

Draft Stormwater Management and Erosion Control Ordinance

Presentation to Public Facilities Committee:
January 19, 2022



Purpose

- To comply with Newton's MS4 Permit.
- Reduce the strain on the City's stormwater system resulting from increased volumes of runoff from more frequent and higher intensity storms.
- Minimize the impacts of the trend of increasing impervious areas that limit natural infiltration.
- Mitigate stormwater runoff from (new) impervious surfaces, which is the greatest source of pollution to Newton's ponds, lake and waterways.

Purpose (continued)

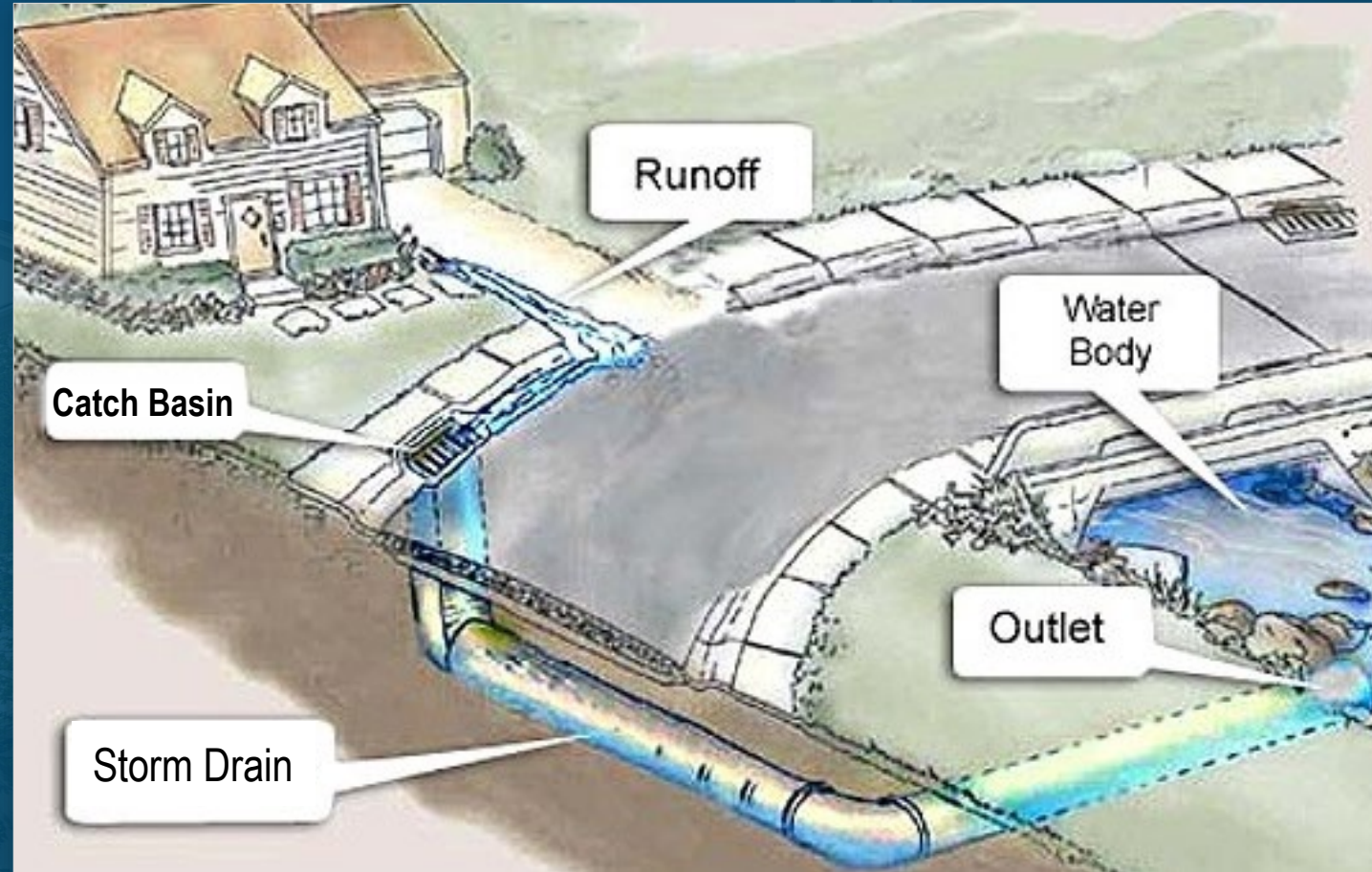
- Current Zoning §Ch. 30 Section 5.3 is limited
- Establish a permit process to:
 - Track projects for compliance, MS4 Annual reports & workflow
 - Formalize standards for plan reviews, construction period inspections and project close-out requirements
 - Establish enforcement procedures

Sec. 5.3. Stormwater Management

See also Revised Ordinances Chapter 22, Article II, Section 22-22.

