

Municipality/Organization:	Town of Bourne
EPA NPDES Permit Number:	MAR041094
MassDEP Transmittal Number:	W- 040428
Annual Report Number & Reporting Period:	Year 10 April 2012 – April 2013

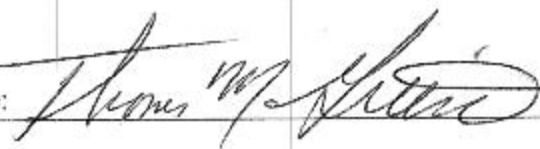
NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2013)

Part I. General Information

Contact Person: Mr. Thomas M. Guerino	Title: Town Administrator
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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: Thomas M. Guerino

Title: Town Administrator

Date: 4/30/13

Part II. Self-Assessment

The Town of Bourne has completed the required self assessment of the annual compliance review for the Phase II Stormwater Program. In accordance with the NPDES Phase II Stormwater requirements, the following topics were evaluated for the completion of the annual report:

1. Compliance with minimum Stormwater Phase II Regulatory Requirements.
2. Ongoing housekeeping for Municipal Operations.
3. Review of Completion of Stormwater Bylaw
4. Review citizen and staff Stormwater Committees.

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 Revised	Education Brochure	Planning/Planner	Distribution	Posted on web site and made available in Town Hall.	Continue to distribute. Develop new material to hand out at Town Meeting. Provide education display boards in Town Hall.
1-2 Revised	Establish Oversight Committee	Board of Selectmen	Advertise and Appointments	Completed committee appointments 3/30/04.	Committee has dropped from 7 to 5 members, find additional members. Engage Committee to serve as reps to educate public.
1-3 Revised	General Storm Water Info	Board of Health		Link of BOH web page to CC Extension – Hazardous waste	Maintain link.

1a. Additions

1a-1	Town Publicity Initiatives	Public Works Supt, Integrated Solid Waste (ISWM) Manager, Stormwater Working Group, Board of Health And Police Dept.	Handouts and Posters	• Posters at Public Buildings • Regional Municipal Hazardous Waste Collections (4 times per year), flyers publicizing • Municipal weekly curbside recycling • Drop off center • Used motor oil collection at drop off center. • Paint collection. • ISWM continues to publicize and offer rain barrels and compost bins to residents. • Flyers distributed at Town Hall on proper application of lawn products, authored by Buzzards Bay Action Committee. • Board of Health & ISWM educate the public on how to dispose of unused medications properly, not down the drain. • Twice-yearly Unused Medications collection days at Police Station. • Fire Department has implemented a medical wastes collection program.	Continue and improve initiative.
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1a-2	Network with other Agencies	Supt. DPW, Conservation Agent, BOH Agent and Planning Dept staff	Meet 2 times per year minimum.	- Participated with Cape communities through resources of Cape Cod Commission. - Conservation Agent works with other member of Buzzards Bay Action Committee.	- Work closely with Cape Cod Commission Group to share information and reduce costs. Work with Buzzards Bay National Estuary Program staff to get information to the public. - Continue to utilize resources of Buzzards Bay National Estuary Program to seek Stormwater remediation construction funds. - Continue networking efforts
1a-3	Proper Disposal of unwanted Medications (Crush Don't Flush)	Board of Health, ISWM, Barnstable County Hazardous Materials Program	- Reduced concentration of medications & by-products in groundwater - Number of events	- Board of Health displays and distributes flyers (Think Twice About Unwanted Medication Disposal) by Barnstable County Hazardous Materials Program and UMass Cooperative Extension Service. - ISWM website continues to instruct residents not to flush pharmaceuticals down the drain. - Link on Board of Health web page http://www.townofbourne.com/Departments/Regulatory/BoardofHealth/ to Cape Cod Extension Service pamphlet "How to Dispose of Unwanted Medications."	- Continue these initiatives. - Police Dept to continue this practice twice a year.
1a-4	General Stormwater information	Board of Health		Link on Board of Health web page to Cape Cod Extension Service info on Hazardous Waste & Water Quality, and fact sheet on Drinking Water Wells detailing sources of groundwater pollution including stormwater discharge	Continue these links

2. Public Involvement and Participation

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
2-1 Revised	Select men's Task Force on Local Pollution	Board of Selectmen	Appointment completed	Meets monthly, oversees pollution related issues	Continue to meet and address pollution remediation
2-2 Revised	Present annual progress report at Selectmen's meeting.	Community Oversight Group and Public Works Supt.	Meet and present information to Selectmen.	Stormwater Oversight group meets periodically with Selectmen also includes Selectmen in distribution of agendas & minutes.	Selectmen appoint the Stormwater Committee annually and are notified periodically of progress.

