

MEMO

To:
CMRSWC Steering Committee

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From:
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Date:
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Arcadis Project No.:
30050247

Subject:
Bylaw/Ordinance and Regulations Audit Results and Recommendations

INTRODUCTION

The Central Massachusetts Regional Stormwater Coalition (CMRSWC) has engaged Arcadis to assist with review of member communities' Stormwater Bylaws/Ordinances for compliance with the National Pollutant Discharge Elimination System (NPDES) permit for small municipal separate storm sewer systems (MS4 Permit) and to provide recommendations for updates. The MS4 permit was issued in 2016 and made effective July 1, 2018.

The member communities are currently in Year 3 of the Permit. This permit contains increased requirements for MS4 permittees to ensure the protection of water quality as compared to the previously issued permit (2003). Updates to the regulatory documents were originally required to be completed by the end of Year 2; however, in accordance with a legal settlement which has been finalized, the regulatory mechanism updates must be completed by the end of Year 3 which occurs on June 30, 2021.

Three MS4 permit minimum control measures (MCMs) must be addressed in the Town's bylaw(s) to meet the requirements of the permit:

- MCM 3: Illicit Discharge Detection & Elimination (IDDE),
- MCM 4: Construction Site Stormwater Runoff Control, and
- MCM 5: Stormwater Management in New Development and Redevelopment

This memorandum provides a summary of the results of the audit of member communities' existing stormwater bylaws/ordinances and regulations (if applicable), and our recommendations for next steps,

regulatory document format and content, and schedules to support updating local bylaws/ordinances. Meetings and workshops were also conducted as part of this audit project to present and confirm the general findings within the bylaws/ordinances and regulations (if applicable) and to provide some of the basic recommendations and considerations for municipalities as they move forward with MS4 compliance.

These meetings/workshops included:

- MS4 Stormwater Bylaw/Ordinance Audit Update (presented at the Steering Committee Meeting and Annual Meeting)
- MS4 Stormwater Bylaw/Ordinance Workshop
- MS4 Stormwater Regulations Workshop

The presentation materials for the above meetings and workshops can be found attached to this memo and include more audit findings and figures, MS4 compliance data, MS4 information including risks of non-compliance, and recommendations for document structure and implementation.

The audit was conducted for the following current CMRSWC members and anticipated FY21 members:

- | | | |
|-------------------|---------------------|-----------------|
| • Ashland | • Leominster (FY21) | • Shrewsbury |
| • Auburn | • Lunenburg | • Southborough |
| • Ayer (FY21) | • Marlborough | • Southbridge |
| • Charlton | • Millbury | • Spencer |
| • Dudley | • Natick | • Sterling |
| • Fitchburg | • Northbridge | • Sturbridge |
| • Framingham | • Northborough | • Upton |
| • Grafton | • Oxford | • Uxbridge |
| • Holden | • Palmer | • West Boylston |
| • Hopedale (FY21) | • Paxton | • Westborough |
| • Hopkinton | • Rutland | |

BYLAW/ORDINANCE INVENTORY AND GENERAL FINDINGS

Municipalities' existing Stormwater Bylaws/Ordinances and Regulations were identified, reviewed, and the following components were documented:

- Bylaw/Ordinance and Regulation (if applicable) name and document URL
- Year/date Bylaw/Ordinance was adopted
- Year/date Regulations were adopted
- Year/date Bylaw/Ordinance and Regulation were revised (if applicable)

- If a local Stormwater Permit is required (in addition to wetlands protection act permits from Conservation, development permits from Planning Boards, or building permits)
- Land disturbance threshold for the Stormwater Permit
- If a local stormwater enterprise has been authorized
- Approval authority for Bylaw/Ordinance (e.g., Town Meeting, City Council)
- Applicable authority for administering Bylaw/Ordinance (e.g., Conservation, DPW, Board of Selectmen, Sewer Commissioners, etc.)
- If the municipality has a stormwater webpage

Table 1: Existing Stormwater Bylaw and Ordinance Links attached to this memo provides links to where existing stormwater regulatory documents have been posted online for each member community.

Table 2: Existing Stormwater Bylaw and Ordinance General Information attached to this memo provides general information addressing the components documented during the audit.

Multiple vs. Singular Stormwater Bylaws/Ordinance

Many municipalities have adopted separate bylaws/ordinances for a) MCM 3 - Illicit Discharges and b) MCMs 4 and 5 - Stormwater Management during Construction and in New/Redevelopment. However, the following municipalities have a comprehensive singular Bylaw/Ordinance for illicit discharges and stormwater management in new and redevelopment:

- | | | |
|-------------|--------------|--------------|
| • Ashland | • Charlton | • Fitchburg |
| • Lunenburg | • Paxton | • Shrewsbury |
| • Spencer | • Sturbridge | • Upton |
| • Uxbridge | | |

Status of Bylaw/Ordinance Development

The municipalities listed below have not yet developed an Illicit Discharge Bylaw/Ordinance:

- **Dudley:** Dudley had a draft Stormwater Management Bylaw that was to be reviewed at the June 22nd Town Meeting, pending further delays due to the Covid-19 pandemic.
- **Hopedale:** Hopedale is currently seeking resources for the development of a Stormwater Management Bylaw and is noted as a discussion topic at the next Town Meeting.
- **Southbridge:** Southbridge is in the planning process of creating a Stormwater Management and Illicit Connections Bylaw with the intention of having a draft together by the end of this year.
- **West Boylston:** West Boylston currently has no regulatory mechanism for illicit discharges and connections. However, the West Boylston Planning Board now has an agenda item to create an Illicit Discharge Bylaw.

The municipalities listed below have not yet developed a Stormwater Management Bylaw/Ordinance addressing the requirements for MCM 4 and MCM5, as described in the “General Compliance Findings” section:

- Dudley
- Hopedale
- Northborough
- **Rutland:** Rutland currently has an established Illicit Discharge Bylaw with components pertaining to stormwater management and the minimum control measures. The Town was issued a statement of non-compliance from the EPA regarding the Stormwater Bylaw and has stated that appropriate changes were made to achieve compliance.

It is recommended that municipalities who have not established any Stormwater Bylaw/Ordinance yet, work to expedite the development of those documents.

All municipalities who have officially adopted Stormwater Bylaw(s)/Ordinance(s) have them posted online.

Status of Regulations Development

As of the time of , the municipalities listed below have either not yet developed or not publicly distributed/published Stormwater Regulations:

- | | | |
|---------------|-------------------|-----------------|
| • Auburn | • Hopedale (FY21) | • Palmer |
| • Ayer (FY21) | • Lunenburg | • Rutland |
| • Charlton | • Millbury | • Southborough |
| • Dudley | • Northbridge | • Sterling |
| • Framingham | • Northborough | • West Boylston |
| • Holden | • Oxford | • Westborough |

Authority

Each municipality should have a clearly defined Authorized Enforcement Agency (AEA) to administer, implement and enforce the Bylaw or Ordinance. The AEA should also have authority to promulgate, adopt, implement, enforce and amend Stormwater Regulations. A range of AEAs have been given authority over the existing Stormwater Bylaws/Ordinances within the member communities. The range of AEAs observed among member communities includes:

- | | | |
|--------------------------------|------------------------|-------------------|
| • Director of Public Works | • Town/City Engineer | • Planning Board |
| • Conservation Commission | • Highway Department | • Board of Health |
| • Land Use Enforcement Officer | • Stormwater Committee | |

The audit found that some municipalities assigned the role to a Town/City Official or a Stormwater Committee made up of municipal officials, while others designated the role to a Board or Commission within the municipality. The municipalities listed below have either a Board or Commission identified as their AEA:

- | | | |
|---------------|----------------|----------------|
| • Ashland | • Lunenburg | • Shrewsbury |
| • Ayer (FY21) | • Millbury | • Southborough |
| • Charlton | • Natick | • Spencer |
| • Framingham | • Northborough | • Sterling |
| • Grafton | • Palmer | • Upton |
| • Hopkinton | • Paxton | • Uxbridge |
| • Leominster | • Rutland | • Westborough |

The Authorized Enforcement Agency for each specific municipality is provided in the attached **Table 2: Existing Stormwater Bylaw and Ordinance General Information**. A recommendation for which authority should take on the AEA role can be found in Item 7 in the section titled "Recommendations for Bylaw/Ordinance and Regulations Structure."

Thresholds for Land Disturbance or Stormwater Management Permit

Each municipality must require that land disturbing activities be regulated through a permit process administered by the municipality. For compliance with the MS4 Permit, land disturbance of 1 acre or more must be regulated, though many communities choose to set more stringent triggers or thresholds for when such a permit is required. The member communities have largely chosen to set more stringent thresholds, many in combination covering several possible scenarios, and likely based around specific observed development patterns, topographic and geographic conditions, water resources and impairments, and other insights relevant to the community. It is also worth noting that several communities have established a tiered permit program such that requirements for minor land disturbance projects are less burdensome than those for larger land disturbance projects.

The range of thresholds for triggering a land disturbance or Stormwater Management Permit includes:

- | | |
|---|--|
| • 1 acre | • All subdivisions, site plan review |
| • 40,000 SF | • Increase imperviousness to >50% of parcel |
| • 20,000 SF | • Disturbance of volume greater than 1,500 CY |
| • 5,000 SF | • Increase in floor area, vehicle traffic, persons |
| • Project occurs in a critical area or hot spot | • Projects clearing 50% of parcel (trees) |
| • Addition of 30% impervious area | • Land disturbance in sloped areas (15% slope) |

The following municipalities still have a 1 acre or more land disturbance threshold as required for compliance with the MS4 Permit:

- Charlton
- Lunenburg
- Uxbridge
- West Boylston

The following municipalities do not have a land disturbance threshold and it is recommended these municipalities work to expedite the development of a threshold:

- Dudley
- Hopedale
- Northborough
- Rutland
- Southbridge

The land disturbance thresholds for triggering the requirement of a Stormwater Management Permit for each specific municipality is provided in the attached **Table 2: Existing Stormwater Bylaw and Ordinance General Information**. Recommendations for the municipalities considering more stringent thresholds than the disturbance of 1 acre or more and municipalities that have not set a threshold, as shown above, can be found in Item 6 in the section titled “Recommendations for Bylaw/Ordinance and Regulations Structure.” These recommendations also apply to any municipality considering re-evaluating their existing threshold.

Procedural and/or Technical Language in Bylaw/Ordinance

Municipalities are required to have procedures for site plan review, site inspections, and enforcement of sediment and erosion controls in their stormwater bylaw/ordinance or regulations. There are additional requirements for technical standards to be included for stormwater runoff retainage and pollutant removal. The following municipalities have the procedural and/or technical language in their Bylaw/Ordinance:

- | | | |
|--------------|------------|---------------|
| • Framingham | • Millbury | • Palmer |
| • Grafton | • Natick | • Upton |
| • Lunenburg | • Oxford | • Westborough |

A recommendation for where these requirements should be located can be found in Item 3. in the section titled “Recommendations for Bylaw/Ordinance and Regulations Structure.”

GENERAL COMPLIANCE FINDINGS

The audit also identified compliance status with the following MS4 Permit requirements:

- 2003 MS4 permit – MCM 3 IDDE requirements

- 2016 MS4 permit – MCM 4 Construction Site Stormwater Runoff Controls
- 2016 MS4 permit – MCM 5 Stormwater Management in New & Redevelopment
- 2016 MS4 permit – Appendix F: Requirements for Discharges to Impaired Waters with an Approved Total Maximum Daily Load (TMDL) (if applicable)
- 2016 MS4 permit – Appendix H: Requirements Related to Discharges to Certain Water Quality Limited Waterbodies (if applicable)

MCM 3 IDDE requirements include:

- Establishing a legal authority to prohibit illicit discharges, investigate and eliminate illicit discharges, and enforce appropriate procedures and actions for illicit connections
- Creating and implementing regulations for removing an identified illicit connection

MCM 4 Construction Site Stormwater Runoff Controls requirements include:

- Use of sediment and erosion controls, along with controls for other construction wastes such as debris, paint, sanitary wastes, and litter
- Written procedures for site inspections and enforcement of the erosion, sediment, and construction waste controls
- Enforcement of a sediment and erosion control program implemented by the construction site operators for land disturbances that result in stormwater discharging to the MS4 system
- Written procedures for site plan review and inspection which include, but are not limited to: preconstruction review, evaluation of LID and green infrastructure opportunities, BMP inspections, and potential water quality impacts

MCM 5 Stormwater Management in New & Redevelopment requirements include:

- Use of LID strategies to the maximum extent possible
- Use of Massachusetts Stormwater Handbook for other federal/state approved design guidance for all BMP design
- New Development and Redevelopment sites retain a certain volume of stormwater runoff and meet technical requirements for removal percentages of average annual pollutant loads
- Submission of as-built drawings after completion of the construction projects
- Long-term operation and maintenance plan for stormwater management structures and practices

Appendix F: Requirements for Discharges to Impaired Waters with an Approved TMDL include:

- New Development and Redevelopment stormwater management BMPs be optimized for the pollutant to which the Approved TMDL applies

Appendix H: Requirements Related to Discharges to Certain Water Quality Limited Waterbodies include:

- New Development and Redevelopment stormwater management BMPs be optimized for the pollutant of concern as described in Appendix H

The following CMRSWC municipalities are in full compliance with the IDDE requirements of the 2003 MS4 Permit:

- | | | |
|---------------|----------------|----------------|
| • Ashland | • Lunenburg | • Shrewsbury |
| • Auburn | • Marlborough | • Southborough |
| • Ayer (FY21) | • Millbury | • Spencer |
| • Charlton | • Natick | • Sterling |
| • Fitchburg | • Northbridge | • Sturbridge |
| • Framingham | • Northborough | • Upton |
| • Grafton | • Oxford | • Uxbridge |
| • Holden | • Palmer | • Westborough |
| • Hopkinton | • Paxton | |
| • Leominster | • Rutland | |

Municipalities not in the list above are designated as achieving “partial compliance” or “noncompliance” in **Table 3: Existing Stormwater Bylaw and Ordinance Compliance Review** with notes explaining observed deficiencies with this requirement.

The following municipalities are in full compliance with the 2016 MS4 Permit for minimum control measures, TMDL requirements, and all other permit requirements:

- Fitchburg
- Shrewsbury

Municipalities not in the list above are designated as achieving “partial compliance” or “noncompliance” in the **Table 3: Existing Stormwater Bylaw and Ordinance Compliance Review** with notes explaining observed deficiencies with these requirements. Charts presenting a percentage breakdown of compliance achievement for each of the Minimum Control Measures and overall compliance can be found in the attached presentation titled “MS4 Stormwater Bylaw/Ordinance Audit Update.”

RECOMMENDATIONS FOR BYLAW/ORDINANCE AND REGULATIONS STRUCTURE

In our experience, a streamlined Bylaw/Ordinance with accompanying Regulations provides flexibility for municipalities as planning priorities, EPA permit requirements, and the development landscape change within the municipalities.

