

MS4 STORMWATER REGULATIONS WORKSHOP



CENTRAL
MASSACHUSETTS
REGIONAL
STORMWATER
COALITION

November 19, 2020

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

Poll Question

What is your biggest challenge to getting started?

[PollEv.com/kateedwards429](https://pollev.com/kateedwards429)

Poll Question Responses

Objectives for Regulations

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

DUE: JUNE 30, 2021

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

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

Document Structure

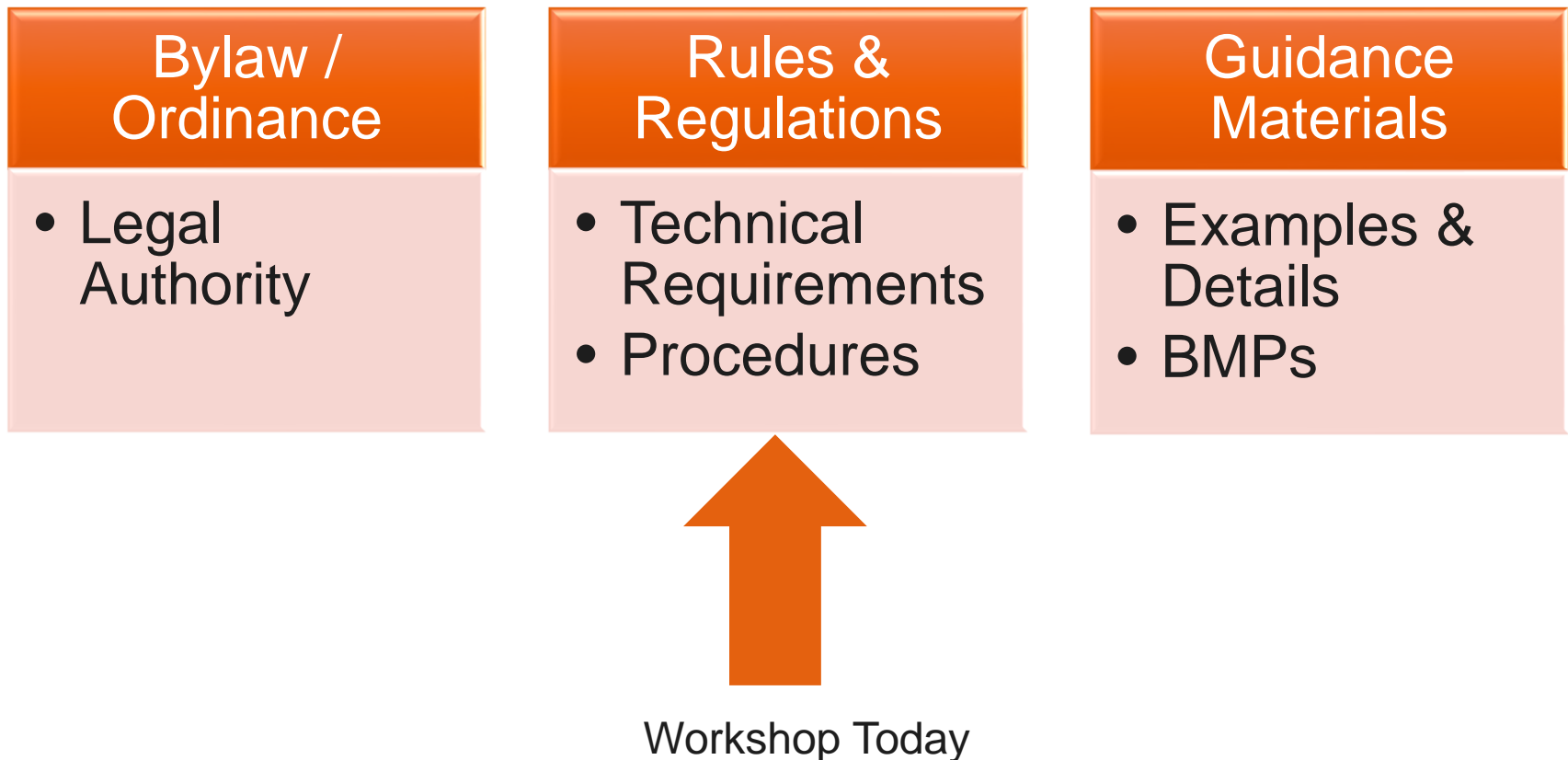
Bylaw/Ordinance	Rules & Regulations	Guidance Materials
<ul style="list-style-type: none"> • Legal Authority 	<ul style="list-style-type: none"> • Technical Requirements • Procedures 	<ul style="list-style-type: none"> • Examples & Details • BMPs