- A. Whenever the existing contours of the land are altered, the land shall be left in a usable condition, graded in a manner to prevent the erosion of soil and the alteration of the runoff of surface water to or from abutting properties, and shall be substantially landscaped.
- B. Projects increasing impervious surface area by more than the lesser of a) 4 percent of lot size or b) 400 square feet, or that involve altering the landscape in such a way that may result in alteration of the runoff of surface water to abutting properties or erosion of soil, shall be reviewed by the Commissioner of Inspectional Services and the City Engineer to ensure compliance with this Sec. 5.3. The Commissioner of Inspectional Services and the City Engineer may reject a project if they believe it will cause runoff of surface water to abutting properties or the erosion of soil.

Municipal Drainage System 101



Stormwater Ordinance Team

- Jim McGonagle, Public Works Commissioner
- Shawna Sullivan, Deputy Commissioner
- Andrew Lee, Associate City Solicitor
- Lou Taverna, City Engineer
- John Daghlian, Associate City Engineer
- Frank Nichols, Director of Engineering
- Maria Rose, Environmental Engineer
- Jennifer Steel, Chief Environmental Planner
- Alfredo Vargas, Design Project Manager



Objectives

- Minimize the discharge of **pollutants** in stormwater runoff from new and redeveloped sites through **infiltration**, **retention** and/or **treatment** using **Best Management Practices** per the MS4 Permit.
- **Minimize** or eliminate **soil erosion** & maintain sediment on site so that it is not transported via stormwater runoff into our drainage system, streams or the Charles River.
- **Reduce / mitigate** the volume of **stormwater runoff** associated with new impervious surfaces (i.e., buildings, parking lots, driveways, etc.)
- Implement Low Impact Development strategies.

Objectives continued

- Establish stormwater permitting process
 - Codify existing Engineering Division policy
- Review retaining walls built outside of the zoning set-backs
- Establish procedures for construction dewatering activities
- Encourage retention of existing trees during (re)development
- Minimize construction (i.e., basements) in the groundwater zone

