

Municipality/Organization: Town of Holden

EPA NPDES Permit Number: 1121

MaDEP Transmittal Number: W- 040559

Annual Report Number

& Reporting Period: No. 2: March 04-April 05

MAY 19 2005

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Lawrence Galkowski

Title: Director of Public Works

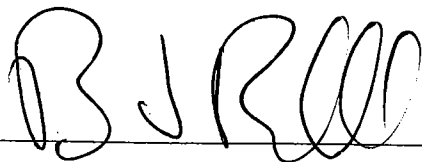
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Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:



Printed Name: Brian J. Bullock

Title: Town Manager

Date: 5/13/05

Part II. Self-Assessment

The Town of Holden has successfully implemented or begun implementation of several Measurable Goals noted in its Notice of Intent. Prior to the development of Holden's Comprehensive Stormwater Management Program, including Measurable Goals, the Town had an assessment performed of current activities, programs, and regulations that could support the NPDES Phase II Stormwater program. This assessment became the basis for modifying current activities, recommending new programs, and informing town boards and departments of their obligation toward successful implementation of Holden's Comprehensive Stormwater Program.

In accordance with Holden's Comprehensive Stormwater Management Program the Town has begun an Illicit Discharge Detection and Elimination (IDDE) Program in Permit Year 1. Attached with this annual report is a letter submitted by Guertin Elkerton & Associates that proposes to support Holden's IDDE Plan and describes proposed IDDE tasks.

Holden is pleased to present the following summary describing its success at implementing the second year of the town's Comprehensive Stormwater Management Program.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
1	Create a Stormwater Program	Department of Public Works Planning Board Conservation Commission Board of Health Board of Selectmen	Holden will present to the public at a public meeting Holden's draft Comprehensive Stormwater Management Program.	Compliant in year 1. The Town of Holden has completed <i>Stormwater Management Phase II Assessment</i> report. Copies are available for review by town departments and the public.	The Town of Holden will schedule a presentation with the Board of Selectmen and later a public meeting to review the Comprehensive Stormwater Program.
2	Create a Stormwater Program	Department of Public Works Planning Board Conservation Commission Board of Health Board of Selectmen	Holden will identify appropriate sources of funding assistance (SRF, 319 Grant Program, 604(b) Grant Program, Lakes & Ponds Grant Program, Source Water Protection Grant Program, Recycling Grant Program) and apply for assistance in implementing portions of Holden's Comprehensive Stormwater Management Program, including public education and outreach.	The Town of Holden received funding from the Department of Conservation and Recreation (DCR), formerly the Metropolitan District Commission (MDC) for regulations development related to stormwater management. Holden is contracted with Comprehensive Environmental Inc. to develop Stormwater regulations and model bylaws.	The Town of Holden will continue to work with Comprehensive Environmental Inc. to develop Stormwater regulations and model bylaws.

1. Public Education and Outreach (cont'd.)

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2	Planned Activities – Permit Year 3
3	Address specific groups	Department of Public Works Board of Health	Distribute EPA Educational brochures to targeted audiences. Distribution points include Town Hall, Library, and Transfer Station.	The Town of Holden is in receipt of EPA educational materials on disk for easy printing and distribution. The Town of Holden provides several informational brochures to the public. The following information is available at the Town Hall: - "2004-2005 Holden Recycling Information" which includes Hazardous Waste Earth Day Collection, recycling information, and curbside pickup calendar (also available on the Town website); - "Is your construction project disturbing 1 or more acres of land..." a poster within the Town Hall describing EPA regulations; - "The Massachusetts Watershed Protection Act" Watershed Regulations for Land in Quabbin Reservoir, Ware River and Wachusett Reservoir Watershed; - "2002 Water Quality Report, Holden Water System"; - "Wachusett Earthday Collection" a yearly brochure describing the Household Hazardous Product and Recycling Event; and - "Mercury Recovery Program with the Holden Board of Health." The Town Hall has a box deposit for "Button Cell Battery Recycling Program" providing another form of hazardous product collection. Items listed above are part of ongoing efforts.	Brochures will continue to be printed and made available at town buildings. A box deposit for "Button Cell Battery Recycling Program" will continue to be present in The Town Hall.