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	

Stormwater Management Regulatory Documents



Sample Regulations Outline

Section 1 – General
Provisions

Section 2 – Illicit Discharges

Section 3 – Land Disturbance

Section 1: General Provisions

Authority

Applicability

Purpose

Severability

Transitional Provisions

Administration

Definitions

Section 1

Authority, Applicability, Purpose

Authority & Administration

- Authorized Enforcement Agency
- Can be delegated in writing

Applicability

- All activities under stormwater bylaw
- Every user of the municipal storm drainage system
- Projects not within the jurisdiction of other boards
- Land disturbance thresholds

Purpose

- Prohibit & remove illicit connections / discharges
- Create a permitting process



Key Bylaw Decisions

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	

Key Considerations

Applicability: Land Disturbance Thresholds

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

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?***

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**



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 purview**.

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**.

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.**

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

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

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 LEWs submitted under 2017 CGP](#)

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

Construction Statistics

3

Under Permit Lookup, Select Construction General Permit



Home | About | Workbench

Enter city, state; or ZIP code

Be Well Informed

[Description](#) • [Source](#)

Have a well and wonder what your water testing results mean? Enter water test results and get feedback about health concerns and water treatment choices.

State/Tribe

Select...

Go

Permit Lookup

[Description](#) • [Source](#)

Select a permit type

Construction Gen

Search

[What permits can I find?](#)

Regulation Finder

[Description](#) • [Source](#)

Select search type

Select...

Search

4

Enter City/Town and State only. Hit Search

Construction General Permit Lookup

Select a permit type

Construction General Permit

Find Notices of Intent (NOIs), Notices of Termination (NOTs), or Low Erosivity Waivers (LEWs) submitted under the U.S. EPA 2017 Construction General Permit (CGP). At this time, search results will only include activity with the national NPDES eReporting Tool (NeT-CGP) for U.S. EPA lead and participating states and tribes.

Enter one or more search criteria

Issuer

Select...

NPDES ID

Coverage type

Select...

Coverage Status

Select...

Submission Type

Select...

Submission Status

Select...

Project / Site name

Street Address

City

State / Territory

Select...

