Stormwater Pollution: An MS4 Municipality Perspective

Presented by:

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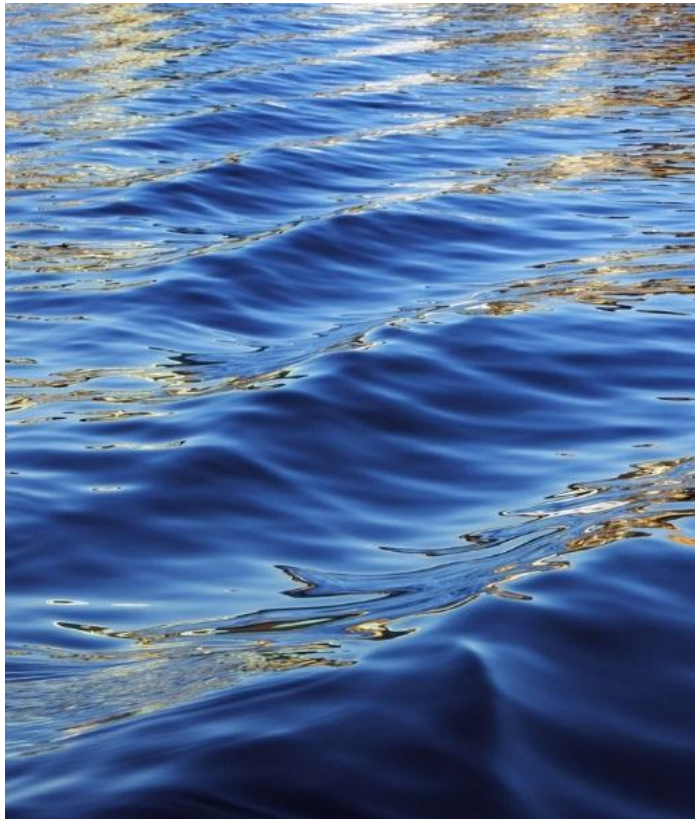
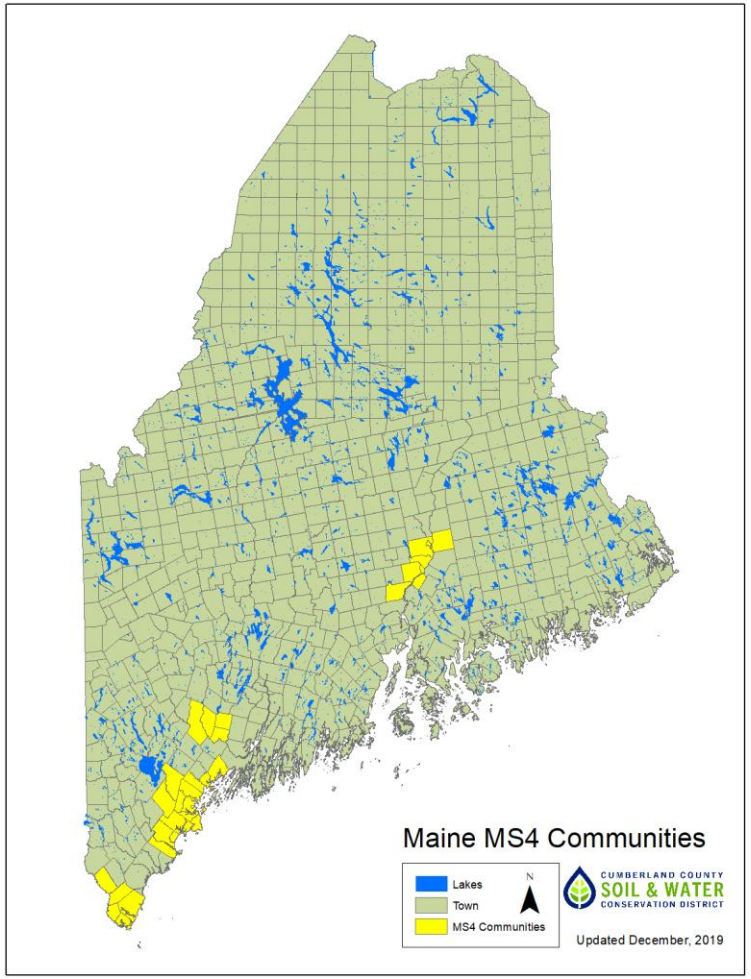


