



MS6 - The Next Generation of MS4 Compliance

February 22, 2018

Department of Environmental Quality



The Next Generation of Compliance

MS4 Sustainability Strategy (MS6)

- 121 MS4 permittees
 - all individual
 - 7 Ph.I
 - 25 audits / yr.
- 2020 Census adds???

~30% have Pop. < 10,000

Federal & State regs. allow DEQ to *potentially* waive the requirement to obtain a NPDES permit for local governments that have *effective* SW programs that have:

Pop. < 10,000

&

No TMDL or Impaired waters



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MS4 Sustainability Strategy (MS6)

1. MS6 **IS NOT** mandatory.
2. MS6 is a **COOPERATIVE EFFORT**
3. MS6 **IS A MANAGEMENT STRATEGY** that provides local governments the tools to develop sustainable stormwater programs.
4. MS6 **IS** also an efficiency strategy.



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MS4 Sustainability Strategy (MS6)

MS4s Partners	MS4s Partners	Engineering Firms
Burlington*	Greenville	AMEC*
Winston-Salem (Phase I)*	Lewisville	WK Dickson
Greensboro (Phase I)*	Durham (Phase I)	DRMP
Raleigh (Phase I)*	Wilmington	Timmons Group
Holly Spring*	Fayetteville (Phase I)	Kimley Horn
High Point	Morrisville	Hazen and Sawyer
Asheville	Cary	
Monroe	Garner	
Kernersville	Charlotte (Phase I)	
Guilford County	Mecklenburg County	

* *Core Partners.*

Other Partners included Several COGs, DEQ, NCDOT, League of Municipalities, APWA-NC, SWANC, and several environmental groups



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MS4 Sustainability Strategy (MS6)

- E-camp audits (Airforce)
- Environmental Compliance Evaluations (ECEs – Marine Bases)
- ISO14000 Gap Analysis
- Corporate Environmental Management Systems (EMS) and Asset Management
- APWA PW certification
- The Baldrige Performance Excellence Program and other Business Plan Models
- Practices implemented by NC local governments.



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MS4 Sustainability Strategy (MS6)

Audits and/or inspections,
gap analysis, action plans
MS6 **WILL NOT** improve
water quality (per se).



You can't fatten a pig weighing it.

What's in it for the State, EPA, and Local Governments

- MS6 promotes a high level of compliance
 - focus of a gap analysis is on identifying and **correcting root causes**
- Minimizes liability
 - Certain comfort level that what you're doing is what everyone else is doing
- Transparent
- Better oversight than traditional approach
- Allows State, EPA, and local governments to leverage limited resources
- Leads to a better understanding of why we are doing what we are doing
- Promotes cooperative solutions
- Strengthens programs through adaptive management

State's Role

- Seek cooperative solutions through meetings, lunch & learns, workshops/training
- Maintain MS6 website with:
 - interactive map
 - list of questions for gap analysis
 - list of root causes
 - compendium of SOPs, model ordinances, checklist, policies, & plans
- Develop & maintain NC MS6 training materials
- Oversight of audits & inspections

DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES (DEMLR) COMMITMENT TO MUNICIPAL SEPARATE STORMWATER SEWER SYSTEM SUSTAINABILITY STRATEGY (MS6)

DEMLR is committed to building sustainable MS4 programs through a network of support across multiple municipalities that 1) promote the sharing of information and the best practices among local governments, 2) provide for self-assessment, peer reviews, and independent assessments that identify program strengths and weaknesses, root causes, and action plans and 3) promote efficiency, effectiveness, and strong municipal and community support.

Posting Gap Analysis, Root Cause Analysis and Action Plans ensures transparency and provides better oversight than the traditional approach (audits, inspections, enforcement and annual reports). Partnerships lead to cooperative solutions. As a partner and a resource, the State will *work with* local governments, private citizens, the private sector, environmental groups, other state and federal agencies, Universities, NCDOT, SWANC, APWA, COGS, and others to find cooperative solutions. Cooperative solutions lead to ownership. Ownership leads to improved stormwater programs.