1. Public Education and Outreach (cont'd.)

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2	Planned Activities – Permit Year 3
4	Address specific groups	Department of Public Works Board of Health Planning Department	The Town of Holden will compile a library of educational materials that can be distributed to youth organizations, the Garden Club, etc. EPA stormwater BMPs targeting specific activities and audiences will be included.	The Town of Holden presents several brochure/information to the public. The Town offers brochures described in BMP #3 as well as information listed on the Town website and brochures enclosed with the Holden Municipal Light bill and sent to residents. Brochures that have been or expect to be sent to residents include: - "Wachusett Earthday Collection" a yearly brochure describing the Household Hazardous Product and Recycling Event, and "Town of Holden, a Resident's Guide to DPW Snow Removal Operations and Procedures." Information included on the Town website includes: - "Recycling and Trash Information"; - "Town of Holden DPW Water Page" including water ban information; - "Spring 2004 Street Sweeping Schedule" which is a list of the streets that the DPW plans to sweep for each month of 2004; - "Spring 2004 Leaf Composting and Brush Chipping"; and - "Septic System Maintenance." Items listed above are part of ongoing efforts. New for year 2: Information to be broadcast on the Holden Cable Television station: - DCR has been contacted to use their copy of the EPA presentation "After The Storm" that is in a cable-ready format.	Brochures/information will continue to be made available to the public. Information will continue to be made available on the Town website. The EPA presentation "After The Storm" will be broadcast on the Holden Access cable station.

1. Public Education and Outreach (cont'd.)

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2	Planned Activities – Permit Year 3
5	Target groups likely to impact storm water	Department of Public Works Board of Health Planning Department	Brochures targeting specific audiences and activities will be available. These target groups include homeowner and lawn maintenance activities, disposal of household waste, and pet maintenance. Other groups include commercial businesses and waste disposal, parking lot maintenance, and floor drains. Educational brochures on the proper disposal of household hazardous wastes will be attached to transfer station permits.	The Town of Holden presents several brochure/information to the public. The Town offers brochures/information described in BMPs #3 and #4. The DPW provides written notice to residents for practices that violate Town regulations. All newly permitted parking lots have been reviewed and include structural and non-structural BMPs including regular street sweeping and maintenance requirements.	The Town DPW will continue to inform the public regarding stormwater protection practices.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2	Planned Activities – Permit Year 3
6	Promote household waste recycling	Department of Public Works Board of Health MIS Department	The Town of Holden and the Board of Health will promote recycling and hazardous waste collection opportunities through brochures and postings on the Town's website and local access channel.	The Town of Holden advertises the yearly hazardous product collection event via brochures (enclosed in the Holden Municipal Light bill) and public access television. Twice yearly hazardous waste collections continue to occur in partnership with Wachusett Earthday and the Board of Health. These events are offered as a means to dispose of hazardous materials, such as paint, chemicals, and electronics in a safe way. Information about these event's can be found on the Town's website. The following brochures are available to the public regarding the event: - "Wachusett Earthday Collection" a yearly brochure describing the Household Hazardous Product and Recycling Event (sent to all residents); - "2003-2004 Holden Recycling Information" which includes regarding Hazardous Waste Earth Day Collection, recycling information, and curbside pickup calendar;	Brochures/information will continue to be made available to the public. The Town of Holden will continue to host twice yearly Hazardous Product Collection Events.

