

Change is Coming:

Understanding the Proposed New Requirements of the NPDES MS4 General Permit

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What is the NPDES MS4 Permit?

- National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit
 - Issued in 2003
 - Regulates MS4s in urbanized areas (UA)
 - Requires:
 - Notice of Intent (NOI)
 - Stormwater Management Program (SWMP) – 6 minimum measures



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



Where is it Now?

2003 Permit Remains in Effect
Until a New Permit is Final

2003
MS4
Permit

2008 NH
Draft MS4
Permit

2010 MA
Draft MS4
Permits
(2 permits)

2013 NH
Draft
MS4
Permit

- MA Draft Expected 2014
- Single Permit for All of MA
- Expected to be Similar to NH Draft



2003 MS4 Permit

- SWMP to meet 6 minimum measures
- Flexibility

2013 Draft NH MS4 Permit

- 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
- 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

Notice of Intent (NOI) for coverage under Small MS4 General Permit Page 1 of 14

Part I. General Information

General Information

Name of Municipality or Organization: State:

EPA NPDES Permit Number:

Primary MS4 Program Manager Contact Information

Name: Title:

Street Address Line 1:

Street Address Line 2:

City: State: Zip Code:

Email: Phone Number:

Fax Number:

Other Information

Check the box if your municipality or organization was covered under the 2003 MS4 General Permit

Stormwater Management Program (SWMP) Location (web address or physical location):

Eligibility Determination

Endangered Species Act (ESA) Determination Complete? Eligibility Criteria (check all that apply): A B C D E F

National Historic Preservation Act (NHPA) Determination Complete? Eligibility Criteria (check all that apply): A B C D

Part II. Outfall Map

Estimated Percent of Outfall Map Complete? If 100% of 2003 requirements not met, enter an estimated date of completion (MM/DD/YY):

Web address where MS4 map is published:

If outfall map is unavailable on the internet an electronic or paper copy of the outfall map must be included with NOI submission (see section V for submission options)

Regulatory Authorities (if covered under the 2003 permit)

Illicit Discharge Detection and Elimination (IDDE) Authority Adopted?: Effective Date or Estimated Date of Adoption (MM/DD/YY):

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

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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 – Encourages Posting of SWMP online

IDDE – Big Changes!

2003 MS4



- Outfall map
- Dry weather screening
- Bylaw
- IDDE plan
- Public education

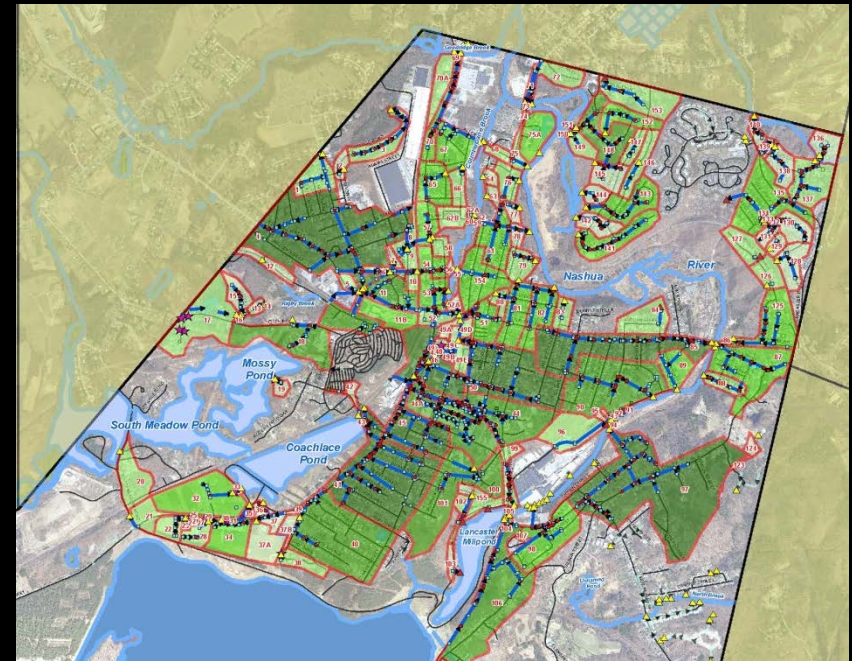
2013 Draft MS4



- 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

IDDE – Mapping & Sanitary Sewer Overflows (SSOs)

- Mapping – Due 2 Years
 - 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 Year
 - 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 Years
 - 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
 - 30% 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