2a. Additions

2a-1	Medical Wastes Collection	Fire Dept	Medical wastes collected	Fire Department has implemented a medical wastes collection program.	Continue this program.
2a-2	Hazardous Wastes Collection	ISWM	Hazardous wastes collected	Hazardous Waste Collection Days (regional), 4 per year, one in Bourne.	Continue this program.
2a-3	Compost bins and rain barrels	ISWM	Compost bins & Rain barrels distributed	ISWM distributes composting bins and rain barrels to residents at a discount.	Continue this program.
2a-4	Municipal Compost	ISWM	Finished compost distributed to public	ISWM distributes free compost to residents	Continue this program.
2a-5	Unwanted Medication Take-Back days	Police Dept and Board of Health	Amount of medications collected		Continue this 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
3-1	Inventory Storm Drain System.	Supt. DPW and Planning Department	• Maintain map with drainage structures and outfall locations.	• Mapping of existing Bourne Stormwater Drainage system completed, May 2006. • The Planning Department's Engineering/Planning Tech/GIS Coordinator updates data per as-built plans of approved subdivisions. • Maps of Stormwater Drainage system at DPW & Town Hall. • DPW has three GPS units to update as necessary.	Engineering /Planning Tech/GIS Coordinator continue to update data per as-built plans of approved subdivisions and information provided by DPW Supt.
Revised					
3-2	Illicit discharge detection plan.	Supt. DPW and BOH Agent	• Respond to all complaints and record. • Install leaching chambers to reduce run-off to waterways.	• Staff is checking outfalls in dry weather and looking for suspicious indicators. • Board of Health completed a written illegal detection plan, April 2009.	Staff to continue checking outfalls in dry weather and look for suspicious indicators. Employees have been given training to also spot illicit discharges.
Revised					
3-3	General Information Materials	Supt. DPW and Stormwater Community Oversight Group	• Produce informational brochures or flyer. • Distribute information to all employees. • Distribute information to businesses. • Provide to public at Library, Town Hall and Town Meeting.	• Posters prominent at Town Hall and Public Library. • Due to reduction in staff materials have not been displayed or updated.	• Reinstate program to distribute materials. • Add distribution to schools and public gathering places.
Revised					

3-4	DPW training for Illicit Connections	Supt. DPW	Provide training materials.	Distribute materials to employees	Continue to share training materials.
Revised					
3-5	Illicit discharge prohibition	Board of Health and Supt. DPW	Necessary Regulation changes.	Regulation adopted by Board of Health April 13, 2005	Action complete.
Revised					

3a. Additions

3a-1	Stormwater Remediation Grant Application	Department of Natural Resources and DPW	New catch basins & leaching galleys installed	Applied for & received \$20,000 grant through Buzzards Bay Project for design of stormwater remediation project at Taylor's Point marina. Design and engineering complete.	Continue stormwater remediation efforts.
3a-2	Stormwater remediation at Buttermilk Bay	DPW, ConCom (Public)	New stormwater filtration system installed	In progress, 50% complete	
3a-3	Stormwater remediation at Circuit Avenue	DPW, ConCom (Public)	New stormwater filtration system installed at 3 areas	Complete	
3a-4	Stormwater remediation at Clubhouse Drive	DPW Private (Betterment)	New stormwater filtration system installed	Complete	
3a-5	Illicit connection and discharge detection and enforcement	Board of Health	Number of events		Continue this activity

4. Construction Site Stormwater Runoff Control

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
4-1	Wetlands By-law for Stormwater Management	Conservation Commission	Adoption of additional Regulations and/or By-laws to expand and improve requirements for stormwater management.	- Conservation Commission currently administers provisions of the Massachusetts Wetlands Protection Act, Riverways Act, and Bourne's own Wetland Regulations, for all development projects within 100 & 200 feet of a wetlands resource. - Projects before the Conservation Commission must demonstrate compliance with MA Storm Water Management Standards as reflected in an Order of Conditions from the Conservation Commission.	Conservation Commission reviews recommendations for revisions to expand and improve stormwater management practices.
Revised					
4-2	Subdivision Regulations for Stormwater Management	Planning Board, Zoning Enforcement Officer, Bldg. Inspector, DPW Supt.	Adopt Regulations/By-laws as necessary to expand and improve requirements for stormwater management.	- Stormwater management is currently required, and standards specified, by Bourne's Subdivision Regulations. - Planning Board currently requires certification of Site Plan stormwater design and calculations by a Registered Professional Engineer. - Town has been working with NRCS to update subdivision Regulations. - Planning Board will hold public hearing to adopt new regulation	- Planning Board amend Subdivision Regulations adopting Stormwater standards and procedures proposed in the new General Stormwater/Erosion Control Bylaw. - Town Staff, Boards & Committees promote passage of new bylaws. - Planning Board or authorized agents proposed to review, inspect and enforce all Stormwater management Permits except for projects with Conservation filings; projects before the Conservation Commission will have to demonstrate compliance with MA Storm Water Management Standards as reflected in an Order of Conditions from the Conservation Commission.
Revised					

