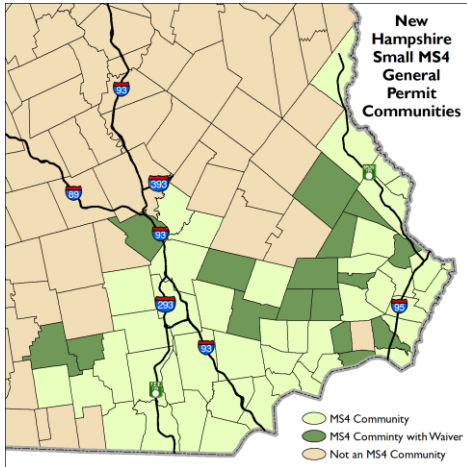


2017 Webinar Series

NEW HAMPSHIRE MUNICIPAL ASSOCIATION



Demystifying the MS4 Permit: Municipal Separate Storm Sewer Systems

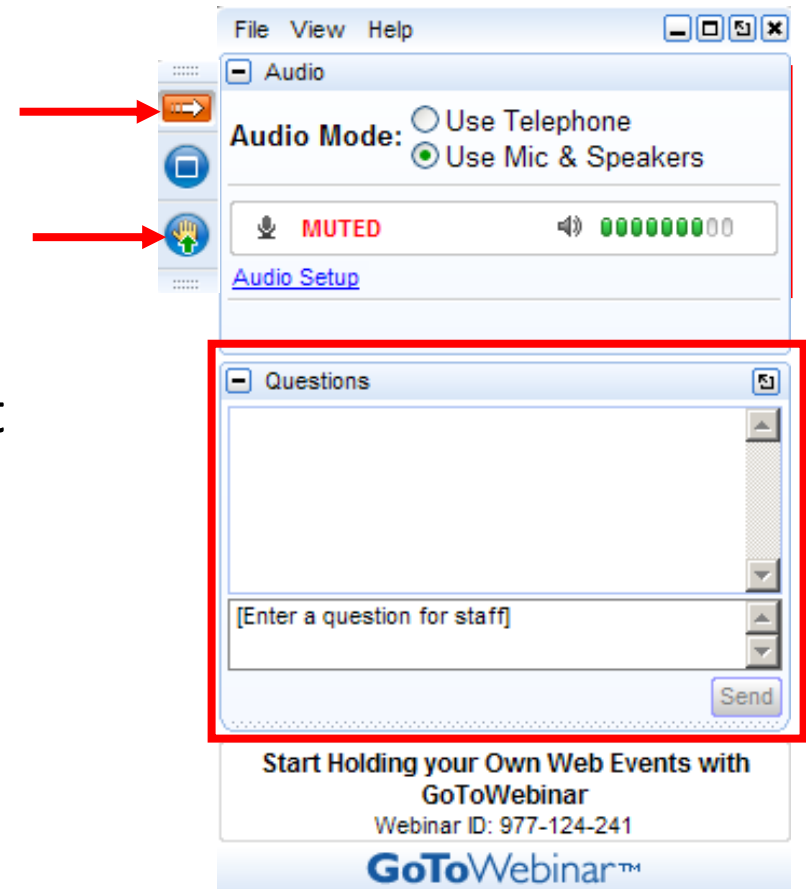
Wednesday September 13, 2017

Julie LaBranche, Rockingham Planning Commission
Barbara McMillan, Department of Environmental Services
Tim Puls, UNH Stormwater Center



How to Participate Today

- Open and close your Panel
- Submit text questions
- Q&A addressed during and at the end of today's session





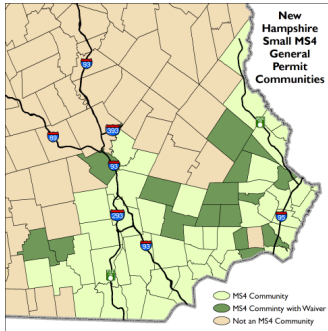
Introduction and Overview

Nuts and Bolts of the MS4 Permit

Local Actions and Regulations



Julie LaBranche, Senior Planner
Rockingham Planning Commission
Phone: 603-778-0885 jlabranche@rpc-nh.org



Introduction and Overview

- MS4 Permit Overview – Julie LaBranche
- Local Actions and Regulations – Julie LaBranche
- Outreach and Education – Barbara McMillan
- Stormwater Systems Mapping – Tim Puls

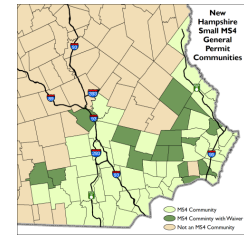
90% of water pollution in the state comes from stormwater runoff

Why does EPA regulation stormwater?

EPA's Stormwater Phase II Rule establishes an MS4 stormwater management program to

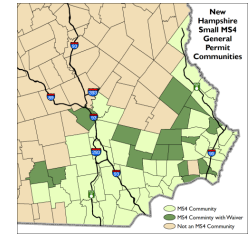
“...improve the Nation's waterways by reducing the quantity of pollutants that stormwater picks up and carries into storm sewer systems during storm events.”