1. Public Education and Outreach (cont'd.)

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2	Planned Activities – Permit Year 3
7	Identify alternative information sources	Department of Public Works MIS Department	Links to stormwater BMPs and other water quality education resources, including EPA and DEP will be posted on Town of Holden's website: http://www.townofholden.net/	The Town of Holden website has several web links to environmental and public health organizations and other environmental information, including the DEP and the EPA.	The Town of Holden will continue to post links to stormwater BMPs and other water quality education resources, including to the DEP and the EPA.
8	Utilize local public access channel	Department of Public Works Board of Health	Stormwater BMPs, solicitation for stream team cleanup volunteers, and EPA produced water quality videos will be considered for presentation on Holden's local public access channel.	DCR has been contacted to use their copy of the EPA presentation " <i>After The Storm</i> " that is in a cable-ready format.	The EPA presentation "After The Storm" will be broadcast on the Holden Access cable station.
9	Develop, conduct and document educational programs	Department of Public Works	The Town of Holden Water Department will apply for funding assistance from DEP's Source Water Protection Program for grant assistance to develop wellhead protection plans and stormwater management plans within Zones II. The proposed tasks will include a public education component.	The Source Water Protection Program was unavailable during Permit Year 2. DCR worked with teachers in advance and conducted watershed training for 2 classes of 4 th grade students at the Mayo School, and 3 classes at Dawson School, each taking 1 hour. DCR conducted a watershed field trip for 50 students in 4 th grade at the Mayo School, and for 70 4 th grade students at the Dawson School, each taking 6 hours.	The Town of Holden will ascertain the availability of funds from the Source Water Protection Program in Permit Year 3.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
10	Conduct public meetings/create citizen panels	Board of Selectmen Department of Public Works	The Town of Holden will contact the Nashua River and Blackstone River Watershed Associations to review opportunities in Holden. These opportunities include hosting a watershed association meeting in Holden with notice on website and local access channel, and televising a meeting reviewing watershed activities or needs specific to Holden.	Wachusett Greenways provides recreational trail maintenance within the Town of Holden. The DCR has regulatory jurisdiction (350CMR 11) over much of the land bordering waterways in Holden (within 400 feet of the water) including regulating land use and density. The Nashua River Watershed Association has included stormwater related protection for the Town of Holden in its 5 (five) year action plan. The plan includes implementation of the Phase II Stormwater Program, acquiring GIS capacity, recreation, open space protection, and water quality. The Association also suggests potential funding sources. The watershed association website is: http://www.acapellastudios.com/nrwa2/. NRWA Wachusett Working Landscapes Partnership sponsored a training on Low Impact Development in Leominster on 3/17/2005.	The Town of Holden will continue to work with Wachusett Greenways, the MDC, and the Nashua River Watershed Association to determine opportunities for collaboration.
Revision				The Blackstone River Watershed Associations is not active within the Town of Holden.	

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
11	Community clean-ups	Department of Public Works MIS Department Board of Selectmen	Town of Holden will coordinate local stream team cleanups with area Scout groups. Town will provide notice of event on local access channel and website.	Wachusett Greenways is a volunteer based organization that provides trail development in several communities, including Holden. The Holden DPW worked with Wachusett Greenways on trail construction, which includes proper drainage. The DCR has regulatory jurisdiction (350CMR 11) over much of the land bordering waterways in Holden (within 400 feet of the water) including regulating land use and density.	The Town of Holden will continue to work with the MDC and Wachusett Greenways to protect the quality of waterways within Holden and to provide environmentally safe public recreation opportunities.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2	Planned Activities – Permit Year 3
12	Mapping of storm water management infrastructure	Department of Public Works Planning Department	Holden will develop a multi-year plan to complete mapping of entire storm drain system. Development of plan will include review of water, sewer, and other infrastructure.	The Town of Holden began mapping under the IDDE during Permit Year 1. Approximately 20% of outfalls in the downtown area were surveyed. Survey information included condition, presence of dry weather flows, location, source of flow, and receiving water body. The outlet locations were mapped using AutoCAD and MassGIS. The Town of Holden has begun to develop a comprehensive GIS program. An aerial flyover to begin the development of the the GIS was conducted in April, 2005. Program is anticipated to include complete mapping of storm sewer system. The Town of Holden has contacted the DCR and obtained GIS information relative to stormwater conveyance structures mapped on GIS. A revised IDDE plan has been presented to the Town of Holden and is awaiting Town approval. A copy of the proposal letter is included in this annual report.	The Town of Holden will continue the IDDE program. The Town of Holden is requesting funding to continue the Stormwater Mapping as part of the Illicit Discharge Detection and Elimination (IDDE) Program for approval at Town Meeting. DCR has historically investigated suspicious dry weather and other occurrences that have been noted in their regular sampling. The Town of Holden will coordinate inspection and documentation of suspect outfalls with DCR.

