

WPA/MS4 Consistency

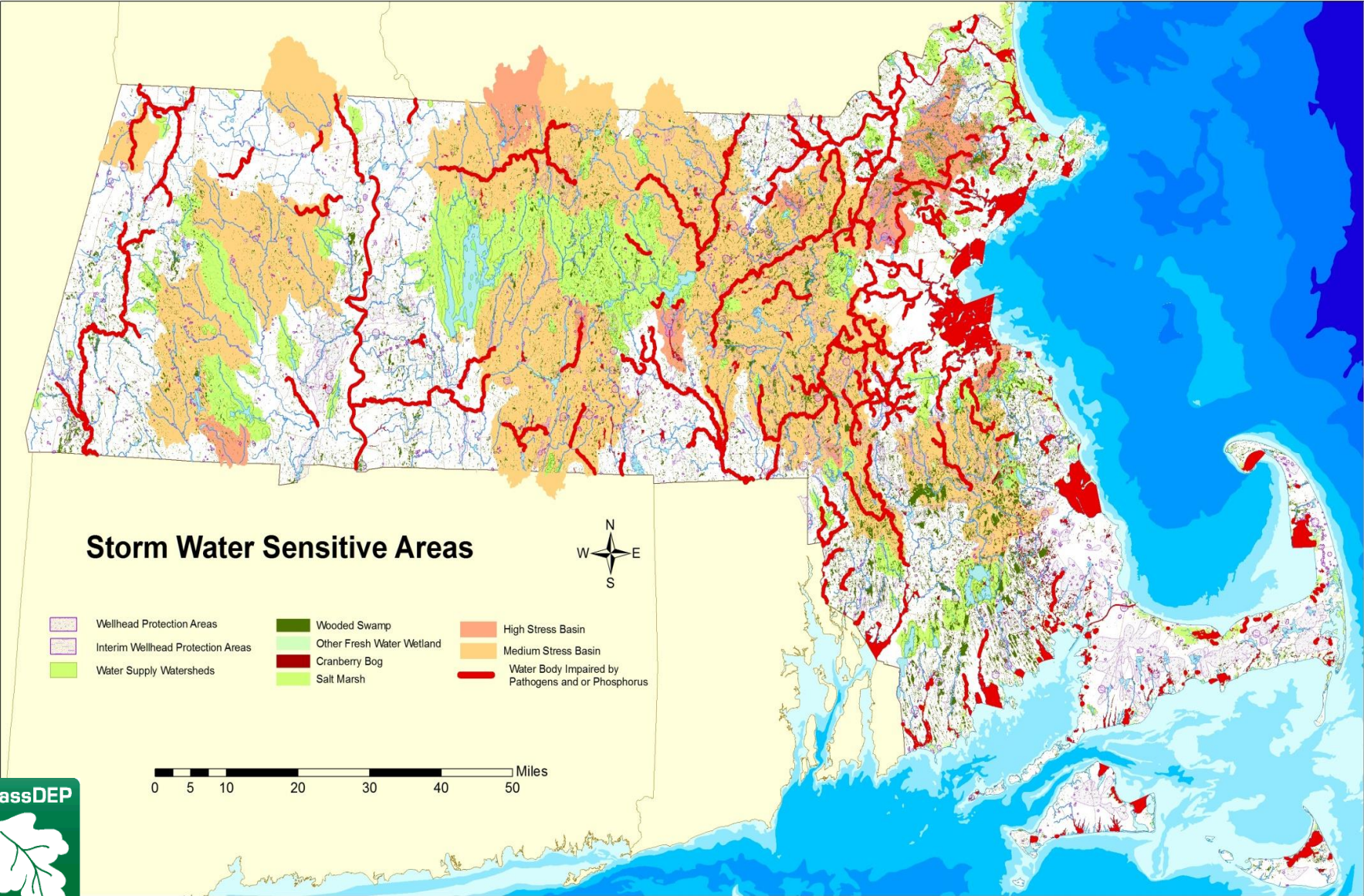
Stormwater Under MS4 General Permit



Why Stormwater?

- Single largest source of water pollution statewide
- ~50% of watersheds don't have enough water in summer
- More "Impervious Cover" = more pollutants
- NO TREATMENT provided in municipal stormwater collection systems

Massachusetts Sensitive Areas



Municipal Separate Storm Sewer System – MS4

- Trigger:
 - EPA-listed “urbanized area”
- How to File with EPA:
 - written NOI
- Regulatory Standard:
 - discharges from Town/agency systems must meet permit requirements and federal and state clean water laws
- Effective Date:
 - “2016” MS4 permit took effect July 1, 2018

New MS4 (Municipal Separate Storm Sewer System) Permit

- Requirements:
 - Meet the 6 minimum control measures
 - Begin TMDL implementation
- Different from the 2003 MS4 permit . . .
 - Cost increases
 - Moving away from a BMP-based program
 - Many administrative and reporting requirements
 - (mostly) use the MA SW Standards

MS4 Public Education Program

- Includes 2 messages each to four audiences
 - Residents
 - Developers
 - Business and commercial facilities
 - Industrial facilities
- Specifies topics to be covered
- *“The permittee shall identify methods that it will use to evaluate the effectiveness of the educational messages and the overall education program.”*
- <https://www.thinkbluemassachusetts.org/>



Public Involvement

- Public review of town's written Stormwater Management Program
- Make all reports available to the public