To that end, it is our general recommendation that if member communities are undertaking the process of updating their Bylaws or Ordinance to achieve compliance, the following should be considered:

1. Separate existing Bylaws/Ordinances may be combined to create one Stormwater Management Bylaw/Ordinance which establishes and consolidates legal authority, purpose/objectives, administration, applicability, definitions, and other common language.
2. The Bylaw/Ordinance should contain language that establishes legal authority to establish, implement, and enforce the programs, regulations, processes, and fees related to MCMs 3, 4, 5, impaired waters considerations and pertinent utility/enterprise fund authorities.
3. Language related to permits, procedures, technical requirements, design standards, fees, and detailed enforcement remedies should be moved to the Regulations document. In the Bylaw/Ordinance, the AEA should be given the authority to promulgate and amend Regulations, and as such, language changes within the regulations should not be subject to adoption or approval by City Council or Town Meeting. This provides communities much more flexibility to change procedural language that either is not working or has become outdated.
4. The Regulations (not the Bylaw/Ordinance), should also reference preferred guidance documents and additional resources. To ensure developers and landowners meet the Massachusetts standards, it is recommended the following documents (most recent edition) be used to aid in structural and non-structural BMP implementation:
 - Massachusetts Stormwater Management Policy Handbook
 - Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas
 - Massachusetts Department of Public Works "Highway Design Manual" Chapter 10, Drainage and Erosion Control.
5. If appropriate for the community, take the opportunity to provide or update definitions for private stormwater systems vs. the municipal stormwater system, and where ownership of a stormwater lateral connection begins/ends for each party.
6. Review the existing thresholds for projects requiring a Stormwater Permit. Development trends and conditions in the community may have changed since the last Bylaw/Ordinance update, and new MS4 permit requirements may dictate consideration of other critical resources/areas to protect or where smaller projects may need more careful review (e.g. projects planned next to impaired waters).
7. In light of the more stringent requirements for the 2016 MS4 permit, it is prudent to review and consider the person or persons designated as the AEA with respect to responsibility for compliance with the MS4 permit and the potential consequences of violations. The Town/City Manager, Administrator, or Mayor was required to sign and authorize the municipality's Notice of Intent to comply with the MS4 Permit. Consideration should be given to either naming a person with an official Town role as AEA or establishing a "Stormwater Committee" to serve as the AEA comprised of at least one person (position) with an official Town role. This is a consideration in cases where the AEA is currently a board or commission who may be made up of a changing group volunteers with varying experience levels and understanding of the MS4 Permit requirements.

8. In the case that a municipality is not wholly situated within the Urbanized Area, it is recommended that discharges to any portion of the separate storm drainage system be regulated by the municipality within the Bylaw/Ordinance.

IMPLEMENTATION CONSIDERATIONS AND RECOMMENDATIONS

Arcadis conducted two meetings and two workshops to provide general recommendations and implementation considerations, along with other audit information as stated in the beginning of this memo. A summary these of considerations included:

- Form a Stormwater Bylaw/Ordinance and/or Regulations Task Force to work through the potential consequences of changes to language and updates to procedures to meet the new requirements. Identify Department heads or staff who would be considered stakeholders in the process. Consider including representatives from the DPW, Engineering, Conservation, Planning, Building Inspector, Board of Health, Town Counsel/City Solicitor.
- Review related bylaws and regulations and understand how updates to the Stormwater Bylaw and Regulations create potential opportunities to streamline the site plan submittal and review process. Examples include coordinating sheet size, title block requirements, and coordinating pre-permitting meetings with the project proponent with various department heads all at the table for the discussion.
- During the review of related regulatory documents and the updates to the Bylaw/Ordinance and Regulations, document findings related to the feasibility of making Green Infrastructure and infiltration practices allowable and any identified barriers to implementing such practices. This can serve as a first step in meeting the MS4 permit requirement for this evaluation (due at the end of Year 4) as outlined in Section 2.3.6c of the permit.
- Consider development of fact sheets, checklists and other educational materials to assist developers and other municipal departments in understanding what is required for the Stormwater or Land Disturbance Permit.

NEXT STEPS

At this time, the recommended course of action is to review this memo and previous workshops for Bylaw/Ordinance and Regulations structure and implementation recommendations that are applicable to your municipality. We welcome critical feedback on items we may have missed, misrepresented, or misunderstood. We also encourage workshop participants to reach out to us with specific questions on their regulatory documents.

Arcadis will be providing templates for Stormwater Bylaw/Ordinance and Stormwater Rules and Regulations. These regulatory document templates will provide blank spaces and annotation for key questions and decisions that municipalities should address and consider while developing a bylaw, or other regulatory document that fits their community. Arcadis will also provide a set of sample guidance documents that correspond to the Rules and Regulations with respect to the required Land Disturbance/Stormwater Permit (to be authorized and enforced by the municipality). The guidance documents will include: Sample Permit Application, Sample Checklists for Project Proponents or Reviewers, Sample Permit Flowchart. Arcadis has consultation hours available to address the above documents, community-specific questions and key decisions in order to assist with bylaw and regulations development.

ATTACHMENTS

Attachment A: Tables

- Table 1: Existing Stormwater Bylaw and Ordinance Links
- Table 2: Existing Stormwater Bylaw and Ordinance General Information
- Table 3: Existing Stormwater Bylaw and Ordinance Compliance Review

Attachment B: Presentations

- MS4 Stormwater Bylaw/Ordinance Audit Update
- MS4 Stormwater Bylaw Workshop
- MS4 Stormwater Regulations Workshop

Attachment A: Tables



Central Massachusetts Regional Stormwater Coalition (CMRSWC)
MS4 Stormwater Bylaw/Ordinance Audit
Table 1: Existing Stormwater Bylaw and Ordinance Links

CMRSWC Member	Bylaw/Ordinance Name	Bylaw/Ordinance Link	Regulations Name	Regulations Link
Ayer	Article XLVII: NPDES Phase II Stormwater Bylaw	https://www.ayer.ma.us/town-bylaws#anchor_xlvii	None Identified	Not Applicable (NA)
	Article XLVIII: Illicit Discharges to the Municipal Storm Drain Systems Bylaw	https://www.ayer.ma.us/town-bylaws#anchor_xlviii	None Identified	NA
Ashland	Chapter 247: Stormwater Management and Illicit Discharge Connections	https://ecode360.com/12610806	Chapter 343: Stormwater Management	https://ecode360.com/13018271
Auburn	Chapter XIV: Stormwater Management	https://www.auburnguide.com/DocumentCenter/View/486/General-By-Laws-PDF	None Identified	NA
	Chapter XVII: Stormwater Management Erosion Control & Illicit Discharge Bylaw	https://www.auburnguide.com/DocumentCenter/View/487/Zoning-By-Laws-PDF	None Identified	NA
Charlton	Chapter 175: Stormwater Management	https://ecode360.com/27313158	None Identified	NA
Dudley	DRAFT		None Identified	NA
Fitchburg	Chapter 154: Stormwater Management	https://ecode360.com/10431661	Stormwater Management Rules and Regulations	https://www.fitchburgma.gov/DocumentCenter/View/4865/Fitchburg-Stormwater-Rules--Regulations-2019
Framingham	Article V: Health and Safety, Section 26: Illicit Discharges to Municipal Separate Storm Sewer System	https://www.framinghamma.gov/DocumentCenter/View/268/Article-5?bidId=	None Identified	NA
	Section V - F. Land Disturbance and Stormwater Management Ordinance	https://www.framinghamma.gov/DocumentCenter/View/28987/Zoning-Bylaw-Ordinance?bidId=	None Identified	NA
Grafton	Article 36: Stormwater Management Bylaw	https://www.grafton-ma.gov/sites/g/files/vyhlif4461/f/uploads/stormwater_bylaw_revised_thru_may_2017_town_mtg.pdf	Town of Grafton Conservation Commission Regulations Governing Stormwater Management	https://www.grafton-ma.gov/sites/g/files/vyhlif4461/f/uploads/final_stormwater_regulations_-_may_2013.pdf
	Article 37: Illicit Discharge Bylaw	https://www.grafton-ma.gov/sites/g/files/vyhlif4461/f/pages/gen_by-laws_with_amendments_from_10-21-2019_0.pdf	None Identified	NA
Holden	Article XXIV: Stormwater Management and Erosion Control Bylaw	https://www.holdenma.gov/sites/g/files/vyhlif4526/f/uploads/proposed_revisions_to_article_xxiv_and_article_xxv-1.pdf	None Identified	NA
Hopedale	None Identified	NA	None Identified	NA
Hopkinton	Chapter 172: Stormwater Management and Erosion Control	http://www.mapc.org/wp-content/uploads/2017/11/Hopkinton-Stormwater-Bylaw-5-5-08.pdf	Stormwater Regulations	http://www.mapc.org/wp-content/uploads/2017/11/Hopkinton-Stormwater-Regulations-2008-Final-Adopted.pdf
	Chapter 171: Discharges to Storm Drain System	https://www.hopkintonma.gov/Departments/Town%20Clerk/Bylaws/General%20Bylaw%20Book%202017.pdf	None Identified	NA
Leominster	Article VI: Stormwater and Erosion Control	https://library.municode.com/ma/leominster/codes/code_of_ordinances?nodeId=PTIITHCO_CH21WASE_ARTVISTERCO	Stormwater and Erosion Control Regulations	https://www.leominster-ma.gov/civicax/filebank/blobdload.aspx?BlobID=25118
	Article V: Illicit Connections and Discharges to the Storm Drain System	https://library.municode.com/ma/leominster/codes/code_of_ordinances?nodeId=PTIITHCO_CH21WASE_ARTVILCODISTDRSY	None Identified	NA
Lunenburg	Chapter 204: Stormwater and Storm Sewers	https://www.ecode360.com/33599550	None Identified	NA
	Chapter 204-1: Stormwater Management; NPDES Phase II Permits Amendment	https://www.ecode360.com/LU3524/laws/LF1244881.pdf	None Identified	NA
Marlborough	Chapter 271: Stormwater Management	https://ecode360.com/15931519	Rules and Regulations for Stormwater Management	https://www.marlborough-ma.gov/sites/g/files/vyhlif3411/f/uploads/stormwater_rules_and_regulations_-_2019.pdf
	Chapter 511: Storm Sewers	https://ecode360.com/15931997	None Identified	NA
Millbury	Chapter 13.15: Post- Construction Storm Water Management of New Developments and Redevelopments	https://millbury.municipal.codes/MMC/13.15.010	None Identified	NA
	Chapter 13.20: Discharges to the Municipal Drain System	https://millbury.municipal.codes/MMC/13.20	None Identified	NA
Natick	Article 79A: Stormwater Management and Erosion Control Bylaw	https://www.natickma.gov/DocumentCenter/View/5460/Article-79A---Stormwater-Management-and-Erosion-Control?bidId=	Town of Natick Stormwater Management and Erosion Control Bylaw Regulations	https://www.natickma.gov/DocumentCenter/View/461/Stormwater-Regulations-PDF
	Article 84: Illicit Discharge Bylaw	https://www.natickma.gov/DocumentCenter/View/5465/Article-84---Illicit-Discharge?bidId=	None Identified	NA
Northbridge	Section 7-800: Stormwater Management Bylaw	https://ecode360.com/14688329	None Identified	NA
	Section 10-400: Illegal Discharges and Stormwater Connections	https://ecode360.com/14704039?highlight=illicit&searchId=12478429081440894#14704039	None Identified	NA
Northborough	Chapter 4-12: Illicit Discharges to the Municipal Storm Drain System	https://www.codepublishing.com/MA/Northborough/html/pdfs/Northborough0412.pdf	None Identified	NA
Oxford	Chapter 65: Discharges to the Municipal Storm Drain System	https://www.town.oxford.ma.us/sites/g/files/vyhlif4836/f/uploads/general_by-law.pdf	None Identified	NA
	Chapter 66: Stormwater Management and Land Disturbance			
Palmer	Chapter 67: Stormwater Management Requirements	https://www.townofpalmer.com/vertical/sites/%7B034F9CAE-5196-4551-90C2-FBFD763748DB%7D/uploads/Palmer_Stormwater_Bylaw_-_chapter_144.pdf	None Identified	NA
	Chapter 144: Stormwater Management Ordinance - Small Development Projects	https://www.townofpalmer.com/vertical/sites/%7B034F9CAE-5196-4551-90C2-FBFD763748DB%7D/uploads/Palmer_Stormwater_Bylaw_-_chapter_145_large_scale.pdf		
Paxton	Chapter 145: Stormwater Management Ordinance - Large Development Projects	https://www.townofpalmer.com/vertical/sites/%7B034F9CAE-5196-4551-90C2-FBFD763748DB%7D/uploads/Palmer_Stormwater_Bylaw_-_IDDE_chapter_146.pdf	Town of Paxton Stormwater Regulations	https://www.townofpaxton.net/sites/g/files/vyhlif4846/f/uploads/paxton_storm_water_rulesregs.pdf
	Chapter 146: Illicit Connections and Discharges to the Municipal Storm Drain System			
Paxton	Town of Paxton Stormwater Bylaw	https://www.townofpaxton.net/sites/g/files/vyhlif4846/f/uploads/storm_water_bylaw_amend_5.6.19_read_only_.pdf		
Rutland	Stormwater Management (Illicit Connections and Discharges to the Storm Drain System)	https://www.townofrutland.org/home/pages/stormwater-management	None Identified	NA
Shrewsbury	Article 21: Stormwater Management Bylaw	https://shrewsburyma.gov/DocumentCenter/View/4546/General-Bylaws-August-31-2018#page=51	Town of Shrewsbury Stormwater Management Rules & Regulations	https://shrewsburyma.gov/DocumentCenter/View/4595/Stormwater-Management-Rules-and-Regulations?bidId=
Southborough	Chapter 174-13.5: Stormwater and Erosion Control	https://www.ecode360.com/9540541?highlight=stormwater&searchId=12494146696514719	Stormwater and Erosion Control Regulations	https://www.southboroughtown.com/sites/southboroughma/files/pages/rev_sw_regs_nov_2015.pdf
	Chapter 225: Illicit Discharge	https://www.ecode360.com/9541140?highlight=illicit&searchId=12494296441066207#9541140	None Identified	NA
Southbridge	None Identified	NA	None Identified	NA
Spencer	Article 14: Stormwater Management Bylaw	https://www.spencerma.gov/sites/g/files/vyhlif1246/f/uploads/general_bylaws_as_of_nov_7_2019_2.pdf	Spencer Stormwater Regulations	https://www.spencerma.gov/sites/g/files/vyhlif1246/f/uploads/stormwater_regulations_1.pdf
Sterling	Chapter 165: Stormwater Management	https://ecode360.com/15005430	None Identified	NA
	Chapter 162: Storm Drains	https://ecode360.com/12404466		
Sturbridge	6.92: Stormwater Bylaw	https://www.sturbridge.gov/sites/g/files/vyhlif3881/f/uploads/sturbridge_general_bylaws_2019_updated_7-2019_1.pdf	Chapter 8: Stormwater Management Regulations	https://www.sturbridge.gov/sites/g/files/vyhlif3881/f/uploads/rules_and_regs_stormwater_revised_102318.pdf
Upton	Stormwater Bylaw	https://www.uptonma.gov/sites/g/files/vyhlif5121/f/uploads/upton_stormwater_management_bylaw.pdf	Stormwater Regulations	https://www.uptonma.gov/sites/g/files/vyhlif5121/f/uploads/stormwater_regulations.pdf
Uxbridge	Chapter 290: Stormwater	https://www.uxbridge-ma.gov/sites/g/files/vyhlif3971/f/uploads/gbl10.22.19_apprag.pdf	Town of Uxbridge Regulations Governing Stormwater Management	https://www.uxbridge-ma.gov/sites/g/files/vyhlif3971/f/uploads/stormwater_regulations.pdf
West Boylston	Article XXXIII: Stormwater Bylaw	https://www.westboylston-ma.gov/sites/g/files/vyhlif1421/f/uploads/2020.10.17_gen_bylaws_master1.pdf	None Identified	NA
Westborough	Stormwater Management and Erosion Control Bylaw	https://www.town.westborough.ma.us/sites/g/files/vyhlif5176/f/uploads/westborough_stormwater_bylaw.pdf	None Identified	NA
	Article 55: Discharges to the Municipal Storm Drain System	https://www.town.westborough.ma.us/sites/g/files/vyhlif5176/f/uploads/general_bylaws_through_atm_2019_final.pdf		