Municipal Separate Storm Sewer System (MS4) Permit

30 regulated Maine communities

Auburn	Milford
Bangor	OOB
Berwick	Old Town
Biddeford	Orono
Brewer	Portland
Cape Elizabeth	Sabattus
Cumberland	Saco
Eliot	Scarborough
Falmouth	South Berwick
Freeport	South Portland
Gorham	Veazie
Hampden	Westbrook
Kittery	Windham
Lewiston	Yarmouth
Lisbon	York



In Westbrook

Stormwater runoff flows into one of >3500 catch basins

It travels through 95 miles of stormwater conveyances

And discharges into our rivers, streams and wetlands via 300+ stormwater outfalls

Municipalities are responsible for any pollution entering our stormwater system no matter who causes that pollution. This includes the activities of residents, businesses, outside organizations and the public.

Private development also impacts water quality through runoff discharged by private pipes or entering waters through surface discharge. Municipalities cannot control but must manage the impact.

Municipal Separate Storm Sewer System (MS4) Permit

The MS4 is broken into the following seven categories known as Minimum Control Measures (MCMs)

Minimum Control Measures:

- MCM 1 – Public Education and Outreach
- MCM 2 – Public Participation/Involvement
- MCM 3 – Illicit Discharge Detection and Elimination
- MCM 4 – Construction Site Stormwater Runoff Control
- MCM 5 – Post-construction Stormwater Runoff Control
- MCM 6 – Pollution Prevention/Good Housekeeping for Municipal Operations

With the 2022 MS4 permit, DEP added a second step permit for municipalities that have Urban Impaired Streams, requiring additional annual actions for each watershed within municipal boundaries.

Municipal Separate Storm Sewer System (MS4) Permit

- A 5 year cycle – Previous permit was administratively continued giving us a 9 year permit
    - Regulations are complicated
- Iterative – More requirements with each new permit
- Consistent – Requirements are largely the same for all **regulated** Maine communities
    - However, most communities are not regulated
- Wide reaching – MS4 impacts most municipal departments including:
    - Public Works, Public Safety, Community Services & Fields, Schools, Planning & Code Enforcement and Economic Development
- Urbanized Area – MS4 permit impacts only a municipality's urbanized area

How Do We Meet the Requirements?

- Attend an annual training or roundtable to learn new chloride reduction techniques
- Provide educational outreach regarding limited liability legislation to legislators and at least two other organizations
- Follow standard operation procedures (SOPs) at these facilities to reduce the potential for pollution
  - FMI on Limited Liability, visit https://www.des.nh.gov/land/roads/road-salt-reduction/green-snowpro-certification
- Conduct annual municipal employee stormwater training program for staff in several departments
- Provide winter maintenance education to the public
- Sweep public streets and parking lots at least once as soon as possible after snowmelt
- Inspect and clean all catch basins on a 2 year cycle (requires over 1600 cleanings per year)
- Maintain and document procedures for site inspections and enforcement
- Maintain and upgrade stormwater conveyance system based on inspection results
- Minimum of 3 inspections during earth-moving phase of development including a 1 inspection at completion to ensure permanent stabilization
- Implement Stormwater Pollution Prevention Plan (SWPPP) and conduct quarterly inspections of Public Services facility
- Large developments often hire 3rd party inspectors but the City remains responsible to ensuring regulations are being followed
- Track construction activities disturbing 1 or more acres to ensure inspections are being completed
- Notify developers of stormwater requirements
- Develop and enforce sediment control ordinance
- Conduct dry weather outfall inspections and inspect each outfall at least once per permit cycle
- Develop and use various communication tools to reach contractors and developers
- Any outfall with flowing water during dry weather must be tested for a variety of pollutants and a source of the water must be determined
- Coordinate with the City of Portland to develop a Salt Reduction Outreach Plan for commercial, industrial and residential property owners
- Conduct wet weather assessment to determine the potential for illicit discharges due to sewer contamination during rain events
- Determine conductivity testing sites and protocols and begin testing
- Develop an Illicit Discharge Detection and Elimination Ordinance which requires and tracks that BMPs and structures have been inspected and maintained
- The ordinance will include conductivity (a measure of chloride) as a metric and will be developed with the guidance of the DEP
  - Often requires reaching out to property owners and/or 3rd party inspectors to request reports
  - Owners have 60 days to correct deficiencies
- Develop and implement a Low Impact Development (LID) ordinance

