emptied once a week.

Recommendations:

- Relocate police vehicle washing to a grassed area, or to a local private car washing facility.
- Continue to use dry methods of cleaning the parking lot.
- Perform any parking lot sealing or surface repairs during periods of forecasted dry weather.

As approved by Town Council on February 17, 2010

Town Hall Annex

Description

The Town purchased the house next door to the Town Hall in 2003 and converted it to office space. This building sits on 2.2 acres of land, of which 14,000 s.f. of the site is developed, and the rest is left in its natural vegetated state (about 1.9 acres). The building footprint is 1,905 square feet. The parking area is recycled asphalt.

Assessment of potential pollutants

Leaks from vehicles in parking area.

Strategies for Reducing the Discharge of Pollutants

The impervious parking lot surface at the Annex helps to reduce runoff of any pollutants.

Recommendations:

Employee awareness and education of proper vehicle maintenance.

Palmer Meeting House / Advent Church

The West Greenwich Land Trust purchased the historic Palmer Meeting House in 2004. The 840 square foot building sits on 13,500 square feet of land. This site is used for special events, such as Celebrate West Greenwich Day and is not considered a generating source of pollution.

Plain Meeting House Church

The Town purchased the historic Plain Meeting House in 2008. This 672 square foot structure sits on 33,256 square feet of land. It is not considered a generating source of pollution.

Soccer Fields

Description

The Soccer Association constructed the soccer fields adjacent to the Town Hall between 2000 and 2005. The soccer fields are on two lots, a portion of which is on the Town Hall lot, and the remainder of which is on an abutting 31 acre lot also owned by the Town of West Greenwich. About 5 acres of this lot is used for soccer fields, and another 1.5 acres is a gravel and grassed parking area and associated gravel access road. These fields are maintained by the Soccer Association who contracts with a private landscape company. Fertilizer, pesticides, herbicides, and water based striping paint are applied. There are ample trash receptacles and a dumpster at the field site that are emptied by a private hauler. The Soccer Association is currently installing an irrigation system to service the soccer fields. Port-a-Johns are also provided on site.

As approved by Town Council on February 17, 2010

Assessment of potential pollutants

Potential pollutant sources from the soccer field operation would be fertilizers, herbicides, and pesticides from the turf maintenance; leaking vehicles at the parking area; and litter.

Strategies for Reducing the Discharge of Pollutants

There are no storm drains and no point sources of pollutants at the soccer fields. The parking area is graveled, so runoff of pollutants is less likely than if it were paved. There are ample trash receptacles, and serviced port-a-johns available. The nearest surface water feature is a wetland, which is approximately 450 feet away through a forested buffer area. Further downhill is the Cedar Swamp, approximately 1,600 feet away.

Recommendations:

Some practices that can help reduce the risk of stormwater pollution from the soccer fields include the following:

- Require the landscape contractor to submit a simple management plan emphasizing low water and low fertilizer and pesticide methods to the extent possible, considering soils, existing condition, and other site specific factors, for review and approval by the Town.
- Place one or two trash cans at the parking area

8.3.3 Facilities that have Point-Source Discharges that are Not Associated with Industrial Activity

No Town-owned facility generates a point source discharge.

Amend Table 8-1 in renumbered Section 8.5 Measurable Goals to include:

Target Year	Activity/ Measureable Goals	Town Department Responsible
by end of 2007 (year 4)	Implement all Facilities BMP recommendations from Section 8.3	Director of Public Works

Employee Training

- All government employee training programs for:
 - Park and open space maintenance
 - Fleet and building maintenance
 - New construction and land disturbances
 - Storm Water system maintenance
- Description of how training programs will be coordinated with the outreach programs developed for the public information minimum measure and the illicit discharge minimum measure.

Town Response: The Town will propose amendments to the SWMPP as follows:

Add new Section 8.4 Employee Training

“Employee training is a required element of the Pollution Prevention and Good Housekeeping Minimum Measure. Education and Training programs must address preventing and reducing storm water pollution from each of the following four good housekeeping activities:

- park and open space maintenance
- fleet and building maintenance
- new construction and land disturbances
- and stormwater system maintenance.

The Town should seek out any existing training programs that address these topics, and participate in any State or Federally sponsored training workshops. Also, self-administered training modules, when available, can be downloaded from the internet and presented to the employees by the Town Planner and/or Public Works Director. The information learned from these training programs can also be used in developing outreach materials to inform the public about stormwater pollution and can be distributed during the illicit discharge and detection ordinance development and when the employees are out in the field. Resources to look into for adapting a training program in West Greenwich are the Non-point Education for Municipal Officials (NEMO) through University of Rhode Island , and the US EPA NPDES Program, which provides training courses, workshops, and webcasts. Refer to Chapter 3 for additional organizations that the Town can partner with to provide education and employee training on municipal good housekeeping.”