Illicit Discharge Detection and Elimination - IDDE

- Ordinance
- Identification of Responsibilities
- Outfall inventory and map
- Catchment rankings
- Detailed written IDDE program
- Outfall Screening
 - Dry weather for all outfalls
 - Limited wet weather

IDDE Screening

- Dry Weather Screening at all outfalls within 3 years
- Wet weather sampling at outfalls only if
 - Indications of septic runoff
 - Based on “Systems Vulnerability Factors”: triggers investigation of catchment area

Post- Construction Ordinance/Bylaw

- For new development/redevelopment that disturbs ≥ 1 acre
- “Retain” 1 inch runoff from impervious surfaces on site
- Requires submittal of “as built” plans to Towns
- In re: impervious surfaces
 - w/in 3 years evaluate street design and parking lot rules
 - w/in 4 years evaluate local rules to encourage green roofs, pervious pavement, cisterns, other LID measures

Draft 2/19/2019



Construction Ordinance/Bylaw

- *“minimize or eliminate erosion and contain sediment on site . . .”*
- For land disturbance \geq 1 acre
- Administrative/Reporting requirements:
 - Written procedures for inspections
 - Site plan review and inspection and enforcement
 - Inspections, reviews of plans, “as built”

Good Housekeeping: It's Not Just for DPW Any More

- Parks and open space (e.g., pesticides, herbicides, dog waste, lawn practices)
- Schools, town offices, police and fire, pools (e.g., employee training, spill, prevention, gas/ oil use)
- Vehicles and equipment (e.g., wash waters, leaking vehicles, refueling)
- Clean catch basins when ½ full; sweep streets in spring
- SWPPP (Storm Water Pollution Prevention Plan) for industrial-like facilities

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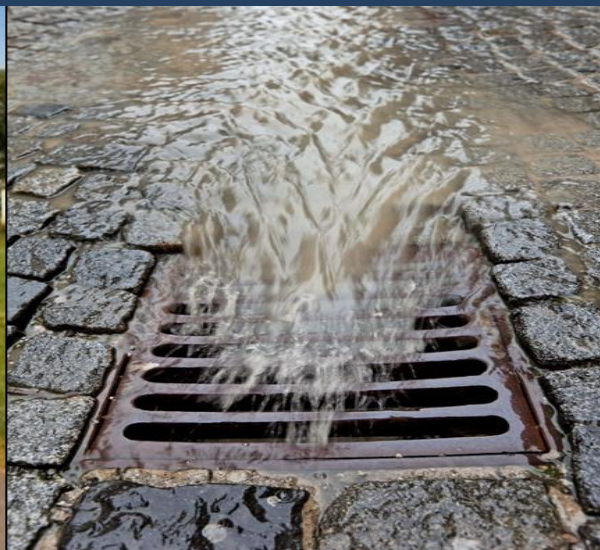