3. Illicit Discharge Detection and Elimination (cont'd.)

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2	Planned Activities – Permit Year 3
13	Identification/ description of problem areas	Department of Public Works	Holden will develop and implement an Illicit Discharge Detection and Elimination (IDDE) plan.	The IDDE program that began in Permit Year 1 did not identify any problem areas, however further study was recommended. In order for he Town of Holden to complete an <i>Illicit Discharge Detection and Elimination (IDDE) Program</i> as part of the Town's Comprehensive Stormwater Management Program it has requested a proposal from GE&A.	The Town of Holden will continue the IDDE program. The Town of Holden has requested funding for Town Meeting approval to support the implementation of the IDDE Plan. As part of the IDDE Program, the Town of Holden will GPS survey outfalls and identify potential sources of illicit discharges beginning with prioritized areas identified in the IDDE Plan.
14	Enforcement procedures addressing illicit discharges	Department of Public Works Planning Department	Holden will review whether local authority is appropriate and able to respond to potential illicit discharges. New by-laws, if necessary, will be proposed. DCR grant will support this effort.	BMP was not scheduled for Permit Year 2. Holden is contracted with Comprehensive Environmental Inc. to develop Stormwater regulations and model bylaws.	The Town of Holden will continue to work with Comprehensive Environmental Inc. to develop Stormwater regulations and model bylaws. New by-laws, if necessary, will be proposed to Town Meeting.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2	Planned Activities – Permit Year 3
15	Initiation of recycling programs	Department of Public Works Board of Health	Holden will apply for funding assistance from DEP's Recycling Grant Program for assistance in public education and the purchase of recycling materials.	The Town of Holden advertises the yearly hazardous product collection event via brochures (enclosed in the Holden Municipal Light bill) and public access television. The Town of Holden applied for and received funding assistance from DEP's Recycling Grant Program for assistance in the purchase of recycling materials for FY 2005. The following brochures are available to the public regarding the event: - "<i>Wachusett Earthday Collection</i>" a yearly brochure describing the Household Hazardous Product and Recycling Event (sent to all residents); - "<i>2003-2004 Holden Recycling Information</i>" which includes regarding Hazardous Waste Earth Day Collection, recycling information, and curbside pickup calendar;	The Town of Holden will continue to host yearly Hazardous Product Collection Events. The Town of Holden will continue to monitor funding sources for applicability for recycling.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
16	Bylaw: Storm water management regulations for construction sites 1 acre or larger	Planning Board Conservation Commission Town Counsel Board of Health Zoning Board of Appeals	Holden will review model by-law developed by DEP in consultation with the Attorney General's Office.	This BMP was not scheduled for Permit Year 1. The DPW has placed a poster titled "<i>Is your construction project disturbing 1 or more acres of land...</i>" within the Town Hall for public viewing. This poster describes EPA regulations; Holden is contracted with Comprehensive Environmental Inc. to develop Stormwater regulations and model bylaws that will incorporate the issues in the DEP Model.	A meeting will be scheduled with all departments to review the construction bylaws. The Town of Holden will continue to work with Comprehensive Environmental Inc. to develop Stormwater regulations and model bylaws. Holden will review whether local authority is appropriate. New by-laws, if necessary, will be proposed to Town Meeting.
17	Bylaw: Procedures for creating a Storm Water Pollution Prevention Plan (SWPPP)	Planning Board Conservation Commission Town Counsel Board of Health Zoning Board of Appeals	Utilizing funding assistance from MDC grant, Holden will review current by-laws and develop and recommend approval for by-laws responding to MM4.	The Town of Holden received funding from the DCR for regulations development related to stormwater management. Holden is contracted with Comprehensive Environmental Inc. to develop Stormwater regulations and model bylaws that will incorporate the issues in the DEP Model.	The Town of Holden will continue to work with Comprehensive Environmental Inc. to develop Stormwater regulations and model bylaws. The Town will review the sample SWPPP bylaw with all departments for implementation.

5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
18	Bylaw: Require post-construction runoff controls	Planning Board Conservation Commission Town Counsel Board of Health Zoning Board of Appeals	Holden will review model by-law developed by DEP in consultation with the Attorney General's Office.	This BMP was not scheduled for Permit Year 2 Holden is contracted with Comprehensive Environmental Inc. to develop Stormwater regulations and model bylaws that will incorporate the issues in the DEP Model.	A meeting is to be scheduled with all departments to review the post-construction bylaws. Holden will review whether local authority is appropriate. Holden is working with Comprehensive Environmental Inc. to develop Stormwater regulations and model bylaws that will incorporate the issues in the DEP Model. New by-laws, will be proposed to Town Meeting.