Central Massachusetts Regional Stormwater Coalition (CMRSWC)

MS4 Stormwater Bylaw/Ordinance Audit

Table 2: Existing Stormwater Bylaw and Ordinance General Information

CMRSWC Member	Bylaw/Ordinance Name	Bylaw/ Ordinance Adoption Date	Bylaw/Ordinance Revisions	Regulations Name	Regulations Adoption Date	Regulations Revisions	S.W. Permit Required?	Land Disturbance Trigger for S.W. Permit	S.W. Enterprise/ Utility?	Approval authority (Town Meeting, City Council)	Administering Authority (DPW, Conservation, etc..)	Stormwater Webpage	Notes
Ashland	Chapter 247: Stormwater Management and Illicit Discharge Connections	5/2/2007	None Identified	Chapter 343: Stormwater Management	5/28/2008	None Identified	Yes	a) 10,000 SF b) projects subject to site plan review c) 5000 SF on 15% slope d) critical resource areas	Yes	Town Meeting (open)	Conservation Commission - S.W. & permit; DPW Director - Illicit connections	Yes	
Auburn	Chapter XIV: Stormwater Management	Cannot Locate (CNL)	10/9/2015	None Identified	NA	NA	Yes	a) 1,000 SF b) Paving over 500 SF c) New building or addition of 500 SF or more d) 500 SF on 15% slope or greater	No	Town Meeting (representative)	Town Engineer	Yes	Stormwater Committee - DPW Director, Town Engineer, Assistant Town Engineer, Civil Engineer, Highway Super, Sewer Super, Town Planner, Director of Public Health, Zoning Enforcement
	Chapter XVII: Stormwater Management Erosion Control & Illicit Discharge Bylaw	7/25/1995	8/15/2019	None Identified	NA	NA	Yes				Land Use Enforcement Officer		Bylaw within Zoning Bylaw
Ayer	Article XLVII: NPDES Phase II Stormwater Bylaw	5/12/2008	None Identified	None Identified	NA	NA	Yes	a) 40,000 SF b) 1,000 SF on 15% slope or greater c) 1,000 SF where cut or fill exceeds 4' vertical depth d) Disturbance of volume greater than 1500 CY		Town Meeting (open)	Planning Board	Yes	Regulations in the draft stage
	Article XLVIII: Illicit Discharges to the Municipal Storm Drain Systems Bylaw	2008	None Identified	None Identified	NA	NA	NA	NA			DPW Superintendent		
Charlton	Chapter 175: Stormwater Management	5/16/2011	5/20/2019	None Identified	NA	NA	Yes	a) 1 acre b) construction of new drainage serving drainage area of 1 acre	No	Town Meeting (open)	Conservation Commission	Yes	
Dudley	DRAFT	NA							No	Town Meeting (open)		Yes	Draft S.W. Bylaw going to Town Meeting on June 22
Fitchburg	Chapter 154: Stormwater Management	6/1/1999	5/7/2019	Stormwater Management Rules and Regulations	9/20/2019	None Identified	Yes	a) 20,000 SF b) Project in Critical Area c) Addition of 30% impervious on over 5,000 SF	Yes	City Council	Commissioner of Public Works	Yes	
Framingham	Article V: Health and Safety, Section 26: Illicit Discharges to Municipal Separate Storm Sewer System	CNL	None Identified	None Identified	NA	NA	NA	NA	No	City Council (representative)	DPW, Department of Conservation, Department of Building Inspection, Board of Health	Yes	
	Article V - F. Land Disturbance and Stormwater Management Ordinance	1/1/2018	None Identified	None Identified	NA	NA	Yes	a) 1 acre b) projects clearing 50% of lot (trees) c) within 30' buffer of moderate slopes			Planning Board		SW Management found in new Zoning ordinance
Grafton	Article 36: Stormwater Management Bylaw	5/11/2010	May, 2017	Town of Grafton Conservation Commission Regulations Governing Stormwater Management	5/28/2013	None Identified	Yes	a) 40,000 SF b) volume of earth totaling 1,000 CY or greater	No	Town Meeting (open)	Conservation Commission	Yes	



Central Massachusetts Regional Stormwater Coalition (CMRSWC)

MS4 Stormwater Bylaw/Ordinance Audit

Table 2: Existing Stormwater Bylaw and Ordinance General Information

CMRSWC Member	Bylaw/Ordinance Name	Bylaw/ Ordinance Adoption Date	Bylaw/Ordinance Revisions	Regulations Name	Regulations Adoption Date	Regulations Revisions	S.W. Permit Required?	Land Disturbance Trigger for S.W. Permit	S.W. Enterprise/ Utility?	Approval authority (Town Meeting, City Council)	Administering Authority (DPW, Conservation, etc..)	Stormwater Webpage	Notes
	Article 37: Illicit Discharge Bylaw	5/11/2009	5/10/2010	None Identified	NA	NA	NA	NA			DPW		
Holden	Article XXIV: Stormwater Management Bylaw	6/9/1966	6/29/2020	None Identified	NA	NA	Yes	a) 20,000 SF b) 5,000 SF or more of additional impervious	No	Town Meeting (open)	Stormwater Committee (DPW Director, Conservation Commission Agent, Town Planner, Building Commissioner	Yes	Currently Regs are being drafted
Hopedale	None Identified	NA							No	Town Meeting (open)		Yes	Creating a bylaw is a discussion point for next Town Meeting
Hopkinton	Chapter 172: Stormwater Management and Erosion Control	5/5/2008	12/14/2009	Stormwater Regulations	10/20/2008	None Identified	Yes	a) 1 acre b) 15% slope or 10,000 SF on 15% slope c) increase of impervious to more than 50% of lot	No	Town Meeting (open)	Planning Board	Yes	
	Chapter 171: Discharges to Storm Drain System	5/1/2017	None Identified	None Identified	NA	NA	NA	NA			DPW and Planning Board		
Leominster	Article VI: Stormwater and Erosion Control	8/4/2014	6/11/2015	Stormwater and Erosion Control Regulations	12/4/2014	6/11/2015	Yes	a) 1 acre b) all subdivisions c) 5,000 SF - 1 acre subject to minimum criteria	No	City Council	Conservation Commission	Yes	
	Article V: Illicit Connections and Discharges to the Storm Drain System	3/28/2005	None Identified	None Identified	NA	NA	NA	NA			DPW		
Lunenburg	Chapter 204: Stormwater and Storm Sewers	11/28/2017	11/17/2020	None Identified	NA	NA	Yes	1 acre	No	Town Meeting (open)	Planning Board	Yes	Town has Stormwater Task Force
Marlborough	Chapter 271: Stormwater Management	11/23/2009	None Identified	Rules and Regulations for Stormwater Management	2019	None Identified	Yes	a) all subdivisions b) 5000 SF (minor projects)	No	City Council	City Engineer	Yes	Webpage at top says "TOWN OF WESTFORD"; Rules and Regs appendices are BLANK
	Chapter 511: Storm Sewers	11/23/2009	None Identified	None Identified	NA	NA	NA	NA			City Engineer		
Millbury	Chapter 13.15: Post- Construction Storm Water Management of New Developments and Redevelopments	5/1/2007	None Identified	None Identified	NA	NA	Yes	a) 5,000 SF or more than 25% of lot b) increase the flow to collection systems c) alter/modify existing drainage system d) 2000 SF on 15% slope	No	Town Meeting (open)	Planning Board	Yes	Regulations in the draft stage
	Chapter 13.20: Discharges to the Municipal Drain System	12/10/2007	None Identified	None Identified	NA	NA	NA	NA			DPW		
Natick	Article 79A: Stormwater Management and Erosion Control Bylaw	CNL	2015	Town of Natick Stormwater Management and Erosion Control Bylaw Regulations	10/23/2006	None Identified	Yes	40,000 SF (land disturbance, paving over surface, new drainage system, altering surface, or roof drainage of 40,000 SF)	No	Town Meeting (representative)	Conservation Commission	Yes	Cannot find adoption date, bylaws only say "Final 2015"
	Article 84: Illicit Discharge Bylaw	CNL	2015	None Identified	NA	NA	NA	NA			Board of Health		Cannot find adoption date, bylaws only say "Final 2015"
Northbridge	Section 7-800: Stormwater Management Bylaw	5/6/2008	None Identified	None Identified	NA	NA	Yes	all new development and redevelopment (unless less than 5,000 SF of disturbance or less than 25% of property)	No	Town Meeting (open)	Planning Board	Yes	
	Section 10-400: Illegal Discharges and Stormwater Connections	10/25/2005	None Identified	None Identified	NA	NA	NA	NA			DPW		
Northborough	Chapter 4-12: Illicit Discharges to the Municipal Storm Drain System	4/29/2008	January, 2010	None Identified	NA	NA	None Identified	NA	No	Town Meeting (open)	Highway Department	Yes	CNL Stormwater Management Bylaw
Oxford	Chapter 65: Discharges to the Municipal Storm Drain System	1/14/2005	None Identified	None Identified	NA	NA	NA	NA	No	Town Meeting (open)	DPW Director	Yes	
	Chapter 66: Stormwater Management and Land Disturbance	1/14/2005	None Identified				Yes	10,000 SF			Planning Board, Conservation Commission, Selectmen - permits; DPW Director - enforcement		
	Chapter 67: Stormwater Management Requirements	1/14/2005	2/1/2016								DPW Director		
Palmer	Chapter 144: Stormwater Management Ordinance - Small Development Projects	3/2/2009	None Identified	None Identified	NA	NA	Yes	a) less than or equal to 255 increase in floor area b) increase of up to 25% vehicle traffic, parking, persons	No	Town Council	DPW	Yes	Note that Stormwater Management Ordinance has been combined but CNL new ordinance on website
	Chapter 145: Stormwater Management Ordinance - Large Development Projects	9/10/2008	None Identified					a) all land disturbance requiring Site Plan Approval including residential additions resulting in 25% increase in floor area, traffic, parking, persons			Planning Board		
	Chapter 146: Illicit Connections and Discharges to the Municipal Storm Drain System	9/10/2008	None Identified				NA	NA			DPW Director or Town Manager		
Paxton	Town of Paxton Stormwater Bylaw	5/6/2006	5/6/2019	Town of Paxton Stormwater Regulations	March, 2012	None Identified	Yes	a) all new and redevelopment including site plan review and subdivision projects b) projects in hot spot areas	No	Town Meeting (open)	Planning Board	Yes	SW Bylaw is at the bottom of the provided link as a WORD doc
Rutland	Stormwater Management (Illicit Connections and Discharges to the Storm Drain System)	11/19/2018	None Identified	None Identified	NA	NA	Yes	CNL	No	Town Meeting (open)	Board of Selectman or DPW	No	The term "Authorized Enforcement Agency" refers to the Rutland Department of Public Works; however the Board of Selectmen shall administer, implement and enforce this by-law; CNL S.W. Management Bylaw



Central Massachusetts Regional Stormwater Coalition (CMRSWC)

MS4 Stormwater Bylaw/Ordinance Audit

Table 2: Existing Stormwater Bylaw and Ordinance General Information

CMRSWC Member	Bylaw/Ordinance Name	Bylaw/ Ordinance Adoption Date	Bylaw/Ordinance Revisions	Regulations Name	Regulations Adoption Date	Regulations Revisions	S.W. Permit Required?	Land Disturbance Trigger for S.W. Permit	S.W. Enterprise/ Utility?	Approval authority (Town Meeting, City Council)	Administering Authority (DPW, Conservation, etc..)	Stormwater Webpage	Notes
Shrewsbury	Article 21: Stormwater Management Bylaw	5/23/2007	8/31/2015	Town of Shrewsbury Stormwater Management Rules & Regulations	2/19/2019	None Identified	Yes	5,000 SF	Yes	Town Meeting (representative)	Board of Sewer Commissioners	Yes	
Southborough	Chapter 174-13.5: Stormwater and Erosion Control	4/10/2006	None Identified	Stormwater and Erosion Control Regulations	7/12/2007	1/8/2015; 11/19/2015	Yes	a) 1 acre or more than 50% of parcel b) major site plan review c) 5 or more acres subdivision d) increase in impervious area more than 50% of the parcel e) 15,000 SF on 15% slope	No	Town Meeting (open)	Conservation Commission	Yes	
	Chapter 225: Illicit Discharge	4/10/2006	None Identified	None Identified	NA	NA	NA	NA			Board of Health		
Southbridge	None Identified	NA											
Spencer	Article 14: Stormwater Management Bylaw	5/7/2009	5/7/2015	Spencer Stormwater Regulations	12/20/2011	11/17/15; 12/15/15; 5/17/16	Yes	a) 1 acre b) less than 1 acre if it meets 2 of 3 conditions: located w/in 100' of any inlet to drainage system discharging to a waterbody or wetland; will occur or result in a slope of 15% or greater; disturbs greater than 10,000 SF in area	No	Town Meeting (open)	Planning Board	Yes	
Sterling	Chapter 165: Stormwater Management	5/11/2009	9/3/2009; 5/14/2012; 10/11/2012	None Identified	NA	NA	Yes	a) all new and redevelopment and other activities increasing runoff b) projects in hot spots	No	Town Meeting (open)	Conservation Commission	Yes	
	Chapter 162: Storm Drains	10/15/2007	2/13/2008; 5/14/2012; 10/11/2012				NA	NA			DPW		
Sturbridge	6.92: Stormwater Bylaw	CNL	2/26/2018; 7/9/2019	Chapter 8: Stormwater Management Regulations	4/8/2008	9/12/2017	Yes	1 acre	No	Town Meeting (open)	DPW Director & Town Engineer under direction from Board of Selectman	Yes	permit to connect or discharge to system new and redevelopment must follow state and NPDES phase 2 regs.
Upton	Stormwater Bylaw	5/10/2012	None Identified	Stormwater Regulations	7/11/2014	5/14/14; 7/11/14; 8/26/14	Yes	a) Tier 1 - 5000 SF to 1 acre b) Tier 2 - more than 1 acre or alteration of drainage characteristics	No	Town Meeting (open)	Conservation Commission	Yes	
Uxbridge	Chapter 290: Stormwater	11/10/2015	None Identified	Town of Uxbridge Regulations Governing Stormwater Management	7/8/2019	None Identified	Yes	a) all new and redevelopment and other activities increasing runoff b) projects in hot spots	No	Town Meeting (open)	Planning Board	Yes	
West Boylston	Article XXXIII: Stormwater Bylaw	CNL	None Identified	NA	NA	NA	Yes	a) all new and redevelopment and other activities increasing runoff and more than 10,000 SF b) projects in hot spots	No	Town Meeting (open)	DPW Director	Yes	NO Illicit Discharge Bylaw; spoke with Planning Board and it is no on their agenda to create one
Westborough	Stormwater Management and Erosion Control Bylaw	2008	2018	None Identified	NA	NA	Yes	a) 5,000 SF - 1 acre b) 1 acre or alteration of drainage	No	Town Meeting (open)	Conservation Commission - water bodies or wetlands; DPW - municipal storm drain system	Yes	
	Article 55: Discharges to the Municipal Storm Drain System	2008	None Identified				NA	NA			DPW Manager		