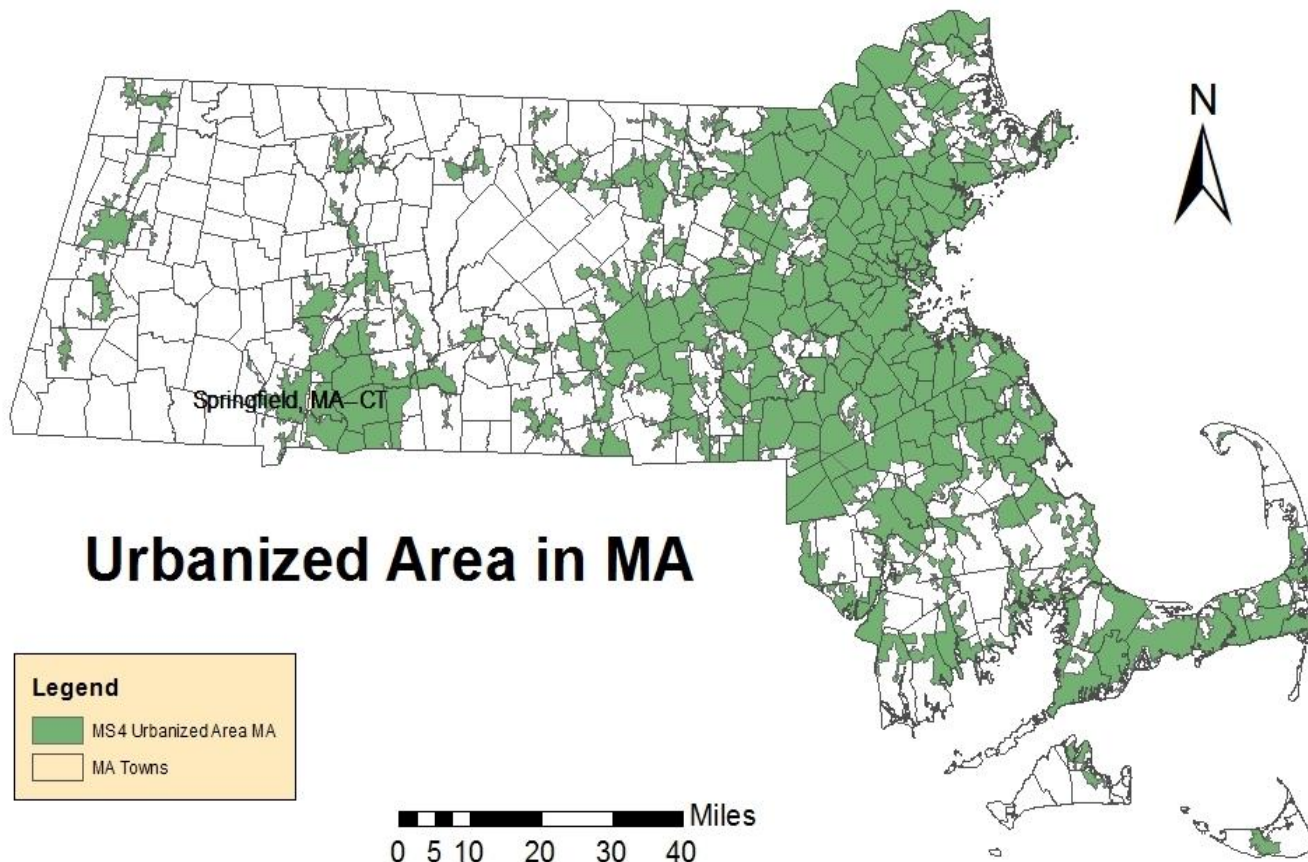
TMDL Implementation

- Start to work on TMDL “recommendations”
- Requirements vary with watershed
- Example: Lake and Pond Requirements
 - Planning
 - Implementation of non-structural BMPs
 - Implementation of structural BMPs
 - Over 15 year time frame; others longer/shorter

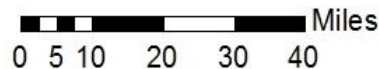


Aligning WPA and MS4 Stormwater Management Rules





Urbanized Area in MA



- 2/3 MA Towns and other entities are regulated under MS4 GP for MA.
- MS4 GP defines rules and minimum standards.
- Towns implement SW Management Program and locally enforceable SW ordinance.

- Where WPA/ MS4 jurisdiction overlap, 2 sets stormwater rules .
- MS4 is unlikely to change.
- MassDEP responds to Towns' request to help simplify the permit process.

Aligning WPA and MS4 Stormwater Management Rules

1. Identify the differences between WPA and MS4.
2. Research and evaluate options to more closely align the state and federal rules.
3. Update WPA SMS regulations, MA Stormwater Handbook, and Hydrology Handbook.
4. Option for Towns to Adopt WPA SMS to implement MS4 provisions for a locally enforceable stormwater ordinance.



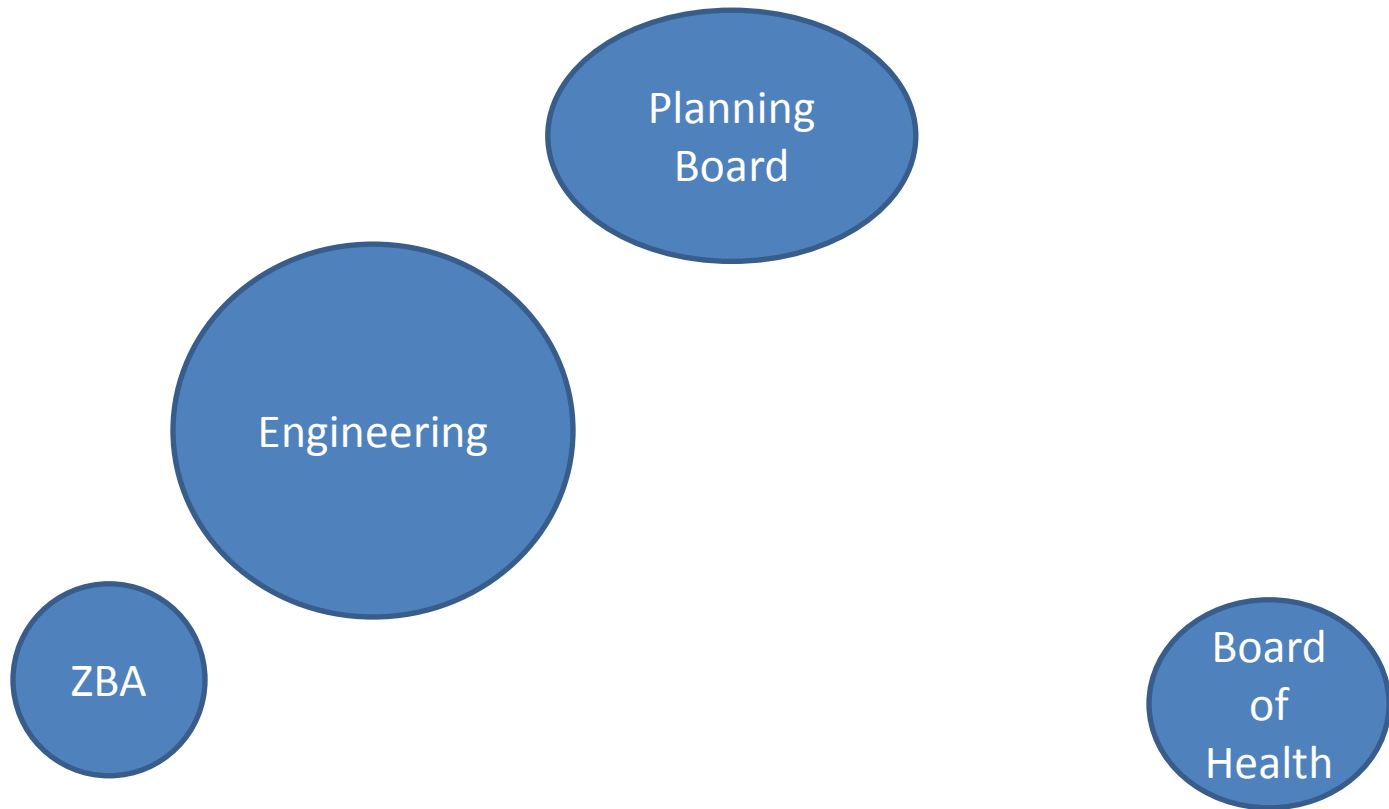
Responsible Agencies

WPA - The permitting process does not change.