Construction Site Runoff Control

2003 MS4



- Bylaw
- Site plan review procedures
- Inspection & enforcement procedures

2013 Draft MS4



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

Post-Construction Stormwater Management

2003 MS4

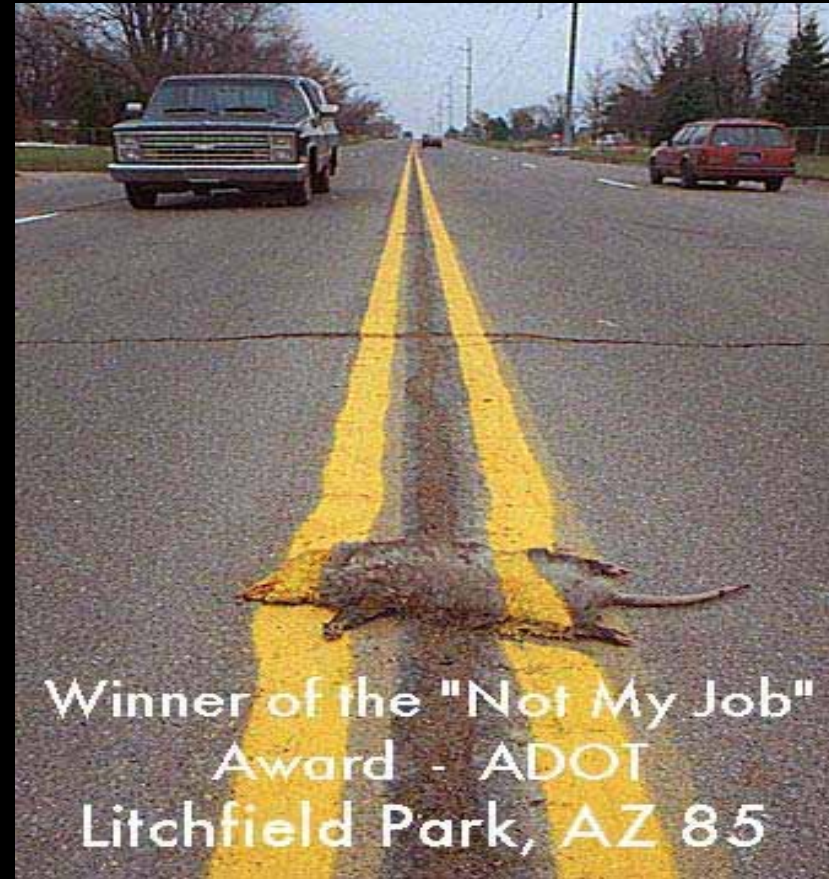
- Bylaw
- Long-term O&M procedures

2013 Draft MS4

- Bylaw Reference State Stormwater Manual – 2 yrs
- Long-term O&M procedures
- As-builts
- Assess regulations for barriers to LID practices – 2 yrs
- Assess feasibility of green infrastructure – 3 yrs
- Estimate changes to IA & DCIA annually
- Rank municipal properties & infrastructure for BMPs – 2 yrs

Good Housekeeping & Pollution Prevention

- Inventory Municipal Facilities & Activities – 6 months
- 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
 - Others 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 – Tracking, Training, Reporting
- Bacteria – Water Quality Response Plan (WQRP)
- Phosphorus – Phosphorus Control Plan (PCP)
- Others - WQRP



Discharges to Waters with an Approved Chloride TMDL

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



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
 - Pet waste & septic system education
 - Street sweeping 2x/yr
 - Catchments designated “Problem Catchments” in IDDE
 - Implementation schedule
 - WQRP assessment efforts



Discharges to Waters with an Approved Phosphorus TMDL

- Phosphorus Control Plan
 - Phosphorus loads & required reductions
 - Non-structural & structural controls
 - Priority ranking of areas & infrastructure for controls
 - Annual report of progress



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

Maximize Efficiency & Reduce Cost

- Use EPA/State Public Education Materials
- Regional Education
- Review & Inspection Fees
- Combine Training Events
- Tracking Tools
 - IA, DCIA – developer worksheets
 - Infrastructure/BMP maintenance
- Refer to State Design Standards
- Field Equipment for Outfall Screening
- Stormwater Fee



A photograph of a classroom with several students in the foreground, seen from behind, raising their hands. The students are wearing light blue, red, orange, and green shirts. The background is a dark chalkboard.

Questions?

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