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Highlights from the National MS4 Needs Survey

The Center recently conducted a survey of municipal separate storm sewer system (MS4) operators in the US. The goal of the survey was to collect information on the current status of stormwater programs across the country, the most pressing needs of MS4s, and future trends so that we can improve and better tailor our national guidance and locally applicable tools for this important audience. A total of 249 MS4 representatives from 26 states responded to the survey. Highlights from the survey responses are summarized here.

Who Took the Survey?

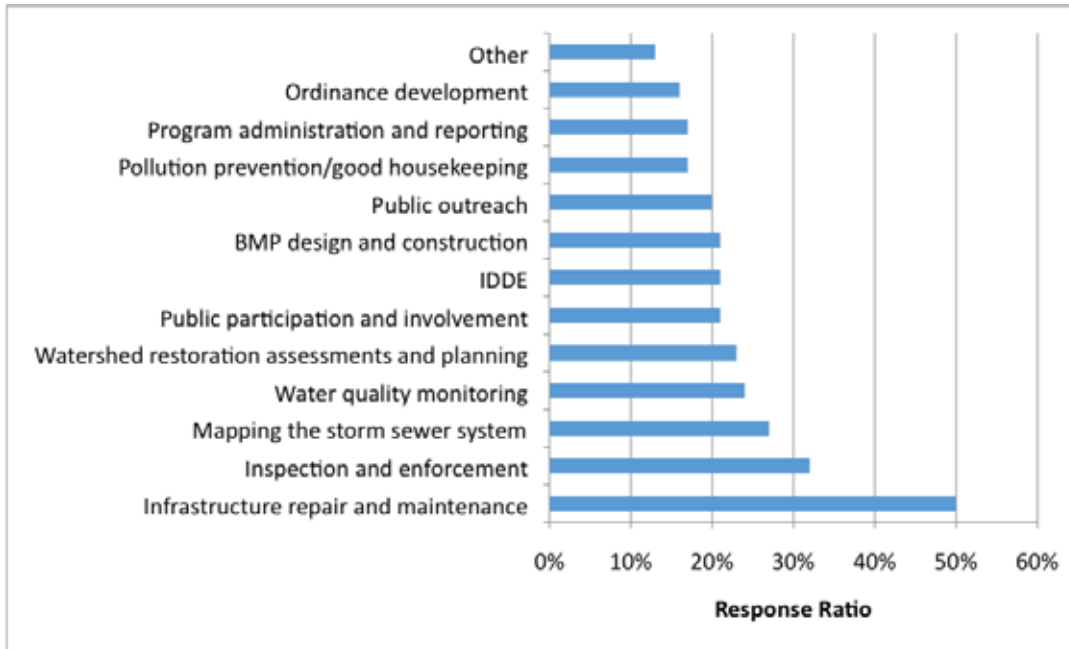
The 249 respondents represented MS4s in 26 states, with the highest response rates from California (18%), Colorado (10%), Georgia (9%) and Missouri (8%). More than half the respondents (55%) were Phase II permittees, followed by Phase I (16%) and unregulated MS4s (2%). The majority of respondents represented city governments (42%) followed by county governments (16%), towns (6%), special districts (4%), public complexes (4%) or other permittee (3%). The majority of respondents (37%) had a population of less than 50,000, followed by 50,000-99,000 (18%), 100,000-249,999 (12%), 250,000-999,999 (4%) and 1 million or greater (1%).