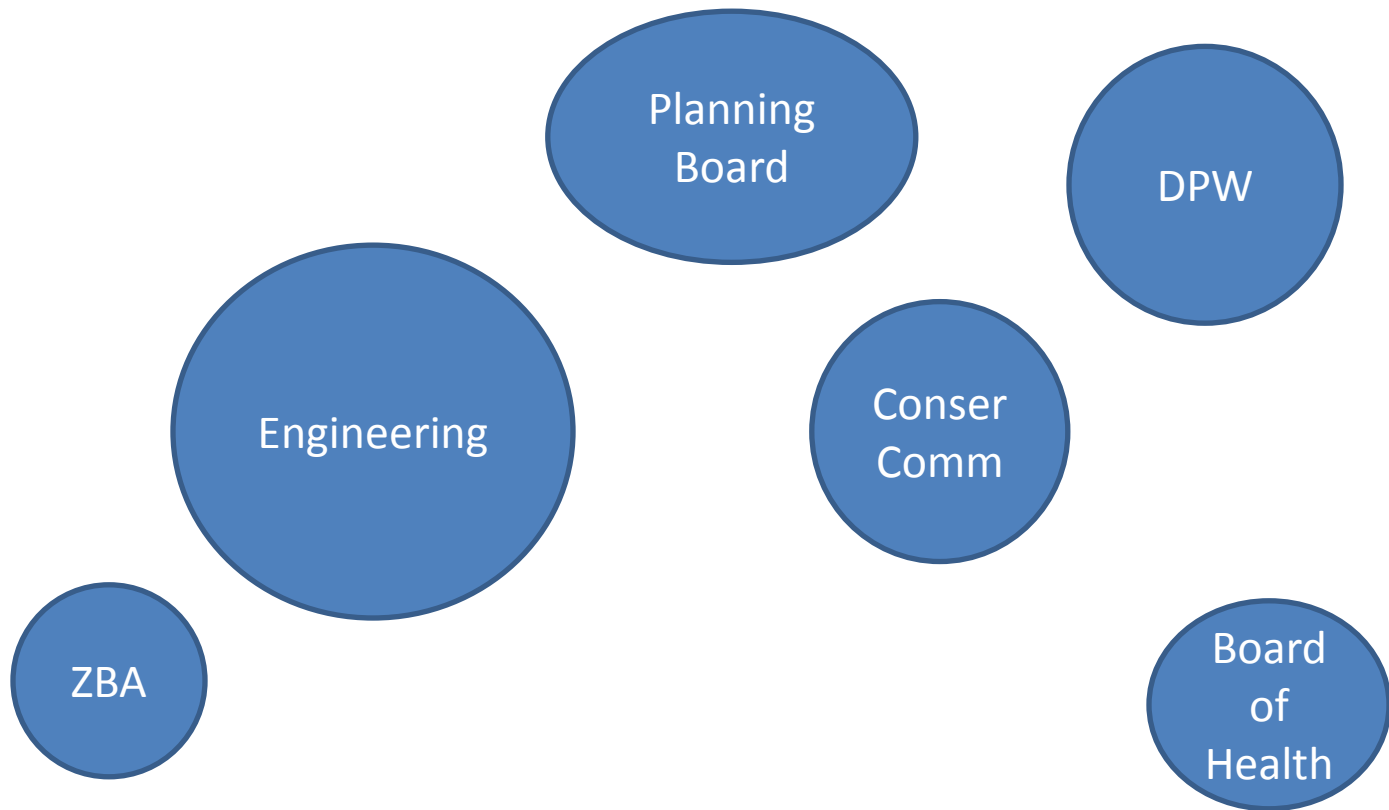
- a. Conservation Commission is responsible for compliance with WPA Regulations at municipal level.
- b. MassDEP is responsible for compliance with WPA Regulations upon appeal of local decisions.

MS4 - Towns assign the municipal Agency responsible for compliance with stormwater ordinance.