Nuts and Bolts of the MS4 Permit



- EPA regulates stormwater management to meet standards of the Clean Water Act of 1972
- MS4 Permit aims to reduce pollution from MUNICIPAL sources, including roads
- 2003 permit in effect until new permit goes into effect on 7/1/2018
 - Notice of Intent due 10/2/2018
 - Most requirements due 1-5 years from effective date

Primary Elements of the MS4



■ Reports and Plans

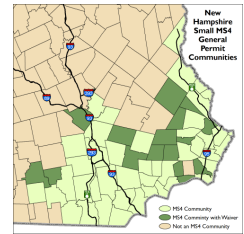
- Prepare and submit a Notice of Intent
- Stormwater Pollution Prevention Plan (SWPPP) for municipal operations, properties and facilities
- Annual Report to EPA

■ System Components Mapping

- Outfalls to surface waters and connected wetlands
- Infrastructure - catch basins, drainage swales, ponds, lines

■ Water Quality Improvements

- Illicit Discharges and Illegal Tie-ins
- Surface Water Quality impairments within and outside the MS4 (same watershed)
- Non-point sources of pollution
- Mixing of stormwater and sanitary sewer
- Erosion/Sediment Controls and Stormwater Regulations

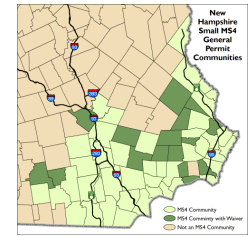


Primary Elements of the MS4 Permit

Develop plan to meet the **6 *minimum control measures***

1. Public education and outreach
2. Public involvement and participation
3. Illicit discharge detection and elimination
4. Construction site runoff control (regulation)
5. Post-construction stormwater management for new development and redevelopment (regulation)
6. Pollution prevention and good housekeeping for municipal operations and maintenance

Local Actions and Regulations



Recommended First Steps

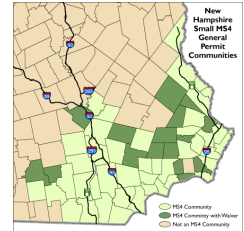
Audit zoning ordinance and regulations relating to water quality (e.g. stormwater, buffers, setbacks, site design, building design)

Get decision makers up to speed – it takes a village (e.g. elected officials, land use boards/commissions, committees)

Engage the public and residents early in the process

Bring in professionals – technical, communication, planning

Partner with neighboring municipalities to cost-share, trade successes and challenges



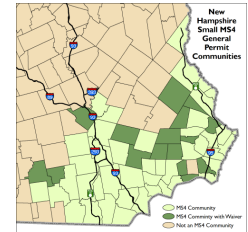
Recommended First Steps

Form an MS4 Committee responsible for data collection, inter-municipal coordination, and annual reporting

Review and document facilities management procedures and best management practices....write it down!

Create a MS4 Permit compliance “roadmap” of actions, financial needs and budget requests, staff assignments, data collection/managment procedures, reporting deadlines

Recommended First Steps



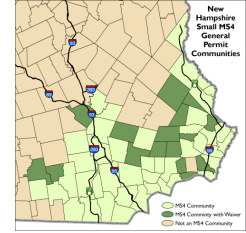
Adopt post-construction stormwater management standards that meet permit requirements

- Benefits of regulation vs. ordinance
- Incorporate specific standards for development near or discharging to impaired waters

Adopt construction erosion/sediment controls that meet permit requirements (regulation)

Adopt an IDDE ordinance so that it applies to all development, not just newly approved development

Regional Cooperation



Southeast Watershed Alliance – Model Stormwater Standards

- 7 core Elements that insure good design, water quality, functional maintenance and enforcement
- Consistent regional/watershed approach