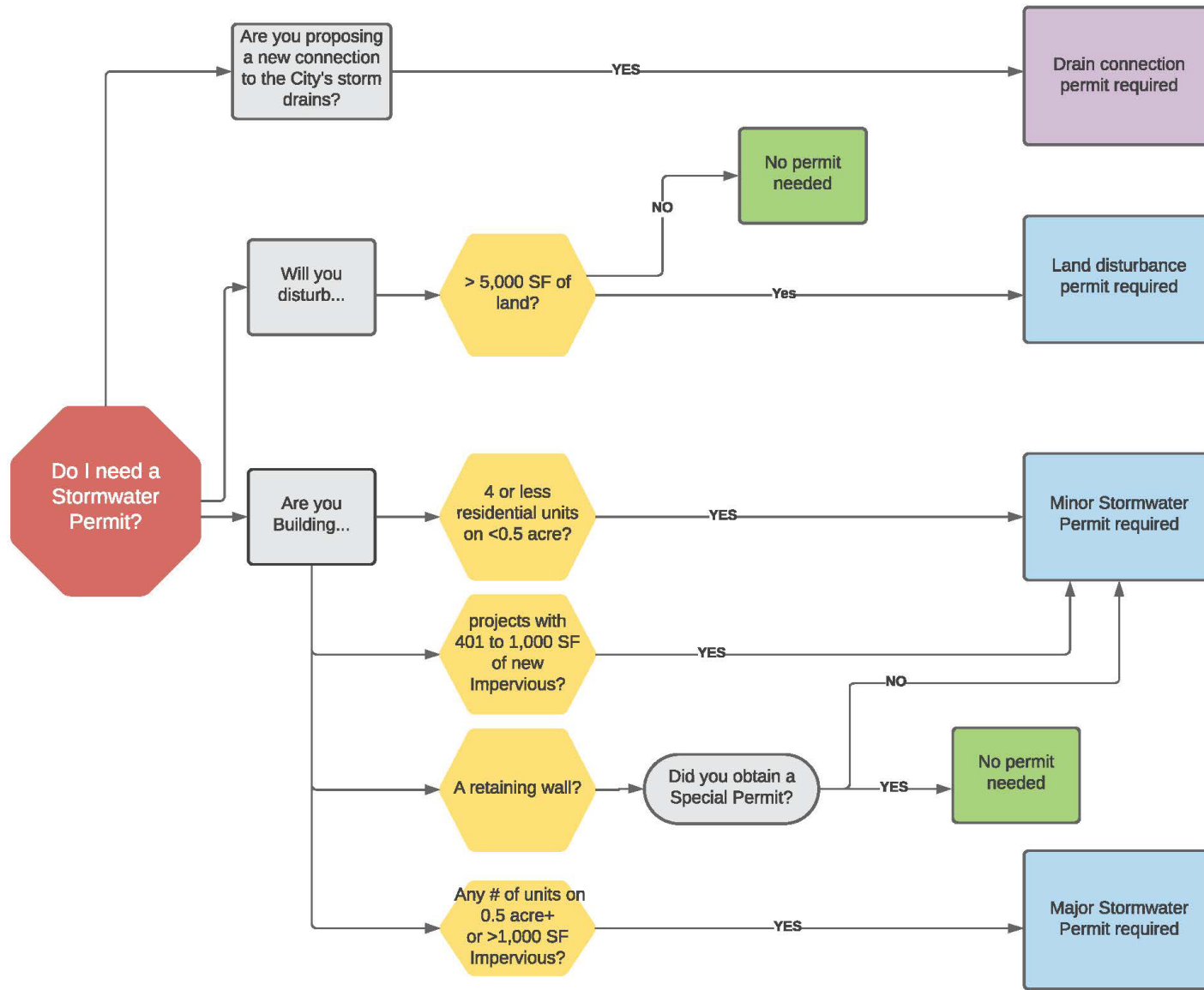


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Better construction site management

On average DPW removes 850 tons of sediment and debris from our catch basins annually.





Three categories of stormwater permits

Land Disturbance Only Projects

- Provide a Site Plan showing existing and proposed topography, trees to be cut / planted, all land features (buildings, pavement, extent of grass and trees)
 - Show proposed erosion control measures
- Permit fee = \$50

Minor Stormwater Projects

- Existing and proposed site plans
- Erosion & Sediment Control Plan
- Stormwater Management Report
 - Document existing & proposed impervious surfaces
 - Calculations to demonstrate - 2" stormwater runoff from net increase is managed on-site
- Incorporate Low Impact Development, unless proven infeasible
- Develop an Operations & Maintenance Plan and record it at the Registry of Deeds
- Permit Fee = \$100

Major Stormwater Projects

- Existing and proposed site plans
- Erosion & Sediment Control Plan
- Stormwater Management Report
 - Document existing & proposed impervious surfaces
 - Retain / infiltrate 2" stormwater runoff from **all impervious areas**
 - Remove Phosphorus: 50 to 60%
 - Capture sediment (TSS): 80 to 90%
 - Demonstrate compliance with the MA Stormwater Handbook
- Incorporate Low Impact Development, unless proven infeasible
- Attempt to reproduce natural hydrologic conditions
- Develop and Record at the Registry an Operations & Maintenance Plan
- Permit Fee = \$300 (one to four family); \$1,000 for all others

Stormwater Mgmt. Certificate of Compliance

Permittee submits:

- Request for Certificate of Compliance
- As-built plans, stamped by a Professional Engineer
- Letter from the Engineer of Record stating construction of Stormwater Managements systems meet the design
- Proof of Recording the O&M Plan

The City Engineer or his/her staff review above before issuing the SMCC.

Note: Land disturbance only projects do not require this.

Thank you!

Questions and Discussion



Photo credit: NEWEA / WEF Water for Life Campaign