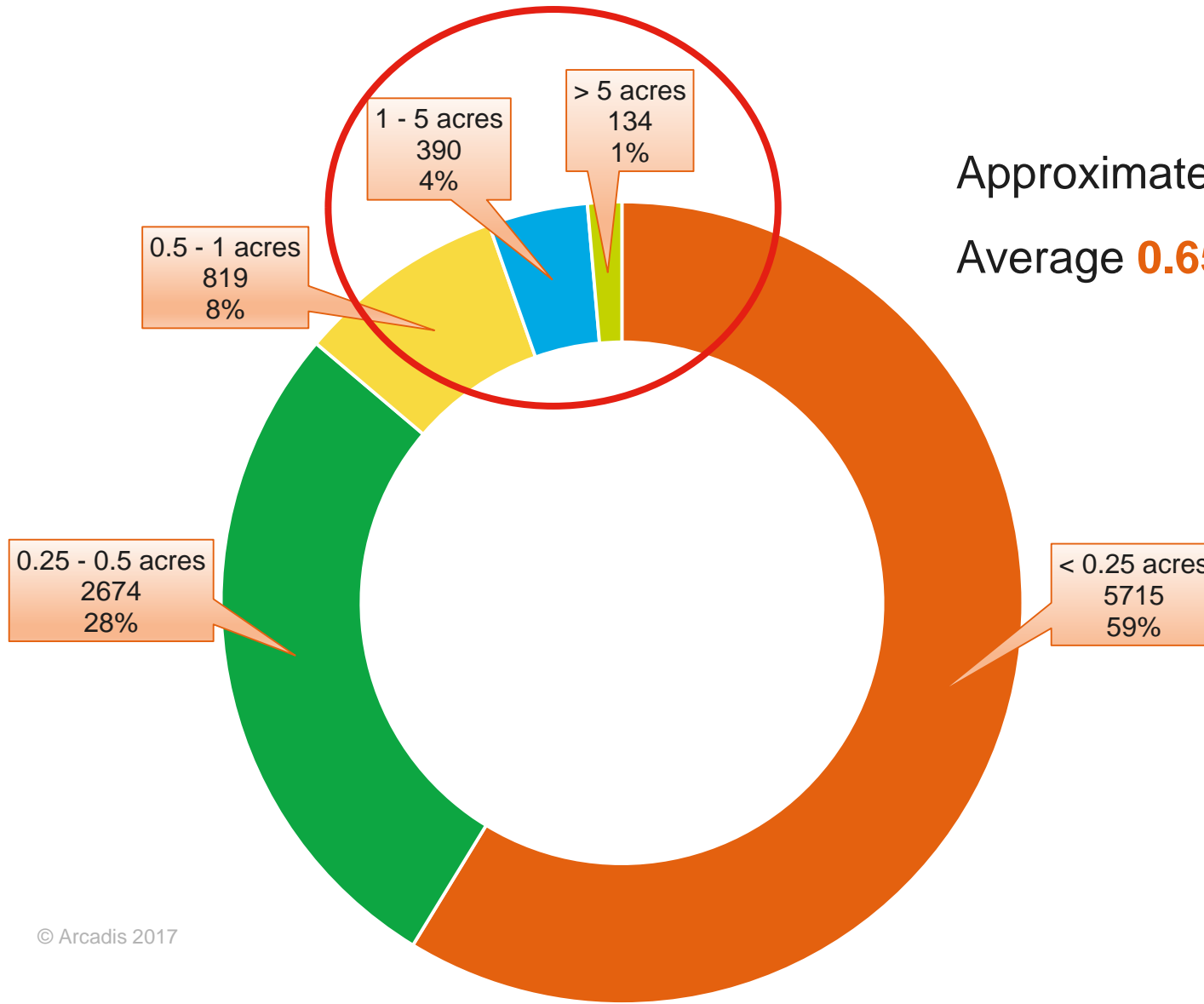
Zip

Advanced Search Criteria

Reset

Search

Parcel Area Distribution



Approximately **9,732 parcels**

Average **0.65 acres**

Key Considerations

Municipal System Use & Connections

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

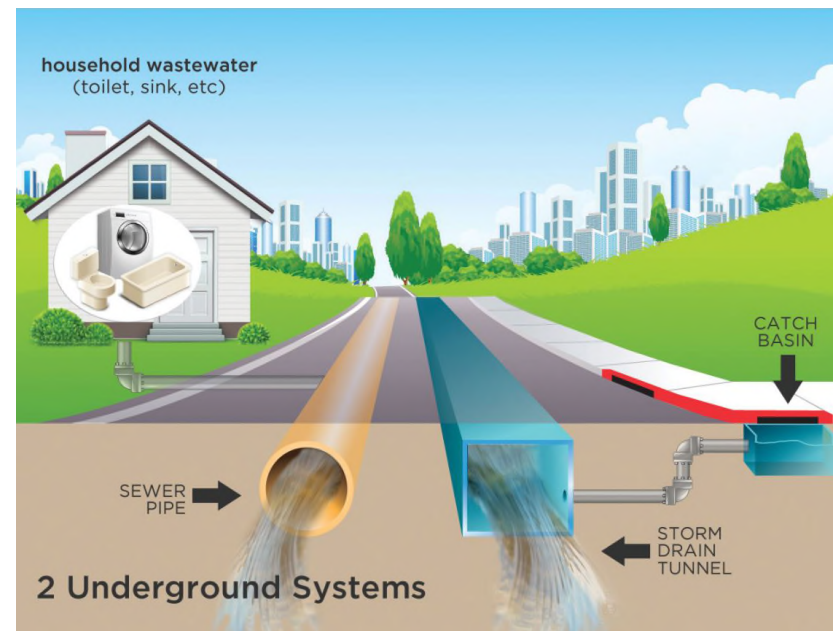
Notification of Spills

Design and Construction Standards

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***



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.

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.