Regional Stormwater Coalitions

Regional Planning Commissions

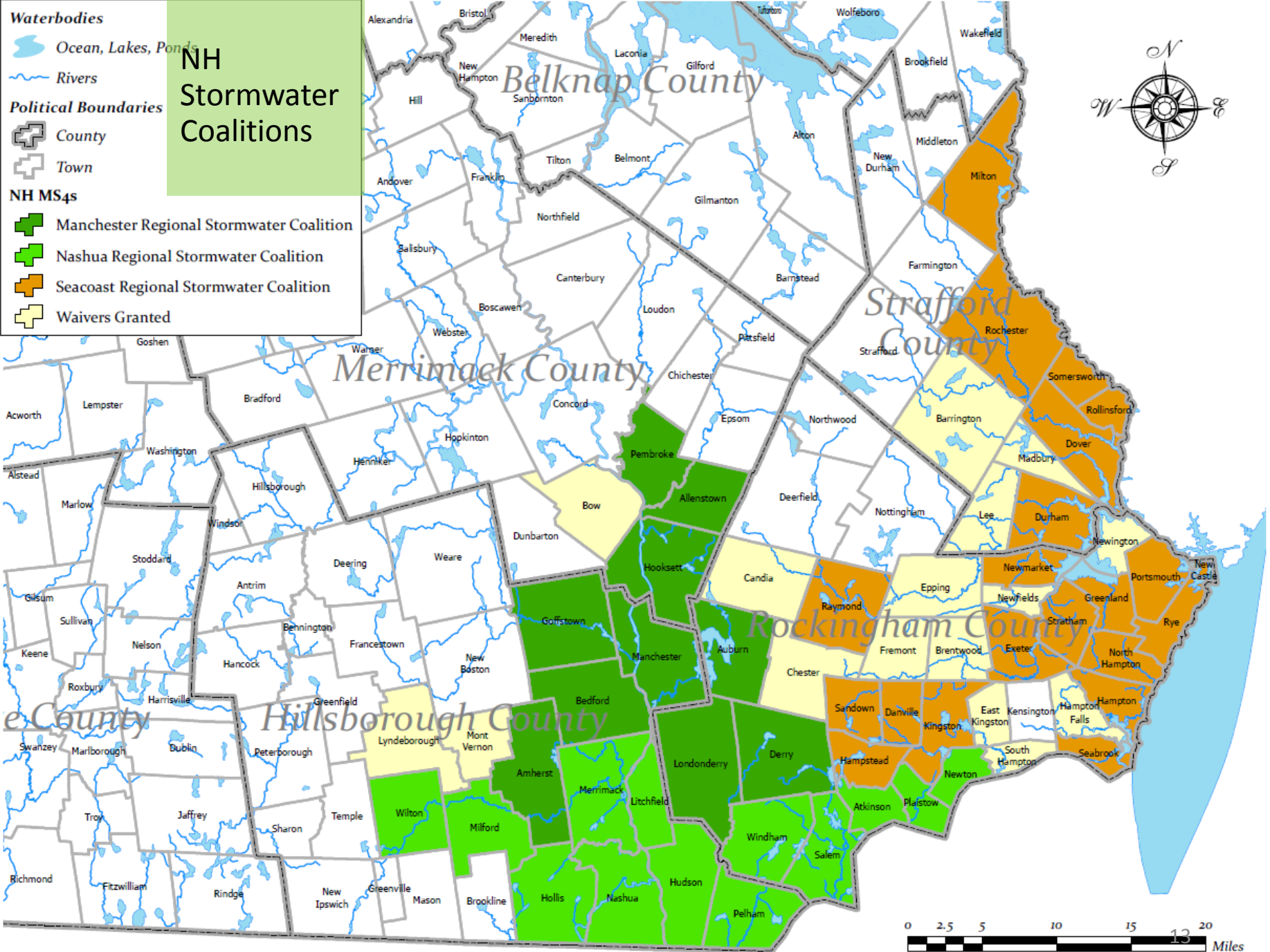


Minimum Control Measure #1: *Outreach and Education*

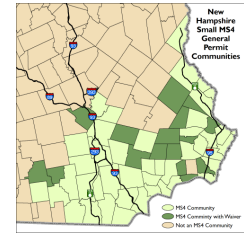


NH Department of Environmental Services

Barbara McMillan, 271-7889 barbara.mcmillan@des.nh.gov



Who is Doing the Work?

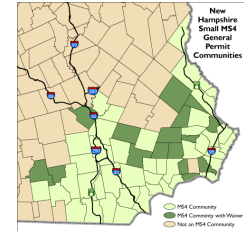


How the heck am I going to meet these crazy stormwater permit requirements?



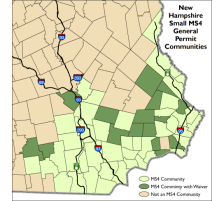


Six Minimum Control Measures



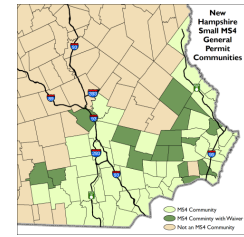
1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm Water Runoff Control
5. Post Construction Management
6. Pollution Prevention and Good Housekeeping

Outreach Program Must Haves



1. Have defined educational goals
2. Focus on specific stormwater issues in the community
3. Focus on pollutants of concern for impaired waters and priority waters in the community

Outreach Program Must Haves



4. Specific Messages
5. Defined targeted audience for each message
6. Measureable results



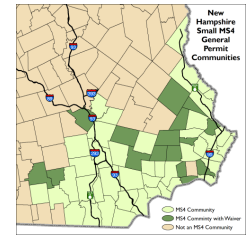
Outreach Requirements

Distribute at least two messages to each of the following audiences:

1. Residents
2. Businesses, institutions and commercial facilities
3. Developers
4. Industrial facilities

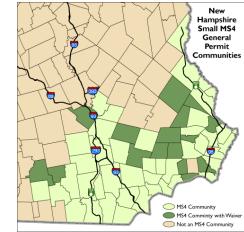


They Can Use



- Printed materials, websites and videos
- Demonstrations
- Presentations, Workshops and Trainings
- Outreach Campaigns





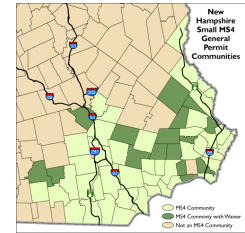
Impaired Waters Permit Requirements



1. Nitrogen
2. Phosphorus
3. Bacteria

Impaired Waters

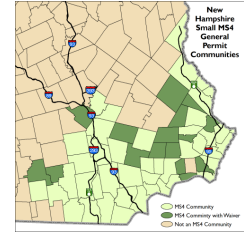
Nitrogen & Phosphorus



Distribute at least two messages to each of the following audiences:

1. Residents
2. Businesses, institutions and commercial facilities
3. Developers
4. Industrial facilities

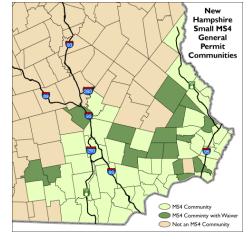
3 Messages



- 1) Proper use and disposal of grass clippings and encouraging the proper use of slow-release **fertilizers**.
- 2) Encouraging the proper management of **pet waste**.
- 3) Encouraging the proper disposal of **leaf litter**.

Messages

Once a year



- 1) Proper use and disposal of grass clippings and encourages the proper use of slow-release fertilizers.

Green Grass & Clear Water

Water quality friendly lawn care and fertilizer recommendations for northern New England

According to a recent survey, it's likely that you and your neighbors believe having a lawn that is safe for the environment is very important.* However, some lawn care practices can create water quality problems. Excess nutrients (including nitrogen and phosphorus found in fertilizers) that run off our properties into local waterbodies can trigger algal blooms that cloud water and rob it of oxygen.

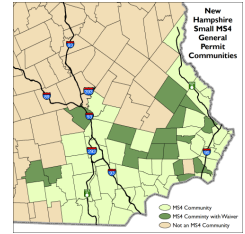
Many of us enjoy the time we spend working on our lawns and are willing to try new practices as long as our lawns continue to look good.* Here are some easy practices for creating and maintaining a truly healthy lawn – attractive and safer for the environment.

For additional resources, please visit:
www.extension.unh.edu/Sustainable-Landscapes-and-Turf



Messages

Once a year



- 2) Encouraging the proper management of **pet waste**.