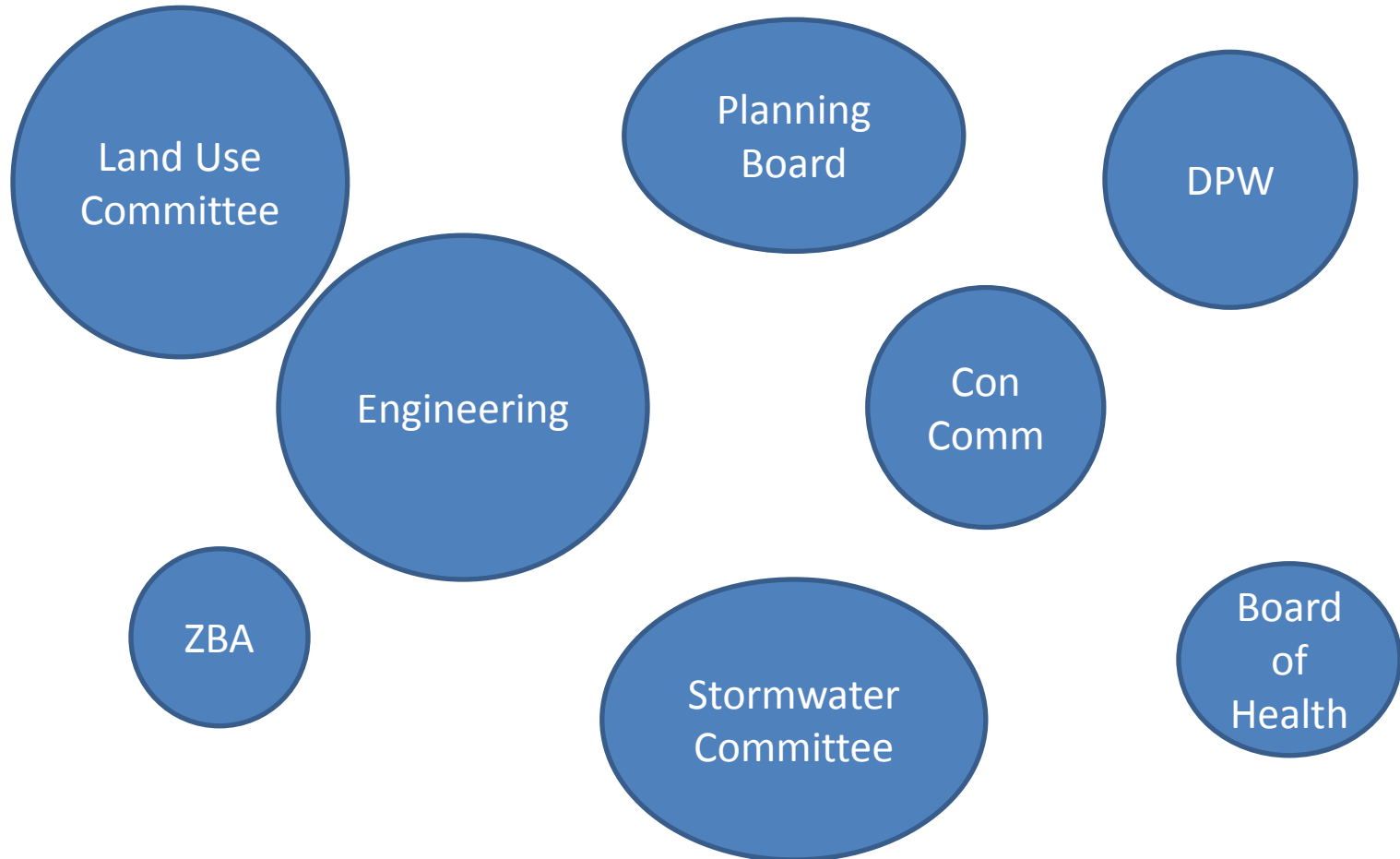
What Town Department or Committee is responsible for compliance with the MS4 stormwater post-construction bylaw?



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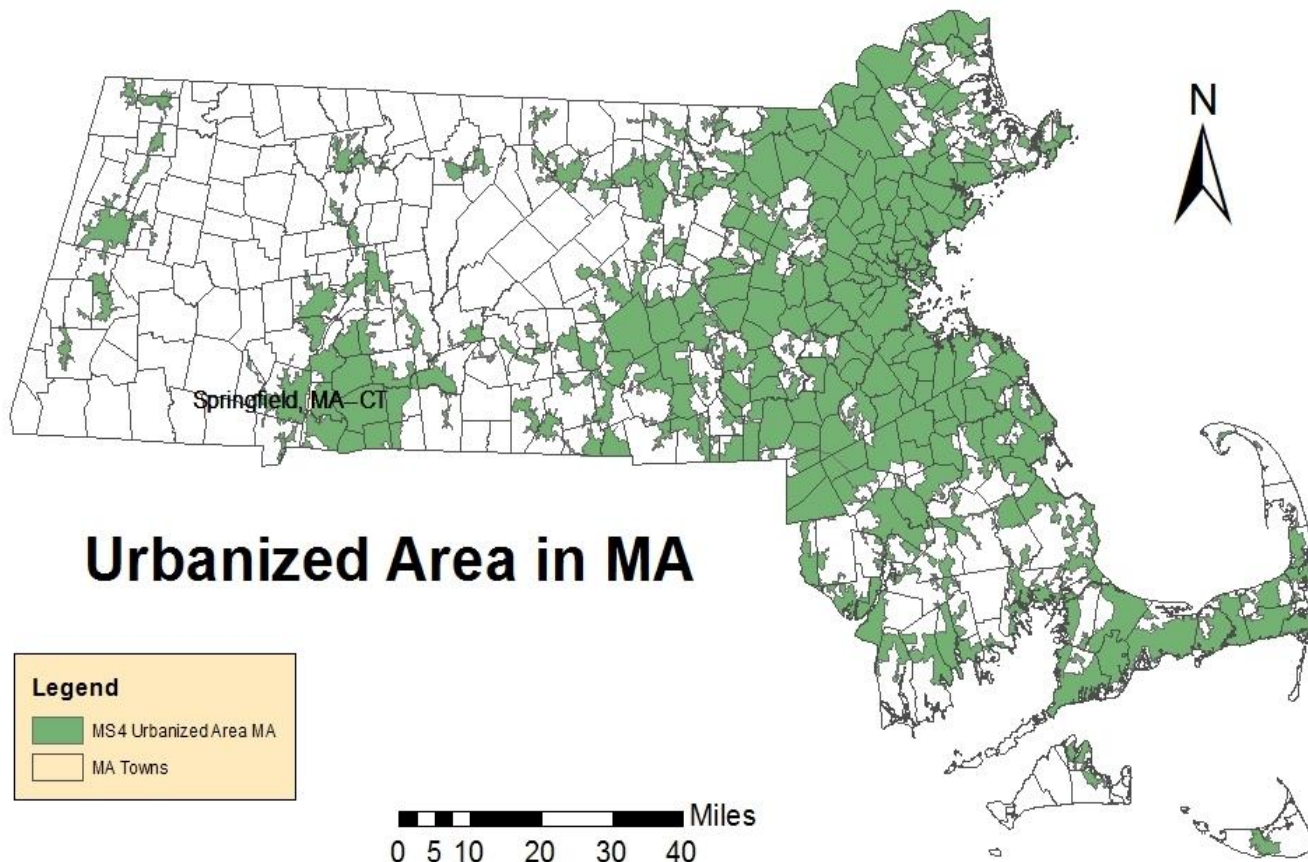
What Town Department or Committee is responsible for compliance with the MS4 stormwater post-construction bylaw?