As a partner and resource, DEMLR continues to espouse sustainable and transparent stormwater programs that rely on:

1. Organizational commitment to sustainability
2. Asset management
3. Environmental Management Systems (EMS)
4. Cooperative Solutions
5. Gap Analysis and Root Cause Analysis.
6. Action Plans for identified gaps in the stormwater program

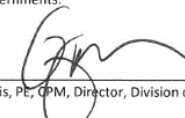
As a partner and resource, DEMLR continues to be committed to:

1. Participating in and supporting outreach activities, such as summits, workshops and training sessions.
2. Seeking cooperative solutions through meetings, Lunch and Learns, and round-table discussions.

As a partner and resource, DEMLR will maintain (and update as necessary) a public web site containing:

1. An interactive map including Phase I or Phase II status (i.e., permitted, permit waived, or exempt), Point Of Contact and a link to the local government's website, why they're regulated, and links to the latest results of Gap Analysis, Root Cause Analysis and Action Plans.
2. A list of sample questions for conducting a gap analysis and a list of Root Causes.
3. A compendium of SOPs, model ordinances, checklist, policies, and plans from existing Local Governments.

Tracy E. Davis, PE, CPM, Director, Division of Energy, Mineral, and Land Resources



8/20/2017
DATE



Local Government's Role

1. Adopt a resolution or other mechanism affirming support of MS6
2. Identify and implement an Environmental Management System
3. Identify and implement an Asset Management Program that includes a Stormwater Inspection and Maintenance (SWIM) program
4. Conduct a gap analysis
5. Develop and implement Action Plans
6. Engage the public and other Stakeholders in finding cooperative solutions
7. Open data reporting
8. Participation in summits, workshops, training, lunch & learns, and round table discussions

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MS4 Sustainability Strategy (MS6)

Assessment / Gap Analysis

- Year 1, 2 and 4 - Self Assessment
- Year 3 – Assessment by a peer
- Year 5 – Assessment by a third party (qualified sw professional)
- Identifies Positive Findings, Deficiencies or Gaps, Root Causes, Recommendations and opportunities to improve the program
- Notify DEQ each time an Assessment has been completed
- Post the Results online



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MS4 Sustainability Strategy (MS6)

Action Plans

- Permittee develop and implement an action plan
- Specific actions that address both the deficiencies and the root causes of those deficiencies
- Identify specific time frames and deadlines when the actions are to be completed
- Notify DEQ when the Action Plan has been developed (posted)
- Notify DEQ when the Action Plan has been completed (posted)



Annual Reports

MS4s are required to prepare and submit annual reports

Alternative

1. Conduct a Gap Analysis and Root Cause Analysis
2. Develop and implement an Action Plan
3. Post results on the local government's website
4. Notify the State

Audits & Inspections

SECTION 106 WORKPLAN for Phase I & II MS4s:

NC DEQ conducts on-site audit/inspection once/5 years.

MS6 Alternative

1. Conduct a Gap Analysis and Root Cause Analysis by a stormwater professional (other than an employee of the permitted entity)
2. Develop and implement an Action Plan
3. Post results on the local government's website
4. Notify the State

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MS4 Sustainability Strategy (MS6)

Post Gap Analysis
Results & Action
Plan Online



Annual
Report

DEQ Audit
& Inspection

(Gap Analysis output may need modifications to meet 2020 EPA eReporting req'mts)

