

**Municipality/Organization:** Town of Eastham, MA  
**EPA NPDES Permit Number:** MAR041110  
**MassDEP Transmittal Number:** W- 040891  
**Annual Report Number & Reporting Period:** Year 11  
April 1, 2013 – March 31, 2014

**NPDES PII Small MS4 General Permit  
Annual Report  
(Due: May 1, 2014)**

**Part I. General Information**

**Contact Person:** Jane Crowley **Title:** Health Agent  
**Telephone #:** (508) 240-5900 **Email:** jcrowley@eastham-ma.gov  
**Mailing Address:** 2500 State Highway, Eastham, MA 02642

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:** Sheila Vanderhoef  
**Printed Name:** Sheila Vanderhoef  
**Title:** Town Administrator  
**Date:** April 30, 2014

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

The Town of Eastham has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions.

### 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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1.1	Educational Brochures	DPW, Health	Development of Brochures	Updated brochures; disseminated brochures concerning hazardous waste disposal days. Continued to coordinate with Cape Cod Commission on informational campaign. Drug Drop Box located in Police Department available 24/7 to remove medication from waste stream.	Continue to update educational brochures as new information arises; provide information on hazardous waste disposal days. Continue efforts to educate the public about proper disposal of unwanted medical waste.
Revised	Brochures educate the public about proper disposal of medical waste and prescription medication for unwanted and unused medical waste drop off box available to the public  Participate in Drug Take Back Day and offer Drop Off box open 24 hours, 7 days a week.  Participate in National Drug Take Back Day	Health, Police	Proper disposal of prescription and non prescription drugs		
1.2	Mailings to Homeowners	Health	Distribution of Brochures	Homeowner mailings regarding importance of septic system maintenance.	Continue annually. 3,500 approximate number of mailings have been sent in 2014 to homeowners who have not pumped septic system in 3 or more years
Revised	<a href="http://www.eastham-ma.gov/Public_Documents/EasthamMA_Health/index">http://www.eastham-ma.gov/Public_Documents/EasthamMA_Health/index</a> septic pumping brochure				
1.3	Mailing to all Property Owners  Participate in Regional Waste water Planning efforts with Cape Cod Commission 208 Project	Health	Distribution of Brochures and educational presentation on wastewater management	Homeowner mailings regarding importance of wastewater management plan including storm water.	Air local wastewater presentation and educational video on local cable and website video on demand

1.4	<p>Coastal/Pond Clean-up</p> <p>Remediation of Herring Pond conducted October 2012 with Alum Treatment</p> <p>Alum Treatment of Great Pond conducted October 2013</p>	<p>ConCom, DPW, Health Dept., Water Management Committee</p>	<p>Conducting Clean-up</p> <p>Pond water quality monitoring for phosphorus + A1 profiles. Also monitor D.O./PH/ALK dissolved; see attached.</p>	<p>Private owners clean pond areas and test fresh water. DPW cleans as necessary. Mutt-mitt project for dog waste has been implemented and continued. Enhanced enforcement of pet regulations. Form local Citizens Advisory group to facilitate compliance</p>	<p>DPW continues to clean up as necessary. Possible expansion of mutt-mitt program to other areas of town. Review pond report from CCC:</p> <p>Water quality monitoring to continue.</p>
Revised				<p>Alum Treatment has improved water quality</p>	
1.5	<p>Office Brochure</p>	<p>NR, DPW, Planning</p>	<p>Availability of Brochures</p>	<p>Brochures with local contact information corresponding with 1.1 displayed in NR, DPW, and Town Hall. Distribute educational materials from Cape Cod Water Protection Collaborative or Massachusetts Estuaries Project. Updated brochures; disseminated brochures concerning hazardous waste disposal days. Continued to coordinate with Cape Cod Commission on informational campaign.</p>	<p>Continue to update brochures and informational/educational brochures in Year 11, including information on fertilizers and other potential contaminants. Review grant- funded Pleasant Bay Watershed Management Plan for cross-applicability. Continue strategies to reduce TMDLs as required in Draft Mass Estuaries Report for Rock Harbor. Final reports on TMDL for Nauset expected 2014. Continue to update educational materials as new information arises; provide information on hazardous waste disposal days.</p>
Revised					