Section 2

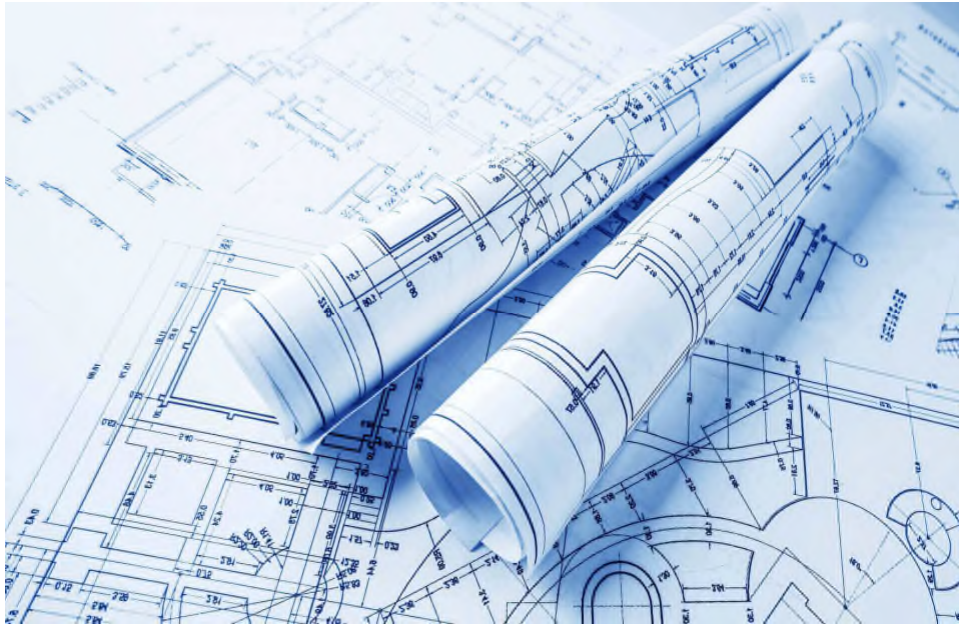
Stormwater Discharges



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.

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.*

Key Considerations:

Addressing Minimum Control Measures 4 & 5

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

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	

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

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

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

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

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



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

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

MCM 5: Stormwater Management in New Development & Redevelopment

Technical Standards

Municipalities with updated Technical Standards in Regulations

Ashland

Fitchburg

Shrewsbury

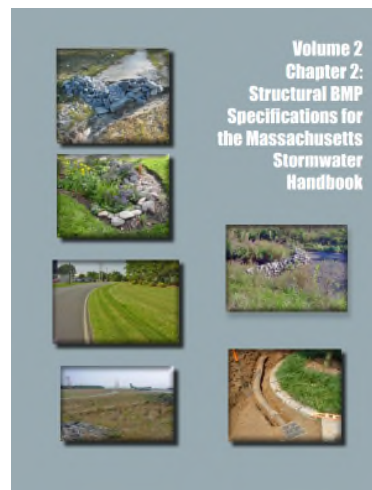
Sturbridge



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.



Key Considerations:

Stormwater Management Permit

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 enclose 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: _____

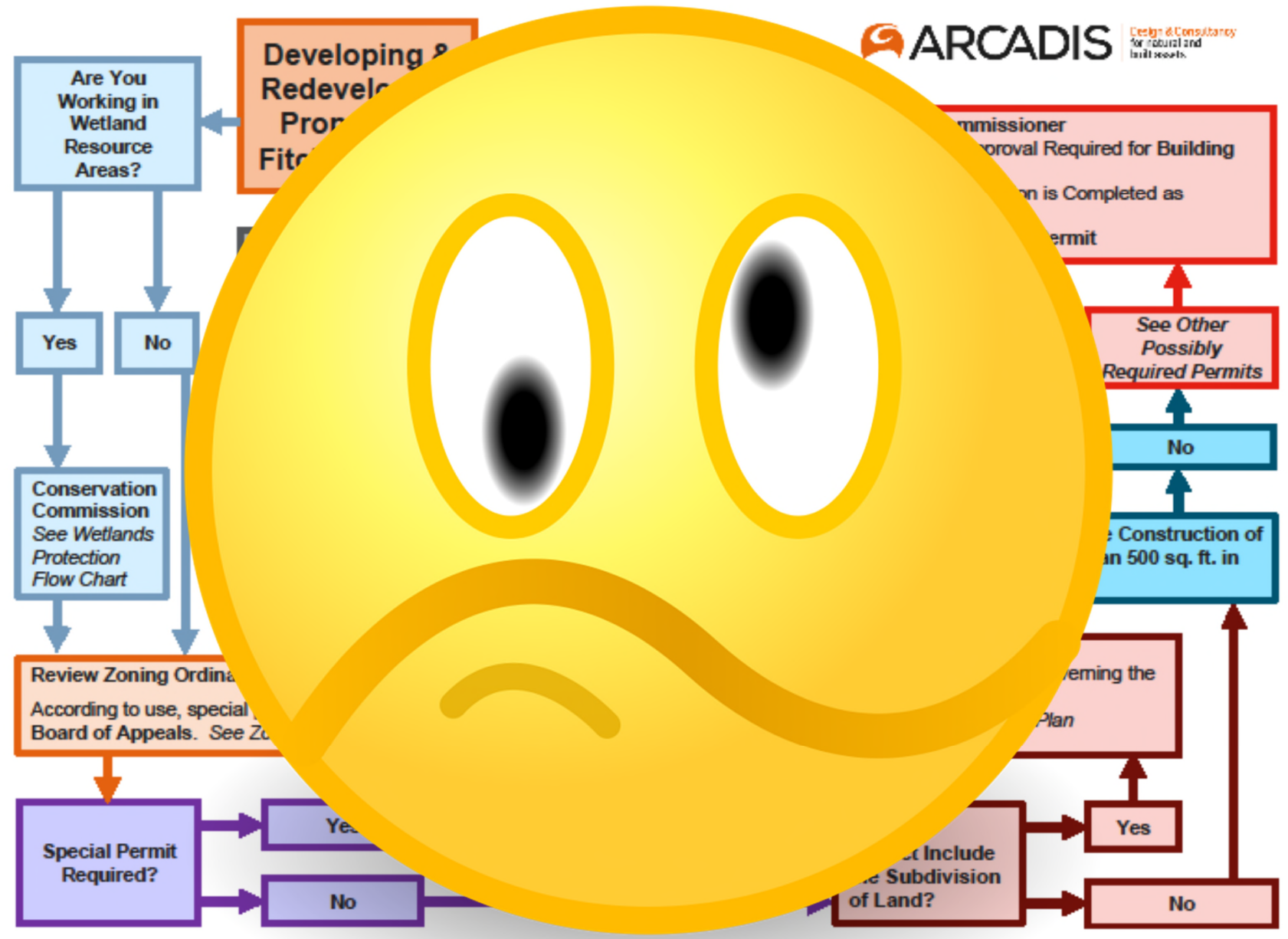
- ☐ Stormwater Management Permit Application requires revisions. See comments.
- ☐ Stormwater Management Permit Application approved.