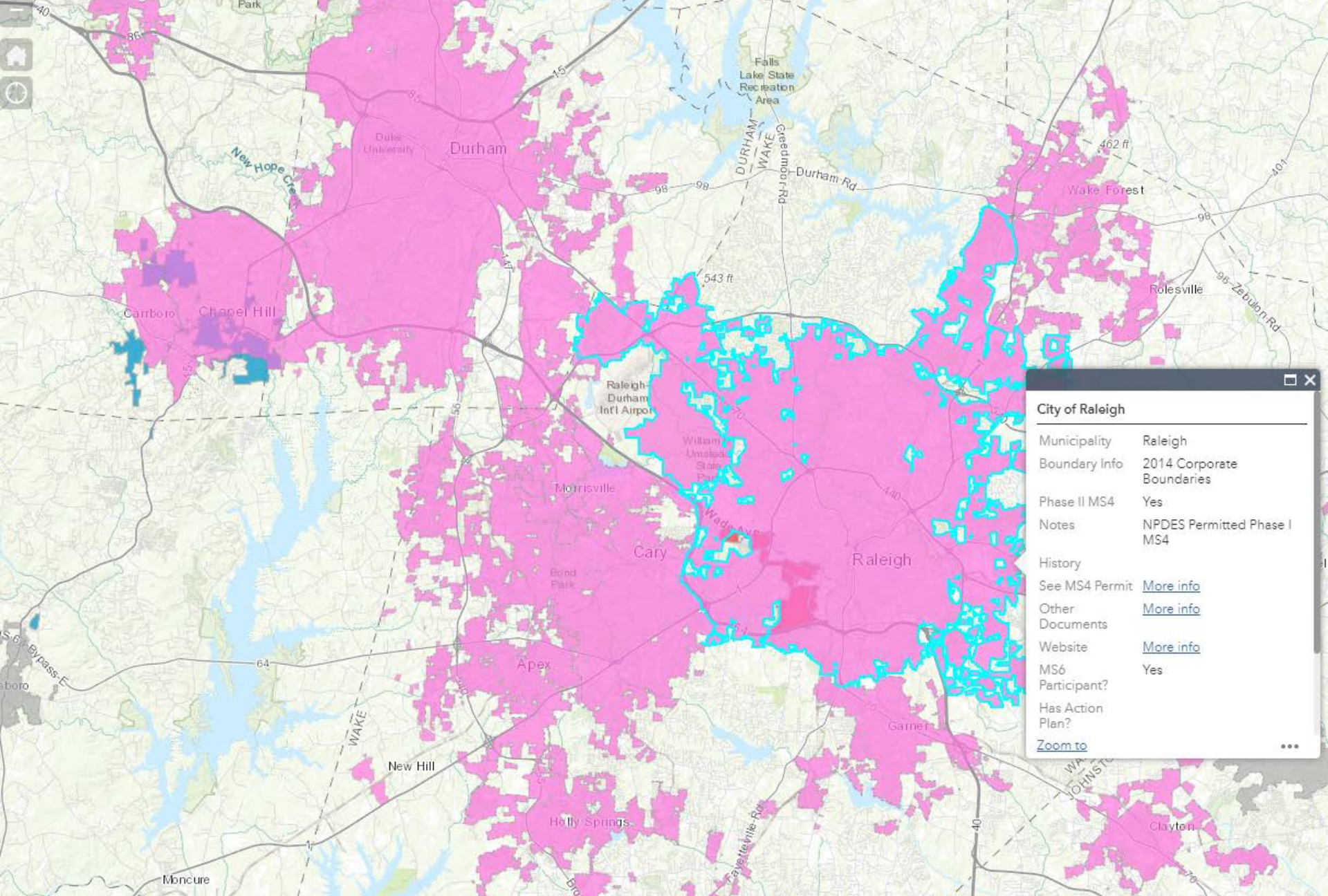


Tracking Success

1. Stormwater professional identify gaps in the local program and the root causes.
2. Local governments will post the results of the Gap Analysis and Root Cause Analysis and notify the State
3. Local governments will develop and post an Action Plan.
4. Once the Action Plan is implemented, the local government would notify the State.
5. The State will update the interactive map.
6. In addition to the Section 106 Work Plan, State would review Gap Analysis, Root Cause Analysis, and Action Plans and document any follow up



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▼ Find address or place Q



City of Raleigh
✖

Municipality	Raleigh
Boundary Info	2014 Corporate Boundaries
Phase II MS4	Yes
Notes	NPDES Permitted Phase I MS4
History	
See MS4 Permit	More info
Other Documents	More info
Website	More info
MS6 Participant?	Yes
Has Action Plan?	
Zoom to	...

What's Next?

- 1-2 day course
- Each module will include lesson plans
- Offered to stormwater professionals, Federal, State & Local entities
- Course will be offered in partnership with NC State University & DEQ

Course Agenda

Day 1 MS6 Program

- Organizational Commitment
- Environmental Management Systems (EMS)
- Asset Management
- Finding Cooperative Solutions
- Performing Gap Analysis and Identifying Root Causes
- Developing and Implementing Action Plans

Day 2 Minimum Measures

- Public Education and Outreach
- Public Involvement
- IDDE
- Construction Activities
- Post-construction Activities
- Good Housekeeping and Pollution Prevention

Day 3 Optional Training

- NC Compliance Strategy
- Alternatives to TMDLs

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MS4 Sustainability Strategy (MS6)

What's Next?