WPA – MS4 Differences

Jurisdiction

The WPA Stormwater Management Standards (WPA SMS) and the MS4 General Permit are implemented in distinct jurisdictional areas that often overlap.



WPA/401 WQC

- WPA regulations typically apply to activities within protected wetland resource area or buffer zone.

310 CMR 10.02

MS4

- Jurisdiction under the MA GP extends to Municipal and other Separate Storm Sewer Systems located in UA. [Part 1.2](#)

MS4 Urbanized Area



PETERSHAM

HUBBARDSTON



No MS4 Jurisdiction

WICETON

BARRE

RUTLAND

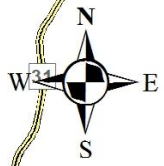
Legend

-  MS4 Urbanized Area
-  MA Towns

OAKHAM



MS4 Urbanized Area





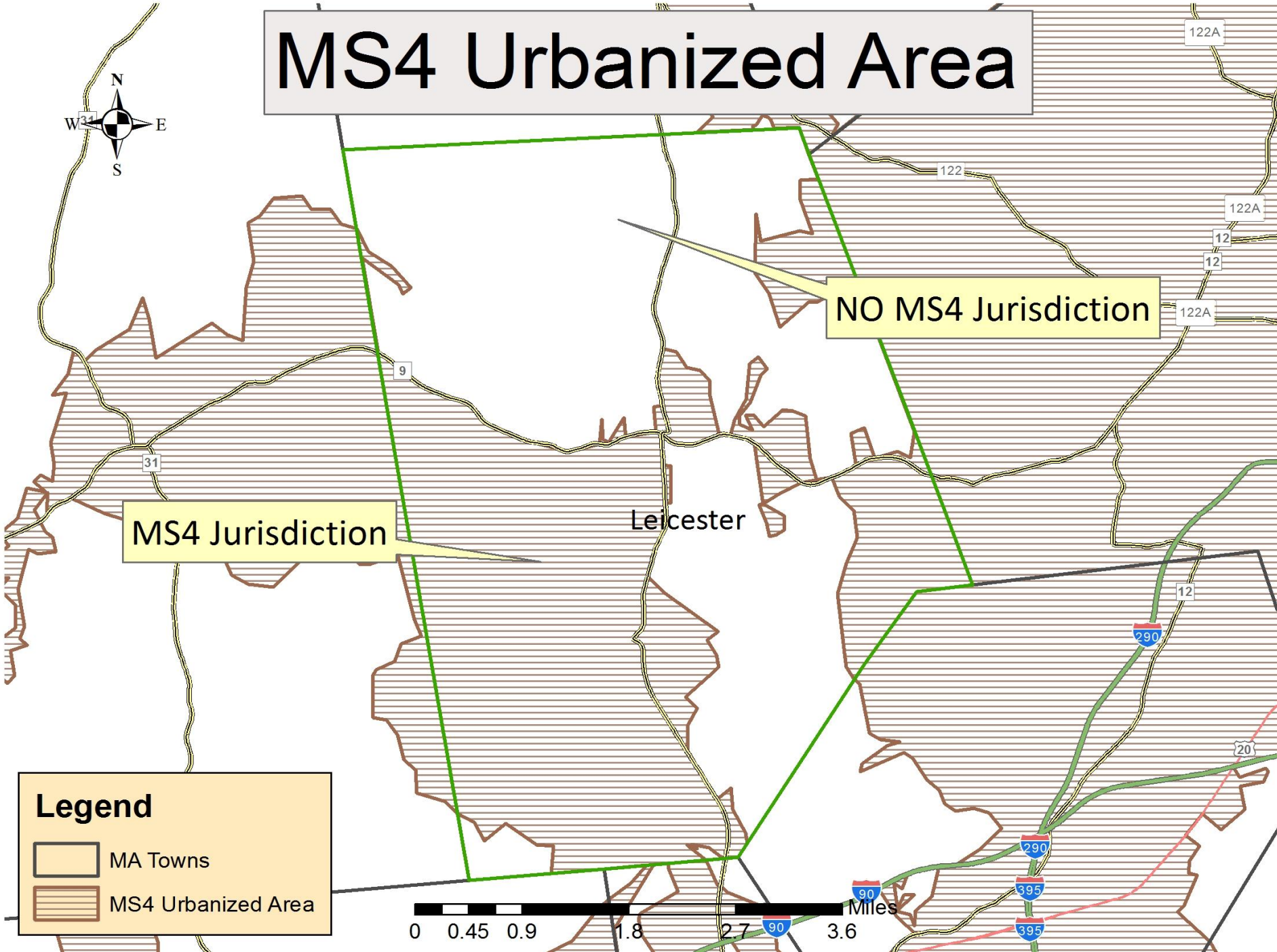
MS4 Jurisdiction

NO MS4 Jurisdiction

Leicester

Legend

-  MA Towns
-  MS4 Urbanized Area



MS4 Urbanized Area



MARLBOROUGH

WAYLAND

FRAMINGHAM

MS4 Jurisdiction


SOUTHBOROUGH


NATICK

WESTBOROUGH

ASHLAND

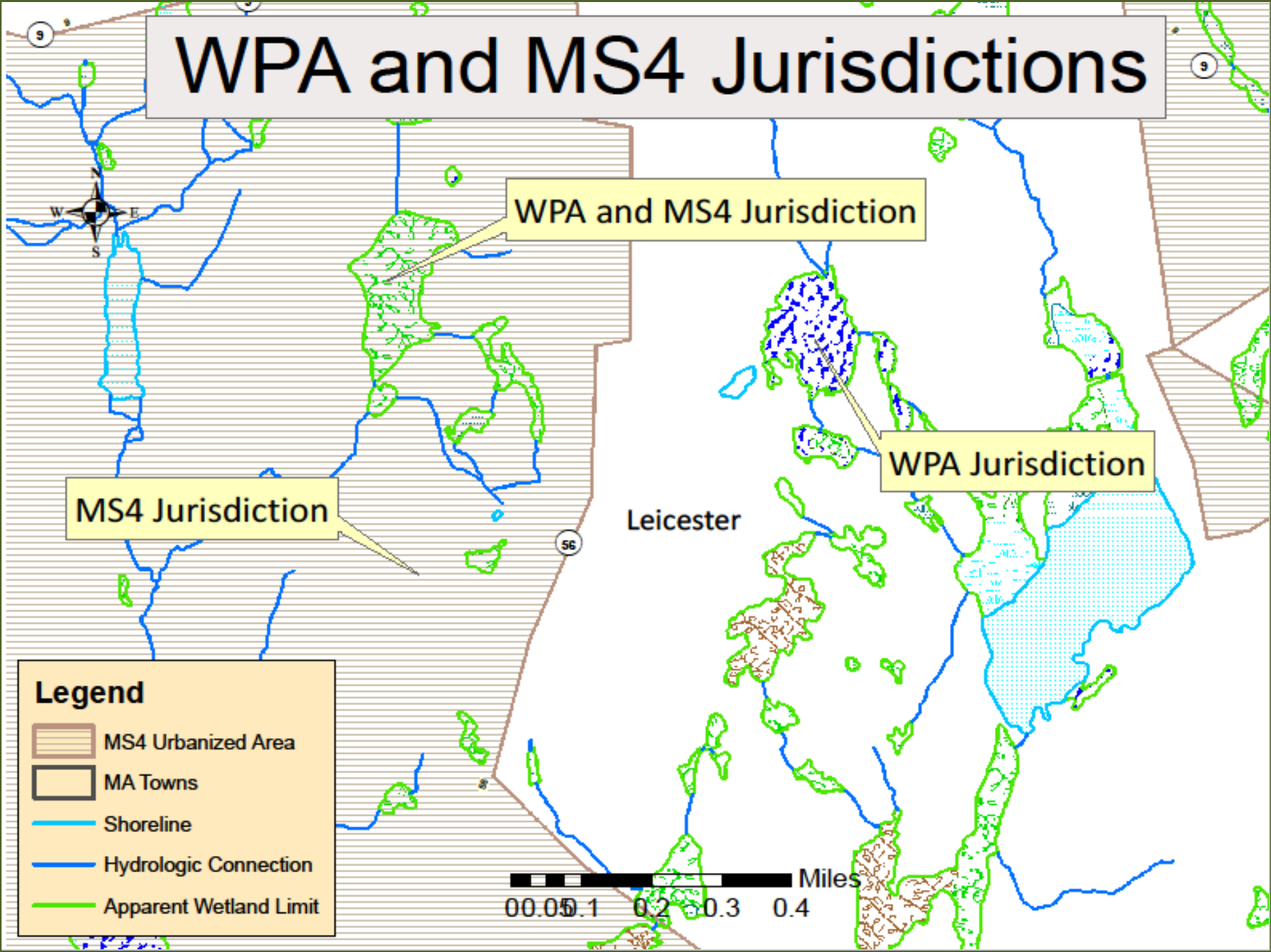
Legend

 MA Towns

 MS4 Urbanized Area



WPA and MS4 Jurisdictions



MS4 Jurisdiction

WPA and MS4 Jurisdiction

WPA Jurisdiction

Leicester

Legend

- MS4 Urbanized Area
- MA Towns
- Shoreline
- Hydrologic Connection
- Apparent Wetland Limit

0 0.1 0.2 0.3 0.4 Miles

WPA/MS4 Differences

MS4 GP for MA sets the minimum standards for Municipal implementation of the six MCMs.

