

**Municipality/Organization: Town of Chatham**

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**EPA NPDES Permit Number: MAR041101**

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**MADEP Transmittal Number: W-035745**

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**Annual Report Number  
& Reporting Period:**

**No. 9: April 11 - March 12**

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## **NPDES PII Small MS4 General Permit Annual Report**

### **Part I. General Information**

**Contact Person: Robert Duncanson, Ph.D.**

**Title: Dir. of Health & Environment**

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**Telephone #: (508) 945-5165**

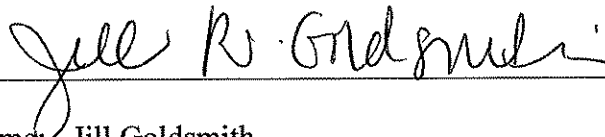
**Email: rduncanson@Chatham-ma.gov**

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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: Jill Goldsmith**

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**Title: Town Manager**

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**Date: April 23, 2012**

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## **Part II. Self-Assessment**

The Town of Chatham has completed the required self-assessment and has determined that our municipality is working toward full compliance as submitted to EPA and approved as Chatham's NOI to the General Permit issued to Massachusetts under Phase II of the Regulations. This annual report demonstrates and documents our efforts toward full compliance.

The Town of Chatham has been working aggressively to address stormwater problems identified through past shoreline sanitary surveys and other water quality programs. Stormwater evaluation and BMP designs are now routinely incorporated into road projects to reduce or eliminate stormwater discharge(s) into sensitive resource areas. New municipal facilities are incorporating stormwater BMPs into facility design.

Since the beginning of the Phase II Program in Chatham 9 stormwater discharges have been mitigated through the installation of stormwater BMPs. In most cases the direct discharge of stormwater has been eliminated through the installation of infiltration BMPs, in several cases the stormwater has been directed to treatment BMPs prior to discharge.

Engineering design continues on 2 stormwater discharge locations, CHA-24, Old Queen Anne Rd. @ Muddy Creek, and CHA-16, Barcliff Ave. Ext. @Chatham Harbor. Progress has been complicated by wetland and land availability for location of BMPs.

The municipal parking lot re-construction project, including the installation of rain gardens for stormwater collection/treatment was undertaken in 2011, final paving is planned for 2012; this will treat/mitigate some of the discharge at CHA-12.

The Town continues dialogue with MassDOT-Highway to address stormwater runoff from state road Route 28 as part of planned upgrade of the roadway. Chatham is working with the neighboring Town of Harwich on a culvert replacement project at Muddy Creek on Pleasant Bay that will also address stormwater runoff at that location.

The Town believes that these actions, as well as others completed prior to the Phase II Permit, show Chatham's ongoing commitment to addressing stormwater issues.

**Part III. Summary of Minimum Control Measures**

**1. Public Education and Outreach**

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 9</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 10</b>
1.1 Revised	Educational Flyer	Department of Health & Environment (DHE)	Distributed Annually	Goal met. Continued distribution of educational materials at municipal office locations, during public events and during public information presentations. Continued cooperation in the development and distribution of materials with the Pleasant Bay Alliance and Project STORM, a regional Cape Cod effort.	New materials to be developed and distributed.
1.2 Revised	Web Page	DHE	Develop & Maintain	Goal met. Storm water information/education web page maintained on Town’s web site. Has information from and links to EPA, MADEP and regional storm water web sites. IT Dept. indicates 356 hits for calendar year 2011.	Maintain and update web page as needed.
1.3	Annual Program Review	DHE, DPW, Board of Selectmen	Meeting held per schedule	Goal met. Progress/update meeting held annually as part of yearly budget process.	Same as year 9.

Revised					
1.4	Pet Waste Control	DHE, Animal Control	Expand/document Mutt Mitt program	Goal met. Mutt Mitt program continues to be expanded, funded and maintained by the Town. The total number of Mutt Mitt dispenser locations in Chatham is 23. In excess of 40,000 Mutt Mitts distributed in calendar year 2011.	Same as Year 9.
Revised					
Revised					

**1a. Additions**


**2. Public Involvement and Participation**

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 9</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 10</b>
2.1	Citizen Water Quality Monitoring	DHE	Program goals met/annual meeting held	Goal met. Summer water quality nutrient monitoring completed as per program goals.	Same as Year 9.
Revised					
2.2	Storm Drain Marking	DHE	Document number marked/year	Effort postponed to Year 10 due to staff time limitations.	Begin storm drain marking in cooperation with volunteers from Friends of Chatham Waterways and other local groups.
Revised					

2.3	Annual Program Review	DHE, DPW, Board of Selectmen	Meeting held per schedule	Goal met. Progress/update meeting held annually as part of yearly budget process.	Same as Year 9.
Revised					
2.4	Household Hazardous Waste Collections	DHE	Document participation	Goal met. Six household hazardous waste collections were held May through October 2011, jointly with 2 adjoining towns, in cooperation with Cape Cod Cooperative Extension. In 2011 204 households participated, compared to 185 in 2010, generating approximately 21,643 pounds of waste.	Same as Year 9.
Revised					
2.5	Web Page	DHE	Documents hits	Goal met. Storm water information/education web page maintained on Town's web site. Has information from and links to EPA, MADEP and regional storm water web sites. IT Dept. indicates 356 hits for calendar year 2010.	Maintain and update web page as needed.
Revised					
Revised					