With EPA electronic reporting (beginning in 2020) and requirements to conduct inspections and audits - the templates, questions, list of root causes, and action plans lend themselves to a web-based application, inspections, audits, and electronic reporting

319 grant and/or public private partnership (P3)



QUESTIONS?



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Department of Environmental Quality
DEMLR Stormwater Program

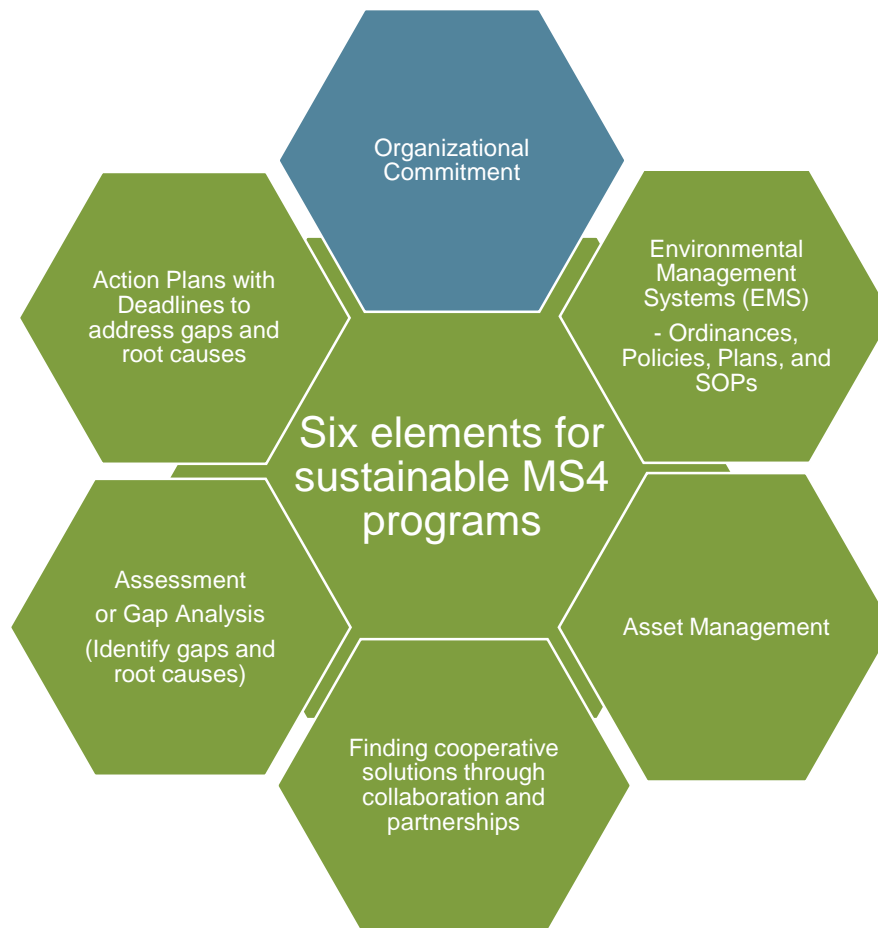


More detailed info slides if needed...



