

**Municipality/Organization: Worcester State University**

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**EPA NPDES Permit Number: MAR042022**

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**MassDEP Transmittal Number: W-040406**

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**Annual Report Number Year 13**

**& Reporting Period: April 1, 2015 – March 31, 2016**

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**NPDES PII Small MS4 General Permit  
Annual Report  
(Due: May 1, 2016)**

**Part I. General Information**

Contact Person: Robert Daniels

Title:

Associate Director of Facilities

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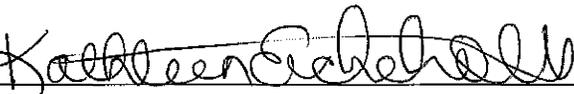
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Certification:

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: 

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Printed Name: Kathleen M. Eichelroth

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Title: V.P.-Administration and Finance

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Date:

5/25/2016

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**Part II. Self-Assessment**

Worcester State University (WSU) has completed a Self Assessment of the Storm Water Management Plan. WSU will update the SWMP by September 2016, and will provide updated training by August 2016 and continues to meet the requirements of the permit.

### 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 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
100.1 (2005)	Distribution of Educational Materials	Robert Daniels	Design a SW Management information page on campus web-site that will be accessible by all students, faculty, administrators and general public.	The latest version of the link to SWMP was made available. However, a university-wide update of the web-page is currently under construction and a new link will be reestablished.	WSU will explore ways to increase student and faculty awareness of its SWMP through its web-site and social media. One example would be to develop outreach material on the stormwater harvesting project associated with the new Wellness Center.
Revised					
100.2 2006	Distribution of Educational Materials	Robert Daniels	Designed a pamphlet for contractors to explain the expectations WSU has for contractors working on-site	Continued to distribute pamphlet to contractors.	Continue to distribute pamphlet to contractors, will update as necessary to reflect with new MS4 permit information.

#### 1a. Additions

100.3 2007	Distribution of Educational Materials	Robert Daniels	Download EPA's "After the Storm" pamphlet.	The latest version of the link to SWMP was made available. However, a university-wide update of the web-page is currently under construction and a new link will be reestablished.	No change
100.4 2008	Distribution of Educational Materials	Robert Daniels	"Focus the Nation" Presentation-nationally recognized teaching program-January 2008	Included SW as topic in WSU's annual sustainability fair.	No change

100.5 2009	Distribution of Educational Materials	Robert Daniels	“National Teach-In on Global Warming” Presentation- nationally recognized teaching program- February 2009	Included SW as topic in WSU’s annual sustainability fair.	No change	
100.6 2011	Distribution of Educational Materials	Robert Daniels	Sustainability Fair – Planned for Fall 2011 organized by WSU Student Affairs and Career Services	Included SW as topic in WSU’s annual sustainability fair.	No change	
100.7 2012- 2016	Distribution of Educational Materials	Robert Daniels	Annual Sustainability Fair –Planned for Fall organized by WSU Student Affairs and Career Services	Included SW as topic in WSU’s annual sustainability fair.	No change	

## 2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) -- Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities -- Permit Year 14
200 Revised	Storm Drain Stenciling	Robert Daniels	Re-stencil drains annually as needed	Painting of storm drains is on-going.	Painting of storm drains is on-going.
200.1 Revised	Campus Clean-up Day	Steve Bandarra	Annually in April-May	Biology and Facilities Departments cleaned campus on or around Earth Day 2016	Faculty, Student Government Association, Regional Environmental Council plan clean neighborhood on or around Earth Day 2017. WSU EHS Department will also include electronics collection and paper shredding.
Revised 200.2 2006 Revised	Lake Ellie Beautification	Peter Fenuccio/Robert Daniels	Dredge Lake Ellie by summer of 2007	Annually clean outlet pipe between Lake Ellie and Moore Brook, dispose of sediment	On-going as needed
200.3 2007 Revised	Clean up of Moore Brook	WSU Grounds Crew and work study students	Clean brook annually as needed	Re-inspected and cleaned in Fall 2015	Re-inspect and clean by Fall 2016