Messages

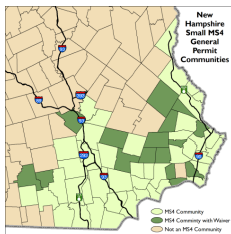
Once a year

3) Encouraging the proper disposal of leaf litter.

Alternatives

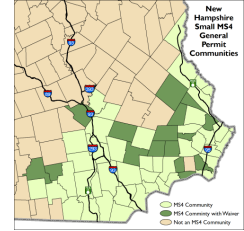
To Dumping Yard Waste:

- ◆ Drop off your leaf and yard waste at **the Portsmouth Public Works** for composting. Call **427-1530** for more information
- ◆ Start backyard composting. Call 271-1098 for a free “how-to” brochure.
- ◆ Use a mulch mowing lawnmower, so that you will not have to dispose of the grass clippings.



Impaired Waters

Bacteria



Distribute at least two messages to each of the following audiences:

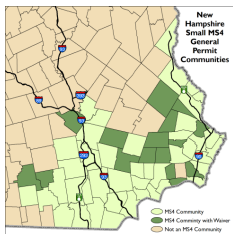
1. Residents
2. Businesses, institutions and commercial facilities
3. Developers
4. Industrial facilities

Impairment

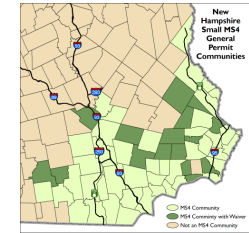
Bacteria

Once a year

- Audience – Residents
- Messages –
 - Encouraging the proper management of **pet waste**.
 - **Septic System** maintenance in catchment discharging to Impairment.



Everyone

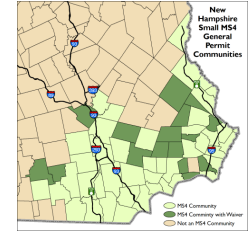


Distribute at least two messages to each of the following audiences:

1. Residents
2. Businesses, institutions and commercial facilities
3. Developers
4. Industrial facilities

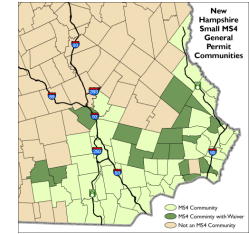


Everyone



Twice during permit

- Audience - Developers:
- Message: Proper erosion control, LID, and EPA Construction General Permit



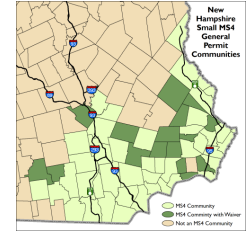
Everyone with Industrial Facilities

Distribute at least two messages to each of the following audiences:

1. Residents
2. Businesses, institutions and commercial facilities
3. Developers
4. Industrial facilities

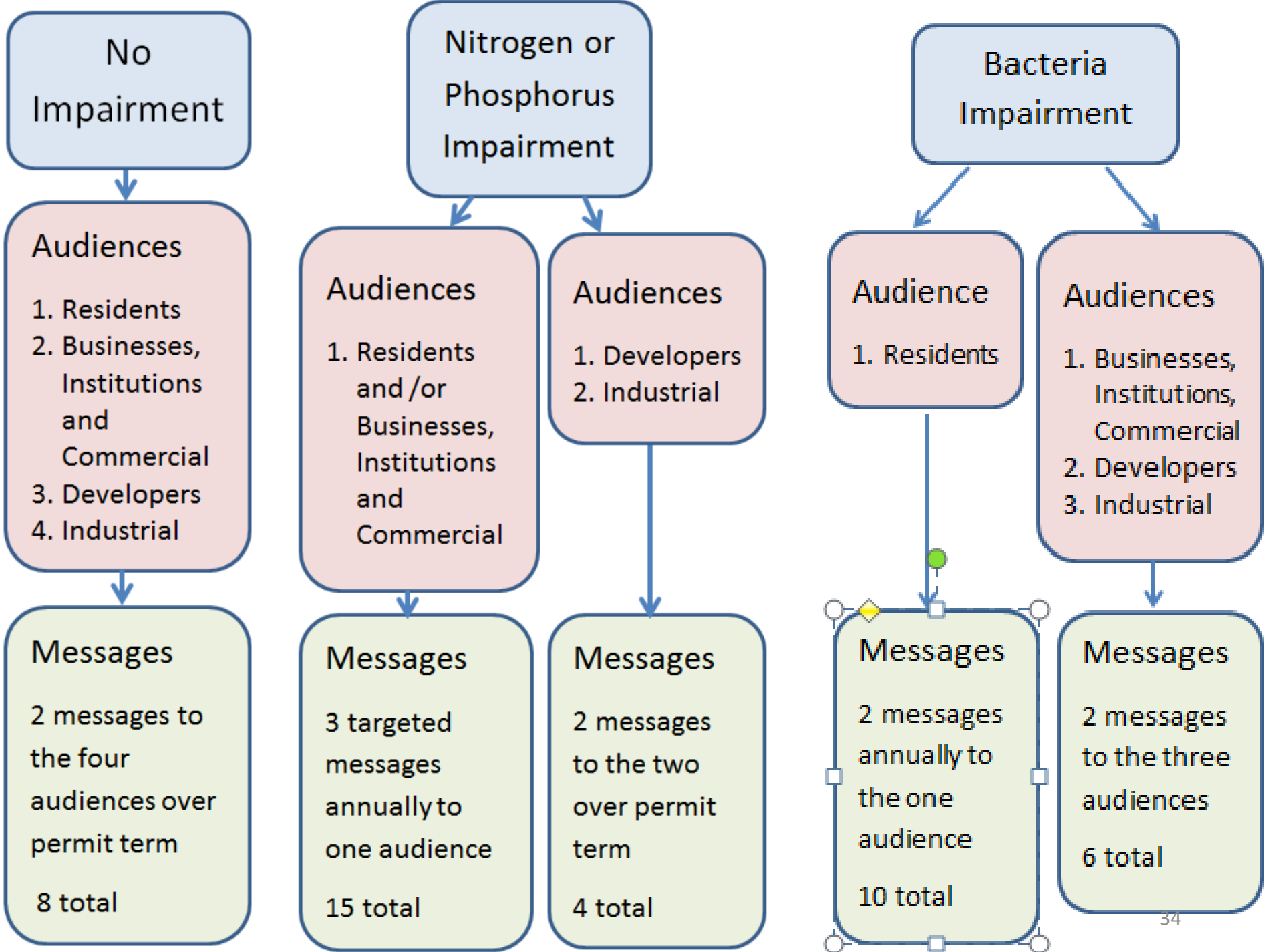
Everyone with industrial facilities

Twice during permit



- Audience - Industrial Facilities: Message: Proper erosion & control, LID, and EPA Construction General Permit







NH-MS4 Municipalities

NH-MS4 Regional Stormwater Coalitions

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Resources

Barbara McMillan, 271-7889
barbara.mcmillan@des.nh.gov

The following are resources to assist NH Municipal Small Separate Storm Sewer System (MS4) communities with meeting the 2003 and 2017 EPA MS4 permit requirements.

Part II: Summary of Receiving Waters

Part III: Stormwater Management Program Summary Minimum Control

- Minimum Control Measure 1: Public Outreach and Education

- **30 Minute Stormwater Video (2003): "Stormwater Runoff - There is No Away"** - Made by and for NH MS4s. Don't let the date fool you. This still relevant and New Hampshire specific video covers how stormwater runoff can pollute our water and how we can all make simple changes in our lifestyle to help reduce this problem.

Search



Archives

[July 2017](#)

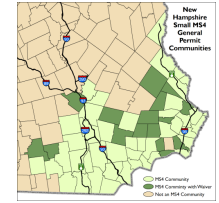
Meta

[Log in](#)

<https://www4.des.state.nh.us/nh-ms4/>



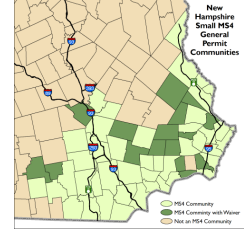
Systems Mapping



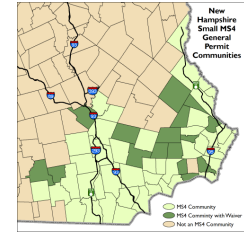
Systems Mapping - Introduction

- Stormwater System Mapping is a component of Minimum Control Measure (MCM) 3; Section 2.3.4. Illicit Discharge Detection and Elimination (IDDE) Program
- Primary Objective
 - “The mapping is intended to facilitate the identification of key infrastructure and factors influencing proper system operation, and the potential for illicit sanitary sewer discharges.” Section 2.3.4.5.

System Mapping Overview



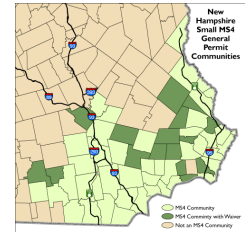
- Permittee shall revise system mapping required by the MS4-2003 permit
- The revised map shall be completed in two phases
 - Phase 1 – Updated within two years of the permit effective date **July 1, 2020**
 - Phase 2 – System map updated annually with all outfall information included within ten years of permit effective date, **July 1, 2028**



System Mapping – Phase 1

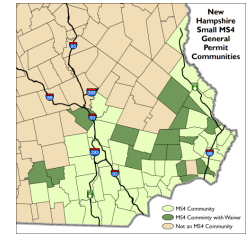
- Phase 1 – Information to include by July 1, 2020
 - Outfalls and receiving waters (required by MS4-2003 permit)
 - Open channel conveyances (swales, ditches, etc.)
 - Interconnections with other MS4s and other storm sewer systems
 - Municipally-owned stormwater treatment structures (e.g. LID, conventional, proprietary systems, etc.)
 - Waterbodies identified by name and indication of all use impairments as identified on the most recent EPA approved New Hampshire Integrated List of waters report pursuant to Clean Water Act section 303(d) and 305(b).
 - Initial catchment delineations. Any available system data and topographic information may be used to produce initial catchment delineations. For the purpose of this permit, a catchment is the area that drains to an individual outfall or interconnection.

System Mapping – Phase 2



- Phase 2 – Information to include by July 1, 2028
 - Outfall spatial location (latitude and longitude with a minimum accuracy of +/- 30ft)
 - Pipes
 - Manholes
 - Catch basins
 - Refined catchment delineations. Catchment delineations shall be updated to reflect information collected during catchment investigations
 - Municipal sanitary sewer system (if available)
 - Municipal combined sewer system (if applicable)

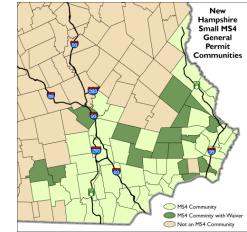
System Mapping – Planning Tool



- “Implementation and phasing of the IDDE program...”
 - Outfall/Interconnection Inventory, Section 2.3.4.7
 - Priority Ranking
 - Dry Weather Screening
 - Catchment Investigations, Section 2.3.4.8.