1. Public Education and Outreach (Part 2.3.2)
2. Public Participation/ Involvement (Part 2.3.3)
3. Illicit Discharge Detection and Elimination (Part 2.3.4)
4. Construction Site Runoff Control (Part 2.3.5)
5. Post-Construction Runoff Control (Part 2.3.6)
6. Pollution Prevention/Good Housekeeping (Part 2.3.7)

WPA/MS4 Differences

Specific differences occur between WPA SMS and the MS4 implementation of MCM 4 and 5.

1. Public Education and Outreach (Part 2.3.2)
2. Public Participation/ Involvement (Part 2.3.3)
3. Illicit Discharge Detection and Elimination (Part 2.3.4)
4. Construction Site Runoff Control (Part 2.3.5)
5. Post-Construction Runoff Control (Part 2.3.6)
6. Pollution Prevention/Good Housekeeping (Part 2.3.7)

WPA/MS4 Differences

Specific differences between the WPA regulations and MS4 permit include, but are not limited to:

- The volume of stormwater to be retained, treated;
- Which pollutants are regulated;
- The level of pollutant removal required;
- What constitutes redevelopment for stormwater;
- The extent to which Low Impact Development (LID) practices should be used to manage stormwater for both new development and redevelopment projects ;
- Construction site runoff control requirements.

Differences - WPA/MS4

New Development SW Recharge and Treatment

WPA

- **SMS₃**: Eliminate loss of Recharge on site by infiltrating a soil based volume of Stormwater.
310 CMR 10.05(6)(k)(3)
- **SMS₄**: Remove **80% TSS** from a water quality volume based on a runoff depth of 0.50" in most cases and 1.0" for Critical Areas /ORWs.
310 CMR 10.05(6)(k)(4)

MS4

- Recharge in Accordance with WPA SMS 3. Part 3.2.6.a.ii.3.c
- **Retain minimum 1.0 inch** runoff from post construction impervious area.

AND/OR

- Remove **90% TSS & 60% TP** of the average annual loads from post construction impervious area on site.
Part 3.2.6.a.ii.3.g

Draft 2/19/2019



Differences - WPA/MS4

Redevelopment Definition

WPA

- Applies to all SW projects that meet the definition of redevelopment, **independent of acreage of earth disturbance.**

(310 CMR 10.04)

MS4

- Applies to projects that have previously been developed to include impervious cover AND result in **≥ 1 acre total earth disturbances.**

Part 2.3.6

Draft 2/19/2019



Differences - WPA/MS4

Redevelopment Definition

WPA

- Applies to portions of a site that are currently impervious.
- **Does not** extend to undeveloped portions of the property.

SW Handbook v.1, c.1, SMS 7

MS4

- Applies to portions of a site that are currently impervious.
- Extends to undeveloped portions of the property.

Part 2.3.6

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Differences - WPA/MS4

Redevelopment Standards

WPA

- SMS 7: Stormwater projects shall meet SMS to “Maximum Extent Practicable” (MEP)

310 CMR 10.05(6)(k)(7)

MS4

- SW management systems shall meet MS4 redevelopment requirements to the “Maximum Extent Feasible” (MEF)
Part 2.3.6.a.ii.4.a.

Draft 2/19/2019



Differences - WPA/MS4

Redevelopment Standards

WPA

- **AND** improve existing conditions.

MS4

- **AND** improve existing conditions by designing stormwater management systems to

Retain 0.80 inch runoff

AND/OR

Remove 80% TSS & 50% TP Part 2.3.6.a.ii.4.b.

Draft 2/19/2019



Differences - WPA/MS4

Environmentally Sensitive Site Design (ESSD) Including Low Impact Development (LID)

WPA

- Proponents shall “consider” the use of ESSD practices and LID.

MS4

- LID site planning and design strategies “must be used to the maximum extent feasible”
More Protective (?)

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Differences - WPA/MS4

Construction Site Runoff Control

WPA

- Sediment and erosion control plan must include SCMs appropriate for site conditions during construction
- The SCMs used during construction **must be different** from the SCMs used for post-construction site conditions.

SW Handbook v.1, c.1, SMS 7

MS4

- Sediment and erosion control plan must include SCMs appropriate for site conditions during construction.
- The SCMs used during construction must be maintained and available for use in post construction conditions.

Draft 2/19/2019



July 1, 2020

Unless wetland regulations are revised, there will be different rules in overlapping Wetlands and MS₄ jurisdictions.

- will need to meet **BOTH** the current wetlands standards **and** the new MS₄ permit.

July 1, 2020

Possible municipal paths: Update Bylaws and Ordinances

1. Specify that stricter standard must be met?
2. What is geographic threshold for local rules?
3. Use the MA SW Standards, as amended?
4. Develop one's own set of stormwater rules?



Questions?

Stormwater Contact Information

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