Final 2017 NH Small MS4 General Permit

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Overview

- Program History
- Part 1: Eligibility
- Part 2.1-2.2: Water-quality based requirements
- Part 2.3: 6 minimum control measures
- Timeline

Sec. 4 of the Clean Water Act

All point sources discharging pollutants to waters of the U.S.

Must obtain a permit from an authorized program (state or EPA)

Why Stormwater?

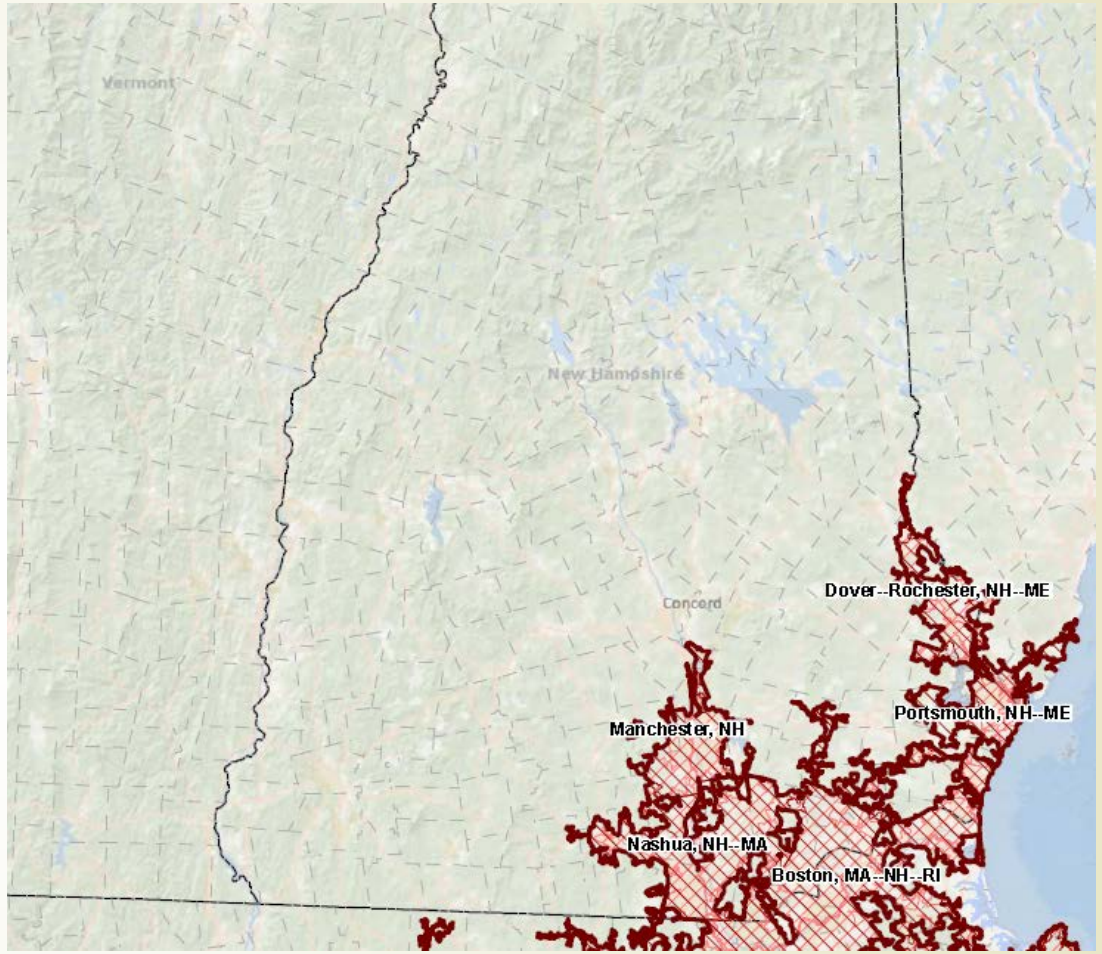
The Nationwide Urban Runoff Program (1979-1983): high levels of heavy metals, fecal coliform, TSS, nutrients and hydrocarbons in urban runoff

Numerous studies since then looking at stormwater pollution

Analysis of the National Stormwater Quality Database shows that stormwater generally contains certain pollutants

The small MS4 program in New Hampshire

- Small MS4s must be regulated as point source discharges under NPDES Phase II Regulations (1999)
- Most municipalities covered under the 2003 permit
- Coverage based on **urbanized areas**