**2a. Additions**

2.6	Comprehensive Wastewater Management Plan Citizens Advisory Committee	DHE	Document Public Involvement	The issue of stormwater management is a regular topic in the discussions of the CWMP CAC as the Wastewater Management Plan is developed. Stormwater management is one of the issues to be addressed in the CWMP. CAC meetings are held on a regular basis (usually monthly) and are televised on local cable access. CAC minutes and other documents are posted on town website.	Continue program.

### 3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 10
3.1 Revised	Stormwater System Mapping	DHE, DPW, GIS	Complete mapping by year 4 of program	Integration into GIS system and QA/QC is ongoing as resources allow.	Continue integration into GIS system.
3.2 Revised	Identify and Document Illicit Connections	DPW, DHE	Document illicit connections	Progress limited to due staff time limitations. Past monitoring of discharges during DMF Sanitary Surveys have not documented the presence of illicit discharges.	Staff training in the detection of illicit discharges. Continued monitoring of discharges during DMF Sanitary Surveys.
3.3 Revised	Eliminate Illicit Connections	DPW, DHE	Quantify illicit connections corrected	Progress limited due to staff time limitations. Discharges are being corrected as part of overall efforts to mitigate stormwater discharges.	Continue monitoring.
3.4	Review Existing Regulatory Mechanisms	DHE	Complete review by December 2004	No progress, due to staff time limitations.	Complete review and recommend necessary additions/changes.

Revised					
3.5	Educational Flyer	DHE, DPW	Distributed annually	No progress, due to staff time limitations.	Develop and distribute flyer.
Revised					
Revised					

**3a. Additions**


**4. Construction Site Stormwater Runoff Control**

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 9</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 10</b>
4.1	Conservation Bylaw/Regulation Review	Conservation Commission/DHE	Necessary regulatory changes implemented	Goal met.	Continue review and recommend additions/changes as new information becomes available.
Revised					
4.2	Subdivision Control review	Planning Board, Community Development Dept.(CDD), DHE	Necessary regulatory changes implemented	Goal met.	Continue review and recommend additions/changes as new information becomes available.

Revised					
4.3	Site Plan Review	Planning Board, CDD, DHE	Necessary regulatory changes implemented	Planning Board and CDD undertaking a complete re-write of the town's zoning bylaw. Proposed changes include revisions to site plan review; expected completion date TBD. Goal is dependent on community consensus on proposed zoning changes; this has been illusive so far.	Re-program to year 10. Review as propose bylaw changes are promulgated for comment.
Revised					
Revised					
Revised					

**4a. Additions**


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

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 9</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 10</b>
5.1	Conservation Bylaw/Regulation Review	Conservation Commission/DHE	Necessary regulatory changes implemented	Goal met.	Continue review and recommend additions/changes as new information becomes available.

Revised					
5.2	Subdivision Control Review	Planning Board, CDD, DHE	Necessary regulatory changes implemented	Goal met.	Continue review and recommend additions/changes as new information becomes available.
Revised					
5.3	Site Plan Review	Planning Board, CDD, DHE	Necessary regulatory changes implemented	Planning Board and CDD undertaking a complete re-write of the town's zoning bylaw. Proposed changes include revisions to site plan review; expected completion date TBD. Goal is dependent on community consensus on proposed zoning changes; this has been illusive so far.	Re-program to year 10. Review as propose bylaw changes are promulgated for comment.
Revised					
Revised					
Revised					

**5a. Additions**


**6. Pollution Prevention and Good Housekeeping in Municipal Operations**

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 9</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 10</b>
6.1	Catch Basin Cleaning	DPW	Clean/document 1/3 of town basins per year	Goal met.	Same as Year 9.
Revised					
6.2	Street Sweeping	DPW	Sweep/document roads once per year	Goal met.	Same as Year 9.
Revised					
6.3	Utilize Appropriate BMP's for All Municipal Projects	DHE, DPW, Building Maintenance	Document implementation	Goal met, ongoing. Engineering design underway to address stormwater discharges into Muddy Creek (CHA-24) and Chatham Harbor (CHA-16). MassDOT re-designing Mitchell River Bridge to incorporate stormwater BMPs (CHA-8). Chatham and Harwich working cooperatively with MassDOT-Highway, USDA NRCS, and MA Div. of Ecological Restoration on Muddy Creek Wetland Restoration Project that will incorporate stormwater BMPs where Route 28 crosses muddy Creek at Pleasant Bay.	Continue implementation of BMP's and initiate design for new projects.