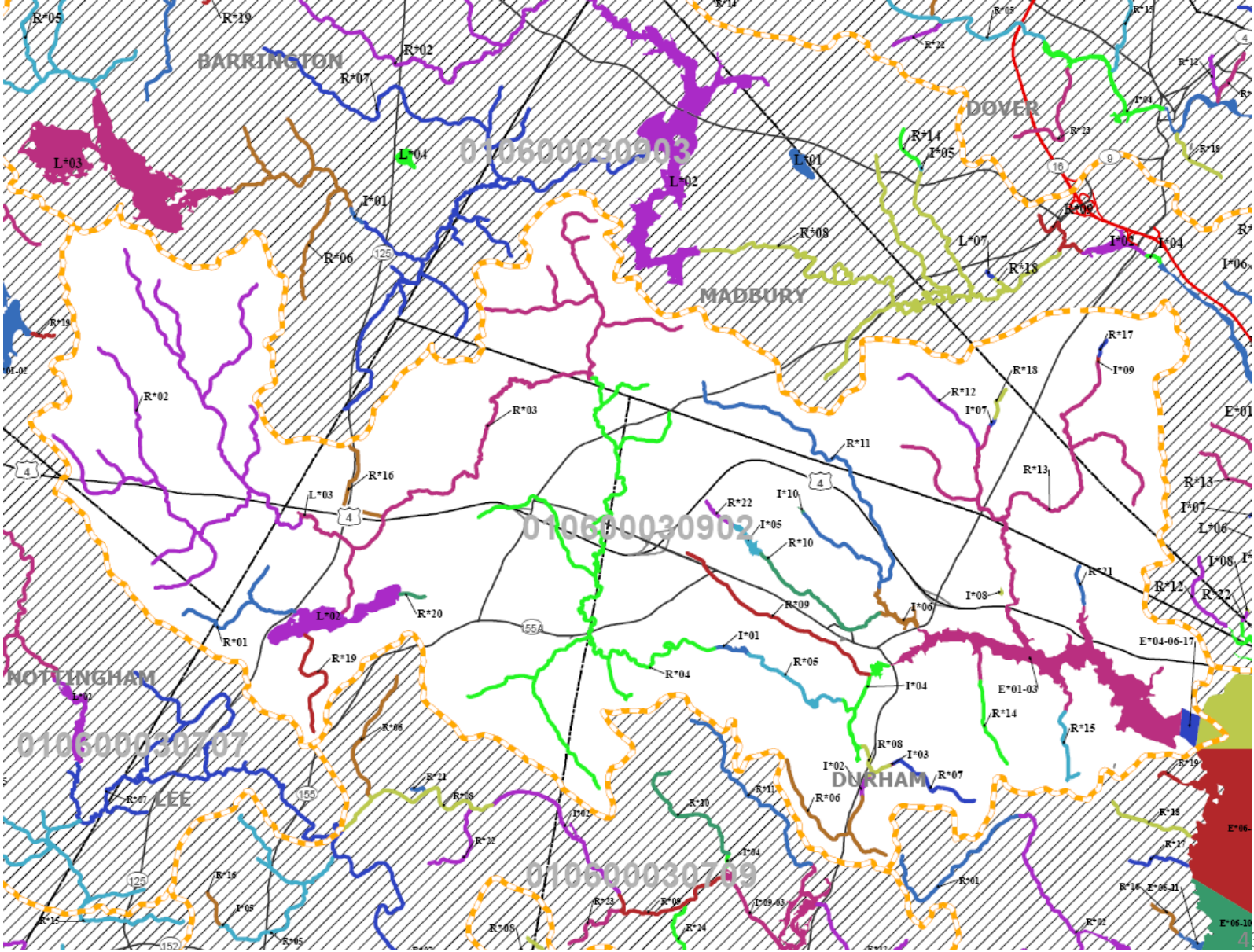
- Notice of Intent (NOI) Part 2: Summary of Receiving Waters
 - Water body segments that receive water from MS4
 - *NH list of impaired waters – 303(d)*
 - Number of outfalls to each segment
 - Pollutants causing impairments