History of the NH Small MS4 GP

- MA and NH MS4s were covered under the 2003 permit
- EPA issued a 2008 Draft permit – significant comments
- EPA issued a 2013 Draft – significant comments
  - Renoticed certain sections of the permit in 2015
- EPA responded to comments and finalized permit Jan, 2017

About the Response to Comments

Index of Commenters and Page References

NH Small MS4 General Permit – Part 1

- "An MS4 is eligible for authorization under this permit if it is … located fully or partially within an urbanized area as determined by the 2010 census"
- "If the small MS4 is not located entirely within an urbanized area, only the portion of the MS4 that is located within the urbanized area is regulated"

NH Small MS4 GP – Part 1 Comments

- On urbanized area and waivers
- On the SWMP and new permittee timelines
  - Must incorporate programs into SWMP when they are due in the permit, not upfront
  - Deadlines for new permittees are extended by 2-3 years

NH Small MS4 GP – Part 1 Comments

- On Compliance with the permit / “immediate noncompliance”
  - The permit contains deadlines for most actions/deliverables
  - The change to NH WQS in 2015 allowed us to put in milestones beyond the 5-year permit timeline
  - Permittees’ discharges are not considered to cause or contribute to an exceedance of WQS if they are following the requirements of part 2.1 and 2.2 to address those discharges

NH Small MS4 GP Part 2.1 Water Quality Based Effluent Limitations

- Discharges to **waters with a TMDL** must follow the relevant requirements of **Appendix F**
- Discharges to **impaired waters** must follow the relevant requirements of **Appendix H**
  - No water quality response plan – EPA has been more explicit about appropriate controls (2015 renotice)

NH Small MS4 GP Part 2.1 Water Quality Based Effluent Limitations

- **This applies to nutrients (TN and TP), metals (cd, cu, fe, pb, zn), solids, bacteria or pathogens, chloride, oil and grease**
  - common stormwater pollutants
  - sources can be reduced through measures within the MS4 catchment area --- EPA has specified enhanced measures

NH Small MS4 GP Part 2.1
Water Quality Based Effluent Limitations

We have listed municipalities that CONTAIN these waterbodies in the permit, although this does not necessarily mean that your MS4 discharges to these waterbodies

NH Small MS4 GP
Six Minimum Control Measures

- Public Education/Outreach
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination (IDDE)
- Construction site stormwater control
- Post-construction stormwater management
- Good Housekeeping and Pollution Prevention

NH Small MS4 GP
Six Minimum Control Measures

- Implementation of one or more of the permit requirements may be shared with another entity or the other entity may fully implement the requirement
  - Must be mutually agreed upon
  - The permittee is still responsible for specifying in annual reports that they are relying on another entity for certain permit requirements --- and reporting on those actions

NH Small MS4 GP Part 2.3.2 Public Education and Outreach

- Continue the public ed program of the 2003 permit
- 4 audiences: residents, businesses and commercial facilities, construction developers, industrial facilities (unless absent)
- 2 educational messages to each audience (1 for new permittees) during the permit term
- Methods to evaluate the effectiveness of the educational messages, reporting

NH Small MS4 GP Part 2.3.2 Comments

- How to evaluate effectiveness?
  - Pick an effect that is measurable
  - Not expecting sophisticated data gathering
  - Pet waste program: is there less pet waste in a park?
  - Erosion and sediment control education: do the catch basins need less frequent cleaning downgradient from the construction project?
  - Trash cleanup day and fliers: is there less trash in a local waterway following the event --- beyond the immediate aftermath?
  - Rain garden demo/workshop: are there more residential rain gardens in town?
- EPA has many educational resources to use