Central Massachusetts Regional Stormwater Coalition (CMRSWC)

MS4 Stormwater Bylaw/Ordinance Audit

Table 3: Existing Stormwater Bylaw and Ordinance Compliance Review

CMRSWC Member	IDDE Compliance	Notes	MCM4: Construction Site Erosion and Sediment Controls Compliance	Notes	MCMS: New and Redevelopment Compliance	Notes	Appendix F: Approved TMDL (if applicable)	Appendix H: Water Quality Limited (if applicable)	Notes
Ashland	Full Compliance		Full Compliance		Full Compliance		Noncompliance	Noncompliance	No mention of regulatory mechanisms to effectively implement Phosphorus Control Plan (PCP) for App. F; Total Phosphorus impairment - no mention of BMPs being optimized for phosphorus removal for App. H
Auburn	Full Compliance		Partial Compliance	No procedure for inspection or site plan review; Zoning has procedures but not all S.W. projects will go through zoning too	Noncompliance	No as-built requirement, LID component, % removal or runoff retainage, MA SW Handbook or other BMP guidance	Noncompliance	Noncompliance	No mention of regulatory mechanisms to effectively implement Phosphorus Control Plan (PCP) for App. F; no mention of BMPs being optimized for nitrogen removal for nitrogen TMDL App. F; Total Phosphorus impairment - no mention of BMPs being optimized for phosphorus removal for App. H
Ayer	Full Compliance		Partial Compliance	No mention of procedure for inspection or site plan review or waste control	Partial Compliance	No as-built requirement; doesn't mention MA S.W. Handbook; % removal or runoff retainage	NA	Noncompliance	Total Phosphorus impairment - no mention of BMPs being optimized for phosphorus removal for App. H
Charlton	Full Compliance		Partial Compliance	No procedure for inspection or site plan review; only mention of public comment on the permit	Noncompliance	No as-built requirement, LID component, % removal or runoff retainage, MA SW Handbook or other BMP guidance	Noncompliance	NA	No mention of regulatory mechanisms to effectively implement Phosphorus Control Plan (PCP) for App. F; no mention of BMPs being optimized for nitrogen removal for nitrogen TMDL App. F
Dudley	Noncompliance	No official S.W. Bylaw	Noncompliance		Noncompliance		Noncompliance	NA	
Fitchburg	Full Compliance		Full Compliance		Full Compliance		NA	Full Compliance	
Framingham	Full Compliance		Full Compliance		Partial Compliance	Mentions "minimum standards" but does not state % removals or runoff retainage; no as-built requirements	NA	Noncompliance	Total Phosphorus impairment - no mention of BMP phosphorus removal as priority for App. H
Grafton	Full Compliance		Full Compliance		Partial Compliance	No % removal or runoff retainage BUT "For compliance with Performance Standards of the Grafton Stormwater Management Bylaw, the applicant must meet all the standards of the Massachusetts Department of Environmental Protection's Stormwater Management Standards and Handbook using current Best Management Practices"	Noncompliance	Noncompliance	No mention of regulatory mechanisms to effectively implement Lake Phosphorus Control Plan (LPCP) for App. F; Total Phosphorus impairment - no mention of BMP phosphorus removal as priority for App. F Sec. A.V; Total Phosphorus impairment - no mention of BMPs being optimized for phosphorus removal for App. H
Holden	Full Compliance		Partial Compliance	No procedure for inspection or site plan review	Noncompliance	No as-built requirement, LID component, % removal or runoff retainage, MA SW Handbook or other BMP guidance	NA	NA	
Hopedale	Noncompliance	No official S.W. Bylaw	Noncompliance		Noncompliance		Noncompliance	NA	
Hopkinton	Full Compliance		Full Compliance		Partial Compliance	No % removal or runoff retainage BUT "shall comply with the performance standards of the most recent version of Massachusetts Department of Environmental Protection (DEP) Stormwater Management Standards and accompanying Stormwater Management Handbook"	Noncompliance	Noncompliance	No mention of regulatory mechanisms to effectively implement Phosphorus Control Plan (PCP) for App. F; Total Phosphorus impairment - no mention of BMPs being optimized for phosphorus removal for App. H
Leominster	Full Compliance		Full Compliance		Partial Compliance	No % removal or runoff retainage only "minimum performance standards with MA S.W. Standards"	NA	Noncompliance	Total Phosphorus impairment - no mention of BMPs being optimized for phosphorus removal for App. H
Lunenburg	Full Compliance		Full Compliance		Full Compliance		NA	Noncompliance	Total Phosphorus impairment - no mention of BMPs being optimized for phosphorus removal for App. H
Marlborough	Full Compliance		Full Compliance		Partial Compliance	No % removal or runoff retainage	Noncompliance	Noncompliance	Total Phosphorus Approved TMDL - no mention of BMPs being optimized for phosphorus removal for App. F; Total Phosphorus impairment - no mention of BMPs being optimized for phosphorus removal for App. H
Millbury	Full Compliance		Partial Compliance	No construction waste definition or in objectives for using controls	Partial Compliance	No updated % removal or runoff retainage; NO LID definition and or language of "maximum extent feasible"	Noncompliance	Noncompliance	No mention of regulatory mechanisms to effectively implement Lake Phosphorus Control Plan (LPCP) for App. F; no mention of BMPs being optimized for nitrogen removal for nitrogen TMDL App. F; Total Phosphorus impairment - no mention of BMPs being optimized for phosphorus removal for App. H
Natick	Full Compliance		Full Compliance		Partial Compliance	No updated % removal or runoff retainage; NO LID definition and or language of "maximum extent feasible"	Noncompliance	NA	No mention of regulatory mechanisms to effectively implement Phosphorus Control Plan (PCP) for App. F
Northborough	Full Compliance		Noncompliance	CNL S.W. Management Bylaw	Noncompliance	CNL S.W. Management Bylaw	Noncompliance	NA	Total Phosphorus Approved TMDL - no mention of BMPs being optimized for phosphorus removal for App. F
Northbridge	Full Compliance		Partial Compliance	No construction waste definition or in objectives; no inspection or site plan review procedures	Partial Compliance	No % removal or runoff retainage, MA S.W. Handbook and standards reference, or as-built requirement	NA	Noncompliance	Total Phosphorus impairment - no mention of BMPs being optimized for phosphorus removal for App. H
Oxford	Full Compliance		Full Compliance		Partial Compliance	No updated % removal or runoff retainage; NO LID definition and or language of "maximum extent feasible"	Noncompliance	Noncompliance	No mention of regulatory mechanisms to effectively implement Lake Phosphorus Control Plan (LPCP) for App. F; no mention of BMPs being optimized for nitrogen removal for nitrogen TMDL App. F; Total Phosphorus impairment - no mention of BMPs being optimized for phosphorus removal for App. H
Palmer	Full Compliance		Partial Compliance	No construction waste definition but has "Properly manage on-site construction and waste materials"	Partial Compliance	No updated % removal or runoff retainage; NO LID definition and or language of "maximum extent feasible"	Noncompliance	NA	No mention of BMPs being optimized for nitrogen removal for nitrogen TMDL App. F
Paxton	Full Compliance		Partial Compliance	No construction waste definition but has "Properly manage on-site construction and waste materials"	Partial Compliance	No updated % removal or runoff retainage	Noncompliance	NA	No mention of BMPs being optimized for nitrogen removal for nitrogen TMDL App. F
Rutland	Full Compliance		Noncompliance	CNL S.W. Management Bylaw	Noncompliance	CNL S.W. Management Bylaw	Noncompliance	NA	CNL S.W. Management Bylaw



Central Massachusetts Regional Stormwater Coalition (CMRSWC)

MS4 Stormwater Bylaw/Ordinance Audit


Table 3: Existing Stormwater Bylaw and Ordinance Compliance Review

CMRSWC Member	IDDE Compliance	Notes	MCM4: Construction Site Erosion and Sediment Controls Compliance	Notes	MCMS: New and Redevelopment Compliance	Notes	Appendix F: Approved TMDL (if applicable)	Appendix H: Water Quality Limited (if applicable)	Notes
Shrewsbury	Full Compliance		Full Compliance		Full Compliance		Full Compliance	Full Compliance	
Southborough	Full Compliance		Full Compliance		Partial Compliance	No updated % removal or runoff retainage, has old TSS, TP, TN % removal	NA	NA	
Southbridge	Noncompliance		Noncompliance		Noncompliance		Noncompliance	NA	
Spencer	Full Compliance		Partial Compliance	No construction waste definition or in objectives for using controls	Partial Compliance	No % removal or runoff retainage	Noncompliance	Noncompliance	No mention of regulatory mechanisms to effectively implement Lake Phosphorus Control Plan (LPCP) for App. F; no mention of BMPs being optimized for nitrogen removal for nitrogen TMDL App. F; Total Phosphorus impairment - no mention of BMPs being optimized for phosphorus removal for App. H
Sterling	Full Compliance		Partial Compliance	No construction waste definition or in objectives for using controls; no procedure for inspection or site plan review	Partial Compliance	No % removal or runoff retainage, as-builts requirement	NA	NA	
Sturbridge	Full Compliance		Partial Compliance	No construction waste definition or in objectives for using controls for debris & waste	Full Compliance		Noncompliance	NA	No mention of BMPs being optimized for nitrogen removal for nitrogen TMDL App. F
Upton	Full Compliance		Partial Compliance	"Construction materials" nothing in objectives about using controls for waste	Partial Compliance	No % removal or runoff retainage; update definitions (TSS, LID)	NA	Noncompliance	Total Phosphorus impairment - no mention of BMPs being optimized for phosphorus removal for App. H
Uxbridge	Full Compliance		Partial Compliance	"Construction materials" nothing in objectives about using controls for waste	Partial Compliance	No % removal or runoff retainage	NA	Noncompliance	Total Phosphorus impairment - no mention of BMPs being optimized for phosphorus removal for App. H
West Boylston	Noncompliance	No Illicit Discharge Bylaw	Partial Compliance	No construction waste definition or in objectives for using controls; no procedure for inspection or site plan review	Partial Compliance	No % removal or runoff retainage, as-builts requirement, LID definition	NA	NA	
Westborough	Full Compliance		Full Compliance		Partial Compliance	No LID definition or "maximum extent feasible", % removal or runoff retainage, as-builts requirement	Noncompliance	NA	No mention of BMPs being optimized for phosphorus removal for phosphorus TMDL App. F

Attachment B: Presentations

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MS4 STORMWATER BYLAW / ORDINANCE AUDIT UPDATE



**CENTRAL
MASSACHUSETTS
REGIONAL
STORMWATER
COALITION**

**Annual Meeting
November 17, 2020**

1

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Overview of Scope

Task 1


- Identify Existing Bylaws and Ordinances
- Deliverable: Inventory / Links (Table 1)

Task 2

- Bylaw/Ordinance Components Audit
- Compliance with MS4 Permit
- Deliverable: General Components and Compliance Review (Tables 2 and 3)

Task 3

- Recommendations
- Implementation considerations
- Deliverables: Recommendations Memo and Workshop(s)



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2

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Documented Components

Bylaw/ordinance and regulation (if applicable) name and document URL
Year/date bylaw/ordinance was adopted
Year/date regulations were adopted
Year/date bylaw/ordinance and regulation were revised (if applicable)
If a local stormwater permit is required (i.e. in addition to wetlands protection act permits from Conservation, development permits from Planning Boards, or building permits)
If a local stormwater enterprise has been authorized
Approval authority for bylaw/ordinance (e.g. Town Meeting, City Council)
Applicable authority for administering bylaw/ordinance (e.g. Conservation, DPW, Board of Selectmen, Sewer Commissioners, etc.)
If the municipality has a stormwater webpage

3

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Status of Deliverables

- ✓ Inventory of Bylaws/Ordinances Complete
- ✓ Compliance Review Complete
- ✓ Draft Recommendations Memo Submitted
- ✓ Steering Committee Meeting Update
- Workshops:
 - Stormwater Bylaw / Ordinance audit Update – September 2nd
 - Bylaws Workshop – October 8th
 - Regulations Workshop – November 19th

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4

Stormwater Permit Requirements for Bylaws/Ordinances

MCM 3: Illicit Discharge Detection & Elimination

- "adequate legal authority to: prohibit illicit discharges; investigate suspected illicit discharges; eliminate illicit discharges, including discharges from properties not owned by or controlled by the MS4 that discharge into the MS4 system; and implement appropriate enforcement procedures and actions."

MCM 4: Construction Site Stormwater Runoff Control

- "ordinance or regulatory mechanism that requires the use of sediment and erosion control practices at construction sites. In addition to addressing sediment and erosion control, the ordinance must include controls for other wastes on construction sites such as demolition debris, litter and sanitary wastes."

