

**Municipality/Organization:** Town of Berkley, MA

---

**EPA NPDES Permit Number:** MAR041092

---

**MassDEP Transmittal Number:** W-41005650

---

**Annual Report Number** **Year 11**  
**& Reporting Period:** **April 1, 2013 to March 31, 2014**

---

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

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

Contact Person: Scott A. Fournier

Title: Highway Surveyor

---

Telephone #: 508-824-8380

Email: Berhig@comcast.net

---

Mailing Address: 3R North Main Street, Berkley, MA 02779

---

#### 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: Scott A. Fournier

---

Title: Highway Surveyor

---

Date: 4-24-14

---

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

**The town of Berkley has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions, except for the following provisions:**

**Due to continuing concerns regarding other priorities for Town spending, the Town was unable to implement all the elements of the Storm Water Management Program by the expiration date of the first permit term, including Year 11 of the program. Specifically, the Town has not explicitly completed the following requirements:**

- **Implement water quality monitoring per BMP No. 2-2; The Town began to observe outfall water quality during the outfall mapping that was completed in 2012 and 2013.**
- **Fully map all town-owned outfalls per BMP No 3-2; In 2012 and 2013 it is estimated that more than 90% of the town's publicly owned manholes, catchbasins and outfall were mapped.**
- **Failed to fully develop an illicit discharge identification program per BMP No. 3-3. In 2013 the Town has begun the process of identifying priority areas for potential IDDE activities.**

**The Town was able to complete mapping of the majority of the town-owned outfalls and structures. During June 2013 approximately 80 outfalls were located using GPS and another 620 manholes, culverts and catchbasins were mapped. This represents about 50% of the Town. When combined with the mapping completed during the prior reporting period, it is estimated that more than 90% of the Town's MS4 has been mapped. During the 2013 mapping period, identified outfalls were visually assessed for dry weather flows and no visual evidence of illicit discharges was noted in any of the outfalls during the mapping period.**

**At the Town Meeting held in June of 2013 the Highway Department obtained \$6,500.00 for stormwater management which will be used to continue MS4 permit activities. Planned work for 2014 includes improvements to the existing mapping including the inclusion of pipes, swales and other water bodies to network existing mapped structures. If identified, additional structures will be added to existing mapping. Delineation of the drainage sub-catchments will be completed in areas where conveyance network mapping can be completed. A subsequent article for stormwater funding is being requested for Annual Town Meeting in June 2014 to obtain additional funding for IDDE efforts and other MS4 permit compliance activities.**

### 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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1-1	Create Stormwater Program and target groups likely to impact Stormwater	Board of Selectmen and Highway Surveyor	Prepare and send a mailing to residents. Post educational materials on stormwater on public kiosks	Stormwater information has been posted on public kiosks at Town Hall and at the Highway Department	Continue to post stormwater educational materials on public kiosks in Town Hall and at the Highway Department.
Revised					
1-2	Target Student Audiences with stormwater information	Board of Selectmen and Highway Surveyor	Obtained a copy of “After the Storm” video.	Video was provided to the school for incorporation into programs.	Continue to provide multi-media information as it becomes available through regulators or other NGO’s from whom the Town can obtain the material at no cost.
Revised					
1-3	Utilize Public Access Channel	Board of Selectmen and Highway Surveyor	Obtained copy of “After the Storm” video to show on Public Access Channel	Video was shown and was provided to school system thereafter. The Town will continue to utilize public access channels for dissemination of information regarding stormwater	No further activities are planned at this time. Further consideration for use of public access will be given as new material becomes available.
Revised					
1-4	Promote household hazardous waste recycling	Recycling and Solid Waste Department	The Town’s Recycling and Solid Waste Department accepts Hazardous Wastes during their usual business hours	The Town’s Recycling and Solid Waste Department accepts Hazardous Wastes during their usual business hours for proper disposal.	Continue to encourage the citizens of the Town of Berkley to dispose of their hazardous wastes properly in the containers provided.
Revised					