Revised					
6.4	Pet Waste Control	DHE, Animal Control	Expand/document Mutt Mitt program	Goal met. Mutt Mitt program continues to be expanded, funded and maintained by the Town. The total number of Mutt Mitt dispenser locations in Chatham is 23. In excess of 40,000 Mutt Mitts distributed in calendar year 2011.	Same as Year 9.
Revised					
6.5	Annual Training	DPW, DHE	Held annually/participation documented.	No progress, due to staff time limitations. See 6a. below.	Program to be developed and implemented in Year 10.
Revised					
Revised					

**6a. Additions**

6.6	Stormwater staff Education/Training	DPW, DHE	Document participation.	Staff participated in “Project STORM”, the consortium of Cape Cod Phase II communities that provides networking and training/education opportunities. DHE staff participated in workshop entitled “Managing Stormwater for Low Impact Development (LID)” hosted by Association to Preserve Cape Cod and MA Bays Program.	Continue to participate in Project STORM and take advantage of education /training opportunities.
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6.7	DPW Permit Filing	DPW	File for applicable Conservation Permits	Goal Met. DPW routinely files for applicable permits.	Continue to file as applicable.
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**7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<if applicable>>**

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 9</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 10</b>
7.1	No Discharge Area (NDA)	DHE	NDA enacted	Goal met. NDA enacted for Pleasant Bay. NDA enacted for outer Cape Cod waters.	Work with partners to establish NDA for Nantucket Sound.
Revised					
7.2	Comprehensive Wastewater Management Plan (CWMP)	DHE, CAC, Water & Sewer	CWMP completed. Town Meeting action to begin implementation.	Four (4) construction contracts (expanded wastewater treatment facility, pump stations, and 2 collection system expansions) continued in Permit Year 9 (2011). Construction contract #4, side street collection system, completed in Year 9.	Oversee construction on three remaining contracts for Phase 1A of the CWMP. Continue planning for Phase 1B.
Revised					
Revised					
Revised					
Revised					
Revised					

**7a. Additions**

7.3	No Discharge Area (NDA) for Pleasant Bay and Chatham Harbor.	DHE	NDA enacted	Goal met. Pleasant Bay NDA enacted. NDA enacted for outer Cape Cod waters.	Work with partners to establish NDA for Nantucket Sound.
7.4	Fertilizer Management	DHE	Implement fertilizer management BMPs	Pleasant Bay Alliance forwarded municipal fertilizer management policy to town for adoption.	Review Policy and work with Board of Selectmen on adoption.

**7b. WLA Assessment**

**Part IV. Summary of Information Collected and Analyzed**

The Town of Chatham was the first Massachusetts community to have nitrogen-loading thresholds completed as part of the MADEP’s Massachusetts Estuaries Project. The thresholds were incorporated into the town-wide Comprehensive Wastewater and Nutrient Management Planning Program. Final CWMP/Final EIR completed and approved; Phase 1 implementation (construction) began in March 2010.

**Part V. Program Outputs & Accomplishments (OPTIONAL)**

**Programmatic**

Stormwater management position created/staffed	(y/n)	1, collateral duty
Annual program budget/expenditures	(\$)	\$20,000*

**\* In addition to DPW funding for routine drainage improvements.**

**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	(#)	Yes
▪ community participation	(%)	204 Households
▪ material collected	(tons or gal)	21,643± pounds
School curricula implemented	(y/n)	

**Legal/Regulatory**

In Place  
Prior to      Under  
Phase II      Review      Drafted      Adopted

Regulatory Mechanism Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination				
▪ Erosion & Sediment Control		X		
▪ Post-Development Stormwater Management		X		
Accompanying Regulation Status (indicate with "X")		X		
▪ Illicit Discharge Detection & Elimination				
▪ Erosion & Sediment Control		X		
▪ Post-Development Stormwater Management		X		

X

**Mapping and Illicit Discharges**

Outfall mapping complete	(%)	100
Estimated or actual number of outfalls	(#)	30
System-Wide mapping complete	(%)	100
Mapping method(s)		
▪ Paper/Mylar	(%)	

▪ CADD	(%)	
▪ GIS	(%)	60
Outfalls inspected/screened	(# or %)	
Illicit discharges identified	(#)	
Illicit connections removed	(# ) (est. gpd)	
% of population on sewer	(%)	
% of population on septic systems	(%)	
		5
		95

### 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)	1/3 OF TOWN PER YEAR
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	1/3 OF TOWN PER YEAR
Total number of structures cleaned	(#)	±
Storm drain cleaned	(LF or mi.)	400 600 L.F.
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	10 tons
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		COMPOST.
Cost of screenings disposal	(\$)	

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	
Qty. of sand/debris collected by sweeping	(lbs. or tons)	1 340 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	COMPOST
Cost of sweepings disposal	(\$)	
Vacuum street sweepers purchased/leased	(#)	
Vacuum street sweepers specified in contracts	(y/n)	
		1

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 <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand	50
Pre-wetting techniques utilized	(y/n)	50 available not used last No
Manual control spreaders used	(y/n)	
Automatic or Zero-velocity spreaders used	(y/n)	
Estimated net reduction in typical year salt application	(lbs. or %)	Yes
Salt pile(s) covered in storage shed(s)	(y/n)	
Storage shed(s) in design or under construction	(y/n)	Yes