**1a. Additions**

1.6	Post information on Countywide Rain Barrel Distribution Program <a href="http://www.eastham-ma.gov/Public_Documents/EasthamMA_Planning/rainflyer10.pdf">http://www.eastham-ma.gov/Public_Documents/EasthamMA_Planning/rainflyer10.pdf</a>	DPW, NR, Planning	Availability of rain barrels	Disseminate information from the Cape Cod Groundwater Guardian Team	Continue indefinitely
1.7	Beach Signage	Health	Post signage	Inspect condition of signage at every marine & freshwater beach to enforce compliance with state beach regulations, noting contact info, testing data and periods of testing	Continue indefinitely

## 2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
2.1	Stormwater Management Program	NR, DPW, ConCom, Planning, Health, WMC	Development of Program, including prioritization of sites	Program has been developed and sites have been identified. Catchbasins and discharge pipes have been mapped in GIS database, based on paper maps. <a href="http://www.eastham-ma.gov/Public_Documents/EasthamMA_Planning/NPDES/Maps/">http://www.eastham-ma.gov/Public_Documents/EasthamMA_Planning/NPDES/Maps/</a> Obtaining quotes for GPS equipment	Contacted Mass State Highway about stormwater drainage into Salt Pond and Minister Pond in attempt to mitigate impact to ponds and develop best management practices.
Revised	<i>Map updated September 2009; Priority outfall maps prepared and posted</i>				
2.2	Pollution Reporting	NR, DPW, Pond Stewards	Visual Monitoring / Recording	Continue routine monitoring of marine areas conducted by NR staff 5 times per week, daily monitoring of drainage system/road network by DPW, and monitoring of fresh surface waters by Eastham Pond Stewards. Monitoring capabilities augmented for summer months in Rock Harbor (marina) by seasonal employee. NR monitoring of Town Cove bacteria levels with MA Division of Marine Fisheries.	Continue with monitoring as described; receive report from Cape Cod Commission's monitoring efforts for action. Pond Report implementation strategies reviewed. <a href="http://www.barnstablecountyhealth.org/bseastham.htm">http://www.barnstablecountyhealth.org/bseastham.htm</a>
Revised					
Revised					

### 2a. Additions

2.3	Wiley Park Demonstration Project	NR	Educate public about alternative low impact sustainable landscape options	Project implementation	Install project by June 1, 2014
2.4	Pond Associations	NR, Health	Conduct outreach for Pond Remediation Project Planning	2 Private pond associations formed to support Pond issues: Work to educate and gain support for pond remediation and continue to encourage best management practices	Continue indefinitely. Bi annual Association Meeting Planned to update developments on best management practices and pond remediation strategies.

### 3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3.1 Revised	Map Outfalls	NR, DPW	Comprehensive Map GIS/GPS	Program has been developed and sites have been identified.	Continue to Refine and enhance source point/waterways map.
3.2 Revised	Detection of Non-Stormwater Discharge	NR, Health	Correction of Discharges	Continue to identify no stormwater discharges and remedy situations as they arise, depending on the source of the discharge	Continue project indefinitely. Update map as needed
3.3 Revised	Dry Weather Flow Screening	NR, Health	Screening Testing; Correction of Discharges	Incorporate dry weather flow screening into the routine monitoring of marine areas conducted by NR staff 5x per week spring through fall.	Continue project indefinitely.
3.4 Revised	Reporting Line <i>A team is assembled when an illicit discharge is confirmed (DPW, Health, Fire, Building Inspector)</i>	NR, DPW, Fire	Establishment of Line	Line established and maintained for NR and DPW to report any inappropriate inputs to the MS4. Reports involving oil or hazardous waste is reported to the Fire Dept, and MA DEP.	Illicit Discharge and Detection Hotline established. <a href="http://www.eastham-ma.gov/Public_Documents/EasthamMA_BBoard/1022B6F80">http://www.eastham-ma.gov/Public_Documents/EasthamMA_BBoard/1022B6F80</a> Continue project indefinitely.
3.5 Revised	Hazardous Product Collection Medical Waste Disposal Day	Health, DPW, Recycling Health, Police	Conducting Collection Day Conduct Collection Day	Hazardous waste collection days schedules for July 19, 2014 and September 20, 2014. Planned Medical Waste take back day conducted in conjunction with DEA. Drop Box available in Police Department 24/7	Continue project indefinitely. Planned for July 19, 2014 and September 20, 2014.