**1a. Additions**


## 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	Host Public Meetings on Stormwater	Board of Selectmen	Host joint meeting with local watershed groups.	No activities were conducted in Permit Year 11.	No activities are proposed for Year 12 due to budget cuts.
Revised					
2-2	Organize volunteer water quality monitoring	Board of Selectmen	Form stream teams and conduct water quality monitoring.	No progress has been made on this BMP.	Due to limited availability of staff, no activities are anticipated for Year 12. Further consideration will be given when the new permit is issued and conditions of the permit are clarified.
Revised					
2-3	Townwide Clean Ups	Board of Selectmen	Work with local community groups to conduct annual townwide clean ups.	At this time a townwide clean up is not scheduled due to budget cuts and also department priorities.	Try to reinstate the Town Wide spring cleanups.
Revised					
Revised					
Revised					

### 2a. Additions


### 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	Review Existing Bylaws	Board of Selectmen and Planning Board	Update Bylaws to address non-stormwater discharges to MS4.	At the Annual Town Meeting held on June 22, 2009 new additions to the bylaws were approved in regards to stormwater discharges.	Town Staff will continue to oversee needed changes in the Town Bylaws to regulate non stormwater discharges to the MS4.
Revised					
3-2	Map Outfalls	Highway Surveyor	Locate all outfalls and map all locations and identify receiving waters by the end of	90% of Town infrastructure - outfalls, culverts, catchbasins and manholes were mapped using GPS mapping technology in Years 10 & 11.	Network mapping of pipes, swales and open water conveyance planned for CY 2014..
Revised					
3-3	Procedure for non-stormwater discharges	Highway Surveyor	Development of program to detect illicit discharges.	An initial assessment of GPS outfalls from BMP 3-2 was completed in Years 10 & 11. No illicit discharges were noted using visual assessment techniques.	Active outfalls with dry weather flows will be revisited in Year 12. Visual observations of water quality will be noted.
Revised					
3-4	Establish Hotline	Selectmen	Provide contact information to public to report illegal dumping .	The hotline was established during Year 5.	Continue to staff and monitor information provided via the hotline.
Revised					

#### 3a. Additions


#### 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	Review Site Plan Review section of Zoning Bylaw	Planning Board	Review and identify need to draft changes to the bylaw.	Changes were brought to the Town Meeting Floor on June 22, 2009 and accepted by the Townspeople.	Town Staff, with the assistance of a consultant, will continue to review local bylaws and as needed continue to update the Town Bylaws.
Revised					
4-2	Revise Site Inspection and Enforcement Control Measures Program	Planning Board	This program will be evaluated and if necessary modified.	Changes were brought to the Town Meeting Floor on June 22, 2009 and accepted by the Townspeople.	Town Staff, with the assistance of a consultant, will continue to review local Town bylaws and as needed continue to update them.
Revised					
Revised					
Revised					
Revised					
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	Review and modify Bylaws to meet requirements for post development runoff control.	Planning Board	Review existing bylaws and draft modifications. Bylaw revisions will be submitted to Town meeting.	By-law was passed on June 2, 2008 at Town Meeting and also revisions to update the bylaw was passed on June 22, 2009	Continue to develop regulations to support the by-law (both implementation and enforcement)
Revised					
5-2	Revise subdivision Rules and Regulations	Planning Board	Review the Subdivision Rules and Regulations. Modifications, as necessary will be drafted and a public meeting held. The final modifications will be presented to Board for a vote.	Changes to the by-laws were voted on at the Annual Town Meeting on June 22, 2009 to regulate any increased amount of stormwater runoff or pollutants flowing from a parcel of land, or any activity that will alter the drainage characteristics of a parcel of land. All new development and redevelopment under the jurisdiction of this bylaw as prescribed in this bylaw shall be required to obtain a Storm Water Management Permit.	Town Staff, with the assistance of a consultant will continue to review local regulations and continue to develop regulations as warranted.
Revised					
Revised					
Revised					

