APPENDIX D 2018 Phase I and Phase II Survey Questions



Stormwater Sector Needs Survey

Introduction

Thank you for taking the time to complete this survey. The results will help the Water Environment Foundation (WEF) understand the type of information and technical resources that will benefit your community or organization's stormwater program.

This survey is also very important because it will support the establishment of stormwater as a sector in the American Society of Civil Engineers Infrastructure Report Card© program.

As you complete the survey, know that you can skip most questions and go back to previous questions, if needed.

Everyone in the WEF and MS4 permittee community appreciates you taking the time to complete the survey. Thank you!

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MS4 Permittee Program Information

. Your city and state:	
City:	
State:	
. We would like to hear from	MS4 permittees. What best describes your role for this survey? (answer is required) *
Employee of a municip	ality, agency, or organization with an MS4 permit
O Consultant answering	on behalf of MS4 permittee
Other - Please explain	
. What is your organization's	MS4 regulatory status? (answer is required) *
O Phase I community	
O Phase 2 community	
Phase 2 non-traditiona institution/organization	I permittee (e.g., university, prison, special transit district, other non-municipal
State department of tra	nsportation (DOT)
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MS4 Permittee Program Information

Year of your commi	unity's or organization's first MS4 permit:
Is your community	or organization covered by a statewide (or regional) general permit?
O Yes	
No, my comm	unity or organization is a primary or co-permittee on an individual MS4 permit

7. Please indicate the extent to which the following factors present a *challenge* to the success of your stormwater program.

	Not a challenge	Minor challenge	Moderate challenge	Fairly significant challenge	Extremely significant challenge
Lack of funding or availability of capital	0	0	0	0	0
Lack of public awareness and support	0	0	0	0	0
Increasing or expanding regulations	0	0	0	0	0
Aging infrastructure	0	0	0	0	0
Aging workforce	0	0	0	0	0
Lack of technical expertise	0	0	0	0	0
Lack of political support for program	0	0	0	0	0
Lack of cross-departmental coordination	0	0	0	0	0
Federal/state requirements are unclear	0	0	0	0	0
Lack of information/training on best practices	0	0	0	0	0
Other (please specify)	0	0	0	0	0

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13%

8. Please indicate the importance of the following *drivers* for your stormwater planning and investment decisions.

	Not a driver	Slightly important driver	Moderately important driver	Very important driver	Extremely important driver
Inflow and infiltration issues	0	0	0	0	0
TMDL compliance	0	0	0	0	0
Combined sewer overflows	0	0	\circ	\circ	0
Localized street flooding from municipal stormwater	0	0	0	0	0
Riverine/lake flooding influenced by watershed stormwater management	0	0	0	0	0
Water supply requirements	0	0	0	0	0
Sanitary sewer overflows	0	\circ	\circ	\circ	0
Water quality/habitat restoration	0	0	0	\circ	0
Climate change	0	0	0	\circ	0
Community and/or political leadership	0	0	0	\circ	0
Regional or inter-jurisdictional needs	0	0	0	0	0
Other (please specify)	0	0	0	0	0

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9. Pl	ease indicate your level of need for additios.	nal information	on and/or tecl	nnical resources	for each of	the following sto	rmwater topi	С
Tip: <u>I</u>	Hover your mouse over individual topic areas f	or more inforn	mation.					
			Need for a	dditional informa	tion and/or t	echnical resources	5	
		No need	Low need	Moderate need	High need	Very high need	I don't know	
	Watershed-based stormwater planning	0	0	0	0	0	0	
	MS4 program planning, administration, and governance	0	0	0	0	0	0	
	Asset management	0	0	0	0	0	0	

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TMDL compliance

Funding and financing

Green infrastructure and other innovative BMPs

10. Please indicate your level of need for additional information and/or technical resources related to each of **the minimum control measures or other aspects of permit compliance**.

Tip: Hover your mouse over individual topic areas for more information.