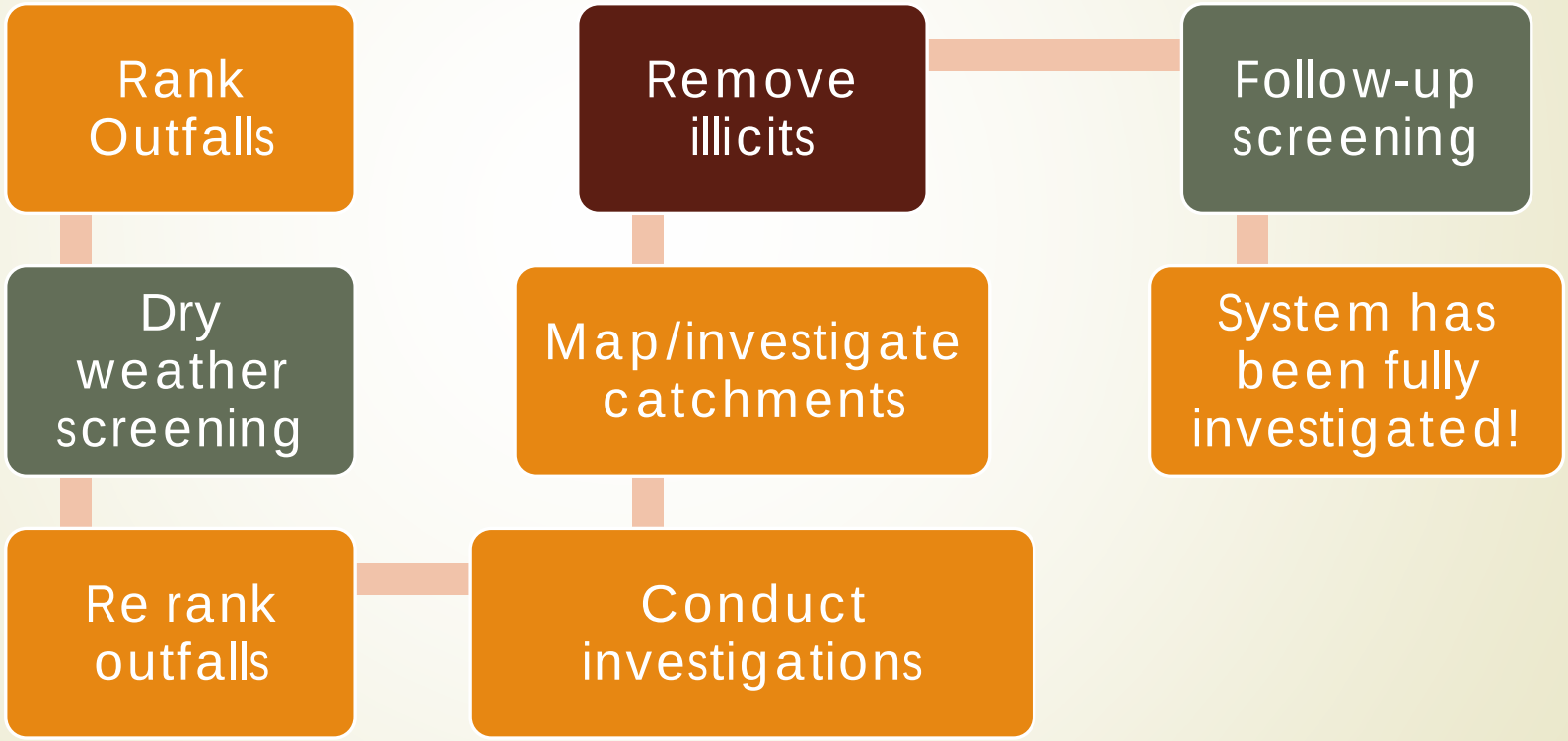
NH Small MS4 GP Part 2.3.3 Public Involvement and Participation

- Annually provide the public an opportunity to participate in the review of the SWMP

NH Small MS4 GP Part 2.3.4 Illicit Discharge Detection and Elimination (IDDE) Program

- Adequate legal authority to prohibit illicit discharges, investigate and eliminate discharges (2003 permit requirement)
- Identify previous SSOs within the first year and update annually
- Develop a more detailed map of your system – concurrently with the IDDE investigation (phase I due in 2 years, a final map is not required until year 10 of the IDDE program)
  - Update on mapping progress in each annual report
- The part has been reorganized to be more sequential; easier to understand

NH Small MS4 GP Part 2.3.4 Illicit Discharge Detection and Elimination (IDDE) Program



NH Small MS4 GP Part 2.3.4 Illicit Discharge Detection and Elimination (IDDE) Program

- Criteria to rank outfalls have been made more explicitly flexible for towns to determine their own priority outfalls
- Certain system vulnerability factors (wet weather screening) have been made discretionary
  - Age of infrastructure
  - Sewer lift stations or known sewer restrictions
  - History of septic system failures or code-required septic system upgrades

NH Small MS4 GP Part 2.3.5 Construction Site Stormwater Runoff Control

- Applies to sites ≥1 acre
- Ordinance to require sediment and erosion control measures at construction sites
- Written procedures for site inspections for sites that discharge to the MS4
- Require construction operators to implement sediment and erosion control measures and control other wastes associated with construction projects
- Written procedures for site plan review of construction BMPs