5. Post-Construction Stormwater Management in New Development and Redevelopment (cont'd.)

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
19	Identify structural and non-structural long-term runoff control strategies BMPs	Planning Board Conservation Commission Town Counsel Board of Health Zoning Board of Appeals	Utilizing funding assistance from MDC grant, Holden will review current by-laws and develop and recommend approval for by-laws responding to MM5.	The Town of Holden received funding from the DCR for regulations development related to stormwater management.	The Town of Holden will continue to work with Comprehensive Environmental Inc. to develop Stormwater regulations and model bylaws. Holden will review whether local authority is appropriate. New by-laws, if necessary, will be proposed to Town Meeting.

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) -- Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities -- Permit Year 3
20	Develop a municipal Operations and Maintenance Plan	Department of Public Works	Using regulations and recommendations from DEP and EPA, Holden will develop an operations and maintenance plan to include proper disposal of street sweepings, catchbasin cleanout, snow disposal, roadway de-icing procedures, vehicle washing, and outside storage of materials.	The Town of Holden DPW cleans catch basins and sweeps all streets yearly. The Town notifies residents of the street sweeping schedule in the newspaper and on the Town website. Unreported in year 1: The Town of Holden has completed an <i>Illicit Discharge Detection and Elimination (IDDE) Program</i> as part of the Town's Comprehensive Stormwater Management Program. As part of the IDDE Program, the Town has a summary of recommendations developed as water quality-friendly maintenance practices, including EPA and DEP Fact Sheets pertaining to Municipal Operations and Maintenance.	The Town of Holden will continue to implement the Operations and Maintenance (O&M) plan regarding catch basins and street maintenance. The Town will review BMPs for applicable O&M practices.

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
21	Develop and implement training programs for municipal employees	Department of Public Works	Holden will send a minimum of 5 public works employees annually to training seminars sponsored by MassHighway, BayState Roads, and other relevant agencies or vendors.	Town of Holden employees attended several trainings in Permit Year 2: - Phase II Stormwater permitting by CEI (Attended by 2 employees); - Mass Highway Municipal Engineers Association meetings- Discussion of Phase II Stormwater (Attended by 2 employees); and - Board of Health DEP Conference- Recycling Initiative (Attended by 2 employees.)	The Town of Holden will continue to provide training and educational development opportunities to its employees regarding stormwater protection.
22	Develop a municipal Operations and Maintenance Plan	Department of Public Works	Holden will implement a formal inspection program, including maintenance logs and scheduling, for catchbasin cleaning, repairs, and new installation.	The Town of Holden DPW cleans catch basins and sweeps all streets yearly. The Town notifies residents of the street sweeping schedule in the newspaper and on the Town website.	The Town of Holden will continue to implement the Operations and Maintenance (O&M) plan regarding catch basins and street maintenance. The Town will review BMPs for applicable O&M practices.
23	Review storm drainage infrastructure needs	Department of Public Works	Holden will consider storm drain improvements in development of annual road maintenance plan subject to funding from Chapter 90	The Town of Holden DPW performs maintenance to the storm drain infrastructure as needed. Storm drain improvements were not necessary during Permit Year 2.	The Town of Holden DPW will continue to perform maintenance to the storm drain infrastructure as needed.

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<if applicable>>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
				No TMDLs in the Town of Holden	

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

Sampling and analysis has not been performed.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	
Annual program budget/expenditures	(\$)	

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	
Stormwater management committee established	(y/n)	
Stream teams established or supported	(# or y/n)	
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	
▪ community participation	(%)	
▪ material collected	(tons or gal)	
School curricula implemented	(y/n)	

Legal/Regulatory

	In Place Prior to Phase II	Under Review	Drafted	Adopted
Regulatory Mechanism Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination				
▪ Erosion & Sediment Control				
▪ Post-Development Stormwater Management				
Accompanying Regulation Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination				
▪ Erosion & Sediment Control				
▪ Post-Development Stormwater Management				

Mapping and Illicit Discharges

Outfall mapping complete	(%)	
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete	(%)	
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	
Outfalls inspected/screened	(# or %)	
Illicit discharges identified	(#)	
Illicit connections removed	(#)	
% of population on sewer	(est. gpd)	
% of population on septic systems	(%)	
	(%)	