Need for additional information and/or technical resources related to each minimum control measure

	No need	Low need	Moderate need	High need	Very high need	l don't know
Public education and outreach	0	0	0	0	0	0
Public involvement and participation	0	0	0	0	0	0
Illicit discharge detection and elimination	0	0	0	0	0	0
Construction site stormwater runoff control	0	0	0	0	0	0
Post-construction stormwater runoff control	0	0	0	0	0	0
Good housekeeping and pollution prevention	0	0	0	0	0	0
Industrial and commercial facilities planning	0	0	0	0	0	0
Monitoring and evaluation	0	0	0	0	0	0

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11. Please provide us with a bit more detail on your information needs related to watershed-based stormwater planning. For ea	ch of the
following, indicate your level of need for additional information and/or technical resources.	
Need for additional information and/or technical reso	urces

	weed for additional information and/or technical resources				
	No need	Low need	Moderate need	High need	Very high need
Planning across municipal departments	0	0	0	0	0
Inter-jurisdictional planning/coordination	\circ	0	0	0	0
Incorporating co-benefits of stormwater controls into decision-making	0	0	0	0	0
Connecting stormwater investments to other community priorities and plans	0	0	0	0	0
Conducting watershed scale assessments	\circ	0	0	0	0
Integrated water supply planning that includes stormwater capture	0	0	0	0	0
Addressing stormwater management across different land use types	0	0	0	0	0
Design of flood management projects to include water quality considerations	0	0	0	0	0
Water quality trading programs	0	0	0	0	0
Other (please specify)	0	0	0	0	0

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	Need fo	or additional in	formation and/or t	echnical resou	rces
	No need	Low need	Moderate need	High need	Very high need
Long-range adaptive planning to measure progress across permit cycles	0	0	0	0	0
MS4 permit design, including innovative permit approaches	0	0	0	0	0
Performance-based permitting and design/maintenance requirements	0	0	0	0	0
Establishing a stormwater utility and fees	0	0	0	0	0
Engaging public officials and/or upper management	0	0	0	0	0
Standardized testing, evaluation, and verification of stormwater control products and practices	0	0	0	0	0
Other (please specify)	0	0	0	0	0

13. Please provide us with a bit more detail on your information needs related to **stormwater asset management**. For each of the following, indicate your level of need for additional information and/or technical resources.

Need for additional information and/or technical resources

	No need	Low need	Moderate need	High need	Very high need
Mapping your storm sewer system	0	0	0	0	0
Mapping private stormwater control structures	0	0	0	0	0
Creating an inventory/database of stormwater assets	0	0	0	0	0
Prioritizing stormwater asset maintenance and replacement	0	0	0	0	0
Developing a condition assessment of stormwater assets	0	0	0	0	0
Evaluating life-cycle costs of stormwater control measures	0	0	0	0	0
Using automated information technology to monitor and control operations and maintenance	0	0	0	0	0
Cost estimating/cash flow analysis for capital expenditure/system improvement	0	0	0	0	0
Asset management software and tools	0	0	0	0	0
Other (please specify)	0	0	0	0	0

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14. Please provide us with a bit more detail on your information needs related to green infrastructure and other innovative BMPs. For each of the following, indicate your level of need for additional information and/or technical resources.

	Need fo	r additional inf	ormation and/or to	echnical resou	rces
	No need	Low need	Moderate need	High need	Very high need
Quantified data on BMP performance	0	0	0	0	0
BMP maintenance requirements and best practices	0	0	0	0	0
BMP life-cycle costs analysis	\circ	0	0	0	0
Analyzing and valuing stormwater management on a multi-benefit basis	0	0	0	0	0
Monitoring and quantifying BMP effectiveness	\circ	0	\circ	0	0
Policies and incentives to encourage green infrastructure on private property	0	0	0	0	0
Development standards and incentives that encourage innovative BMPs/green infrastructure	0	0	0	0	0
Minimum certification requirements for construction, inspection, and maintenance workers that install green infrastructure	0	0	0	0	0
Stormwater volume credit trading programs	0	0	0	0	0
Screening and evaluation of new technologies	0	0	0	0	0
Addressing state and federal barriers to innovation	0	0	0	0	0
Cost-sharing pilot demonstrations for new technologies	0	0	0	0	0
Other (please specify)	0	0	0	0	0