NH Small MS4 GP Part 2.3.6 Stormwater Management in New Development and Redevelopment

- Applies to sites ≥1 acre
- Ordinance to address discharges from development to the MS4
  - Design of BMPs shall follow NH Stormwater Manual
  - BMPs must be designed to
    - Retain the WQV (runoff from 1 in of precipitation) in accordance with NH AOT OR
    - Remove 90% avg annual TSS load, 60% avg annual TP load generated from the site's impervious area
  - More flexibility allowed for redevelopment projects: offsite mitigation within the same watershed allowed, must remove 80% avg annual TSS load, 50% avg annual TP load
- OR the ordinance must be consistent with Sec. 4 Elements C and D of the SE Watershed Alliance Model Stormwater Standards for Coastal Communities
- Require the submission of as-built drawings for these projects for operator review, as well as plans for O&M of new BMPs

NH Small MS4 GP Part 2.3.6 Stormwater Management in New Development and Redevelopment

- Report assessing street design and parking lot guidelines to affect the creation of impervious cover
- Report assessing existing regulations to determine any barriers to green infrastructure practices (green roofs, rain gardens, curb extensions, porous pavement, soil augmentation, water harvesting)
- Inventory of permittee-owned properties for potential retrofits

NH Small MS4 GP Part 2.3.7 Good Housekeeping and Pollution Prevention for Municipal Operations

- Permittee-owned operations: reduce pollutant sources
- Develop written O&M programs (due year 2) for
  - Parks and open space
  - Buildings and facilities with petroleum products or other potential stormwater pollutants
  - Vehicles and equipment
  - MS4 infrastructure

NH Small MS4 GP Part 2.3.7 Good Housekeeping and Pollution Prevention for Municipal Operations

- Catch basin cleaning schedule
  - Goal: 50% full
  - Prioritize nutrient impaired catchments and catchments with construction activity
  - Investigate excessive sediment loadings to CBs
  - Log CBs cleaned; report in annual report

NH Small MS4 GP Part 2.3.7 Good Housekeeping and Pollution Prevention for Municipal Operations

- Street sweeping plan
  - All streets with curbing and/or CBs (ie MS4 connected) shall be swept and/or cleaned a minimum of **once per year in spring**
  - Report miles swept and material removed in the annual report
- Procedures for winter road maintenance
  - Proper salt and sand storage
  - Opportunities for alternative materials
  - Minimize use
- Inspection and maintenance of SW treatment structures
  - Permittee owned
  - At least annual inspection

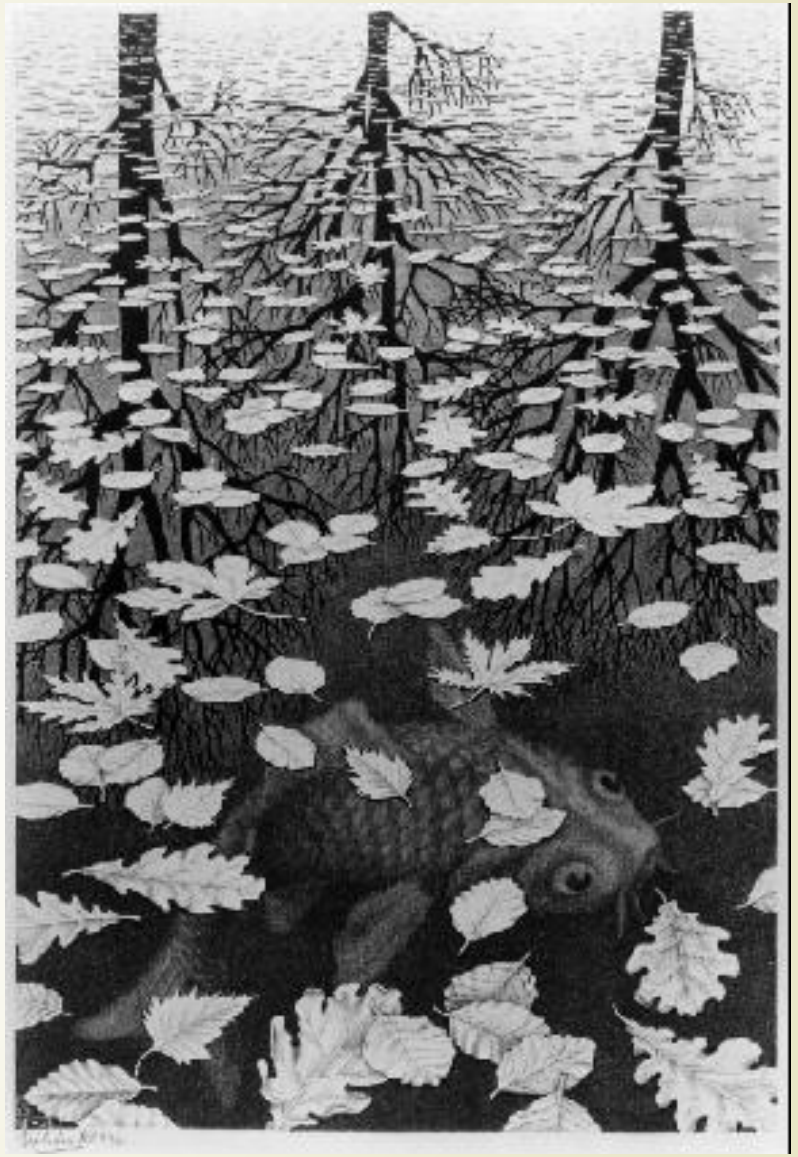
NH Small MS4 GP Part 2.3.7 Good Housekeeping and Pollution Prevention for Municipal Operations