Systems Mapping

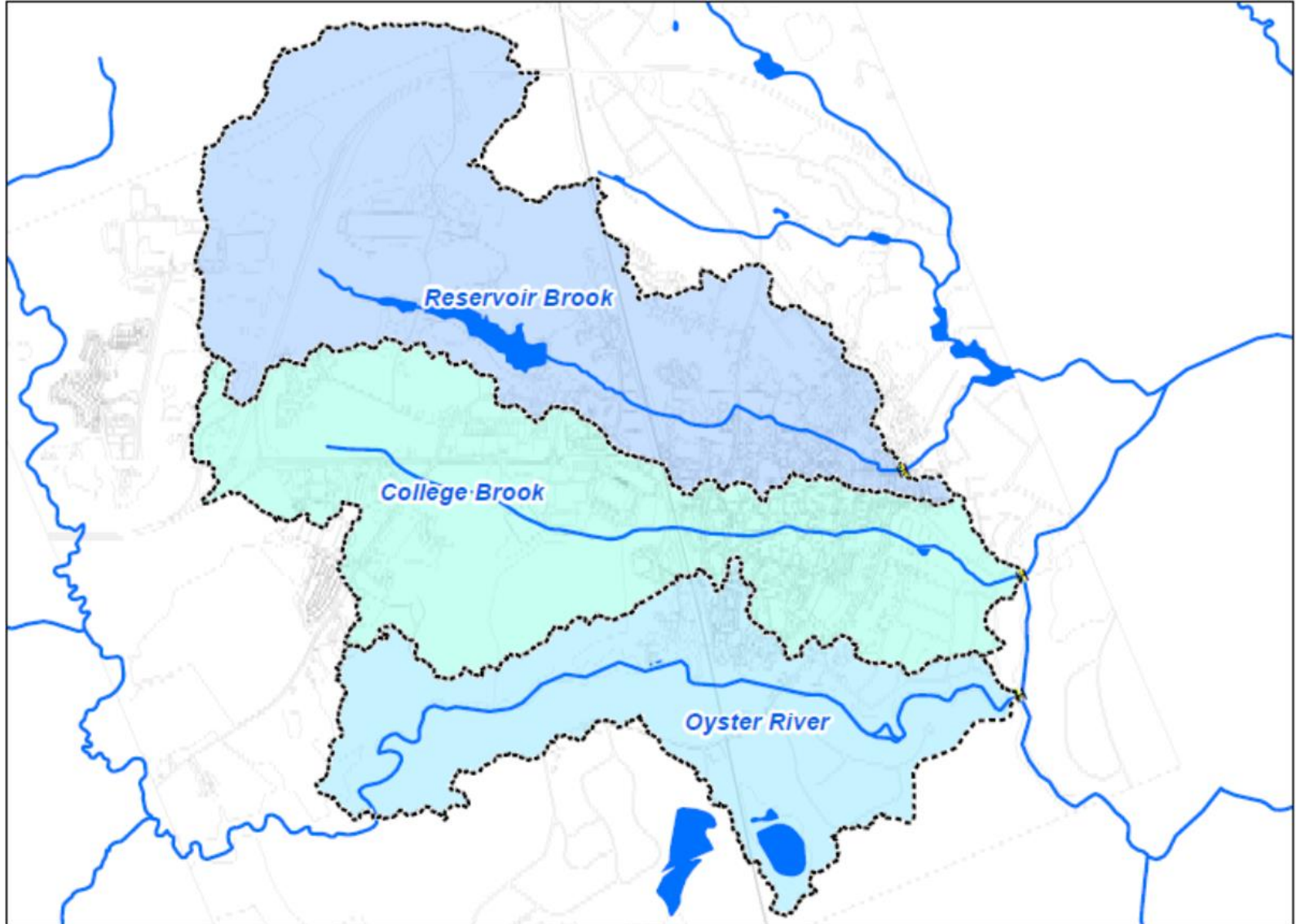


- Primary Focus is on “Outfall” and “Interconnection”
 - “An outfall means a point source as defined by *40 CFR 122.2* as the point where the MS4 discharges to waters of the United States.”
 - “An interconnection means the point where the permittee’s MS4 discharges to another MS4 or other storm sewer system, through which the discharge is conveyed to waters of the United States...”
- Data Sources
 - Municipal GIS, AutoCAD, hand drawn drainage maps
 - NH DES One Stop Data and ArcGIS mapping tool
nhdes.maps.arcgis.com
 - NH DES 305(b) Report and 303(d) List

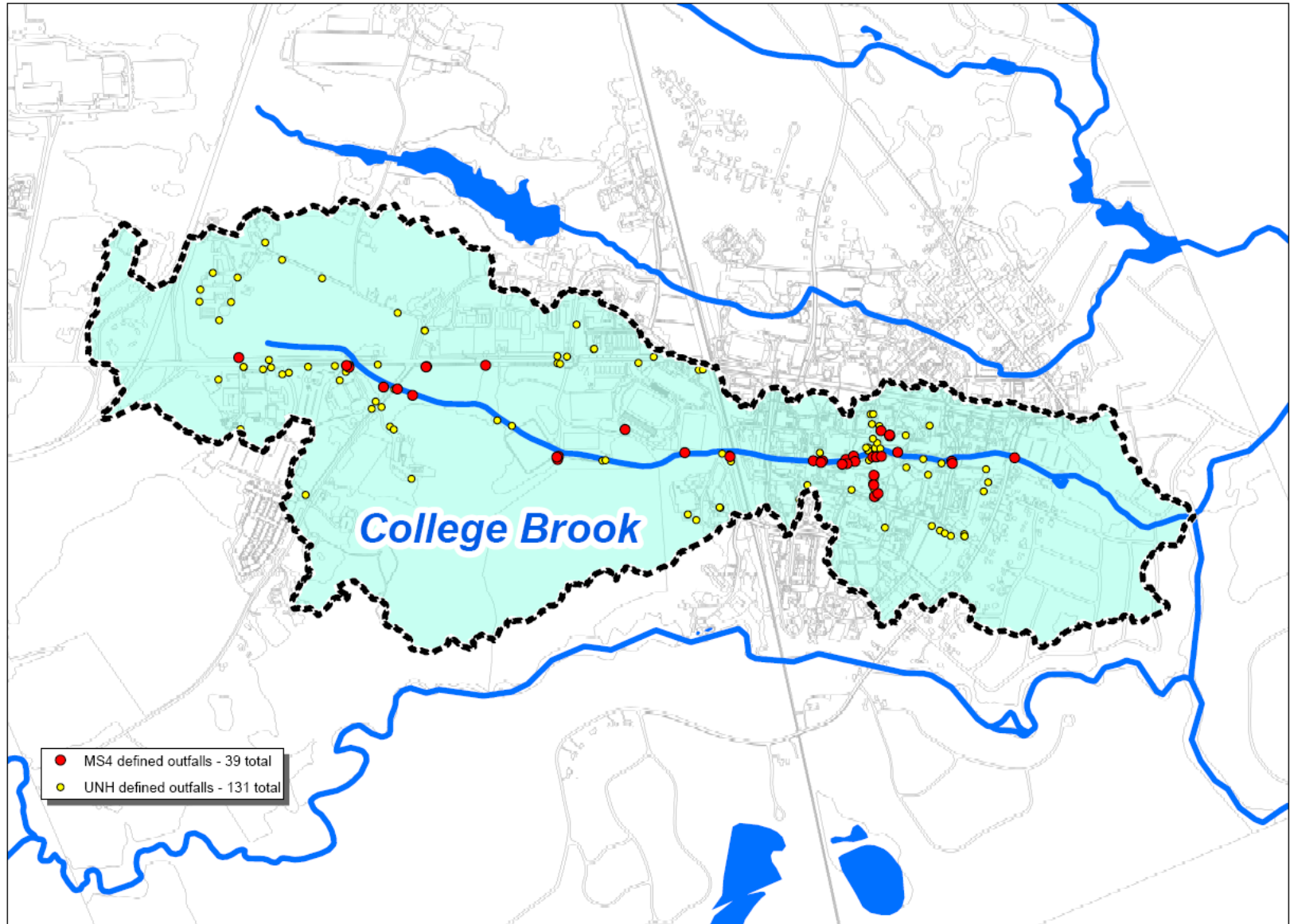
System Mapping – NH DES Watershed Report Card