New Operations

- Procedures to ensure that design and construction of new elements of the MS4 and repairs of existing elements of the MS4 undertaken by the operator are assessed for potential water quality impacts and incorporation of additional water quality protection devices or practices. **Required Measurable Goals: If not already addressed, develop strategies and procedures for assessment of flow management projects within the first year.**

COMMENT: A measurable goal of developing in the first year procedures to ensure that design and construction of new elements of the MS4 and repairs of existing elements of the MS4 undertaken by the operator are assessed for potential water quality impacts and incorporation of additional water quality protection devices or practices must be included in the plan. A description of these procedures must have been submitted to the Department in March of 2005. Copies of these procedures must be submitted to the Department in the Annual Report for calendar year 2004.

Town Response: The Town will propose amendments to the SWMPP as follows:

Add Section “**8.2.8 Drainage Management and Construction Projects**”

Flow Management Projects

New flow management projects will be assessed by the Highway Supervisor on a case by case basis, in order to determine the potential impacts to surrounding water quality. New flow projects are rare in West Greenwich, as any new infrastructure is installed by private developers after review and approval by the Planning Board. For projects initiated by the Town, some projects will not involve new water quality infrastructure, and for other projects the Town will have to hire an engineer to design and go through any necessary State permitting process. These types of projects are identified for inclusion as special projects during the budget process.

Existing flows where improvements are warranted will be determined during regular maintenance and inspections, and also during the outfall mapping process. While in the field, evidence of pollution sources and excessive erosion and/or scouring will be assessed, and a consultant will be contacted to design the most effective, and cost effective BMP.

Recommendations

The Town should consider contracting with Southern Rhode Island Conservation District for their expertise in stormwater quality and engineering. Also, any of the various consulting engineers that the Town uses for plan review and inspections would be able to provide this service. As the municipal employees go through the required training components for good housekeeping, they will become more aware of the sources of pollution and the measures that can be taken to minimize and eliminate the pollution from entering local waterbodies, and therefore, will become competent at choosing and implementing effective BMP's themselves.

Construction Projects

The Town must address procedures for implementing proper erosion and sediment and water quality controls for all construction projects, including roadway re-paving and flood control projects. The most common construction undertaking by the Town is roadway repairs and resurfacing, mostly using chip seal or asphalt. The Town does not stripe any roads.

For building construction and additions, the Town hires consultants to design plans and construct the site.

Flood control projects are generally minor repairs that take a few hours to complete. These are often addressed with rip rap, crushed stone, asphalt berms, and loam and seed. For projects that take more than a few days, the DPW uses haybales and silt fencing during the construction duration.

Currently, there are no planned major capital improvements or municipal new development or re-development projects.

Recommendations

As approved by Town Council on February 17, 2010

Require erosion control plans and inspections for new construction and redevelopment or expansion projects, and include this requirement in the bid proposal.

Require Planning Board review of municipal project site plans.

Plan repaving / chip sealing/ roadway repairs during forecasted periods of dry weather.

Collect loose sand, gravel, asphalt, and other materials as soon as possible after construction activities.

Continue to sweep chip seal stone as soon as cured, and avoid spreading aggregate beyond the sealed surface.

Continue to stabilize road shoulders as soon as possible during projects that disturb the road shoulder.

Continue to use hay bales and silt fence on longer term projects.

X. Implementation Schedule and Annual Reporting

- Plan has a comprehensive implementation schedule consistent with RIPDES guidance (refer to Appendix B) that includes BMP identification number, BMP description, responsible party, measurable goal and implementation start and completion dates.

Town Response: The SWMPP will be amended to include this information in a comprehensive Implementation Schedule at the end of the document, using the format provided by RIDEM in Guidance document “Implementation Scheduling.”

- Plan must identify how records will be kept and the Program will be evaluated annually.

Town Response: Section 9.1: “Evaluation/ Reporting Requirements” of the SWMPP will be amended as follows:

The Town is required to comply with specific evaluation/assessment reporting requirements under the Phase II Storm Water General Permit, Section IV Subsections E Program Evaluation, F Record Keeping, and G Reporting. These requirements ~~include~~ are as follows:

- The Program shall be evaluated annually, and reported within the required Annual Reports, based on an assessment of the findings from the following requirements:
 - The status of compliance with permit conditions, including an assessment of the appropriateness of selected BMP’s and progress toward achieving the measurable goals for each minimum control measure;
 - Results of any information collected and analyzed;
 - A summary of activities planned for the next reporting cycle; and
 - A change in any identified best management practices or measurable goals for any minimum control measure.
- Program evaluation may prompt changes to the SWMPP, which shall be based on RIDEM requirements in the General Permit.

As approved by Town Council on February 17, 2010

- All records created through the implementation of the SWMPP must be kept for a period of five years, as required by the General Permit, and must be available to the public.

Plan must identify that the operator will submit an annual report by March 10th.

Town Response: Section 9.2: “Planned Reporting” of the SWMPP will be amended as follows:

The Town will comply with DEM’s evaluation and reporting requirements by evaluating the progress and success of the storm water program annually. If any of the proposed target dates are not being met, the Town will provide an explanation as well as an amended target date. DEM’s RIPDES Storm Water Program indicated in a meeting on November 6, 2002, that they were developing a report format that they want all the regulated MS4s to utilize. The Town of West Greenwich will utilize the RIDEM report format as requested and will submit ~~timely~~ annual reports as required, by March 10th.

//End //