Construction

Number of construction starts (>1-acre)	(#)	
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	
Site inspections completed	(# or %)	
Tickets/Stop work orders issued	(# or %)	
Fines collected	(# and \$)	
Complaints/concerns received from public	(#)	

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	
Site inspections completed	(# or %)	
Estimated volume of stormwater recharged	(gpy)	

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	
Total number of structures cleaned	(#)	
Storm drain cleaned	(LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		
Cost of screenings disposal	(\$)	

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	
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Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	
Qty. of sand/debris collected by sweeping	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	
Cost of sweepings disposal	(\$)	
Vacuum street sweepers purchased/leased	(#)	
Vacuum street sweepers specified in contracts	(y/n)	

Reduction in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	
▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	

Anti-/De-Icing products and ratios		% NaCl	
		% CaCl ₂	
		% MgCl ₂	
		% CMA	
		% Kac	
		% KCl	
		% Sand	
Pre-wetting techniques utilized		(y/n)	
Manual control spreaders used		(y/n)	
Automatic or Zero-velocity spreaders used		(y/n)	
Estimated net reduction in typical year salt application		(lbs. or %)	
Salt pile(s) covered in storage shed(s)		(y/n)	
Storage shed(s) in design or under construction		(y/n)	



Guertin Elkerton & Associates, Inc.

Engineers and Scientists

April 6, 2005

Mr. Lawrence H. Galkowski, P.E.
Director of Public Works
Town Hall, 1196 Main Street
Holden, Massachusetts 01520-1067

RE: Illicit Discharge Detection and Elimination Plan

Dear Mr. Galkowski:

Guertin Elkerton & Associates is pleased to present this proposal to support Holden's ongoing efforts to comply with EPA's NPDES Phase II Stormwater regulations, specifically to develop and implement an Illicit Discharge Detection and Elimination (IDDE) program.

Holden's IDDE program must include:

- Development of a storm sewer system map showing the location of all outfalls.
- Adoption of by-laws or regulations prohibiting illicit discharges; and implementation of appropriate enforcement procedures.
- Development and implementation of a plan to detect and address illicit discharges.
- Implementation of a public education program targeting public employees, businesses, and the general public on the hazards associated with illegal discharges and improper disposal of waste.

To date, Holden has documented and mapped the locations of some storm sewer infrastructure through varied and disconnected projects. Sources of information regarding available storm sewer mapping include plan documents from the recent sanitary sewer improvements project, outfall mapping performed by the Metropolitan District Commission, storm sewer mapping performed by Guertin Elkerton & Associates documented in a September 2003 report, and miscellaneous plans and as-builts.

The Town of Holden is implementing a phased approach in developing a town-wide comprehensive GIS mapping program. Mapping the storm sewer infrastructure will not only respond to EPA's IDDE program requirements, but also provide a complete and accurate storm sewer map layer. The map layer in GIS can ultimately support a storm sewer modeling application that shows pipe systems and flow direction.

Headquarters

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(800) 284.1048
Fax: 781.279.7993
www.geainc.us

Branch Offices

West Springfield, MA
Island Pond, VT
Augusta, ME



Mr. Lawrence H. Galkowski, P.E.

April 6, 2005

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Guertin Elkerton & Associates, Inc.

Engineers and Scientists

GE&A proposes to:

Develop Stormwater GIS from Existing Data

Using available Town data and available information from Massachusetts Geographic Information Systems (MassGIS), GE&A will develop a map book that divides the Town into tiles at a scale of 1"=400'. Each tile will be presented as a 24' x 36" sheet. All subsequent stormwater data will be mapped on this base map. Data layers include

- Town boundaries
- Town parcel map data
- Hydrological features
- Land use
- Major basins, sub-basins
- Soil characteristics
- TIGER Census 2000 Roads
- Massachusetts Highway Department Roads
- Roads, trails, train lines
- Topographic contours

GE&A will review available maps and plans in order to identify and map locations of storm sewer outfalls, catchbasins, and manholes. Each plan will be scanned into a raster format (.TIF), at approximately 200-400 dots-per-inch (DPI), and then returned to the Town. If the Town requires GE&A can take these plans/tie cards in batches or all at once depending on the Town's preference. Each group of plans will need to be off site for approximately six working days.