4-3	Erosion control by-law	Planning Board, Conservation Commission, Zoning Enforcement Officer, Bldg. Inspector, and DPW Supt.	Adoption of Construction Erosion Control language in a Town Stormwater By-law and/or Subdivision Regulations.	• Construction Erosion Controls are currently required, and reviewed by Planning Staff and Planning Board, for commercial projects under Site Plan Review. • Town has been working with NRCS to revise the Subdivision regulations • The Planning Board will hold a public hearing	• Planning Board amend Subdivision Regulations to require construction Erosion Controls by specifying new standards as proposed in the new General Stormwater/ Erosion Control Bylaw. • Town Staff, Boards & Committees promote passage of new bylaw. • Planning Board or authorized agents proposed to review inspect and enforce all Stormwater Management Permits except for projects with Conservation filings; projects before the Conservation Commission will have to demonstrate compliance with MA Storm Water Management Standards as reflected in an Order of Conditions from the Conservation Commission.
Revised					
4-4	Site plan review/ construction site inspection program	DPW Supt., Planning Board, Building Inspector and Conservation Commission	• Review plans, inspect, pre-construction site visit. • A zoning bylaw is planned for the Spring 2014 Town Meeting	• Town has formal site plan-special permit review of commercial development, including PE Certified stormwater design, calculations, construction and post-construction erosion control measures. Conservation Commission currently reviews projects within 100 and 200 feet of wetlands resources. • Town has been working with NRCS	• Planning Board or authorized agents proposed to inspect and enforce all Stormwater Management Permits except for projects with Conservation filings; projects before the Conservation Commission will have to demonstrate compliance with MA Storm Water Management Standards as reflected in an Order of Conditions from the Conservation Commission.
Revised					

4a. Additions

4a-1	Request copy of commercial projects' construction permit 1+ acre filings with EPA.	Planning Board and regulatory staff		As part of Site Plan-Special Permit review process for commercial development projects.	Continue this practice.
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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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
5-1	Subdivision Regulations change	Planning Board, Zoning Enforcement Officer, Building Inspector, DPW Supt.	Regulation adopted by Planning Board and/or by-law to ensure full compliance with Stormwater requirements.	- Stormwater Management is currently required, and standards specified by Bourne's Subdivision Regulations. - Planning Board currently requires PE certification of Site Plan stormwater design consistent with Subdivision Regulations. - Town has been working with NRCS to update Subdivision Regulations	Planning Board adoption of revised Subdivision Regulations
Revised					
5-2	Erosion Control by-law	Planning Board, Zoning Enforcement Officer, Building Inspector, DPW Supt.	Adoption of post-construction erosion control language in a Town Stormwater By-law and/or in Subdivision Regulations.	- Post-construction erosion controls are currently required, and reviewed by Planning Staff and Planning Board for commercial projects under site plan-special permit review. - Town has been working with NRCS. - Stormwater/Erosion Control Bylaw, and is nearing completion of the bylaw to be to Planning Board for adoption.	- Town Staff, Boards & Committees promote passage of new bylaw. - Planning Board to adopt new bylaws & regulations. - Town Staff & Boards fine-tune proposed processes for permitting & enforcement.
Revised					