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Integrating TMDL requirements into stormwater planning Cost and effectiveness of available BMPs Cost and effecti		Need f	or additional in	formation and/or t	echnical resou	rces
Please provide us with a bit more detail on your information needs related to stormwater program funding and financing. For the following, indicate your level of need for additional information and/or technical resources No					_	Very high need
Tracking and accounting for TMDL compliance		0	0	0	0	0
Water quality modeling for aligning MS4 implementation with TMDL compliance Other (please specify) Please provide us with a bit more detail on your information needs related to stormwater program funding and financing. For the following, indicate your level of need for additional information and/or technical resources. Need for additional information and/or technical resources. Need for additional information and/or technical resources. No Low Moderate High Need need need need need need need need	Cost and effectiveness of available BMPs	0	0	0	0	0
Other (please specify) Please provide us with a bit more detail on your information needs related to stormwater program funding and financing. For the following, indicate your level of need for additional information and/or technical resources. Need for additional information and/or technical resources. Need for additional information and/or technical resources. No Low Moderate High very hoped need need need need need need need n	Tracking and accounting for TMDL compliance	0	0	0	0	0
Please provide us with a bit more detail on your information needs related to stormwater program funding and financing. For the following, indicate your level of need for additional information and/or technical resources. No		0	0	0	0	0
Please provide us with a bit more detail on your information needs related to stormwater program funding and financing. For the following, indicate your level of need for additional information and/or technical resources. No	Other (please specify)	0	0	0	0	0
Need for additional information and/or technical resources No Low Moderate High need need need need need need need nee	46%					
Analysis of stormwater funding needs O O O O O Inventory of available funding sources Leveraging funding from additional sources based on co-benefits Innovative financing approaches, such as environmental impact bonds O O O O O O O O O O O O O O O O O O						
Inventory of available funding sources Leveraging funding from additional sources based on co-benefits Innovative financing approaches, such as environmental impact bonds Public-private partnerships OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO		nal information	and/or techni	cal resources.		
Leveraging funding from additional sources based on co-benefits Innovative financing approaches, such as environmental impact bonds OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO		nal information Need No	and/or techni for additional i	cal resources. nformation and/or Moderate	technical reso High	
based on co-benefits Innovative financing approaches, such as environmental impact bonds Public-private partnerships O O O O O	e following, indicate your level of need for addition	nal information Need No	and/or techni for additional i	cal resources. nformation and/or Moderate	technical reso High	urces Very hiç
environmental impact bonds Public-private partnerships O O O O	ne following, indicate your level of need for addition Analysis of stormwater funding needs	Need No need	for additional in	cal resources. nformation and/or Moderate	technical reso High	urces Very hiç
	Analysis of stormwater funding needs Inventory of available funding sources Leveraging funding from additional sources	Need No need	for additional in	cal resources. nformation and/or Moderate	technical reso High	urces Very hiç
Other (please specify)	Analysis of stormwater funding needs Inventory of available funding sources Leveraging funding from additional sources based on co-benefits Innovative financing approaches, such as	Need No need	for additional in	Moderate need	High need	Very hig need
	Analysis of stormwater funding needs Inventory of available funding sources Leveraging funding from additional sources based on co-benefits Innovative financing approaches, such as environmental impact bonds	Need No need	for additional in	Moderate need	High need	Very hig need

	Need	for additional ir	formation and/or	technical reso	urces
	No need	Low need	Moderate need	High need	Very hi
Public education/outreach goals and strategy development	0	0	0	0	0
Messaging and audience targeting	0	0	0	0	0
Public participation strategies and activities	0	0	0	\circ	0
Community-based social marketing to enhance public participation and involvement	0	0	0	0	0
Outreach and participation effectiveness evaluation methods	0	0	0	0	0
Strategies for working with development community	0	0	0	0	0
Other (please specify)	0	0	0	0	0
lease provide us with a bit more detail on your in of the following, indicate your level of need for account of the sollowing.	formation need				ation (IDD&E)
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19. Please provide us with a bit more detail on your information needs related to construction site and post-construction stormwater runoff control. For each of the following, indicate your level of need for additional information and/or technical resources. Need for additional information and/or technical resources No Low Moderate High Very high need need need need need \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc Construction stormwater permitting \bigcirc Erosion and sediment control enforcement Tracking public comments regarding local 0 construction activities Stormwater manuals/design templates for developers, especially for innovative BMPs Ordinance development for volume and quality 0 0 0 0 standards Post-construction inspection and enforcement procedures 0 0 0 Other (please specify)