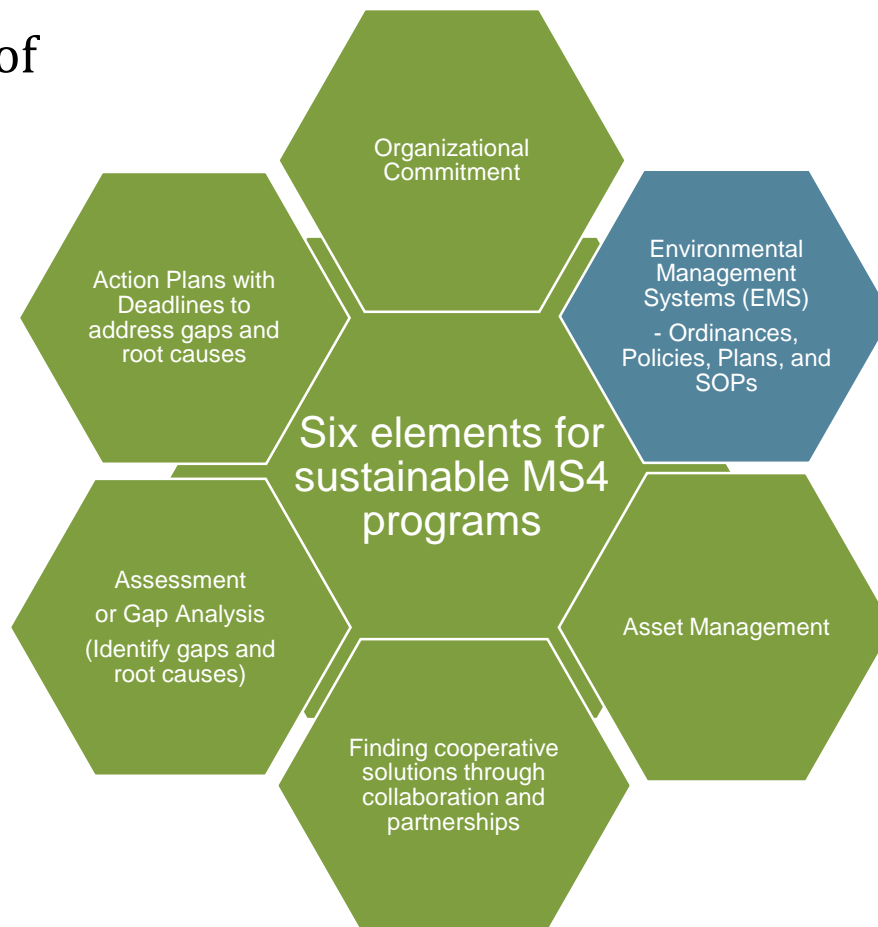
Municipal Separate Storm Sewer System Sustainability Strategy (MS6)

- Local governments submit a resolution affirming the Local Government supports a Sustainability Strategy, the primary contact and link to program website
- Email with PDF to robert.patterson@ncdenr.gov



Municipal Separate Storm Sewer System Sustainability Strategy (MS6)

- State maintains a compendium of useful documents, checklist, a sample gap analysis, list of root causes, training material, etc.



Municipal Separate Storm Sewer System Sustainability Strategy (MS6)

Asset Management Plan is a tactical plan for managing an organization's infrastructure and other assets to deliver an agreed standard of service.