Program structure and funding

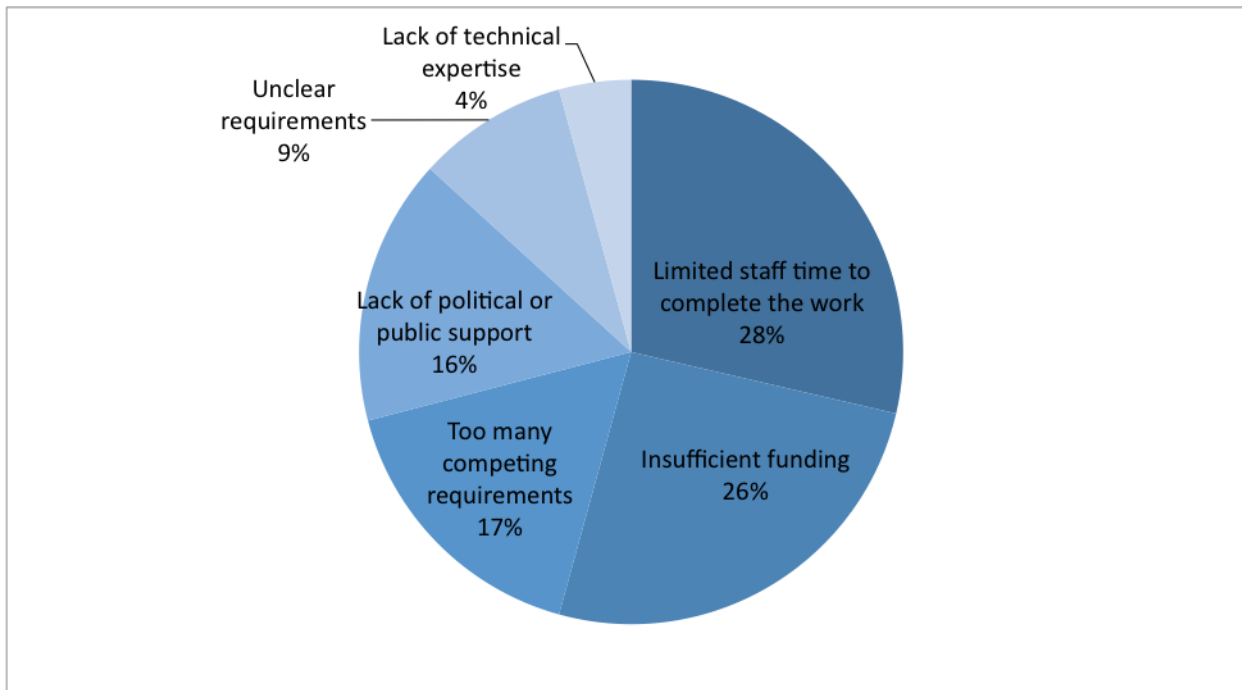
Only a small percentage of respondents (2%) indicated that their stormwater program was just starting up, while the remainder said their program was well established (34%) or somewhere in between (31%). Responses were varied in how many agencies/departments are involved in implementing and reporting for the stormwater program, and included just one (25%), two to three (21%) and four or more (20%).

The majority (43%) of respondents had a stormwater program budget of less than \$500,000. Eighteen percent had budgets between \$500,000 and \$9.9 million, while a small percent (3%) had budgets greater than \$10 million. The most common funding source for the program was the general tax revenue (52%), followed by stormwater utility fees (39%), grants (24%) and permitting and other fees (19%). Sixteen percent of respondents indicated "other" sources of funding, which included sources such as road funds, other utility fees and rental income as well as unique sources such as Montgomery County, Maryland's plastic bag fee. Several respondents indicated they did not have any funding source for their stormwater program. The majority (34%) said the current funding was not sufficient while 18% indicated they did have sufficient funding.

What are the most pressing need of your stormwater program?



What are the biggest challenges related to stormwater program implementation?



What topics need greater research and attention?