MCM 5: Stormwater Management in New Development and Redevelopment

- 1 acre disturbance
- LID
- Mass SW Standards
- Retain Volume on-Site
- Remove TSS
- Remove Phosphorus

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5

Bylaw / Ordinance Inventory & Components

6

Status of Bylaw/Ordinance Development

MCM 3: No Illicit Discharge Bylaw/Ordinance	MCMs 4 & 5: No Stormwater Management Bylaw/Ordinance
Dudley	Dudley
Hopedale	Hopedale
Southbridge	Northborough
West Boylston	Rutland

Refer to Table 1: Existing Stormwater Bylaw and Ordinance Links

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7

7

Range of Authorized Enforcement Agency



Director of Public Works	Town/City Engineer
Planning Board	Conservation Commission
Highway Department	Board of Health
Land Use Enforcement Officer	Stormwater Committee

Refer to Table 2: Existing Stormwater Bylaw and Ordinance General Information

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8

8

Range of Land Disturbance Thresholds

1 acre	All subdivisions, site plan review
40,000 SF	Increase imperviousness to > 50% of parcel
20,000 SF	Disturbance of volume greater than 1,500 CY
5,000 SF	Increase in floor area, vehicle traffic, persons
Project occurs in a critical area or hot spot	Projects clearing 50% of parcel (trees)
Addition of 30% impervious area	Land disturbance in sloped areas (15% slope)



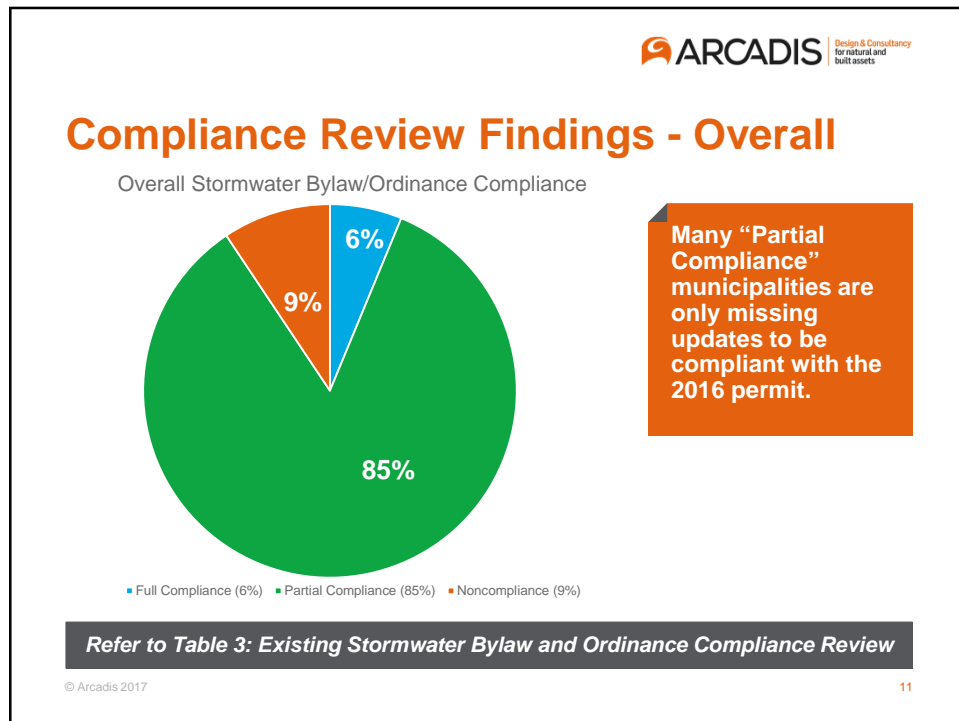
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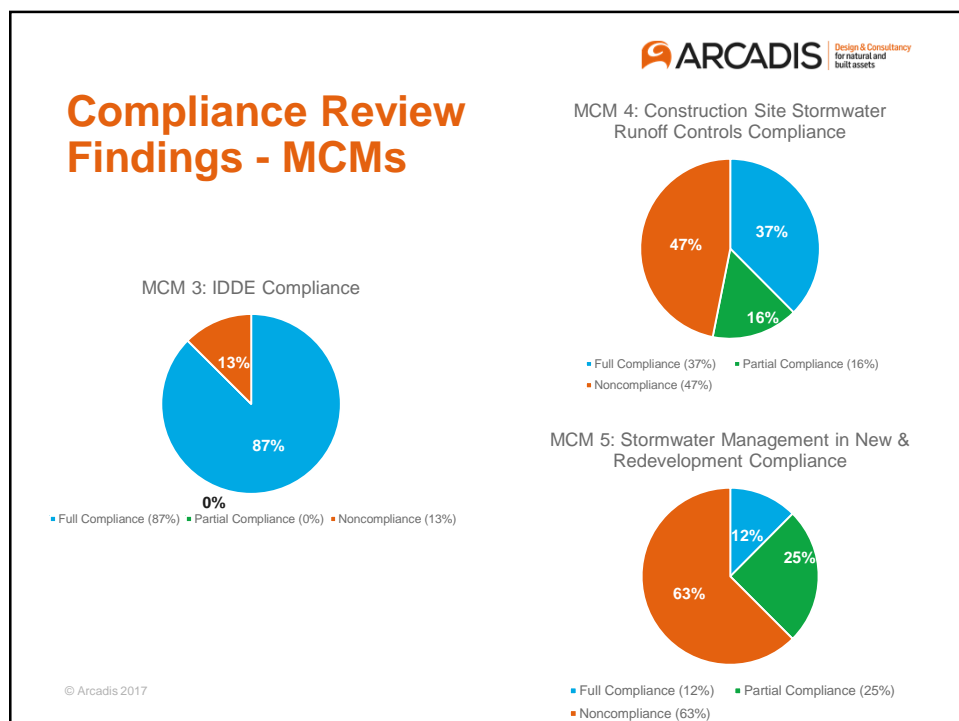
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Bylaw/Ordinance and Compliance Findings

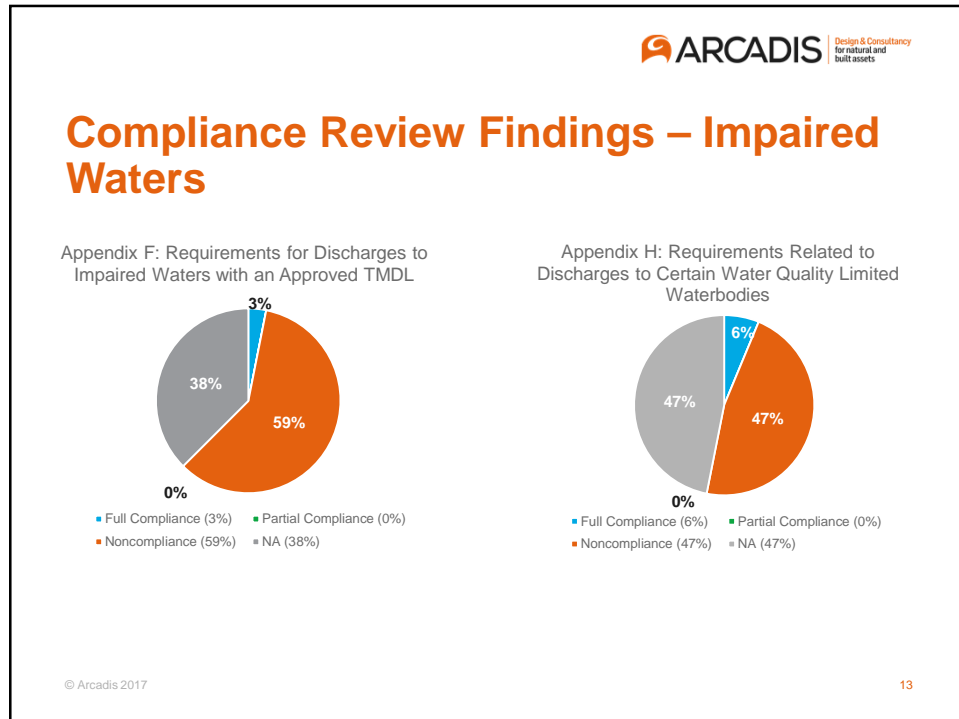
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14

Document Structure

Separate existing bylaws/ordinances may be combined to create one Stormwater Management Bylaw/Ordinance

Communities with Singular Comprehensive Bylaw

• Ashland	• Charlton
• Fitchburg	• Lunenburg
• Paxton	• Shrewsbury
• Spencer	• Sturbridge
• Upton	• Uxbridge

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15

Document Structure

Bylaw/Ordinance	Rules & Regulations	Guidance Materials
• Legal Authority	• Technical Requirements • Procedures	• Examples & Details • BMPs

Bylaws/Ordinances that have procedural and/or technical language should consider moving such language to the Stormwater Regulations

Communities with Procedural/Technical Language in Bylaw or Ordinance

• Framingham	• Grafton
• Lunenburg	• Millbury
• Natick	• Oxford
• Palmer	• Upton
• Westborough	

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Authorized Enforcement Agency

Consideration should be given to either naming a person with an official Town role as AEA or establishing a “Stormwater Committee” to serve as the AEA comprised of at least one person (position) with an official Town role.

Communities with a Board or Commission as the AEA

• Ashland	• Ayer
• Charlton	• Framingham
• Grafton	• Hopkinton
• Leominster	• Lunenburg
• Millbury	• Natick
• Northborough	• Palmer
• Paxton	• Rutland
• Shrewsbury	• Southborough
• Spencer	• Sterling
• Upton	• Uxbridge
• Westborough	

17

17

Additional Recommendations



Guidance documents should be referenced from Regulations



Definitions for Private vs. Public ownership of drainage systems



Review the existing thresholds for projects requiring a Stormwater Permit and update accordingly.



Urbanized Area vs. whole municipality



Grant stormwater regulation enforcement authority to one department, commission, or board (Neponset River Watershed Association)



Reach out and connect with surrounding municipalities (Neponset River Watershed Association)







Engage and educate the public and local decisions makers (Neponset River Watershed Association)

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Implementation Considerations

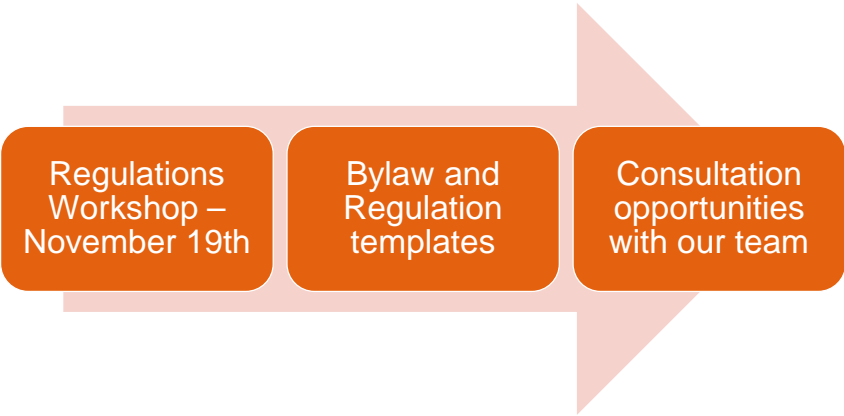
-  Form a Stormwater Bylaw and/or Regulations Task Force
-  Review related bylaws and regulations for potential opportunities to streamline the site plan submittal and review process
-  Document findings related to the feasibility of making Green Infrastructure, infiltration practices, etc. allowable
-  Development of fact sheets, checklists and other educational materials

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Next Steps



- Regulations Workshop – November 19th
- Bylaw and Regulation templates
- Consultation opportunities with our team

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Thank You

Kathryn B. Edwards, PE Project Manager Kate.Edwards@arcadis.com	Evan Raffi, EIT Water Engineer Evan.Raffi@arcadis.com
---	---

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Wakefield, MA 01880

21

MS4 STORMWATER BYLAW WORKSHOP



CENTRAL
MASSACHUSETTS
REGIONAL
STORMWATER
COALITION

October 8, 2020

1

Agenda

Objectives for Updated Bylaw/Ordinance

Key Considerations:

- Separate vs. Consolidated Bylaws
- Enforcement Authority
- Review of Exempt Discharges
- Typical Development Projects & Site Plan Review Thresholds
- Building Permit / Certificate of Occupancy
- Roles/Responsibilities and Implementation

2

Objectives for Bylaw / Ordinance Updates

3

Overview of Project Scope

Task 1

- Identify Existing Bylaws and Ordinances
- Deliverable: Inventory / Links (Table 1)

Task 2

- Bylaw/Ordinance Components Audit
- Compliance with MS4 Permit
- Deliverable: General Components and Compliance Review (Tables 2 and 3)

Task 3

- Recommendations
- Implementation considerations
- Deliverables: Recommendations Memo and Workshop(s)



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Stormwater Permit Requirements for Bylaws/Ordinances

MCM 3: Illicit Discharge Detection & Elimination

- "adequate legal authority to: prohibit illicit discharges; investigate suspected illicit discharges; eliminate illicit discharges, including discharges from properties not owned by or controlled by the MS4 that discharge into the MS4 system; and implement appropriate enforcement procedures and actions."

MCM 4: Construction Site Stormwater Runoff Control

- "ordinance or regulatory mechanism that requires the use of sediment and erosion control practices at construction sites. In addition to addressing sediment and erosion control, the ordinance must include controls for other wastes on construction sites such as demolition debris, litter and sanitary wastes."

MCM 5: Stormwater Management in New Development and Redevelopment

- 1 acre disturbance
- LID
- Mass SW Standards
- Retain Volume on-Site
- Remove TSS
- Remove Phosphorus

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Stormwater Management Regulatory Documents

Bylaw / Ordinance

- Legal Authority

Rules & Regulations

- Technical Requirements
- Procedures

Guidance Materials

- Examples & Details
- BMPs

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6

Key Considerations

Separate vs. Consolidated Bylaws

7

Separate vs. Consolidated Bylaws Document Structure

*Separate existing bylaws/ordinances may be combined to create one
Stormwater Management Bylaw/Ordinance*

Communities with Singular Comprehensive Bylaw

• Ashland	• Charlton
• Fitchburg	• Lunenburg
• Paxton	• Shrewsbury
• Spencer	• Sturbridge
• Upton	• Uxbridge

8

Separate vs. Consolidated Bylaws

Advantages to Consolidated Bylaw

- **General Language – Authority, Applicability, Purpose, Administration, Definitions, Severability, Enforcement will be consolidated and the same.**
- **Jurisdiction can be same for Illicit Discharges and Land Disturbance or different.**
- **Future updates to one bylaw/ordinance.**

Consolidated Bylaw vs. Separate Bylaws

Key Questions:

- **Who has jurisdiction over discharges?**
- **Who will oversee land disturbance?**



Key Considerations

Authorized Enforcement Agency

11

Authorized Enforcement Agency

Roles and Responsibilities

Administer

Implement

Enforce

12

Authorized Enforcement Agency Central Mass. AEAs



Director of Public Works	Town/City Engineer
Planning Board	Conservation Commission
Highway Department	Board of Health
Land Use Enforcement Officer	Stormwater Committee

Refer to Table 2: Existing Stormwater Bylaw and Ordinance General Information

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Authorized Enforcement Agency Recommendations

Consideration should be given to either naming a person with an official Town role as AEA or establishing a “Stormwater Committee” to serve as the AEA comprised of at least one person (position) with an official Town role.

Communities with a Board or Commission as the AEA

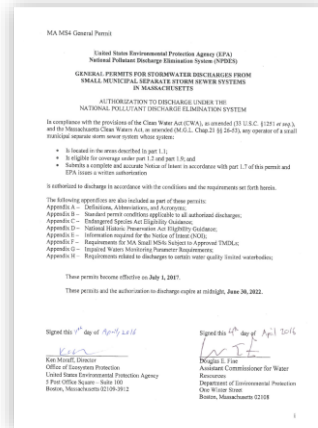
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• Leominster	• Lunenburg
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• Northborough	• Palmer
• Paxton	• Rutland
• Shrewsbury	• Southborough
• Spencer	• Sterling
• Upton	• Uxbridge
• Westborough	

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Authorized Enforcement Agency Key Questions:

- **Who is responsible for MS4 permit compliance?**
- **Who has the most resources to implement and enforce?**
- **What support does the AEA need?**



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Key Considerations Allowable Discharges

16

Exempt (Allowable) Discharges

- Waterline flushing;
- Flow from potable water sources;
- Springs;
- Natural flow from riparian habitats and wetlands;
- Diverted stream flow;
- Rising groundwater;
- **Uncontaminated groundwater** infiltration as defined in 40 CFR 35.2005(20), or uncontaminated pumped groundwater;
- Water from exterior foundation drains, footing drains (not including active groundwater dewatering systems), crawl space pumps, or air conditioning condensation;
- Discharge from landscape irrigation or lawn watering;
- Water from individual residential car washing;
- **Discharge from dechlorinated swimming pool water** (less than one ppm chlorine) provided the water is allowed to stand for one week prior to draining and the pool is drained in such a way as not to cause a nuisance;
- Discharge from street sweeping;
- **Dye testing**, provided verbal notification is given to the Authorized Enforcement Agency prior to the time of the test;
- Non-stormwater discharge permitted under a Federal or State permit/authorization
- Discharge for which advanced written approval is received from the Authorized Enforcement Agency as necessary to protect public health, safety, welfare or the environment.