Stormwater Regulation Comes at a Cost

Portland (FY 27 budget)

- SW Operating Budget: $3,599,447
- SW CIP: $4,690,355
- Utility Revenue (FY 26 budget): $7,916,034

Scarborough

- Annual Total: $1,500,000
- Total Value of SW Infrastructure: $65,155,925

South Portland (FY 24-25)

- SW + Combined Sewer): $323,343

* Does not include vehicle/equipment maintenance

Lewiston FY 26

- Total Expenses: $4,059,329
- Stormwater Utility Revenue:$3,993,492

Brewer

- Estimates multi-department work to be: $350,000 annually

SMSWG – Consulting Expenses ONLY (PY4)

- Berwick - $21,625
- Eliot - $20,875
- Kittery - $19,125
- S. Berwick - $22,125
- York – $30,125

➢ Does not include payroll, street sweeping, CB cleaning, infrastructure maintenance

Our message to you…

Stormwater professionals are passionate about protecting our waters but we need support.

Pete Carney and Fred Dillion leading a talk about (and in) Long Creek

Field training for dry weather sampling of SW outfalls – a new requirement

Chlorides

We apply chlorides (salt) to the *roadways, driveways, parking lots and sidewalks* in winter. We do so knowing that it causes significant and growing environmental degradation and **we have no way to remove salt from our freshwater systems**.

Challenges:

- Public safety will ALWAYS come first
- Changing weather: More ice = More salt
- Driver expectations: Bare roads immediately after or even during a storm and no need for low speeds, snow tires or chains
- Extremely limited insurance options for commercial winter maintenance companies
  - TWO companies who insure these businesses
  - A single slip and fall, even if the company treated surfaces properly, can put them out of business
  - Results in over salting

Not a local photo but representative of local conditions

Chlorides

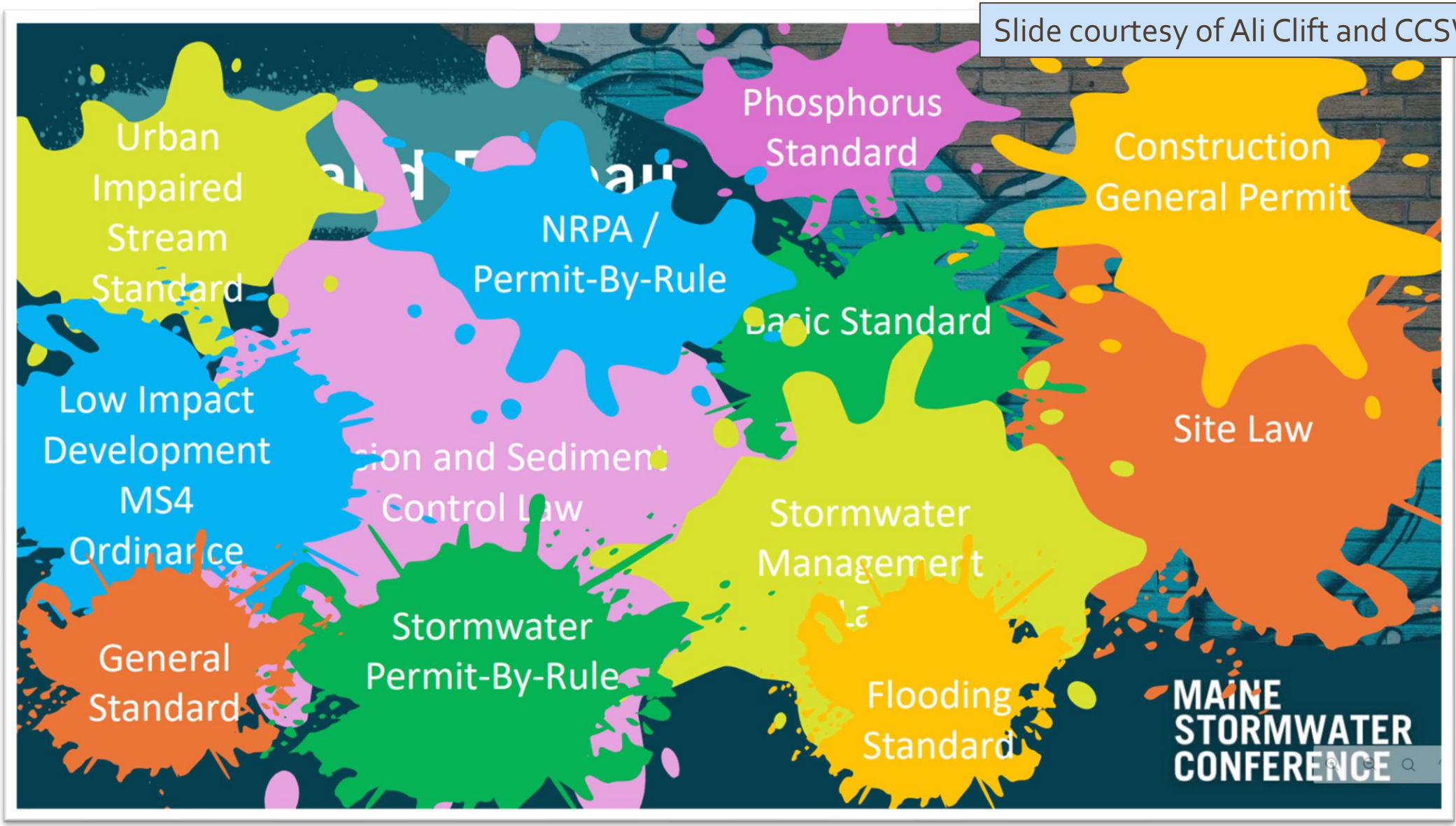
Winter Maintenance Operator Suggestions:

- The adoption of a program similar to NH Green Snow Pro
  - Important: Our goal is **NEVER** reduced safety but it is reduced environmental harm
- Support for the development of innovative winter maintenance
  - Brining, sophisticated road/weather monitoring, alternative deicers, improved plows
- Increased education to the public on responsible winter driving
  - It is INCREDIBLY hard and expensive to do this successfully and equally difficult to measure effectiveness
  - Important to highlight damage to concrete, pavement, interiors - $$$

Important: Solving the problem requires a 3 pillar approach – Municipal, Private, State Transportation Agencies and it has to be source control

Additional DEP Support

Slide courtesy of Ali Clift and CCSWCD



Additional DEP Support

<u>Bluntly: The DEP is understaffed and underpaid and have been for years.</u>

We are not seeking ways for the DEP to "bother us" less. We are seeking ways to have adequate regulatory support managing difficult situations and a successful State/Municipal partnership.

We need DEP's enforcement support and for:

- Permit review
- Environmental protection technical assistance
- Enforcement of State regulations
- Site inspections
- Creating consistent communication & baseline standards across the State (helps municipalities, businesses and developers)
- Coordination between bureaus and organizations
- Program updates
- Data collection, analysis and management

Additional DEP Support

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We cannot do our work to meet the many State environmental regulations, standards, and permits without DEP doing their roles and responsibilities. Any dropped or neglected State level task becomes a municipal burden and local taxpayer expense.

Natural Resource Management Requires DATA

- Municipalities are tasked with creating and implementing multiple natural resource plans including:
  - Stormwater Management Plans
  - Watershed Management Plans
  - Open Space Plans
  - Climate Resiliency Plans
  - Comprehensive Plans
- Cost-effective and targeted natural resource management can only be done when there is **accurate, diverse, long-term data** available
- State environmental departments need more staff, funding, equipment, and academic partnerships to collect, analyze, and manage this data

Natural Resource Management Requires Data

To manage watersheds, you need to know:

- Hydrology data - soils, flow rates, groundwater recharge rates, and watershed-specific issues.
- Water chemistry data - temperature, dissolved oxygen, pH, conductivity, nutrients, and watershed-specific issues.
- Aquatic life density and diversity data - plants/algae, indicator species, invasive species, harmful bacteria, and watershed-specific issues.
- Habitat data - vegetative cover, bank slopes, road crossings, changes in nearby land use, and watershed-specific issues.

Municipal Goals

We hope the outcome of this commission will help municipalities, businesses, and State agencies/orgs become:

- **Empowered**: To manage our natural resources responsibly and act as good stewards
- **Proactive**: To prevent environmental degradation rather than attempt to correct it
- **Partners**: To make the best possible use of our financial resources and human ingenuity to protect natural resources today and moving forward as we learn

Photo courtesy of Cumberland County Soil & Water Conservation District

Thank You

Questions or suggestions regarding this program should be addressed to Lynn Leavitt, Sustainability Coordinator, City of Westbrook @ lleavitt@westbrook.me.us or 591-8135