

Massachusetts Draft MS4 Permit: What Does this Mean to NH?

Nashua Regional Stormwater Coalition Meeting

March 24, 2015

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Overview

- Where is it Now?
- Notice of Intent
- Stormwater Management Program
- Six Minimum Measures
- Antidegradation Provisions
- Discharges to Impaired Waters
- Summary: What is Different from NH Permit?



Where is it Now?

2003 Permit Remains in Effect
Until a New Permit is Final

2003
MS4
Permit

2008 NH
Draft

2010 MA
Draft
(2 permits)

2013 NH
Draft

2014 MA
Draft
(1 permit)

- NH Final Expected June 2015
- Effective Dec 2015
- Expected to be Similar to MA Draft



2003 MS4 Permit

- SWMP to meet 6 minimum measures
- Flexibility

2013/2014 Draft MS4 Permits

- Same 6 minimum measures – Increased & more specific requirements
- More emphasis & clarity on impaired waters



Notice of Intent (NOI)

- Due 90 Days From Effective Date of Permit – March 2016
- Basic Information
 - Endangered species & historic properties
 - Status of outfall map, bylaws/ordinances
 - Receiving waters & outfalls
 - Proposed SWMP BMPs
- Public Notice – 30 Day Comment Period
- Authorization to Discharge



Stormwater Management Programs

- Due 1 Year From Effective Permit Date
- Written Plan to Support NOI
 - Endangered species & historic properties documentation
 - BMPs to address 6 minimum measures
 - Measures to address impaired waters
 - Drainage Maps



Six Minimum Measures

Public Education

Public Outreach

Illicit Discharge Detection & Elimination
(IDDE)

Construction Site Stormwater
Controls/Regulations

Post-Construction Site Stormwater
Controls/Regulations

Good Housekeeping



Public Education & Outreach

- Target Four Audiences
 1. Residents
 2. Businesses & commercial facilities
 3. Developers
 4. Industrial facilities
- 2 Messages to Each Audience Over Permit Term
- Permit Outlines Specific Topics – Include Septic Maintenance if >30% Residents on Septic

Public Involvement & Participation

- Same as 2003
 - Comply with state public notice requirements
 - Public review of SWMP
 - Make all reports available to the public
- New from 2003 – Encourages Posting of SWMP online

IDDE

- Drainage System Map
- Catchment Delineation
- Inventory Sanitary Sewer Overflows (SSOs)
- Written IDDE Plan
- Priority Ranking of Catchments
- Dry Weather Screening & Sampling
- Wet Weather Sampling
- Catchment Investigations

Construction Site Runoff Control

- Reference BMP design standards
- Site plan review procedures – 1 yr
- Inspection & Enforcement Procedures – 1 yr
- Track # of site reviews, inspections, & enforcement actions



Post-Construction Stormwater Management

- Bylaw Reference State Stormwater Manual – 2 yrs
 - Additional provisions added to MA Permit
 - Retain 1” runoff from impervious surfaces or equivalent pollutant removal to biofiltration
 - No infiltration on contaminated or industrial sites
 - Incorporate shutdown and containment into infiltration designs near environmentally sensitive areas