Reviewer Name: _____

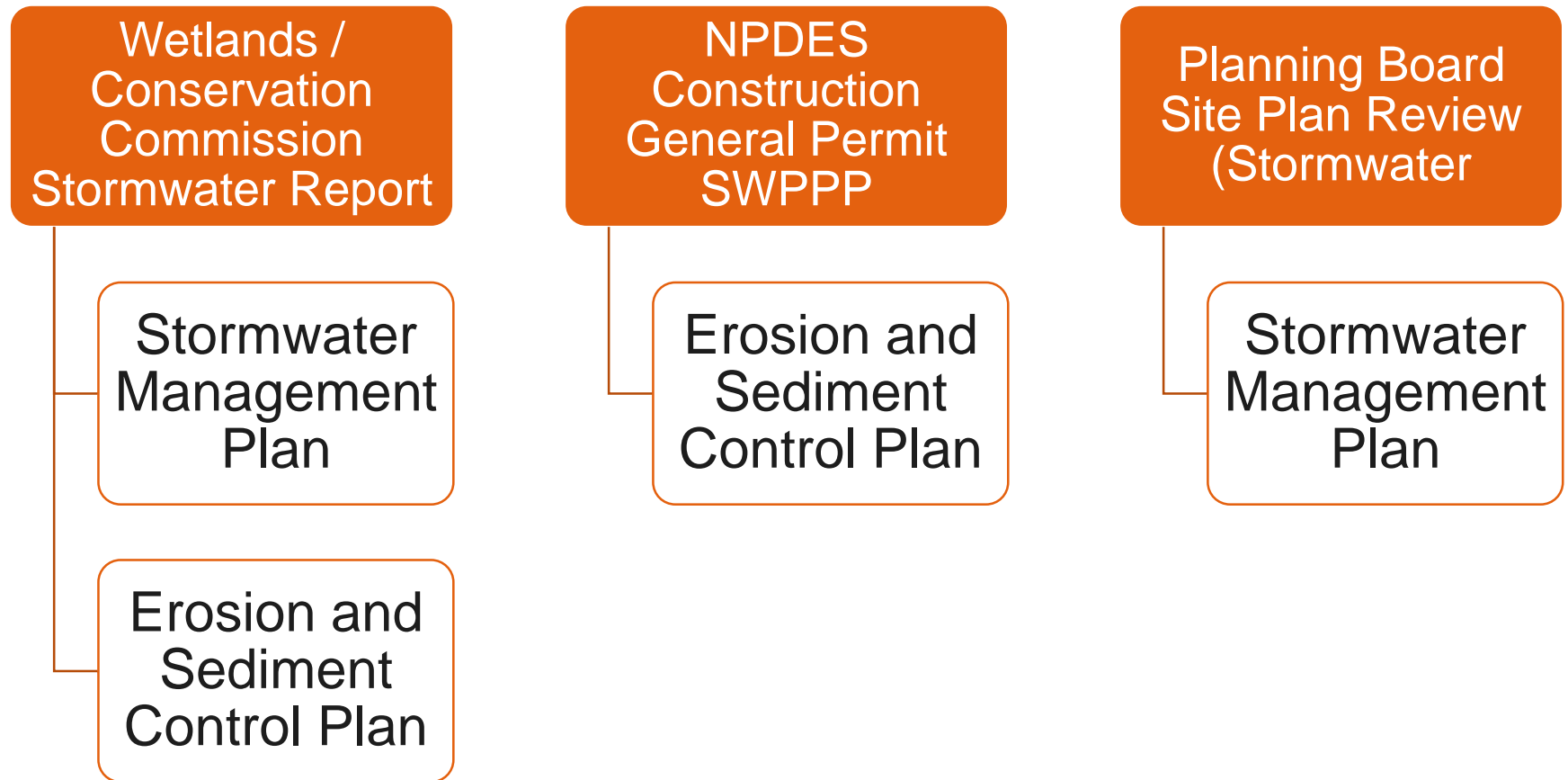
Reviewer Contact Information: _____

Reviewer Signature and Date: _____

Comments:



Overlap with Other Development Requirements



Considerations for Streamlining

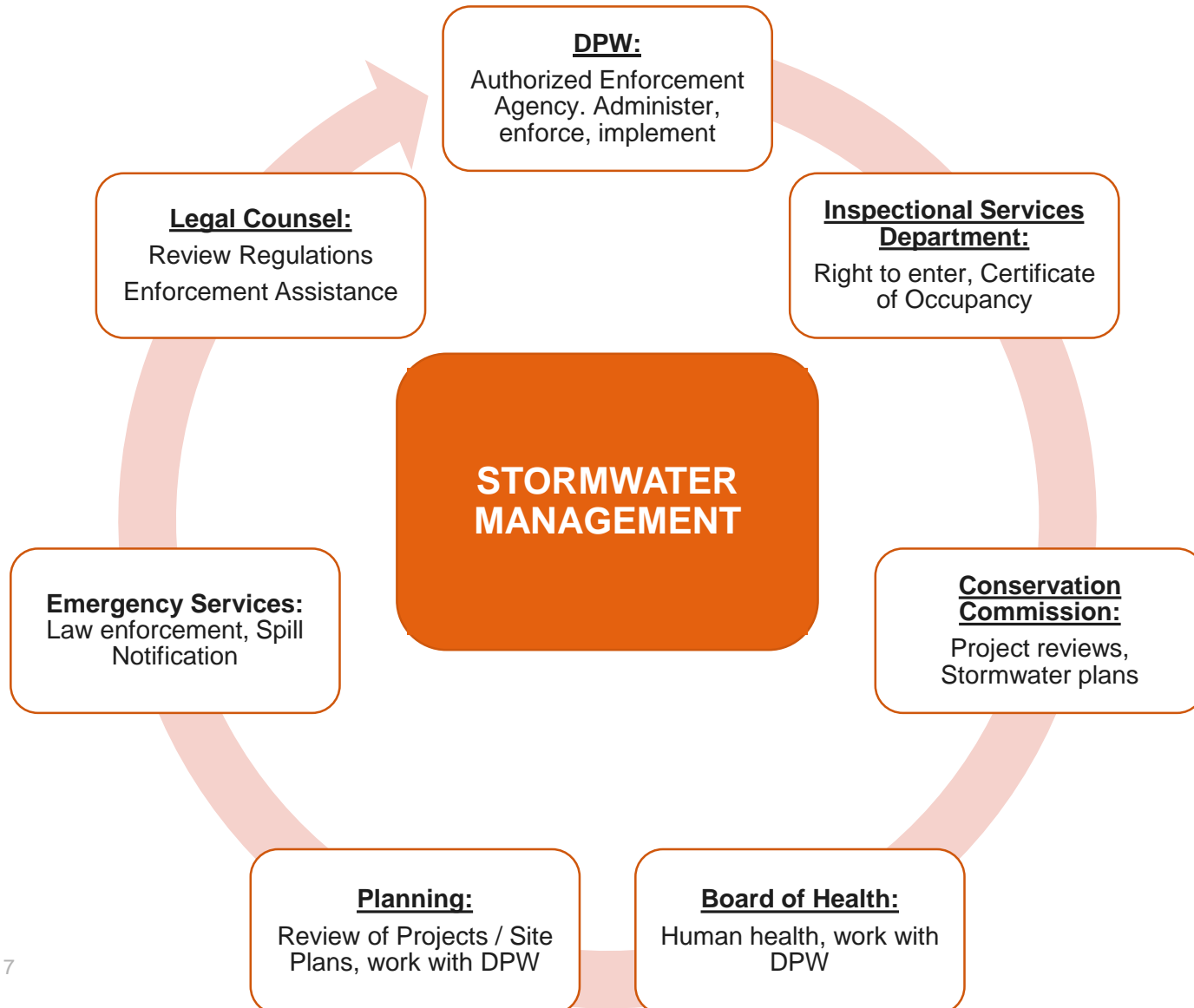
Stormwater / Land
Disturbance
Permit will likely
be the most
stringent