- Develop SWPPPs for maintenance garages, public works yards, transfer stations, waste handling facilities where pollutants are exposed to stormwater --- due year 2
  - Not needed for facilities with a SWPPP under MSGP or NOE
  - Based on MSGP requirements
    - Who: pollution prevention team
    - What: description of facility, potential pollutants, design, installation and implementation of stormwater BMPs
  - Include best management practices: minimize exposure (salt!), good housekeeping, preventative maintenance, spill prevention and response plan, erosion and sediment control
  - Quarterly inspections; report in annual report

NH Small MS4 GP Part 2.3.7 Comments

- Sweeping uncurbed streets makes no sense
  - Agreed! Updated in final permit
- 50% full metric for CBs – why not just a schedule?
  - Goal, not a requirement
  - Based on available information

Additional water quality based requirements: impaired receiving waters



NH Small MS4 GP Appendix F Requirements for TMDL receiving waters

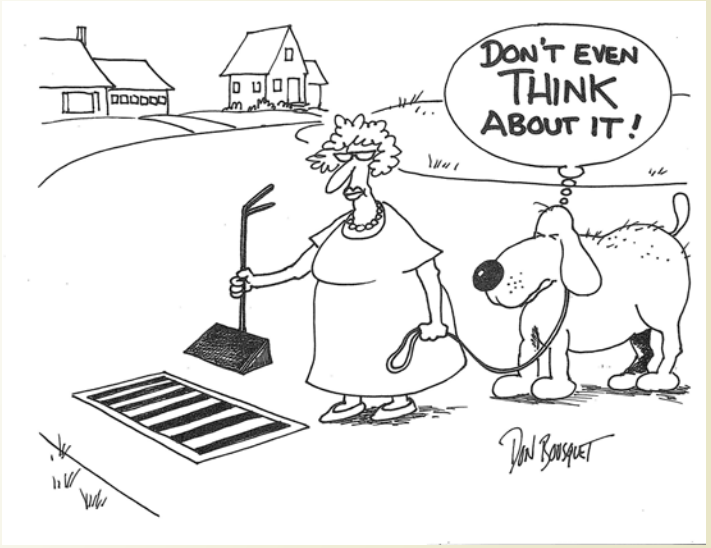
Chloride TMDLs:

- Chloride reduction plan with specific planned actions (year 1)
- Track salt applied to municipally owned surfaces (year 2)
- ID private parking lots draining to the MS4; applicators be trained on salt usage and reporting

NH Small MS4 GP Appendix F Requirements for TMDL receiving waters

Bacteria/Beaches TMDLs:

- Public education to residents during the permit term must cover pet waste, septic system maintenance (if applicable)
- Prioritize catchments draining to TMDL waters in the IDDE program (HIGH priority catchments)



NH Small MS4 GP Appendix F Requirements for TMDL receiving waters

Lake and Pond Phosphorus TMDLs:

- Phosphorus control plan to reduce TP loading from the MS4
- Reductions: 40-76%
- 15 year implementation timeframe