#### 3a. Additions

3.6	Outfall Elimination	DPW	Reduction of outfalls contributing to bodies of water	Projects Completed	Maintenance and Operations Plan
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3.7	I'DDE	DPW Board of Health	Found and Eliminated	See attached enforcement	Continue monitoring
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#### 4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4.1 Revised	Draft Construction Site Runoff Control Bylaw	Planning	Develop Bylaws	Bylaw adopted by Planning Board and Town Meeting <a href="http://www.eastham-ma.gov/Public_Documents/EasthamMA_Planning/Legal_Notices/ForATM2010/MLU_Form7_02-18-10_PBNNotice.pdf">http://www.eastham-ma.gov/Public_Documents/EasthamMA_Planning/Legal_Notices/ForATM2010/MLU_Form7_02-18-10_PBNNotice.pdf</a>	Implement bylaw
4.2 Revised	Enact Construction Site Runoff Control Bylaw	ConCom, Planning, Town Meeting	Implement Bylaw	Continue to discuss the creation of a bylaw to be incorporated into local wetland control bylaw and local subdivision rules and regulations.	Continue to work on the development and implementation of bylaws. There is a policy, but not a bylaw.
4.3 Revised	Sand Nourishment	ConCom	Regulations	Continuation of goal for better compliance and quality of sand. NR agent frequently meets with applicants.	Homeowners required to do sand nourishment must do so with sand of comparable grain size to what is natural with no debris.
Revised					

#### 4a. Additions


### 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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
5.1 Revised	Construction Site Runoff Control Bylaw	ConCom,	Develop Bylaws	Implement bylaw which was incorporated into local wetland control bylaw and local subdivision control rules and regulations.	Continue to work on the development and implementation of a bylaw. Review bylaw for adoption at town meeting for ConCom. Continue “Limit of Work” in Order of Conditions for project as well as use hay bales &/or silt fence until area is stabilized.
5.2 Revised	Amend Site Plan Review	Planning	Bylaw	Bylaw adopted.	Goal achieved
5.3 Revised	Enact Construction Site Runoff Control Bylaw	ConCom, Planning, Town Meeting, Bd. Of Highway Surveyors	Implement Bylaw	Enacted bylaw which was incorporated into local wetland control bylaw and local subdivision rules and regulations.	Enforce bylaw. Work on the development and implementation of bylaws completed
Revised					

#### 5a. Additions

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## 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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6.1	Annual Training	NR, DPW, Planning, Fire, Health	Training Session	Annual training on best practices for pollution prevention and mitigation.	Annual training for worker safety, attend educational workshops for employees or public given by CCC or WBNERR, Barnstable County Health
Revised	Right to Know Employee Training on Hazards and STS/GHS				
6.2	Review of Town Properties	DPW, Building Maintenance	Monitor and Correct Problems	Audit conducted by MIIA.	Continue indefinitely.
Revised					
6.3	Review of Town Operations	DPW, Facilities Manager	Monitor and Correct Problems	Pollution Prevention Control	Ongoing project
Revised					
6.4	Catch basin Cleaning	DPW	Updated Log	Clean all town-owned catchbasins in spring and fall 2014	Clean all town-owned catchbasins in Spring and Fall 2014
Revised	<a href="http://www.eastham-ma.gov/Public_Documents/EasthamMA_Planning/NPDES/DPW%20Street%20Sweeping%20and%20Catchbasin%20Policy.pdf">http://www.eastham-ma.gov/Public_Documents/EasthamMA_Planning/NPDES/DPW%20Street%20Sweeping%20and%20Catchbasin%20Policy.pdf</a>				
6.5	Street Sweeping	DPW	Record areas swept	Sweep all town-owned roadways and parking lots in spring and fall 2014. Received beneficial use determination based on testing.	Sweep all town-owned roadways and parking lots in Spring and Fall 2014
Revised					
6.6	Remediation of existing outfall	DPW	Elimination of stormwater discharge	One discharge site identified: Cole Road. Funding not received.	Complete survey
Revised					
6.7	Drainage Alterations	DPW	Catch basin Replacement	Catch basins identified for replacement or closure.	Continue project indefinitely. Incorporate green infrastructure in at least 1 location
Revised					
6.8	Fuel Tanks	Fire	Fuel Tank Removal	Goal achieved.	Goal achieved
Revised					