### 2a. Additions

200.4 2008	"In Business for the Blackstone"	Robert Daniels	Become member of the organization	Decided not to join "In Business for the Blackstone"	NA
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200.5 2012	Formed Neighborhood Advisory Council (NAC)	President's Office and Public Relations	Public involvement and information sharing	Continued and expanded Neighborhood Advisory Council to share information with local community (Civic Engagement Group), get involved in community and campus clean ups	On-going	
200.6 2012	American College and University President's Climate Commitment	Steve Bandarra	Submitted Climate Action Plan	The Climate Action Plan referred to WSU's stormwater management plan, considered a member in good standing	Will update as necessary	
200.7 2012	National Arbor Day Foundation Tree Campus USA Initiative	Steve Bandarra	Join foundation	WSU became a Tree Campus in training	Committed and in the process of becoming members.	
200.8 2014	Princeton Review Guide to Green Colleges	Steve Bandarra	Be listed as Green Campus	Applied to get listed as Green Campus and was notified that WSU made the list	Will be published as a Green Campus in Spring 2017	
2015	Live Learn Cohort-EcoHouse	Steve Bandarra	Students become more active in sustainability issues on campus	Students who want to live with common interest in sustainability and environmental issues	Group of students living together in Sheehan Hall-will be required to take sustainability seminar (e.g., solid waste, energy, toxics)-on-going	

### 3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
300.2	Dry Weather Inspections	Robert Daniels	Semiannual Inspections	Performed dry weather inspection in March 2015	On-going inspections- WSU will plan on spring and fall inspections in 2016.
Revised					

#### 3a. Additions

300.4	New SW Site Plans-as part of Campus Utilities Plans	Sandra Olson	New SW Site Plan	Update BSI –Subsurface utility plans annually	On-going The BSI –Subsurface Utility Engineering plan will be updated to include any changes to the storm water system as the campus grows
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### 4. Construction Site Storm Water Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
400.1	Develop Construction Site Run Off Plan	Robert Daniels	Update Construction Run-off Program	Construction Run-off Program reviewed in Fall 2014, no changes necessary.	Update as necessary as result of renewal of MS4 permit.
Revised					
400.2	Construction Run-Off Plan Training	Robert Daniels	Implementation of periodic training	WSU provided training in January 2015	WSU will provide retraining by August 2016
Revised					

400.3 2006	Develop an enforcement strategy when construction inspections and BMPs are not being implemented	Robert Daniels and Facilities Department	Document all Stop Work notices that are generated	There were no Stop Work orders issued.	If necessary, Stop Work orders will be issued.
Revised					

#### 4a. Additions

400.4 2007	SW Review with Construction Site Personnel and MSCBA/DCAMM	Robert Daniels	Meet with construction company and MSCBA before and during construction projects	Continued to interact with construction companies and DCAMM/MSBBA for utility relocation for construction projects.	Will continue to interact with construction companies and DCAMM/MSBBA for all DCAMM/MSBBA future projects that affect SW.
400.5 2007	Construction Site Inspections	Robert Daniels	Periodic construction site inspections	General contractor conducts weekly construction site inspections (or as otherwise related in their Construction SWPPP as related to a specific project)	Construction site inspections will be conducted for any new future projects that will impact SW

### 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 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
500	Develop a Post Construction Storm Water Management Plan as an appendix to Storm Water Management Plan	Robert Daniels	Update Post Construction SWM Plan	Updated SWMP in Spring of 2015	Will update SWMP as necessary by September 2016
Revised					
500.1	Implement training for Post Construction SWM	Robert Daniels	Implementation of periodic training	WSU provided retraining in January 2015	WSU will provide retraining by August 2016
Revised					
500.2 2006	Research alternatives to sand/road salt for road and walkway deicing.	Robert Daniels	Get prices and do a cost benefit analysis	Discontinued use of Sand/ Salt and used environmentally friendly salt product instead.	Will continue the use of environmentally friendly salt product during future winters.
Revised					

#### 5a. Additions

500.3 2007	Catch basin clean out	Robert Daniels	Clean catch basins	Cleaned out catch basins at base of construction project in spring of 2015 Vortechnic Units were inspected and those accessible were cleaned out in 2015	Will clean out catch basins and Vortechnic units by summer 2016.
500.4 2007	Soil stabilization for Parking Garage construction site	Consigli Construction	Stabilized soil in project area	Completed	Completed
500.5 2013	Upgraded Sand/Salt Shed	Robert Daniels	Improved shelter to result in less run-off	Completed the upgrade in November 2013	Maintain the structure – ongoing, also cover pile with tarp because consists only of salt

**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 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
600 2007  Revised	Develop a training program for Facility Personnel	Robert Daniels	Implementation of periodic training	WSU provided retraining in January 2015	WSU will provide retraining by August 2016-----
600.1 2009  Revised	Snow Management	Robert Daniels	Less snow melt into Lake Ellie	WSU continues to work at improving snow removal management by relocating to less environmentally sensitive areas on campus	Continue the best management practices.

**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 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
	NA			NA	NA
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, 2015 through March 31, 2016)

**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)	

### 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 vacuor **	(%)	

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