Number	LPCP Component and Milestones	Completion Date
1	Legal Analysis	2 years after permit effective date
2	Funding source assessment	3 years after permit effective date
3	Define LPCP scope (LPCP Area)	4 years after permit effective date
4	Calculate Baseline Phosphorus, Allowable Phosphorus Load and Phosphorus Reduction Requirement	4 years after permit effective date
5	Description of planned nonstructural and structural controls	5 years after permit effective date
6	Description of Operation and Maintenance (O&M) Program	5 years after permit effective date
7	Implementation schedule	5 years after permit effective date
8	Cost and Funding Source Assessment	5 years after permit effective date
9	Complete written LPCP	5 years after permit effective date

To discontinue TMDL receiving water requirements

- If NHDES revises the TMDL, and the new EPA-approved TMDL requires no further stormwater controls for the MS4 discharge
- Permittee may work with NHDES to plan an alternative pollutant reduction plan consistent with the TMDL; will include with NOI for EPA review and public noticing

NH Small MS4 GP Appendix H Requirements for impaired receiving waters

Nitrogen impairments:

- Annual public education messages on specific seasonal topics (spring: fertilizer mgmt, summer: pet waste, fall: leaf litter disposal)
- New and redevelopment ordinance: BMPs must be optimized for N removal
- Good housekeeping: procedures to manage specific N sources on municipal properties, street sweeping 2x per year (or leaf litter collection program)

NH Small MS4 GP Appendix H Requirements for impaired receiving waters

Nitrogen impairments:

- Nitrogen source identification report (4 years)
  - N loading estimate to receiving water, any sampling
  - Identify and prioritize high N loading catchments
  - Identify potential structural BMP retrofits
- Retrofit inventory – potential structural BMPs (5 years)
  - One demonstration BMP by year 6
  - Track N removal on any installed BMPs (no reduction target)

NH Small MS4 GP Appendix H Requirements for impaired receiving waters

Phosphorus impairments:

- Annual public education messages on specific seasonal topics (spring: fertilizer mgmt, summer: pet waste, fall: leaf litter disposal)
- New and redevelopment ordinance: BMPs must be optimized for Phosphorus removal
- Good housekeeping: procedures to manage specific Phosphorus sources on municipal properties, street sweeping 2x per year (or leaf litter collection program)

NH Small MS4 GP Appendix H Requirements for impaired receiving waters

Phosphorus impairments:

- Phosphorus source identification report (4 years)
  - P loading estimate to receiving water, any sampling
  - Identify and prioritize high P loading catchments
  - Identify potential structural BMP retrofits
- Retrofit inventory – potential structural BMPs (5 years)
  - One demonstration BMP by year 6
  - Track P removal on any installed BMPs (no reduction target)

NH Small MS4 GP Appendix H Requirements for impaired receiving waters

Bacteria or pathogens impairments

- Public education to residents during the permit term must cover pet waste, septic system maintenance (if applicable)
- Prioritize catchments draining to impaired waters in the IDDE program (HIGH priority catchments)

NH Small MS4 GP Appendix H Requirements for impaired receiving waters

chloride impairments

- salt reduction plan with specific planned actions (year 3, fully implement by year 5)
- Track salt applied to municipally owned surfaces (year 2)
- ID private parking lots draining to the MS4; applicators be trained on salt usage and reporting

NH Small MS4 GP Appendix H Requirements for impaired receiving waters

Solids, metals, oil and grease impairments

- Commercial and industrial areas (new or redevelopment) stormwater controls should allow for shutoff and containment in case of an emergency spill
- Increased street sweeping and catch basin cleaning frequency as determined by the permittee

To discontinue impaired receiving water requirements

- If the **receiving water** (downstream segments in the case of nutrients) is determined to **no longer be impaired** (NHDES and EPA agree)
- **A TMDL is developed** for the receiving water and the MS4 WLA indicates no further stormwater controls are necessary
- The permittee determines their **discharge is below applicable water quality criteria** ("accurate characterization" – no specific monitoring plan specified) --- this option not available for nutrients

Schedule

- The permit effective date is **July 1, 2018**
- **NOIs are due on Oct 2, 2018**
- Updated Stormwater Management Program due at 1 year (2019)
- Ongoing/first year requirements:
  - Clean catch basins
  - Sweep streets in the spring
  - Public education (no specific timeline in permit)
- Outfall inventory and priority ranking for IDDE program due at 1 year (2019)
- Written IDDE program due at 1 year
- SSO inventory due at 1 year

Questions/Discussion

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