Once these plans have been scanned the inventory phase will begin. A source inventory shapefile will be created for the project. For each source either a linear segment or a point will be created that represents the approximate location that is shown on the source. In this shapefile GE&A will create a number of fields that will provide an inventory and description of each source. These fields will include the filename of the scanned map, and the date of the source. This process creates a spatial index of the sources and also allows identification of where there may be missing sources for the storm sewer system layer's automation. GE&A will consult with the Massachusetts District Commission and incorporate relevant stormwater data from MDC in order to avoid duplication of efforts.

After all sources have been inventoried, a town-wide map will be developed for the storm sewer system. After relevant plans have been reviewed and stormwater structures have been mapped, GE&A will meet with Town staff to review map features to that point.

Headquarters

91 Montvale Avenue
Stoneham, MA 02180
781.279.2288
(800) 284.1048
Fax: 781.279.7993
www.geainc.us

Branch Offices

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Island Pond, VT
Augusta, ME



Mr. Lawrence H. Galkowski, P.E.

April 6, 2005

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Guertin Elkerton & Associates, Inc.

Engineers and Scientists

**Deliverable: A map book showing approximate locations of documented stormwater structures and corresponding electronic files (.pdf, .shp).
Locate and Field Verify Stormwater Structures**

Using Global Positioning System (GPS) technology, GE&A will locate undocumented and verify location of questionable stormwater infrastructures. Input from local officials and employees will be used as a guide to focus field location and verification efforts appropriately in areas where undocumented storm sewer information is known or suspected. GPS collection will be conducted at better than 1:100 scale accuracy (sub-meter horizontal, no vertical accuracy) using appropriate hardware and software.

The location, as collected by GPS, of outfalls, catch basins, and manholes in the storm sewer system will be presented in an updated map book along with a data table with Northings, Eastings, and elevations based on Massachusetts Mainland State Plan coordinate system, which is recognized and used by the Massachusetts Highway Department. All data collected during this task can be readily incorporated into existing comprehensive GIS mapping efforts.

Deliverable: An updated map book and data table presenting GPS surveyed locations of stormwater structures and corresponding electronic files (.pdf, .shp).

Inspect Outfalls

GE&A will perform outfall field inspections for the purpose of identifying potential illicit connections to the storm sewer system.

The following data will be obtained or verified for each outfall:

- Structure Type
- Size
- Material
- Condition
- Observable Flow
- Signs of Illicit Connections

Approximately 90 outfalls were mapped and inspected by GE&A in February 2003 in a pilot program. GE&A will consult with the Massachusetts District Commission and incorporate relevant data from MDC outfall inspections in order to avoid duplication of efforts.

Deliverable: A tabulated inventory of outfalls, with photographs and inspection summary for each outfall.

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Guertin Elkerton & Associates, Inc.

Engineers and Scientists

Final Report

GE&A will prepare a Final Report incorporating data and maps developed in the previous tasks. The Final Report will also identify outstanding IDDE tasks and a recommended budget for Holden to complete those tasks and achieve permit compliance.

Recommended Budget

Since the extent of knowledge regarding the location of storm sewer infrastructure is unknown, and thus the level of effort for field locating undocumented structures is difficult to project, GE&A proposes that the Town budget \$35,000 to permit Guertin Elkerton & Associates, Inc. to begin this work.

The GE&A Project Team will work closely with you and other stakeholders in implementing Holden's IDDE program and direct our work in accordance with a mutual understanding of priorities. We propose to perform this work on a time and material basis, and will invoice monthly.

If this proposal is acceptable to you, please arrange for its execution and transmit one copy back to our office. We will begin work promptly upon receiving your authorization. If you have any questions, please do not hesitate to call me at 413-781-0000 or Peter Garvey, P.E. at 781-279-2288.

Very truly yours,

GUERTIN ELKERTON & ASSOCIATES, INC.

Mary Monahan-Burgess
Vice President

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cc: Dan Nason, Town Engineer
enc: Terms and Conditions

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West Springfield, MA
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Paul D. Guertin
President



Mr. Lawrence H. Galkowski, P.E.

April 6, 2005

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Guertin Elkerton & Associates, Inc.

Engineers and Scientists

MAY 19 2005

ACCEPTED:

Name, Title
Town of Holden

Date

Headquarters

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