The most common theme in the responses was a need for more information about the effectiveness of BMPs, especially green infrastructure. As one respondent put it "before green infrastructure is put everywhere, does it really work and how does it hold up in the long term?" MS4s want to know about the cost and benefits of green infrastructure, how it can be made more cost-effective, does it really work to meet TMDLs and water quality goals, how does effectiveness change over time, and what are the local effects of all this infiltration? They also want more information on effectiveness of non-

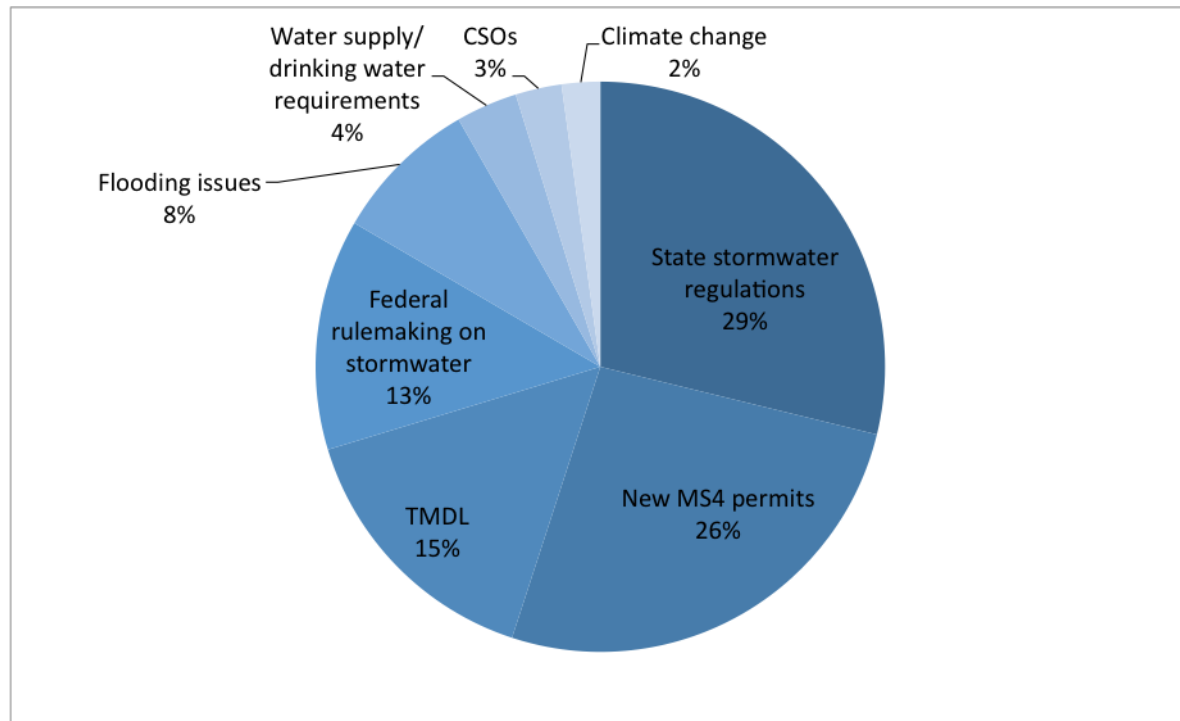
structural BMPs such as public education, and effectiveness data for additional pollutants and for arid climates. Other common responses related to TMDL compliance, the high cost of meeting TMDLs and questions about the efficacy of the methods used to develop TMDLs, and whether restoration is actually feasible.

Five years from now, what will be your most pressing stormwater management concerns?

The responses to this question overwhelmingly related to post-construction stormwater management, with the following specific concerns most commonly identified:

- Maintenance, inspection and repair of infrastructure/BMPs/failing systems
- Meeting TMDL requirements and whether it is even feasible to meet them
- Need for funding and additional staffing to meet new requirements
- Determining the effectiveness of BMPs/programs/regulations to meet water quality mandates

What are the primary drivers for expansion or strengthening of stormwater management programs in your region?



For more detail on the MS4 survey, contact Karen Cappiella at kc@cwpa.org.