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

Authority & Responsibilities Example



New Responsibilities/Roles



Notifications of Spills: Fire, Police, Public Works

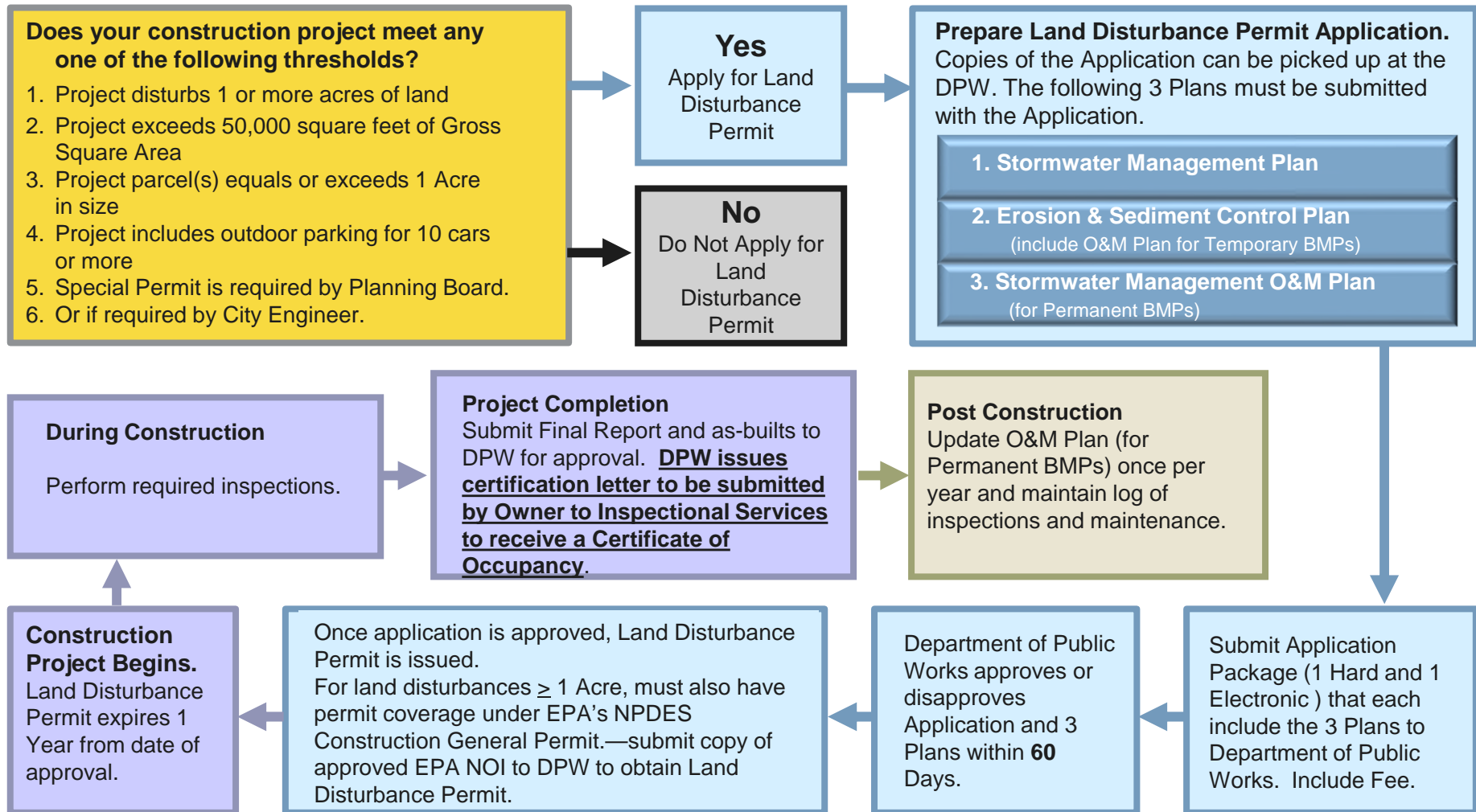


Enforcement: DPW, Law Enforcement, Legal Counsel

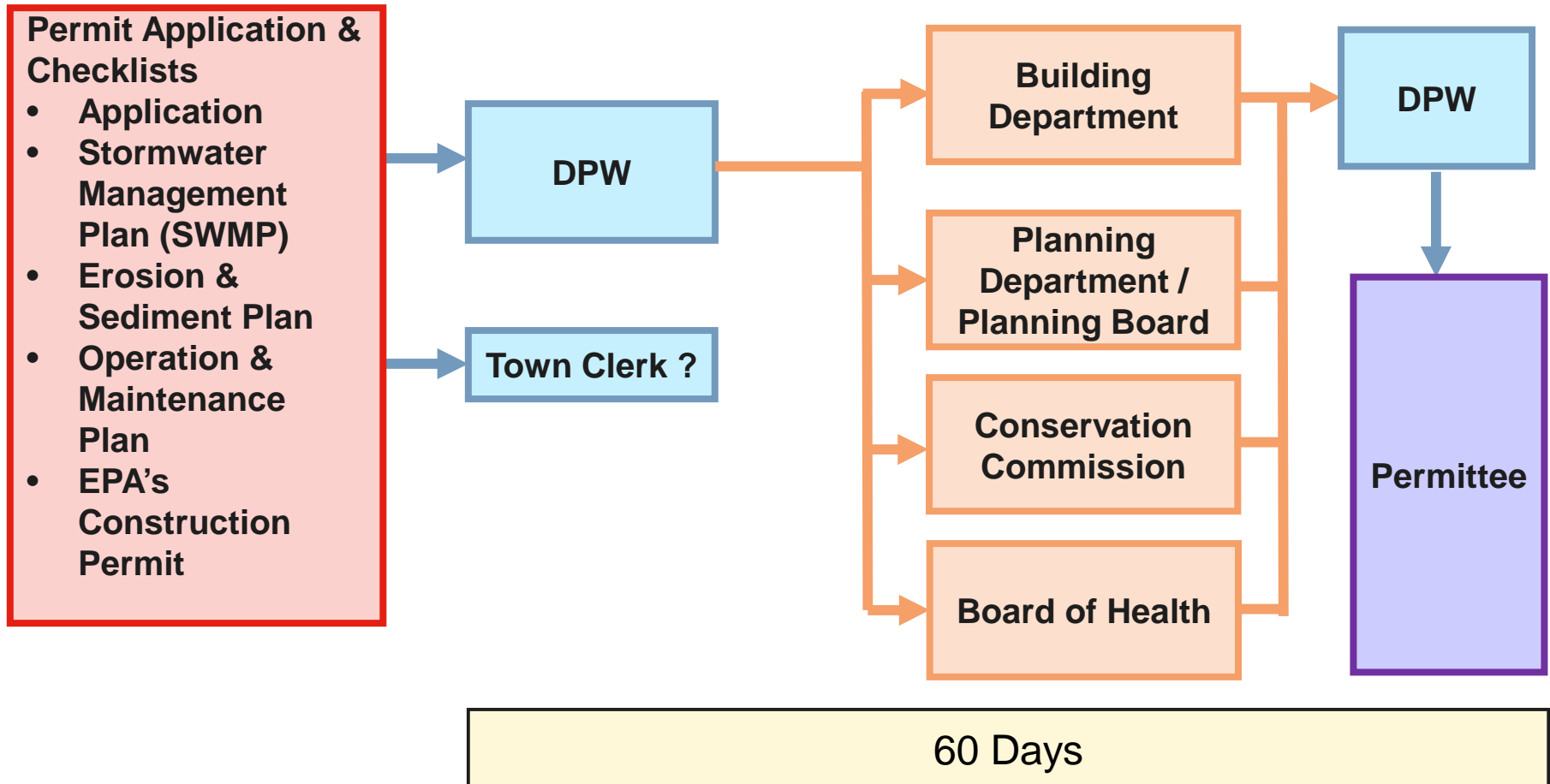


Construction/Design Standards: Public Works, Inspectional Services

Sample Permit Flow Chart for Developer



Sample Permit Flow Chart (Internal Coordination)



Fees

Application Fee

Third party review

Inspection Fees

Authorization to Discharge

User Fee

Violations/Penalties

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

Next Steps



Bylaw and
Regulation
templates

Consultation
opportunities
with our team

Thank You

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