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63%	5		

	Need fo	or additional in	formation and/or t	echnical resou	rces
	No need	Low need	Moderate need	High need	Very high need
O&M program development for municipal operations and facilities	0	0	0	0	0
Standard operating plans for maintenance procedures	0	0	0	0	0
Employee training programs reducing pollutant discharges from municipal operations	0	0	0	0	0
Pesticide, herbicide, and fertilizer application protocols and training	0	0	0	0	0
Catch basin cleaning procedures	0	0	0	0	0

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67%

Public roads maintenance procedures

Deicing agent selection and application

Prioritization inspection of public facilities based

procedures

on water quality impacts

Other (please specify)

21. Please provide us with a bit more detail on your information needs related to monitoring and evaluation. For each of	the following
indicate your level of need for additional information and/or technical resources.	

	Need fo	or additional inf	ormation and/or t	echnical resou	rces
	No need	Low need	Moderate need	High need	Very high need
Dry weather monitoring	0	0	0	0	0
Wet weather monitoring	0	0	0	0	0
Local stormwater monitoring study design (e.g., targeting sampling locations, frequency of sampling)	0	0	0	0	0
Monitoring impaired water bodies or candidates for de-listing	0	0	0	0	0
Quality assurance/control procedures and plans	0	0	0	\circ	0
Use of monitoring data to evaluate program effectiveness	0	0	0	0	0
Program audits to identify areas for improvement	0	0	0	0	0
Guidance and methods for verifying compliance	0	0	0	0	0
Other (please specify)	0	0	0	0	0

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What is your estimated stormwater program budget for 2018, including approximate expenditures for programmatic, capital, operations, and maintenance activities? (please enter a dollar amount)
Is your estimated 2018 annual stormwater budget adequate to meet all of your current stormwater goals including regulatory compliance?
○ Yes
● No
To be fully compliant and to meet all of our current stormwater goals our agency needs approximately \$ MORE this year, in addition to our current 2018 budget (please enter a dollar amount that represents the additional funding needed for the 2018 program year):
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75%

Please indicate which of the following describes your organization:	
Flood Control and/or Drainage District	Regional Utility/Authority
Stormwater Utility	O Environmental Services Department
Wastewater Utility	O Planning Department or Agency
Wastewater and Stormwater Utility	O Public Health Department
 Water, Wastewater, and Stormwater Utility 	Other (please describe)
O Public Works Department	
What is the size of the population that your organization serves?	
O Less than 10,000	O 500,000 to 999,999
O 10,000 to 49,999	1 million to 1,999,999
O 50,000 to 99,999	O 2 million or greater
O 100,000 to 499,999	
Please indicate the nature of your organization or agency's responsibilities with respect to MS4 permit compliance: Responsible for all aspects of MS4 permit compliance within local jurisdiction Responsible for coordinating stormwater program implementation across multiple permittees Responsible for specific minimum control measures or aspects of permit compliance (please describe) Other - Please describe	
79%	Next

Final Thoughts

What are the most useful sources of information for you on apply)	stormwater management and best practices? (mark all that
■ National professional organizations	☐ Webcasts and webinars
☐ State or regional professional organizations	☐ Academic journals
Local, state or regional conferences	Other MS4s
■ National or international conferences	☐ Peer-to-Peer exchange networks
State and/or federal agency guidance and websites	Other (please describe)
☐ Training workshops	
What printed sources of stormwater information are of Stormwater Report (WEF SWI) World Water: Stormwater Magazine (WEF) Stormwater (Forester Communication) Water Environment and Technology (WEF) Water and Wastes Digest None of the above Other (please describe)	
Back	Next

Final Thoughts

Results of the needs assessment survey will be available by summer of 2018. Please make sure we have you name and email address so that we can share a summary of the findings with you.
Your name (optional):
/our email (optional):
We would love to learn more about your stormwater program. Please fill in the following optional questions to ell us about the most innovative and well-developed aspects of your program, or those areas that may need more work.
What is the most innovative part of your stormwater program?
What is the most well-developed and/or least-developed part of your stormwater program? (Please indicate in your
response whether you are describing the most well-developed or least-developed part.)
Back Submit
96%