6.9 Revised	Flooding Remediation	DPW	Construction of Detention pond	Brackett Road stormwater design completed	Ensure compliance
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**6a. Additions**

6.10	Pesticide/Fertilizer Policy	Board of Selectmen	Fertilizer and Pesticide reduction	Adopted Policy Developed	Policy adopted
6.11	Beach Cleaner Purchased	DPW	Aerate sand and remove debris	Operated June through September	Continue Beach Cleaning
6.12	Vegetation management with goats	DPW	Elimination of Herbicide	Pilot project complete	Publicize program

**7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<Not applicable>>**

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
Revised					
Revised					
Revised					

**7a. Additions**

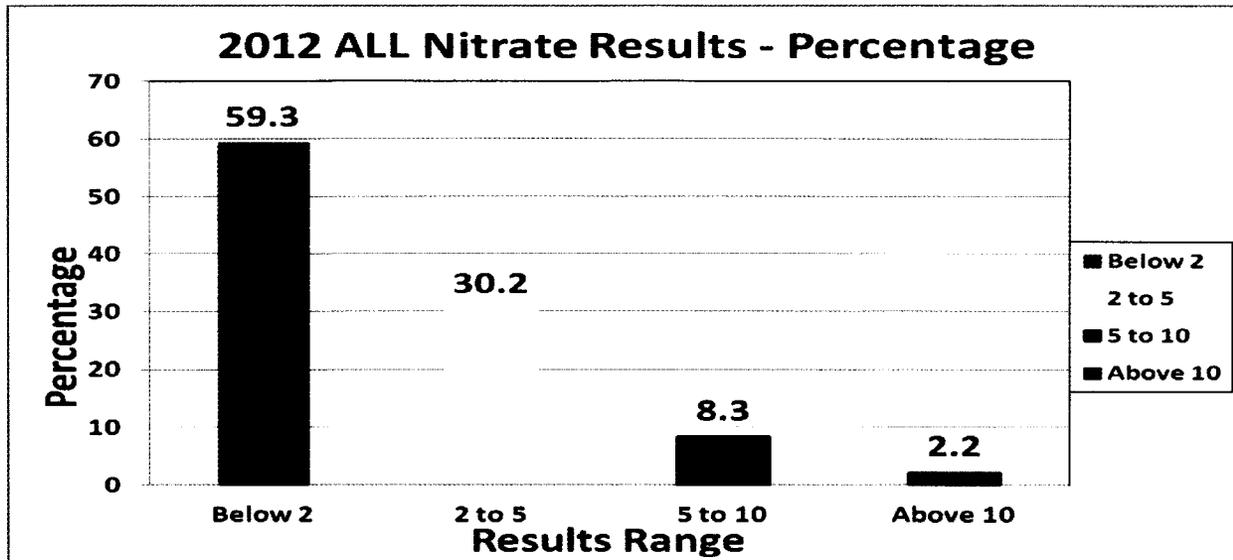

#### **Part IV. Summary of Information Collected and Analyzed**

**Freshwater Sampling** – The Cape Cod Pond and Lake Stewardship (PALS) are continually sampling the Eastham ponds in an effort to identify possible pollutant and recommend best management practices for containing and eliminating possible pollutants. Eastham has a total of 12 ponds currently being sampled. (<http://www.capecodcommission.org/water/PALS/home.htm>). See attached.

**Beach Sampling** – Sixteen Eastham beaches (12 saltwater and 6 freshwater) were sampled during the summer months by the Barnstable County Department of Health and Environment. In 2012 over 2234 samples were tested for E. Coli or Enterococci as applicable. In 2012 over 300 weekly samples were tested. Samples exceeding the limits result in the posting of swimming advisory notices and posting on our website. In 2011 only 4 samples exceeded were detected. Repeat samples taken the following day were within acceptable limits in all cases and the beaches were reopened to the public. (<http://www.barnstablecountyhealth.org/bseastham.htm>). See attached.

**Groundwater Sampling** – The town continued its voluntary sampling project to evaluate levels of nitrate in residential wells. Each year one-third of the town is sampled allowing for a three-year sampling rotation schedule. We are experiencing a return of approximately 60% of the vials mailed.