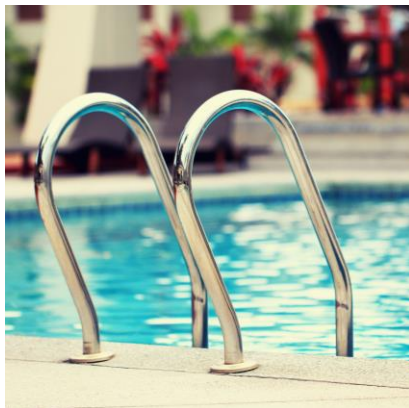


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Exempt (Allowable) Discharges Key Questions:



- ***Pool water discharges – how is that handled?***
- ***Dye testing?***
- ***Future / Regulations - Where do decorative fountain and splash park waters get discharged?***

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Key Considerations

Typical Development / Land Disturbance Thresholds

19

Land Disturbance Thresholds

Central Mass. Land Disturbance Thresholds

1 acre	All subdivisions, site plan review
40,000 SF	Increase imperviousness to > 50% of parcel
20,000 SF	Disturbance of volume greater than 1,500 CY
5,000 SF	Increase in floor area, vehicle traffic, persons
Project occurs in a critical area or hot spot	Projects clearing 50% of parcel (trees)
Addition of 30% impervious area	Land disturbance in sloped areas (15% slope)



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Land Disturbance Thresholds Construction Statistics (1 Acre or More)

Number of Sites seeking coverage under EPA's Construction General Permit by Year

Year	NOI's Filed
2014	6
2015	4
2016	1
2017	1
2018	4
2019	0

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VISIT:

<https://www.epa.gov/npdes/electronic-reporting-epas-npdes-general-permits>

2

Search for NOIs

(May want to search under 2017 and 2012 permits)

Electronic Reporting for EPA's NPDES General Permits

The [NPDES Electronic Reporting Rule](#) requires regulated entities to submit information electronically to EPA instead of filing paper reports. Electronic reporting is required for construction sites, industrial facilities, pesticides, and vessel operators to apply for coverage under EPA's:

- Construction General Permit (CGP),
- Multi-Sector General Permit (MSGP),
- Pesticides General Permit (PGP), and
- Vessel General Permit (VGP).

EPA's Construction General Permit (CGP) (construction stormwater)



[Obtaining coverage under EPA's CGP](#)

[Search for NOIs and LEVs submitted under 2017 CGP](#)

[Search for NOIs and LEVs submitted under the 2008 and 2012 CGPs](#)

21

Land Disturbance Thresholds Construction Statistics

3

Under Permit Lookup, Select Construction General Permit

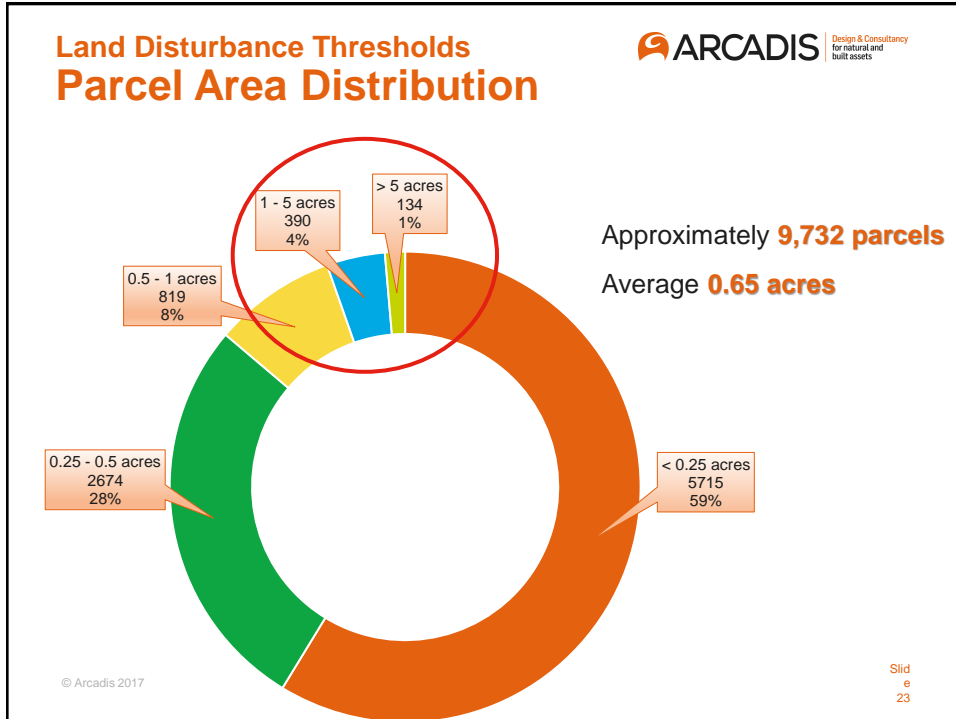
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Enter City/Town and State only. Hit Search

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Land Disturbance Thresholds Key Questions:

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- What types of development are you seeing right now, can you expect to see in the future?
- What does the topography of your Town look like?
- Will 1 acre or more be sufficient for controlling stormwater runoff in your Town?
- What level of effort and resources will be required for site plan review/permitting process?
- Are there special/critical areas that require protection outside of other boards' jurisdictions?

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Key Considerations: Violations/Penalties

25

Enforcement

Civil Relief

- Injunctive relief in court restraining person from performing activities

Orders

- Written Order – Eliminate discharges, perform monitoring, cease and desist, remediation

City Performs Remediation at Cost to Owner

- Cost plus administrative fee, no less than \$300

Criminal Penalty

- Fine not more than \$200 / violation (each day constitutes separate violation)

Non-Criminal Disposition

- 1st violation \$25
- 2nd violation \$50
- 3rd violation \$100
- 4th violation \$200


Entry to Private Property to Perform Duties

- Authorized Enforcement Agency
- Inspectional Services Department


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26



Violations/Penalties
Key Questions:



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- Each Day is separate violation
- Each Violation is separate
- Mimic clean water act - \$\$ per violation per day.
- Procedural Language belongs in the regulations.
- How does your Town/City set fines? Where do they need to be listed?
- Right to enter property
- Right to perform the fix, at cost to Owner

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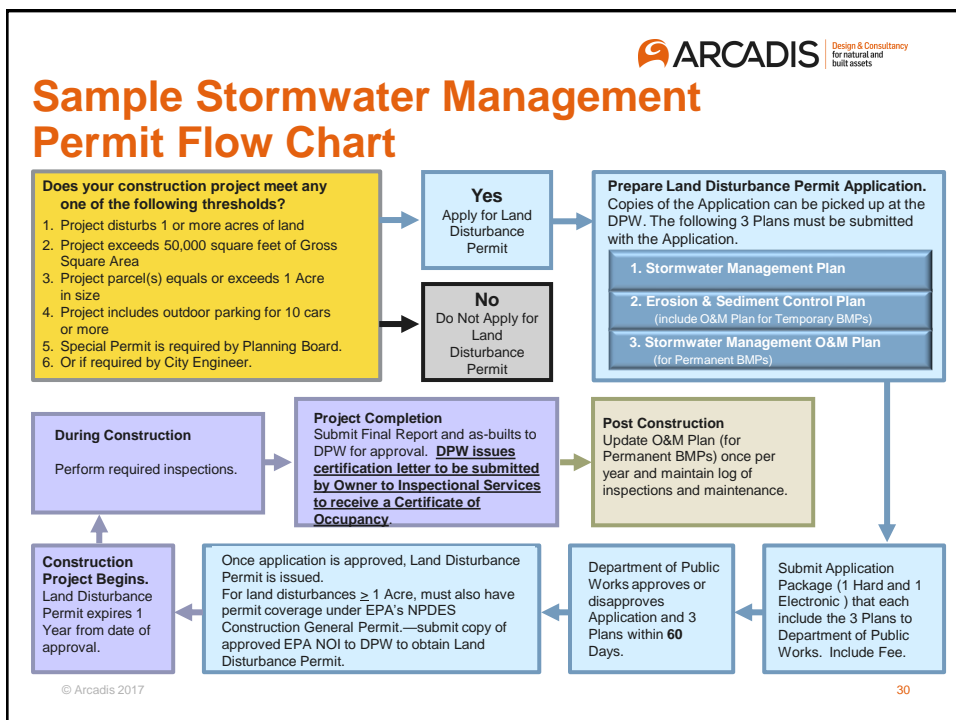


Key Considerations:
Building Permit / Certificate of Occupancy

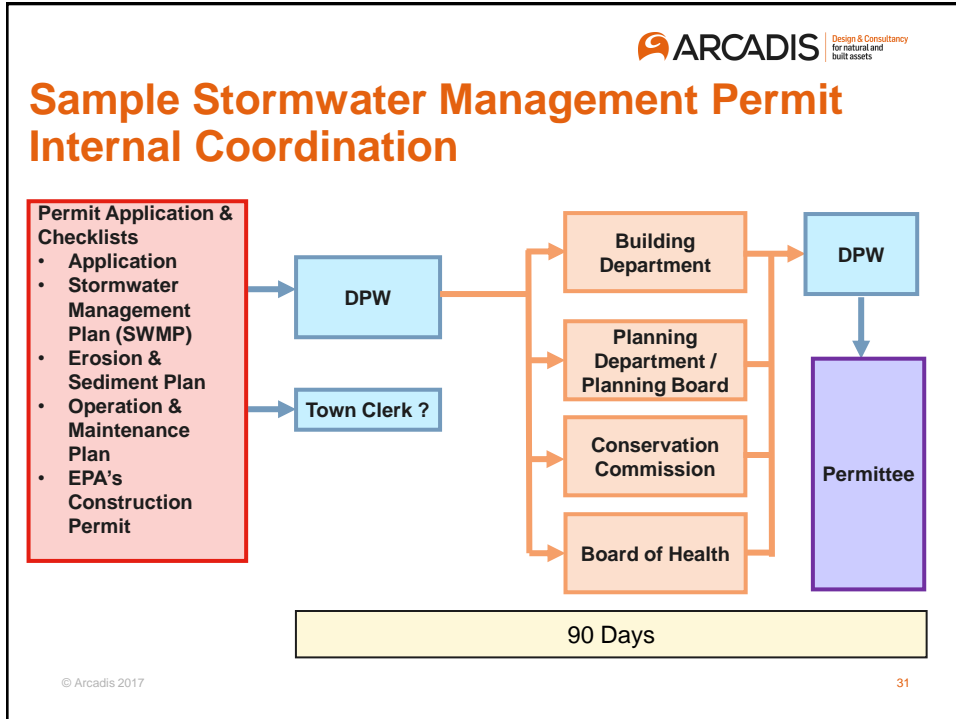
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Implementation Considerations



Form a Stormwater Bylaw and/or Regulations Task Force



Review related bylaws and regulations for potential opportunities to streamline the site plan submittal and review process



Document findings related to the feasibility of making Green Infrastructure, infiltration practices, etc. allowable



Development of fact sheets, checklists and other educational materials

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Thank You

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34

34

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MS4 STORMWATER REGULATIONS WORKSHOP



CENTRAL
MASSACHUSETTS
REGIONAL
STORMWATER
COALITION

November 19, 2020

1

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Agenda

Poll Question

- Membership Feedback

Objectives for Regulations

- Understand Requirements of Regulations
- Understand Roles and Responsibilities
- Think about Permit Procedures and Workflow

Key Considerations:

- Land Disturbance Thresholds
- Municipal System Connections
- Minimum Control Measure Requirements
- Roles/Responsibilities
- Stormwater Management Permit

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Poll Question

What is your biggest challenge to getting started?

[PollEv.com/kateedwards429](https://poll-ev.com/kateedwards429)

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Poll Question Responses


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Objectives for Regulations

5

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Stormwater Permit Requirements for Bylaws/Ordinances

<p>MCM 3: Illicit Discharge Detection & Elimination</p> <ul style="list-style-type: none"> • "adequate legal authority to: prohibit illicit discharges; investigate suspected illicit discharges; eliminate illicit discharges, including discharges from properties not owned by or controlled by the MS4 that discharge into the MS4 system; and implement appropriate enforcement procedures and actions." 	<p>MCM 4: Construction Site Stormwater Runoff Control</p> <ul style="list-style-type: none"> • "ordinance or regulatory mechanism that requires the use of sediment and erosion control practices at construction sites. In addition to addressing sediment and erosion control, the ordinance must include controls for other wastes on construction sites such as demolition debris, litter and sanitary wastes." 	<p>MCM 5: Stormwater Management in New Development and Redevelopment</p> <ul style="list-style-type: none"> • 1 acre disturbance • LID • Mass SW Standards • Retain Volume on-Site • Remove TSS • Remove Phosphorus
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DUE: JUNE 30, 2021

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Status of Bylaw/Ordinance Development	
MCM 3: No Illicit Discharge Bylaw/Ordinance	MCMs 4 & 5: No Stormwater Management Bylaw/Ordinance
Dudley	Dudley
Hopedale	Hopedale
Southbridge	Northborough
West Boylston	Rutland
Refer to Table 1: Existing Stormwater Bylaw and Ordinance Links	
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Status of Regulations Development	
Municipalities with Stormwater Regulations	
Ashland	Fitchburg
Grafton	Hopkinton
Hopkinton	Leominster
Marlborough	Natick
Paxton	Shrewsbury
Southborough	Spencer
Upton	Uxbridge
Refer to Table 1: Existing Stormwater Bylaw and Ordinance Links	
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Document Structure



Bylaws/Ordinances that have procedural and/or technical language should consider moving such language to the Stormwater Regulations

Communities with Procedural/Technical Language in Bylaw or Ordinance

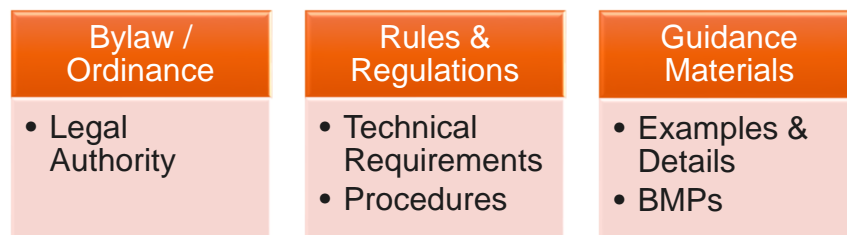
• Framingham	• Grafton
• Lunenburg	• Millbury
• Natick	• Oxford
• Palmer	• Upton
• Westborough	

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Stormwater Management Regulatory Documents



Workshop Today

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Sample Regulations Outline

- Section 1 – General Provisions
- Section 2 – Illicit Discharges
- Section 3 – Land Disturbance

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Section 1: General Provisions

- Authority
- Applicability
- Purpose
- Severability
- Transitional Provisions
- Administration
- Definitions

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Section 1 Authority, Applicability, Purpose

Authority & Administration	Applicability	Purpose
<ul style="list-style-type: none"> • Authorized Enforcement Agency • Can be delegated in writing 	<ul style="list-style-type: none"> • All activities under stormwater bylaw • Every user of the municipal storm drainage system • Projects not within the jurisdiction of other boards • Land disturbance thresholds 	<ul style="list-style-type: none"> • Prohibit & remove illicit connections / discharges • Create a permitting process


 Key Bylaw Decisions

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Authorized Enforcement Agency

Consideration should be given to either naming a person with an official Town role as AEA or establishing a “Stormwater Committee” to serve as the AEA comprised of at least one person (position) with an official Town role.