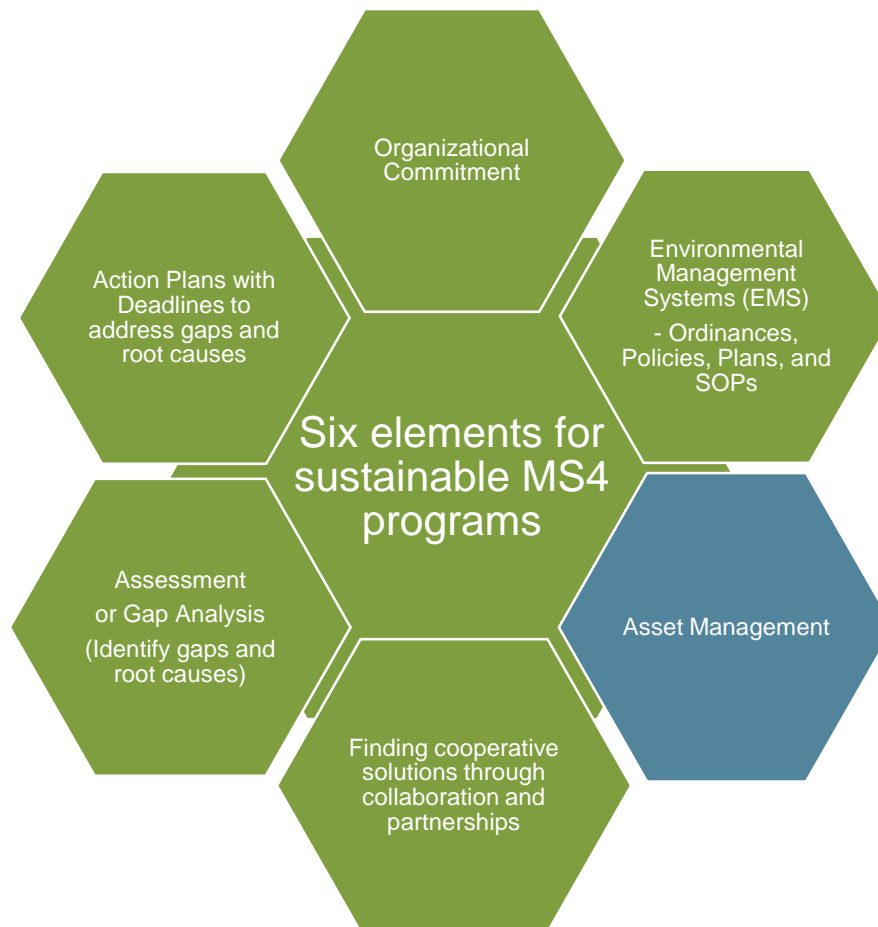


Municipal Separate Storm Sewer System Sustainability Strategy (MS6)

Justification

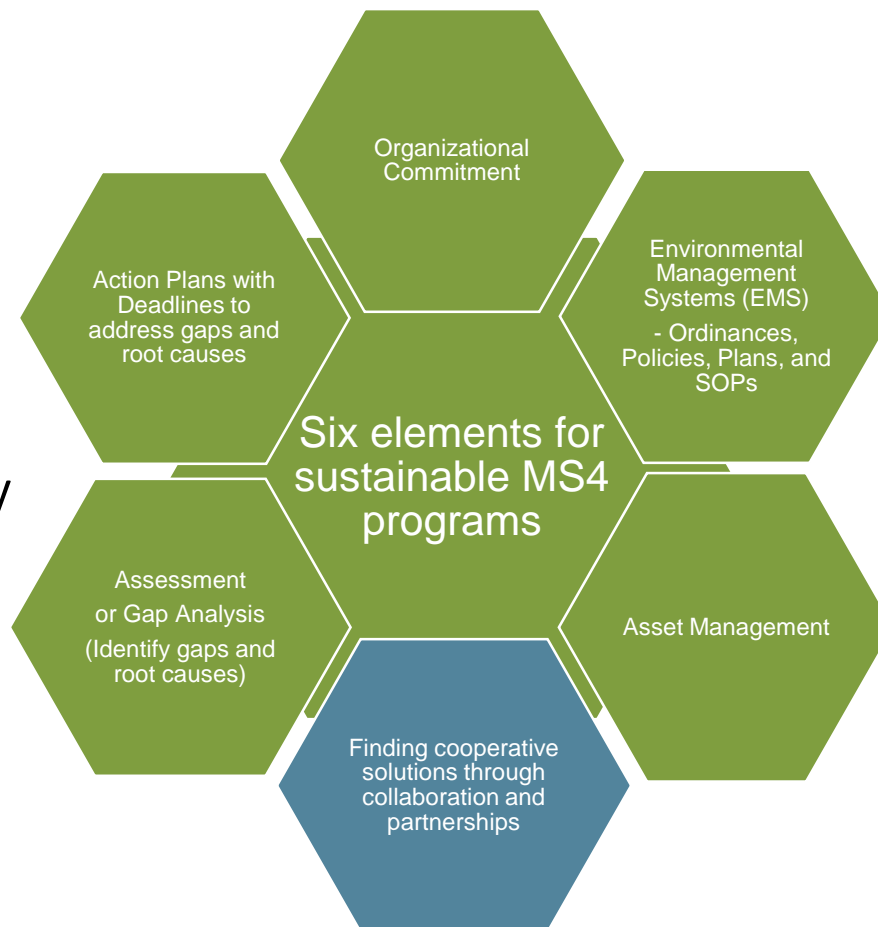
Gives visibility of the costs and benefits associated with providing the agreed standard of service.

Minimizes the whole-life cost, including the operation, maintenance and replacement of each asset.