<b>Year</b>	<b># Samples Returned</b>
2013	1761
Below 2	991
2 to 5	542
5 to 10	185
Above 10	43



**Shellfish Sampling** – The Natural Resources Office continues to test for Red Tide and participate in shellfish sampling in coordination with Massachusetts Division of Marine Fisheries on a weekly basis through the Spring, Summer and Fall.

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

(Since beginning of permit coverage unless specified otherwise by a \*\*, which indicates response is for period covering April 1, 2009 through March 31, 2014)

**Programmatic**

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	
Annual program budget/expenditures **	(\$)	
Total program expenditures since beginning of permit coverage	(\$)	
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		

**Education, Involvement, and Training**

Estimated number of property owners 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.)	
Shoreline cleaned since beginning of permit coverage	(mi.)	

Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	
▪ community participation **	(# or %)	
▪ material collected **	(tons or gal)	
School curricula implemented	(y/n)	

### Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	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

	(Preferred Units)	Response
Outfall mapping complete	(%)	
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	

Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	
Outfalls inspected/screened **	(# or %)	
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	
Illicit discharges identified **	(#)	
Illicit discharges identified (Since beginning of permit coverage)	(#)	
Illicit connections removed **	(#); and (est. gpd)	
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	
% of population on sewer	(%)	
% of population on septic systems	(%)	

### Construction

	(Preferred Units)	Response
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 (for proper BMP installation & operation) completed **	(# or %)	
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	
Low-impact development (LID) practices permitted and encouraged	(y/n)	

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**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)	
Qty of structures cleaned **	(#)	
Qty. of storm drain cleaned **	(%, LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	
• Disposal cost**	(\$)	
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	
• Vacuum truck(s) owned/leased	(#)	
• Vacuum trucks specified in contracts	(y/n)	
• % Structures cleaned with clam shells **	(%)	
• % Structures cleaned with vector **	(%)	

	(Preferred Units)	Response
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)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	
• Disposal cost**	(\$)	
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	
• Vacuum street sweepers owned/leased	(#)	
• Vacuum street sweepers specified in contracts	(y/n)	
• % Roads swept with rotary brush sweepers **	%	
• % Roads swept with vacuum sweepers **	%	

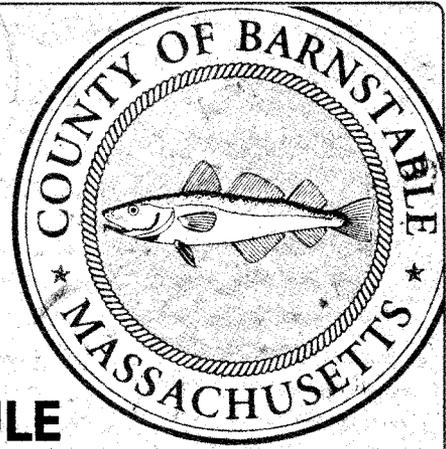
Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	
▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	
Integrated Pest Management (IPM) Practices Implemented	(y/n)	

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used **  (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % CaCl <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand	
Pre-wetting techniques utilized **	(y/n or %)	
Manual control spreaders used **	(y/n or %)	
Zero-velocity spreaders used **	(y/n or %)	
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/l <sub>n</sub> mi. or %)	
Estimated net reduction or increase in typical year sand application rate **	(±lbs/l <sub>n</sub> mi. or %)	
% of salt/chemical pile(s) covered in storage shed(s)	(%)	
Storage shed(s) in design or under construction	(y/n or #)	
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	

## Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	
<ul style="list-style-type: none"><li>Treatment units induce infiltration within 500-feet of a wellhead protection area</li></ul>	# or y/n	

# A Resident's Guide to Difficult-to-Manage Waste



## 2014 COLLECTION SCHEDULE Towns of Eastham & Orleans



Produced by Cape Cod Cooperative Extension — [www.capecodextension.org](http://www.capecodextension.org) Cape-Cod-HazMat-and-Resource-Recovery

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Household Hazardous Products (HHP) Collections are funded by the Towns of Eastham & Orleans, Covanta SEMASS, and Barnstable County / Cape Cod Cooperative Extension.