System Mapping – Example (UNH GIS)



System Mapping – Example (Outfalls)



- MS4 defined outfalls - 39 total
- UNH defined outfalls - 131 total

System Mapping – (Catchment Investigation)



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Senior Planner

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Barbara McMillan, Watershed Outreach

Coordinator

NH Department of Environmental Services

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Phone: (603) 271-7889 or Coastal at: (603)

559-1517

barbara.mcmillan@des.nh.gov

Timothy Puls

Research Engineer

UNH Stormwater Center

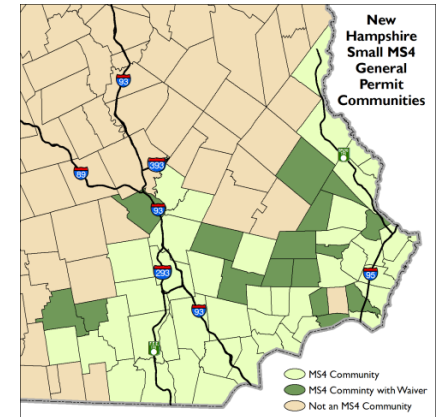
Durham, NH

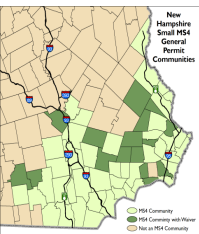
Phone: 603-862-4024

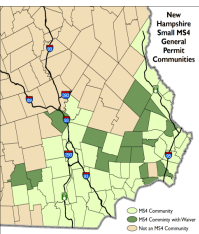
<http://unh.edu/unhsc>

Updated Southeast Watershed Alliance Model

<http://www.southeastwatershedalliance.org/>







Mark your Calendars for the 2017 Municipal Law Lecture Series

Saturday, September 23

Medallion Opera House,
20 Park Street, Gorham

Saturday, October 14

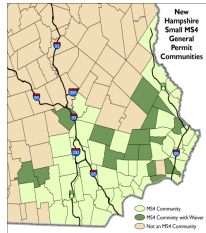
NHMA Offices, 25 Triangle
Park Drive, Concord

Full Day Workshops with Three Lectures

Land Use and Water Protection
Telecommunications and Land Use Boards
Land Use Board Procedures: From Application to Decision



**Agenda and registration information will be available in July.*



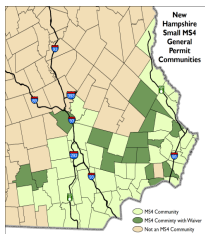


SAVE!
the
DATE!

November 15-16, 2017

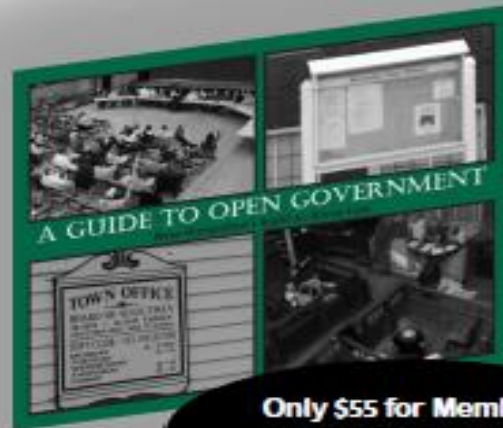
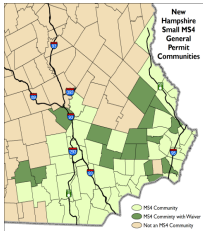
**New Hampshire Municipal Association's
76th Annual Conference
The Radisson Hotel
Manchester, New Hampshire**

2017 Sponsor & Exhibitor Kit available in July.



NHMA RELEASES NEW PUBLICATION ON NEW HAMPSHIRE'S RIGHT-TO KNOW LAW

Check out our new
"go-to" resource
for public
officials when
confronted with the
numerous legal
issues surrounding
New Hampshire's
Right-to-Know Law.



Order
Today

Only \$55 for Members
\$95 for Non-members

The Right-to-Know Law (RSA Chapter 91-A) affects every aspect of local government in our state. Every board, committee, commission, and sub-committee in every town, city and village district in New Hampshire must comply with this law. As a result, all local officials and employees must understand the law and their responsibilities regarding both public meetings and governmental records.

Join Legal Services Counsel Stephen Buckley, Government Affairs Counsel Cordell Johnston, and Staff Attorney Margaret Byrnes for a full day workshop on Thursday, September 14 on the Right-to-Know Law. They will address some of the most difficult issues under the law, including confidential information, electronic records and communication, procedures for nonpublic sessions, and communications outside a meeting. There will be ample time for questions and answers on all aspects of the law.

Go to NHMA's online store at www.nhmunicipal.org/shop
to order your new book today!



Learn more about the Right-to-Know Law at a full-day
workshop on Thursday, September 14
at NHMA Offices in Concord.
\$90 includes workshop, meals and new book!
Check our website for registration details.



For Joining Us for Today's Webinar

Mission Statement

The New Hampshire Municipal Association is a non-profit, non-partisan association working to strengthen New Hampshire cities and towns and their ability to serve the public as a member-funded, member-governed and member-driven association since 1941. We serve as a resource for information, education and legal services. NHMA is a strong, clear voice advocating for New Hampshire municipal interests.



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