Center Supports Pennsylvania Municipalities on Stormwater and TMDL Plans

Pennsylvania's numerous cities, townships and boroughs in the Chesapeake Bay basin are struggling to meet the stormwater management requirements of the Chesapeake Bay total maximum daily load (TMDL) for sediment and nutrients. A lack of funding to put stormwater controls in place, confusion over what is required and a lack of good data are hampering these efforts. The Chesapeake Bay Foundation recently funded the Center to provide hands-on technical support to municipalities in Blair County and York County. The Center determined how these communities can use existing resources and identified future stormwater projects that will help them meet their local TMDL requirements and the Chesapeake Bay TMDL.

In Blair County, the Center worked with local jurisdictions to help them meet their stormwater permit requirements. According to the permit, the County and associated jurisdictions needed a local TMDL plan to address sediment and a Chesapeake Bay Pollution Reduction Plan to address the Chesapeake Bay TMDL. The Center met with local staff, consultants, and other representatives to outline the proposed work and clearly demonstrate how the findings will

meet their needs. The Center performed field investigations that identified existing stormwater practices and potential stormwater retrofit improvements, and summarized the findings. The resulting implementation plans identify reasonable and cost-effective practices for the jurisdictions to consider and build and they chart a path forward for the County to meet their pollutant load reductions using stormwater and watershed improvements.

In York County, forty-two of the municipalities with a stormwater permit have agreed to work together to address permit requirements through the formation of a Stormwater Collaborative. The collaborative is currently working together to develop a regional Chesapeake Bay Pollution Reduction Plan that will improve water quality to the Chesapeake Bay through the implementation of best management practices. The Center is working with the collaborative to develop pollution reduction strategies that allow the participating municipalities to pool their resources and skills and offer the maximum benefit to the entire County.

The projects are in progress and we anticipate securing future funding to implement the top ranked projects in the counties. The Center and the Chesapeake Bay Foundation recently presented two webcasts on the development of a stormwater TMDL plan and a Chesapeake Bay Pollution Reduction Plan. The two webcasts are recorded and available on the [Chesapeake Bay Foundation's website](http://www.chesapeakebayfoundation.org). To learn more about these projects, contact Bryan Seipp at 410-461-8323 or bts@cbf.org.

Construction complete on first permeable pavement parking lot on Virginia's Eastern Shore

The Center, in partnership with the Chesapeake Bay Foundation and the Town of Onancock, designed and supported installation of what is considered to be the first permeable pavement parking lot on the Eastern Shore of Virginia.

The parking lot project at the corner of Parker and King streets included replacing pavement in the center of the lot with 4,200 square feet of permeable pavers that allow runoff water to soak into the ground and toward a center vegetated strip (16 feet wide) planted with native trees and grasses. The project is designed to catch, absorb and treat urban runoff before it can enter Onancock Creek, parts of which are polluted by urban runoff, according to the Virginia Department of Environmental Quality.

The final design is estimated to treat approximately 0.41 acres of parking lot and prevent 0.48 pounds of phosphorus, 2.73 pounds of nitrogen, and 195 pounds of sediment per year from entering Onancock Creek.

The project was funded by a grant from the National Fish and Wildlife Foundation as part of a comprehensive whole-community approach to watershed restoration that includes urban and agricultural best management practice implementation. The Center conducted an urban stormwater retrofit assessment of the Onancock Creek watershed and identified and ranked 34 potential retrofit projects. The Town Hall parking lot retrofit was selected for implementation based on public ownership, visibility and other ranking factors.

The Onancock Tree Board provided partial funding for the landscaping, and the contractor was Eastern Shore Landscape Management, Inc., of Belle Haven, Virginia. To learn more about this project, contact Joe Battiatà at jgb@cbf.org.



Figure 1. Town of Onancock permeable parking lot site before (left) and after (right) installation



The Center is Moving!

The Center is moving to a new, improved office space just down the road in Ellicott City.

Effective July 23, 2014 our new mailing address will be:

Center for Watershed Protection
3290 North Ridge Road, Suite 290
Ellicott City, MD 21043

Our main office telephone number and fax number will remain unchanged and are listed below:

Phone: 410-461-8323
Fax: 410-461-8324