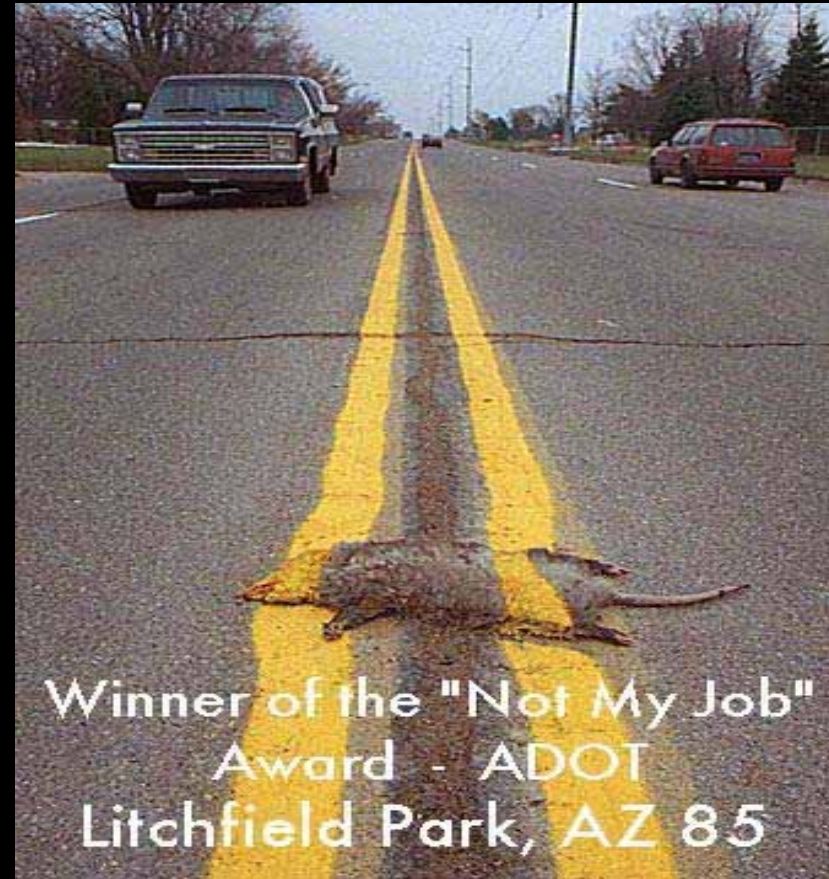
Post-Construction Stormwater Management

- Long-term O&M Procedures
- As-builts
- Assess Design Standards for Streets & Parking
– 2 yrs (MA – 3 yrs)
- Assess Feasibility of Green Infrastructure – 3
yrs (MA – 4 yrs)
- Estimate Changes to IA & DCIA Annually
- Rank Municipal Properties & Infrastructure for
BMPs – 2 yrs (MA – 4 yrs)



Good Housekeeping & Pollution Prevention

- Inventory Municipal Facilities & Activities – 6 months (MA – 1 yr)
- Establish Written O&M Procedures – 1 yr
 - Parks & open space
 - Building & facilities exposed to runoff
 - Vehicles & equipment
 - Infrastructure



Good Housekeeping & Pollution Prevention

- Infrastructure
 - Street sweeping
 - Annually in Spring
 - More frequently for targeted areas
 - Report # miles cleaned & quantity of material removed
 - Catch Basin Cleaning
 - Maintain <50% full
 - Prioritize & optimize cleaning
 - Report # inspected, cleaned & materials removed in annual reports
 - Structural Stormwater BMPs
 - Minimum annual inspection



Photo source: <http://pubs.usgs.gov/sir/2007/5156/>



Photo source: <http://www.superproductslc.com/applications/>

Good Housekeeping & Pollution Prevention

- Stormwater Pollution Prevention Plans (SWPPPs) – 2 yrs
 - Maintenance garages
 - Public works yards
 - Transfer stations
 - Other waste handling facilities where pollutants are exposed to stormwater runoff



Photo source: <http://www.pitman.org/page.asp?prmName=publicworks>



Photo source: <http://candswaste.com/california/lakeport>

Antidegradation Provisions

- New or Increased MS4 Discharges Subject to Antidegradation Regulations
 - Limit pollutant loading of contaminants
 - Met through controlled site development & implementation of stormwater BMPs



Discharges to Waters with an Approved Total Maximum Daily Load (TMDL)

- Chlorides – Salt Reduction Plan (No Chloride TMDLs in MA)
- Bacteria – Enhanced BMPs & Water Quality Response Plan (WQRP) (MA eliminates WQRP, enhanced BMPs only)
- Phosphorus – Phosphorus Control Plan (PCP)



Discharges to Impaired Waters – No TMDL

- Water Quality Response Plan (WQRP)
 - Preliminary source assessment
 - Specific BMPs to be included (e.g., public education, regulatory inclusions, additional sweeping, IDDE)
 - BMP implementation & assessment within 5 years
- Massachusetts
 - Replaces WQRP with Nutrient Identification Plans
 - No WQRP or increased sweeping for bacteria impairments
 - BMPs Incorporated into Six Minimum Measures



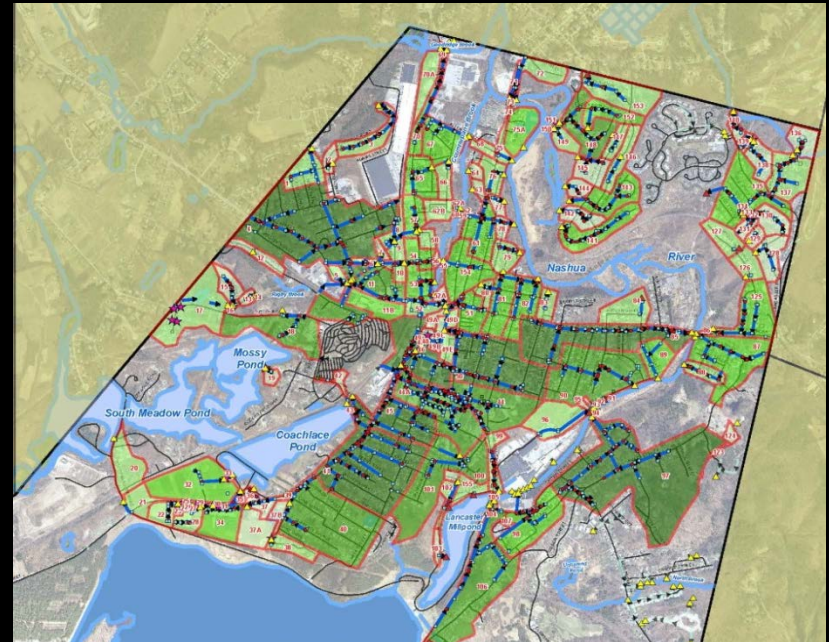
Summary: What is Different from NH Permit?