POSTAL CUSTOMER  
ECRWSS

PRSRST STD  
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Cape Cod Cooperative Extension  
P.O. Box 367  
Deeds & Probate Building  
Barnstable, MA 02630-0367



## 2014 COLLECTION SCHEDULE



### Towns of Eastham & Orleans

These collections are open to all Town of Eastham & Orleans residents & homeowners.  
Local businesses must call to participate at cost: 508-375-6699

**Date:** July 19  
**Time:** 9:00 am to Noon  
**Location:** Eastham DPW/Natural Resources  
555 Old Orchard Road, Eastham

**September 20**  
**9:00 am to Noon**  
Orleans DPW / Highway Garage  
22 Bay Ridge Lane, Orleans

Questions?

Contact the Barnstable County  
Hazardous Materials Program  
(508)375-6699 / (800)319-2783

## 2013 All Nitrate Results Summary

		Percentage				Total #	Number				
		Below 2	2 to 5	5 to 10	Above 10		Below 2	2 to 5	5 to 10	Above 10	5+
Area 1	North	50.2	33.7	14.0	2.2	315	158	106	44	7	51
Area 2	Central	52.2	34.4	9.6	3.8	659	344	227	63	25	88
Area 3	South	62.1	26.6	9.9	1.4	787	489	209	78	11	89
		56.3	30.8	10.5	2.4	1761	991	542	185	43	228

		Percentage				Total #	Number		
		Below 2	2 to 5	5+	Below 2		2 to 5	5+	
Area 1	North	50.2	33.7	16.2	315	158	106	51	
Area 2	Central	52.2	34.4	13.4	659	344	227	88	
Area 3	South	62.1	26.6	11.3	787	489	209	89	
		56.3	30.8	12.9	1761	991	542	228	

Area	Map	Percentage				Total #	Number			
		Below 2	2 to 5	5 to 10	Above 10		Below 2	2 to 5	5 to 10	Above 10
1	1	73.3	26.7	0.0	0.0	15	11	4	0	0
1	2	59.1	36.4	4.5	0.0	22	13	8	1	0
1	4	46.3	40.0	13.8	0.0	80	37	32	11	0
1	5	32.8	34.3	28.4	4.5	67	22	23	19	3
1	6	42.9	47.6	9.5	0.0	21	9	10	2	0
1	7	53.8	31.9	9.9	4.4	91	49	29	9	4
1	23	100.0	0.0	0.0	0.0	10	10	0	0	0
1	24	100.0	0.0	0.0	0.0	5	5	0	0	0
1	7A	50.0	0.0	50.0	0.0	4	2	0	2	0
1	22A	0.0	0.0	0.0	0.0	0	0	0	0	0
		50.2	33.7	14.0	2.2	315	158	106	44	7
Area	Map	Below 2	2 to 5	5 to 10	Above 10	Total #	Below 2	2 to 5	5 to 10	Above 10
2	8	37.6	40.8	12.0	9.6	125	47	51	15	12
2	9	58.5	29.6	9.2	2.8	142	83	42	13	4
2	10	48.1	39.4	8.7	3.8	104	50	41	9	4
2	11	54.9	33.6	10.7	0.8	122	67	41	13	1
2	12	55.8	38.9	4.2	1.1	95	53	37	4	1
2	20	46.9	31.3	15.6	6.3	32	15	10	5	2
2	21	68.8	15.6	12.5	3.1	32	22	5	4	1
2	25	100.0	0.0	0.0	0.0	7	7	0	0	0
		52.2	34.4	9.6	3.8	659	344	227	63	25
Area	Map	Below 2	2 to 5	5 to 10	Above 10	Total #	Below 2	2 to 5	5 to 10	Above 10
3	13	71.5	17.1	10.6	0.8	123	88	21	13	1
3	14	59.4	27.3	12.5	0.8	128	76	35	16	1
3	15	52.0	30.4	13.7	3.9	102	53	31	14	4
3	16	0.0	0.0	0.0	0.0	9	4	1	2	2
3	17	57.9	33.7	7.9	0.5	190	110	64	15	1
3	18	66.1	25.8	7.5	0.5	186	123	48	14	1
3	19	71.7	17.4	8.7	2.2	46	33	8	4	1
3	15A	66.7	33.3	0.0	0.0	3	2	1	0	0
		62.1	26.6	9.9	1.4	787	489	209	78	11
<b>Overall TOTAL</b>		<b>56.3</b>	<b>30.8</b>	<b>10.5</b>	<b>2.4</b>	<b>1761</b>	<b>991</b>	<b>542</b>	<b>185</b>	<b>43</b>

## 2013 ALL Nitrate Results - Percentage