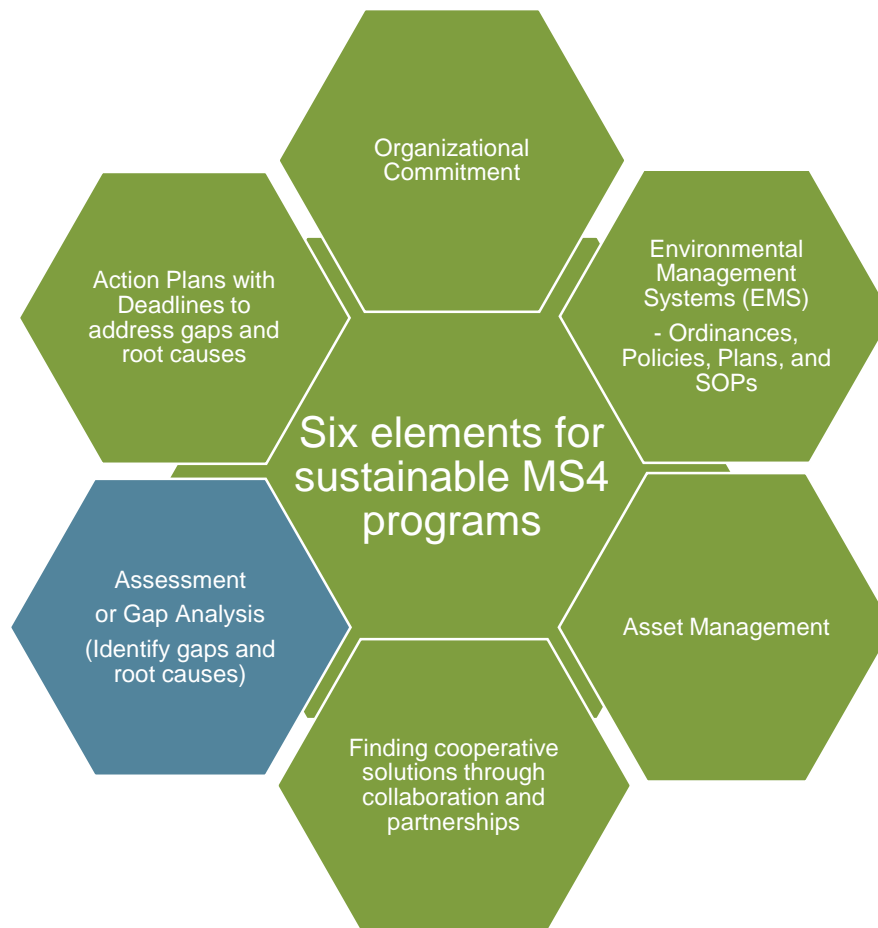
Municipal Separate Storm Sewer System Sustainability Strategy (MS6)

- Partnerships lead to cooperative solutions
- Cooperative solutions lead to Ownership
- Ownership leads to improved stormwater programs, regulatory compliance, an engaged public, and result based adaptive management that benefits the community and water shed



Municipal Separate Storm Sewer System Sustainability Strategy (MS6)

- Checklist maintained by the state includes regulatory background information, permit requirements, and elements of sustainable strategy
- Gap analysis performed by local governments identifies positive findings, deficiencies or gaps in the Stormwater Program, identifies root causes of deficiencies and provides recommendations and identifies opportunities to improve the program



Municipal Separate Storm Sewer System Sustainability Strategy (MS6)

Action Plans, developed by the Local Government, should identify:

- Clear outcomes
- Who is involved and what is their role
- What actions or changes will occur to address gaps and/or deficiencies and root causes
- Who is going to do what and by when
- What resources (i.e., money, staff) are needed to carry out these changes.



Municipal Separate Storm Sewer System Sustainability Strategy (MS6)

- Action Plans lend credibility to your organization
- Action Plans shows members of the community that your organization is well ordered and dedicated to getting things done
- Action Plans ensure local governments don't overlook any of the details

Municipal Separate Storm Sewer System Sustainability Strategy (MS6)

- One of biggest problems with Action Plans is the Action Plan is not Implemented.
- Too often staff are fatigued from completing the earlier phases the sustainability strategy – getting Commitments, EMS, Asset Management, Seeking Cooperative Solutions, and completing Gap Analysis.
- Not unlike writing permits, the task is not “done” once the permit is written. Stormwater Control Measures require ongoing inspections and maintenance – Action Plans require ongoing review and actions.