Communities with a Board or Commission as the AEA

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• Northborough	• Palmer
• Paxton	• Rutland
• Shrewsbury	• Southborough
• Spencer	• Sterling
• Upton	• Uxbridge
• Westborough	

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Key Considerations

**Applicability: Land Disturbance
Thresholds**

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Status of Land Disturbance Thresholds

Municipalities with 1 acre or more threshold	
Charlton	Lunenburg
Uxbridge	West Boylston

Municipalities with NO threshold	
Dudley	Hopedale
Northborough	Rutland
Southbridge	

Opportunity to review and update

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Land Disturbance Thresholds Key Questions:



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- *What types of development are you seeing right now, can you expect to see in the future?*
- *What does the topography of your Town look like?*
- *Will 1 acre or more be sufficient for controlling stormwater runoff in your Town?*
- *What level of effort and resources will be required for site plan review/permitting process?*
- *Are there special/critical areas that require protection outside of other boards' jurisdictions?*

17

Land Disturbance Thresholds Fitchburg

1. Land Disturbance that exceeds a total cumulative area of **20,000 square feet**
2. Land disturbance within a critical area as defined in Article I, Section 7 of this document: Disturbed areas **2,000 square feet or greater** within the surface **water supply protection area** of any of the City's drinking water supplies; or disturbed areas of **300 square feet or greater on slopes greater than 15%**
3. Land disturbance on a parcel of land having more than **5,000 square feet of existing impervious area** and ultimately resulting in a **net increase of 30% or more of impervious area**



18

Land Disturbance Thresholds Palmer

Small Development:

- Construction activity related to all development projects involving **new construction of single or two-family dwellings**, and any additions to existing structures that result in less than or equal to a **25% increase in floor area**, or that because of the construction, will result in an increase of up to **25% in vehicle traffic, parking, number of tenants/occupants, and/or number of employees**, and for any land disturbance that does **not** fall under the Planning Board's review.

Large Development:

- Land disturbance uses **requiring Site Plan Approval**, and any residential uses, including residential additions that create land disturbances and result in **greater than a 25% increase in floor area, vehicle traffic, parking, number of tenants, and/or number of employees**.

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Land Disturbance Thresholds Holden

Holden Land Disturbance Thresholds (Minor Project):

- Land disturbance is undertaken on a single property or is part of a larger common plan of development or sale that results in:
 - (i) Total cumulative **added impervious surface** that **meets or exceeds 5,000 square feet** of area.
 - (ii) Total cumulative disturbance of land that **meets or exceeds 20,000 square feet of area and is less than 1 acre of area**.

Holden Land Disturbance Thresholds (Major Project):

- Land disturbance is undertaken on a single property or is part of a larger common plan of development or sale that results in a **total cumulative disturbance of land that meets or exceeds 1 acre of area**.

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Construction Statistics (1 Acre or More)

Number of Sites seeking coverage under EPA's Construction General Permit by Year

Year	NOI's Filed
2014	6
2015	4
2016	1
2017	1
2018	4
2019	0

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1

VISIT:

<https://www.epa.gov/npdes/electronic-reporting-epas-npdes-general-permits>

2

Search for NOIs

(May want to search under 2017 and 2012 permits)

Electronic Reporting for EPA's NPDES General Permits

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- Construction General Permit (CGP),
- Multi-Sector General Permit (MSGP),
- Pesticides General Permit (PGP), and
- Vessel General Permit (VGP).

EPA's Construction General Permit (CGP) (construction stormwater)



[Obtaining coverage under EPA's CGP](#)

[Search for NOIs and LEWs submitted under 2017 CGP](#)

[Search for NOIs and LEWs submitted under the 2008 and 2012 CGPs](#)

21

Construction Statistics

3

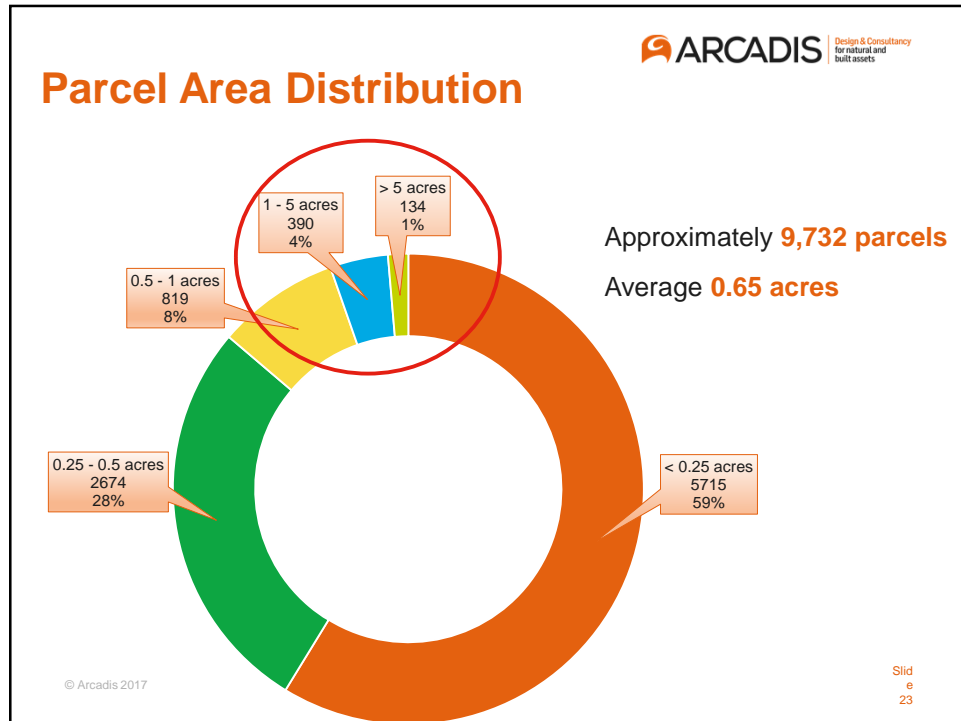
Under Permit Lookup, Select Construction General Permit

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Enter City/Town and State only. Hit Search

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23

Key Considerations

Municipal System Use & Connections

24

Section 2: Illicit Discharge Detection and Elimination

System

Prohibited Connections

Wastewater System Connections

Flow Obstructions Prohibited

Authorized Discharges

Authorization to Discharge

NPDES NOI and Permit

Industrial or Construction Activity NPDES Permit

Waste Disposal Prohibitions

Dumping to Catch Basins

Notification of Spills

Design and Construction Standards

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Municipal System Connections

Key Questions:

- **Who is allowed to make connections to the drainage system?**
- **Is there a permit or authorization required?**
- **What is required? (e.g. capacity analysis?)**
- **Who is responsible for reviewing proposed connections?**
- **Existing Connections – Enforcement of IDDE Bylaw/Regulations Sections**



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Define Public vs. Private Shrewsbury

The Town shall be responsible for all costs to operate, maintain, improve, and access those stormwater management systems and facilities, which are located:

- a. Within the public road rights-of-way;
- b. On private property, but within easements granted to, and accepted by, the Town, or which are otherwise permitted to be located on such private property by written agreements for rights-of-entry, rights-of-access, rights-of-use, or such other lawful means to allow for operation, maintenance, improvement, and access to the stormwater management systems and facilities located thereon; and
- c. On public land which is owned by the Town and/or land of another governmental entity upon which the Town has agreements providing for the operation, maintenance, improvement, and access to the stormwater management systems and facilities located thereon.

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Define Public vs. Private Cambridge

Building drain shall mean the lowest horizontal piping of a plumbing or Drainage system which **extends from inside or outside the walls of a building to a point ending 10 feet outside the inner face of the building foundation wall.** The building Drain conveying Waste from plumbing fixtures within the building shall discharge to a building sewer lateral or building combined sewer lateral, while the building Drain conveying stormwater and other Drainage shall discharge to a building stormwater Drainage lateral.

Building stormwater Drain lateral shall mean the pipe, which connects a building Drain conveying stormwater to a stormwater Drain, combined sewer, or other place of disposal. **The building stormwater Drain lateral begins 10 feet outside the inner face of the building foundation wall and extends to and includes the connection to the City's stormwater Drain,** combined sewer or private combined sewer or stormwater Drain.

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Section 2 Stormwater Discharges



Objectives

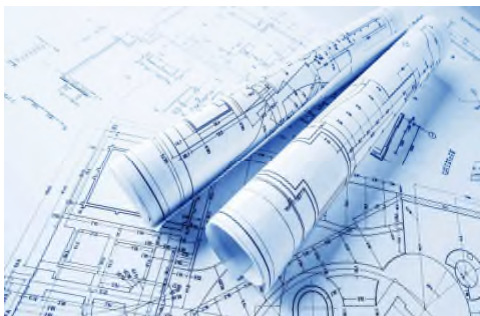
- ✓ To prevent pollutants from entering the municipal separate storm sewer system (MS4);
- ✓ To prohibit illicit connections and unauthorized discharges to the MS4;
- ✓ To require the removal of all such illicit connections;
- ✓ To require notifications of spills;
- ✓ To comply with state and federal statutes and regulations relating to stormwater discharges; and
- ✓ To ensure compliance with the provisions of the bylaw through the inspection, monitoring, and enforcement.

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System Design Standards



- *All new connections to the municipal's stormwater drainage system shall be designed and constructed in conformance with current DPW standards and specifications.*
- *In the absence of such specifications, the materials and procedures set forth in the American Society for Testing and Materials, the ASCE/WEF Manual of Practice - Design and Construction of Urban Stormwater Management Systems most recent edition shall apply, subject to the prior written approval of DPW.*

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Key Considerations:
Addressing Minimum Control Measures 4 & 5

31

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Section 3: Stormwater Management and Erosion Control

- Permits and Procedures
- Land Disturbance Permit Application (Major / Minor)
- Stormwater Management Plan
- Erosion and Sediment Control Plan
- O&M Plan
- Design References
- Surety
- Inspection/Site Supervision
- Final Report
- Waivers
- Exemptions
- Certificate of Occupancy

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32

MCM4: Construction Site Stormwater Runoff Control

Municipalities with NO Construction Waste Control	
West Boylston	Sterling
Sturbridge	Dudley
Hopedale	Southbridge
Northborough	Rutland
Palmer	Paxton
Ayer	Lunenburg
Northbridge	Upton
Uxbridge	Millbury
Spencer	

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33

MCM4: Construction Site Stormwater Runoff Control (cont.)

Municipalities with NO Procedure for Inspection and/or Site Plan Review	
Dudley	Hopedale
Southbridge	Northborough
Rutland	West Boylston
Charlton	Sterling
Northbridge	Ayer
	Auburn

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34

Contents

Detailed Requirements

- Construction
- Development and Redevelopment Stormwater
- 1 acre or more of land disturbance (minimum)

Standards and Procedures

- Permits (Land Disturbance Projects)
- Stormwater Management Plan
- Erosion & Sediment Control Plan
- Operation & Maintenance Plan
- Design Standards

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35

35

MCM4: Construction Site Stormwater Runoff Control

- Erosion & Sediment Control Plan
- Inspections & maintenance



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- Erosion & Sediment Control measures
- Prevent off-site transport of sediment
- Temporary and permanent stabilization measures
- Minimize area of land disturbance
- Sequence activities
- Minimize peak rate of runoff in accordance with the Massachusetts Stormwater Policy,
- Maximize groundwater recharge
- **Manage construction materials and waste, material storage areas**
- Prevent off-site vehicle tracking of sediments
- Remove soil that enters the public right-of-way
- Protect stormwater inlets

36

36

Site Inspections (Construction) Key Questions

- *Who will perform inspections?*
- *What kinds of inspections are required?*
- *Standardized Inspection Forms?*
- *Enforcement*
- *Fees*



Minimum MS4 Permit Requirements

- Inspection for sediment and erosion control measures
- Inspections occur during construction of stormwater BMPs and after construction is complete
- Grant permission to enter the site for inspection and verify information in Stormwater Application

37

Site Inspections – Types of Inspection

Inspections at Critical Stages

Pre-Construction Meeting
Initial Site Inspection
Installation of E&SC Measures
Site Clearing
Rough Grading
Final Grading
Close of Construction Season
Final Landscaping and Stabilization
Bury Inspection
Final Inspection

E&SC Maintenance Inspections

Before and After Rain Events
Weekly
Corrective Action (if necessary)
Record Keeping



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38

Site Inspections – Who Performs Inspections?

Recommendations:

- AEA at least have the authority/option to oversee Critical Construction Stages
- Define Qualifications acceptable for permittee's inspector
- Require / Define recordkeeping procedures
 - Turning in inspection logs/reports
 - Keeping them available to be viewed on site at any time

Authorized Inspectors

Department of Public Works - Shrewsbury
Applicant's Technical Representative - Fitchburg
Planning Board - Grafton
Conservation Commission - Leominster
City Engineer - Marlborough

39

MCM 5: Stormwater Management in New Development & Redevelopment Technical Standards



- Controls to prevent or minimize impacts to water quality
- Retain or treat the first 1.0 or 0.8 inches of runoff from all impervious area on site.
- Removal of Total Suspended Solids (TSS) and Phosphorus.
- Comply with Massachusetts Stormwater Standards 1, 2, 3, 5, 6, 9
- Low Impact Development to maximum extent feasible
- Ensure adequate long term O&M BMPs are in place

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40

40

MCM 5: Stormwater Management in New Development & Redevelopment Technical Standards

Municipalities with updated Technical Standards in Regulations

Ashland	Fitchburg
Shrewsbury	Sturbridge



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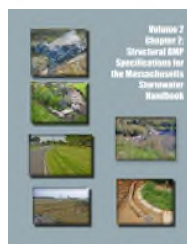
41

41

Reference to State Standards, Handbook, Guidance

In order to complete the Stormwater Management Plan, Erosion and Sediment Plan, and Operation and Maintenance Plan as part of the permit requirements and ensure that developers and landowners meet Massachusetts standards, the Applicant shall use the following (most recent edition) references to aid in structural and non-structural BMP implementation:

- A. Massachusetts Stormwater Management Policy Handbook.
- B. Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas.
- C. Massachusetts Department of Public Works "Highway Design Manual" Chapter 10, Drainage and Erosion Control.



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42



Key Considerations:

Stormwater Management Permit

43



Stormwater Management Permit

Key Questions:

- *How long does the municipality need to review/approve and send back the application?*
- *How many copies of the application and plans need to be submitted? Printed or electronic?*
- *Does the AEA have to sign off before a certificate of occupancy is issued?*
- *Is there an established line of communication between the AEA and other relevant departments/boards?*

Stormwater Management Permit Checklist

Stormwater Management Permit Checklist

Page 1 of 3

You must sign and date this checklist and endorse with completed application package for submittal.