- Longer Implementation Times in Some Cases
 - 15-20 yrs PCP implementation
- More Specific Design Provisions for Ordinance Updates?
- Elimination of WQRP for Bacteria Impaired Waters – more direction on specific enhanced BMPs
- WQRP Replaced with Nutrient Identification Plans
 - Implementation of One Demonstration BMP Within 6 yrs



IDDE – Mapping & Sanitary Sewer Overflows (SSOs)

- Mapping – Due 2 yrs
 - Entire storm drain system
 - Delineate outfall catchment areas
 - Sanitary sewer & combined sewer system where available
- Inventory SSOs – Due 120 days
- Volume, cause, mitigation
 - New SSO – oral & written notice to EPA



IDDE – Written Plan

- Due 1 yr
- Priority ranking of catchments – Excluded, problem, high & low
 - Further ranking – water quality data, density of surrounding land uses, age of infrastructure, sewer conversion, etc.
 - Outfall & interconnection screening procedures
 - Catchment investigation procedures



IDDE – Dry Weather Screening

- Due 3 yrs
 - Outfalls & Interconnections
 - Ammonia, chlorine, conductivity, salinity, E. coli or enterococcus, surfactants, temperature, pollutants receiving water is impaired for
 - Field kits allowed for all but bacteria



Photo source: http://www.sde-inc.com/case_studies/idde/dws.html



IDDE – Catchment Investigations

- Inspect All Key Junction Manholes
- Identify System Vulnerabilities – If Present, Wet Weather Sampling
- Schedule
 - 80% of all problem catchments within 3 years
 - 100% of all problem catchments & 40% of all catchments within 5 years
 - 100% of all catchments within 10 years



Discharges to Waters with an Approved Chloride TMDL

- Salt Reduction Plan
 - Tracking & report salt use
 - Equipment upgrades
 - Municipal staff training
 - No or low salt zones
 - Public education
 - Minimize exposure to salt piles
 - Identify parking lots with ≥ 10 spaces
 - Applicators must be trained
 - Report salt use to MS4
 - Private



Photo source:

<http://www.baltimoresun.com/news/weather/weather-blog/bal-md-p11-snow-fox-20131210,0,1207230.photo>



Discharges to Waters with an Approved Bacteria TMDL

- Water Quality Response Plan (WQRP)
 - Preliminary source assessment
 - BMP Identification to include at a minimum:
 - Pet waste & septic system education
 - Street sweeping 2x/yr
 - Catchments designated “Problem Catchments” or “High” priority in IDDE
- Massachusetts
 - Eliminates WQRP – BMPs Incorporated into Six Minimum Measures
 - No increased sweeping



Discharges to Waters with an Approved Phosphorus TMDL

- Phosphorus Control Plan – Developed & Implemented within 5 yrs
 - Phosphorus loads & required reductions
 - Non-structural & structural controls
 - Priority ranking of areas & infrastructure for controls
 - Annual report of progress
- **Massachusetts**
 - 5 yrs to develop plan, 15-20 yrs to implement
 - **Enhanced BMPs**



Photo source:
<http://www.lakegeorgeassociation.org/what-we-do/lake-friendly-living/The-Trouble-with-Phosphorus.htm>

EPA Provides Credit System for Controls



Discharges to Impaired Waters - No TMDL

Phase 1: Preliminary Evaluation & Source Identification - Water Quality Response Plan (WQRP) – 1 yr

- Do discharges contribute to impairment?
- Identify potential sources
- Identify BMPs

Phase 2: BMP Implementation – 3 yrs

- Implement BMPs in WQRP
- Final source identification & assessment

Phase 3: Reassessment of Implemented BMPs – 5 yrs

- Reassess implemented BMPs & initial evaluation
- Identify need for modifications or additions



Discharges to Impaired Waters – No TMDL – Great Bay Nitrogen & Chloride

- Great Bay Nitrogen
 - WQRP to include following BMPs at a minimum:
 - Public education on fertilizer, yard waste disposal, pet waste
 - Track nitrogen reductions following removal if illicit connection
 - Post-construction bylaw to require BMPs be optimized for nitrogen removal
 - Good housekeeping practices for lawn/yard maintenance
 - 2x/yr sweeping
 - Track structural BMPs and associated nitrogen removal
- Chloride
 - Salt reduction plan – same as TMDL waters



Discharges to Impaired Waters – No TMDL – Massachusetts

- Nutrient (phosphorus, nitrogen)
 - Enhanced BMPs
 - Nutrient Source Identification Report
 - Identification of potential structural BMPs on municipal-owned property
 - **One Demonstration BMP within 6 yrs**
- Bacteria
 - Enhanced BMPs
- Chloride
 - Salt reduction plan within 3 yrs
 - Tracking on municipally owned & maintained surfaces
 - **Outreach to private properties, no tracking**
- **Solids, Oil and Grease, or Metals**
 - Enhanced BMPs



Questions?

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