5a. Additions

5a-1	Request copy of commercial projects' construction permits 1+ acre filings with EPA.	Planning Board, staff		As part of Site Plan-Special Permit review process for commercial development projects.	Continue this practice.
5a-2	Downtown Buzzards Bay Zoning – rain gardens	Planning Board, regulatory staff	Rain gardens constructed	New Downtown Zoning District, passed in 2008 & 2009, states landscape planting areas should be constructed to serve as stormwater rain gardens.	Continue to enforce, recommend and educate re best management 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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6-1	Street sweeping program	Supt. DPW	Spring annual sweeping all streets/parking lots. Record periodic sweeping of other areas as needed.	- Goal has been met and exceeded. All primary arterial roadways swept a minimum of 8-9 times per year. - Disposal at double-lined landfill in Bourne. - Town utilizes 3 sweepers. - Winter salt stockpiles kept in storage shed.	Continue this program.
Revised					
6-2	Catch basin Cleaning/drain cleaning	Supt. DPW	500 catch basins per year	878 catch basins cleaned in past year with Town's Vac-All truck. - Disposal at municipal double-lined landfill. - All stormwater infiltration systems inspected and cleaned as needed.	Continue this program.
Revised					
6-3	DPW Annual Training	Supt. DPW	Preparation of education document and distribution.	- Distributed training material April 2013. - Policy document not yet complete.	Continue this program and complete the Policy Guide.
Revised					
6-3	Pet waste prohibition	DNR/Clerk	Pet waste education, signage and collection	- By-law exists. - Educational literature needs updating, will then resume distribution with dog licenses. - Dogs prohibited from beaches. - Added dog waste stations.	Continue to publicize Town By-law change passed in 2006 prohibiting dogs from all Town owned beaches.
Revised					
6-5	Regional Landfill ISWM (Integrated Solid Waste Management)	Town Administrator, BOH and ISWM General Manager	To provide and operate a state-of-the-art double-lined landfill for region.	Revenues fund local collection of municipal solid waste and recyclables at the curb. Household hazardous waste collection off site.	Facility and programs it supports are scheduled to continue.

Revised				• Residential recycling center offers drop-off for universal waste (mercury items), waste oil, used antifreeze, batteries, (NiCad, LI, auto & marine), paints (latex & oil), & used oil filters, also Swap Shop availability for re-use of usable items. • Facility is also depository for street sweepings & catch basin cleanings from municipal operations. • Quarterly monitoring protects groundwater. • Bylaw prohibiting water wells downgradient from landfill protects drinking water. • Facility offers rain barrels and compost bins. • ISWM website instructs residents not to flush pharmaceuticals down the drain. • Facility provides finished compost to residents from composting program at the landfill. • ISWM website offers information on sharps, hazardous waste collect dates & other important information & links.	
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6a. Additions

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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

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, 2010 through March 31, 2011)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	No
Annual program budget/expenditures **	(\$)	\$0
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 %)	11,000 ±
Stormwater management committee established	(y/n)	Yes
Stream teams established or supported	(# or y/n)	No
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	Yes
Shoreline cleaned since beginning of permit coverage	(mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	4
▪ community participation **	(# or %)	
▪ material collected **	(tons or gal)	2763 tons
School curricula implemented	(y/n)	Yes

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

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(#)	154
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	0%
▪ CADD	(%)	0%
▪ GIS	(%)	100%
Outfalls inspected/screened **	(# or %)	0
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	3
Illicit discharges identified **	(#)	0
Illicit discharges identified (Since beginning of permit coverage)	(#)	3
Illicit connections removed **	(#); and (est. gpd)	0
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	3
% of population on sewer	(%)	12%

% of population on septic systems	(%)	88%
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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)	

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	As needed
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	As needed
Qty of structures cleaned **	(#)	800
Qty. of storm drain cleaned **	(%, LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	2900 ±
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	land fill

Basin Cleaning Costs (Funded as part of overall DPW budget)		
• 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	(#)	1
• Vacuum trucks specified in contracts	(y/n)	
• % Structures cleaned with clam shells **	(%)	
• % Structures cleaned with vector **	(%)	100%

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	6/yr
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	12/yr
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	2800 ±
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	land fill
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	(#)	4
• Vacuum street sweepers <u>owned</u> /leased	(#)	
• Vacuum street sweepers specified in contracts	(y/n)	no
• % Roads swept with rotary brush sweepers **	%	100%
• % 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 ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	25% 0% 0% 0% 0% 0% 75%
Pre-wetting techniques utilized **	(y/n or %)	Yes
Manual control spreaders used **	(y/n or %)	Yes
Zero-velocity spreaders used **	(y/n or %)	No
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/lb mi. or %)	0%
Estimated net reduction or increase in typical year sand application rate **	(±lbs/lb mi. or %)	
% of salt/chemical pile(s) covered in storage shed(s)	(%)	Yes
Storage shed(s) in design or under construction	(y/n or #)	Yes
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	Yes

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	
Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	