Review History – FOR TOWN USE ONLY. All required plans must be approved before land disturbance activities can begin.

First Review

Permit Application Received on: _____

Review Completed on: _____

Second Review

Permit Application Received on: _____

Review Completed on: _____

Third Review

Permit Application Received on: _____

Review Completed on: _____

☐ Stormwater Management Permit Application requires revisions. See comments.

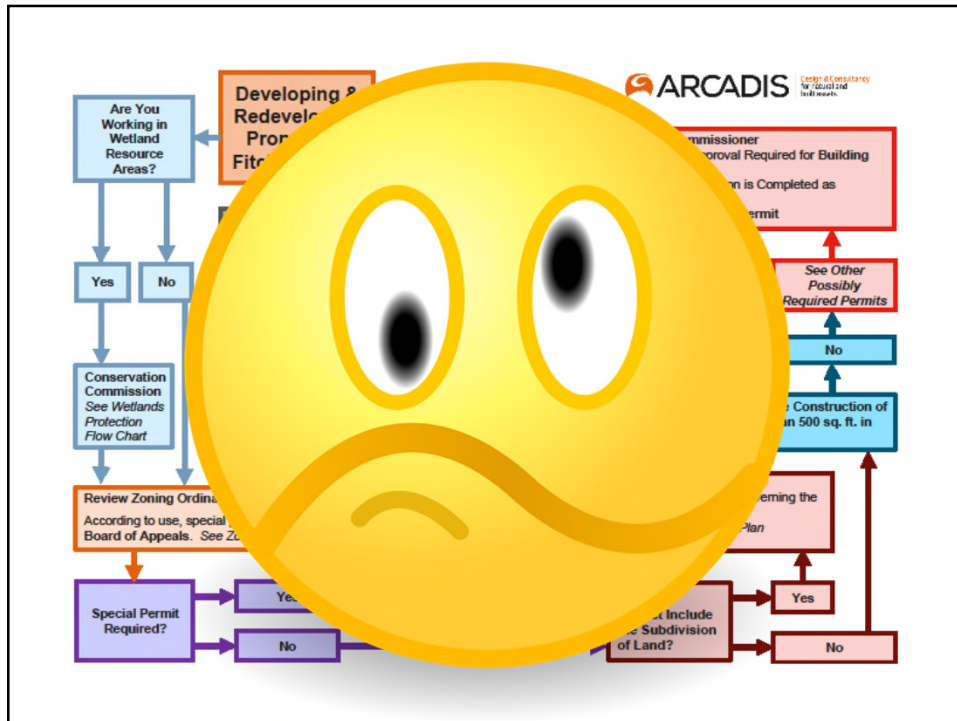
☐ Stormwater Management Permit Application approved.

Reviewer Name: _____

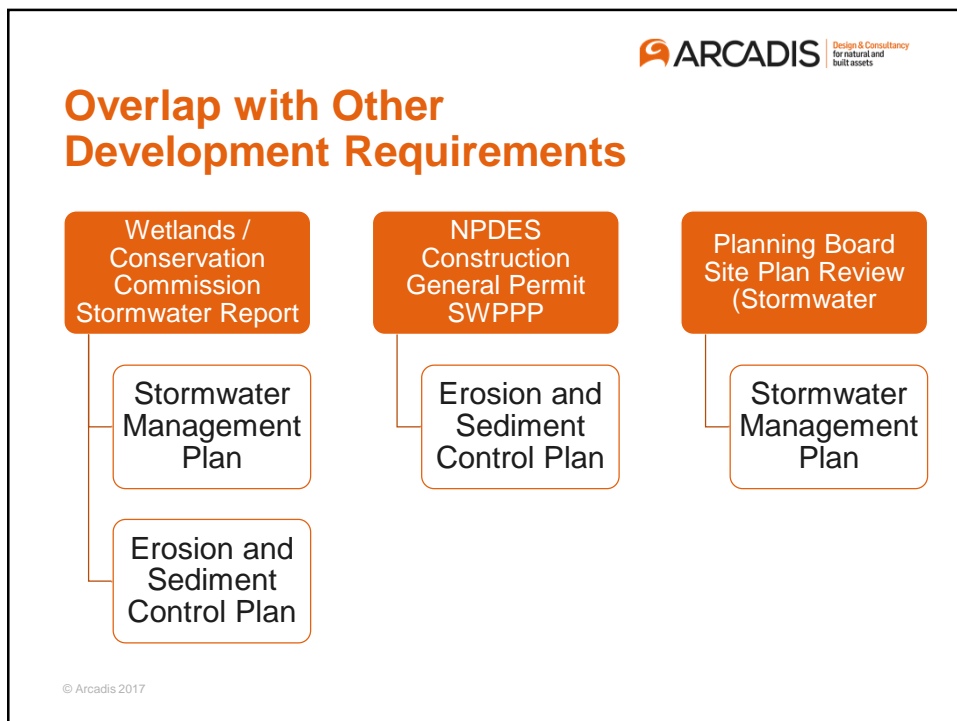
Reviewer Contact Information: _____

Reviewer Signature and Date: _____

44



45



46

Considerations for Streamlining

Stormwater / Land Disturbance Permit will likely be the most stringent

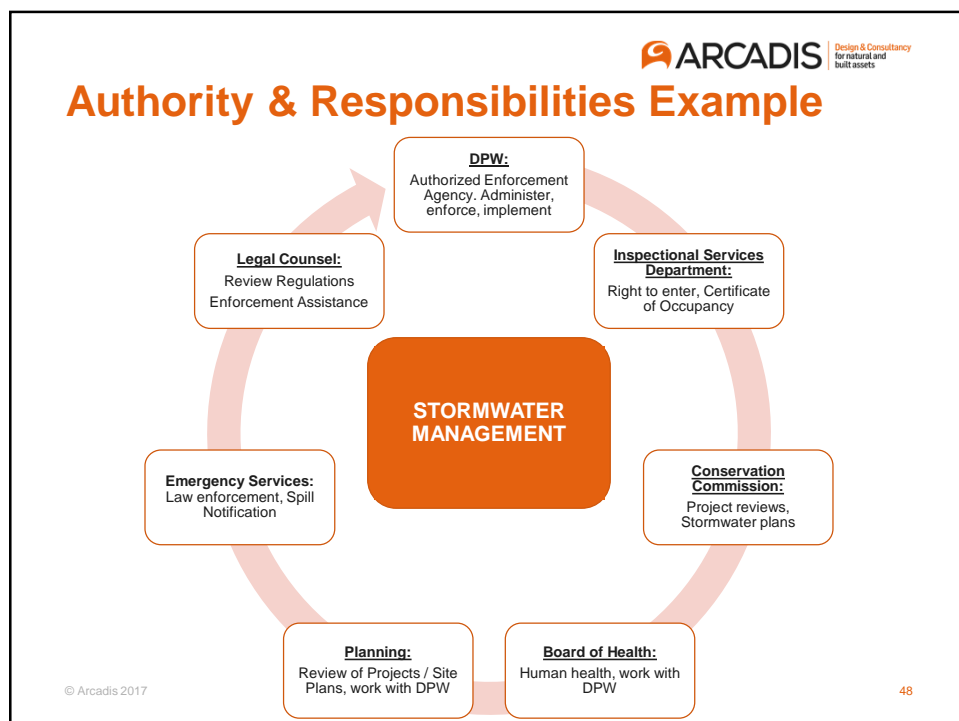
Local Project Approvals

- Plan Size
- Title Block
- Design Storm / Precipitation Requirements / Volume
- Land Disturbance Thresholds
- Critical Areas
- Internal Departmental Workflow
- Timeframe Alignment
- Number and Type of Copies

Continuous and Consistent Communication

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47



48

New Responsibilities/Roles



Notifications of Spills: Fire, Police, Public Works



Enforcement: DPW, Law Enforcement, Legal Counsel



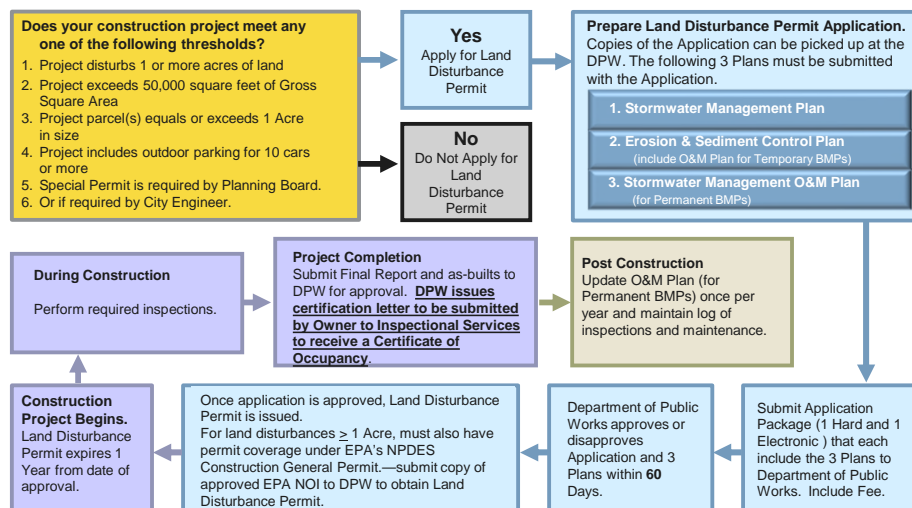
Construction/Design Standards: Public Works, Inspectional Services

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49

49

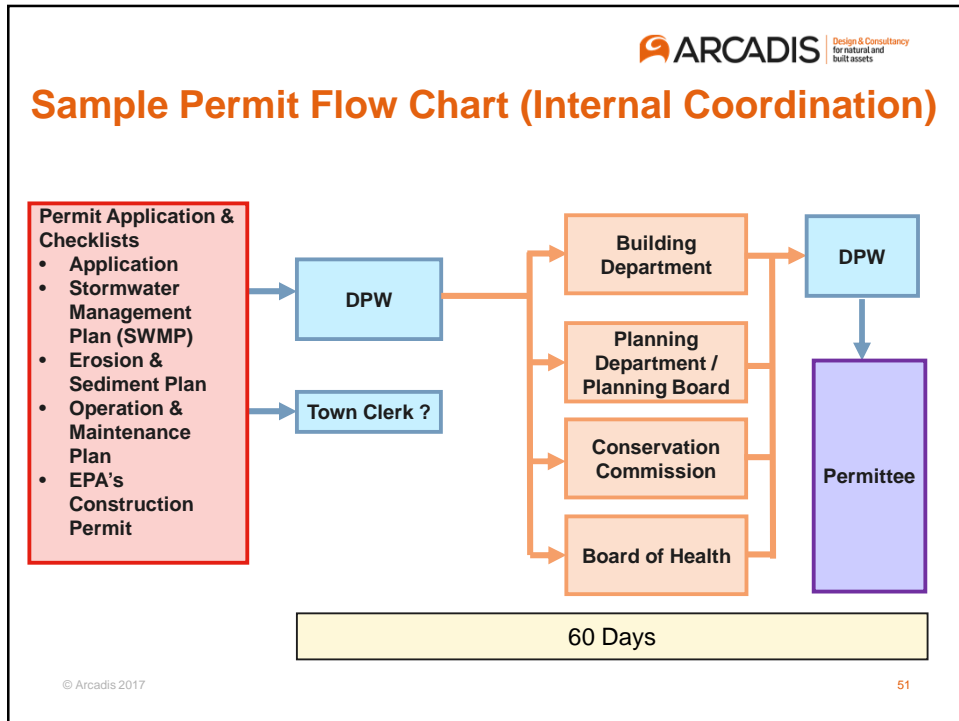
Sample Permit Flow Chart for Developer



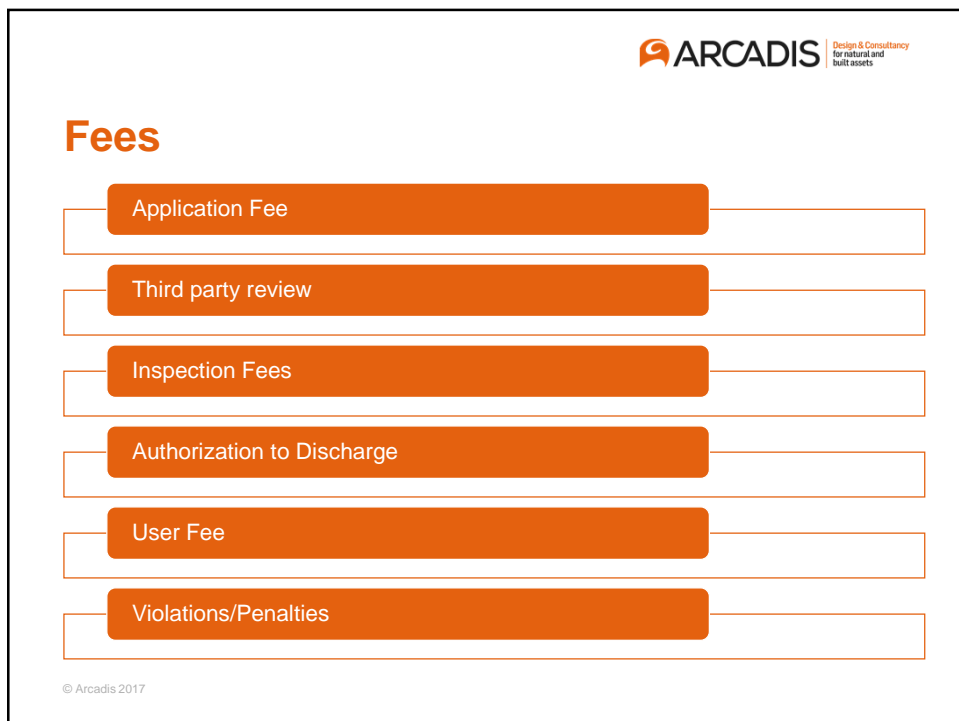
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50

50







51



52

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Implementation Considerations

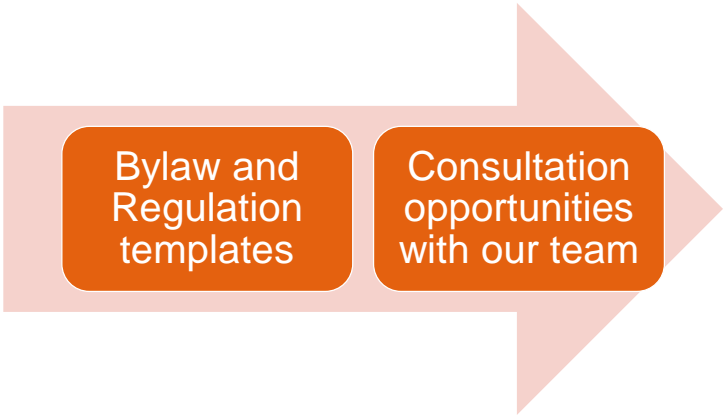
-  Form a Stormwater Bylaw and/or Regulations Task Force
-  Review related bylaws and regulations for potential opportunities to streamline the site plan submittal and review process
-  Document findings related to the feasibility of making Green Infrastructure, infiltration practices, etc. allowable
-  Development of fact sheets, checklists and other educational materials

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53

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Next Steps



Bylaw and Regulation templates

Consultation opportunities with our team

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54

Thank You

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55