### 5a. Additions




## 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	Employee Training	Highway Surveyor	A plan to train employees will be established.	The Highway Department conducts continual training of all employees, including initial training of new employees.	The Highway Department will continue to implement employee training program.
Revised					
6-2	Develop & Implement a plan to prevent and reduce pollutant runoff from municipal operations	Highway Surveyor	Develop a plan to log and schedule, repair, install and maintain drainage system.	Information developed and incorporated into SWMP manual.	Town will work with catchbasin cleaning sub-contractor to obtain information on the condition of catchbasins. Town will continue to work toward finalizing and adopting a plan for municipal operations.
Revised					
6-3	Pollution Prevention Plan	Highway Surveyor	Highway Department will review all department facilities for stormwater contamination potential and prepare a pollution prevention plan.	Limited progress made on this BMP. Generic information developed and incorporated into SWMP manual.	Highway Department will endeavor to complete the preparation of a pollution prevention plan for their facilities in the future.
Revised					
6-3	Catch Basin Cleaning	Highway Surveyor	Clean and inspect all catch basins annually and periodically when needed	Utilizing a clam shell, the Town cleaned all catch basins on an annual basis. Emergency cleaning of catch basins also done when needed.	Continue to implement annual cleaning of all catch basins and emergency cleanings when needed due to inclement weather etc.
Revised					
	Street Sweeping	Highway Surveyor	Perform street sweeping of all Town roads annually	The Town performed annual street sweeping of all Town roadways.	Continue to implement annual sweeping of town roadways.
Revised					

**6a. Additions**


**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 11</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities</b>
Revised					
Revised					
Revised					
Revised					

**7a. Additions**


**7b. WLA Assessment**

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

No additional data was collected other than that provided herein.

#### 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, 2013 through March 31, 2014)

##### Programmatic

		Response
Stormwater management position created/staffed	(y/n)	N
Annual program budget/expenditures **	(Preferred \$ Units)	\$6500
Total program expenditures since beginning of permit coverage	(\$)	
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General

##### Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	
Stormwater management committee established	(y/n)	N
Stream teams established or supported	(# or y/n)	
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	N
Shoreline cleaned since beginning of permit coverage	(mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	100
▪ community participation **	(# or %)	
▪ material collected **	(tons or gal)	
School curricula implemented	(y/n)	Y

## Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Draft Review	Adopted
Regulatory Mechanism Status (indicate with “X”)				
▪ Illicit Discharge Detection & Elimination		Planning Board, Highway Surveyor, Board of Health Zoning Board		
▪ Erosion & Sediment Control		Planning Board Highway Surveyor Board of Health Zoning Board	6/22/09	
▪ Post-Development Stormwater Management		Planning Board Highway Surveyor Board of Health Zoning Board	6/22/09	
Accompanying Regulation Status (indicate with “X”)				
▪ Illicit Discharge Detection & Elimination		Planning Board Highway Surveyor Board of Health Zoning Board	6/22/09	
▪ Erosion & Sediment Control		Planning Board Highway Surveyor Board of Health Zoning Board	6/22/09	
▪ Post-Development Stormwater Management		Planning Board Highway Surveyor Board of Health Zoning Board	6/22/09	

6/22/09

## Mapping and Illicit Discharges

		Response
Outfall mapping complete	(%)	90%+
Estimated or actual number of outfalls	(Preferred Units) (#)	A 144
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	45%
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	100%
Outfalls inspected/screened **	(# or %)	50%
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	90%+
Illicit discharges identified **	(#)	0
Illicit discharges identified (Since beginning of permit coverage)	(#)	0
Illicit connections removed **	(# ); and (est. gpd)	0
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	0
% of population on sewer	(%)	0
% of population on septic systems	(%)	100

## Construction

		Response
Number of construction starts (>1-acre) **	(#)	
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(Preferred Units) (%)	
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)	1/yr
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1/yr
Qty of structures cleaned **	(#)	E 650
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	(#)	1
• Vacuum truck(s) owned/leased	(#)	0
• Vacuum trucks specified in contracts	(y/n)	0
• % Structures cleaned with clam shells **	(%)	100%
• % Structures cleaned with vacuor **	(%)	0%

#### Response

Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	1/yr
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	1/yr
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	3 No. Main
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	(#)	1
• Vacuum street sweepers owned/leased	(#)	N/A
• Vacuum street sweepers specified in contracts	(y/n)	
• % Roads swept with rotary brush sweepers **	%	100%
• % Roads swept with vacuum sweepers **	%	N/A

Reduction (since beginning of permit coverage) in application on public land of:  
 (“N/A” = never used; “100%” = elimination)



▪ Fertilizers	(lbs. or %)	0%
▪ Herbicides	(lbs. or %)	0%
▪ Pesticides	(lbs. or %)	0%
Integrated Pest Management (IPM) Practices Implemented	(y/n)	N/A

		Response
Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	(Preferred Units) % NaCl % CaCl <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand	
Pre-wetting techniques utilized **	(y/n or %)	100%
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/lb mi. or %)	
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)	(%)	100%
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)	Y

### 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	