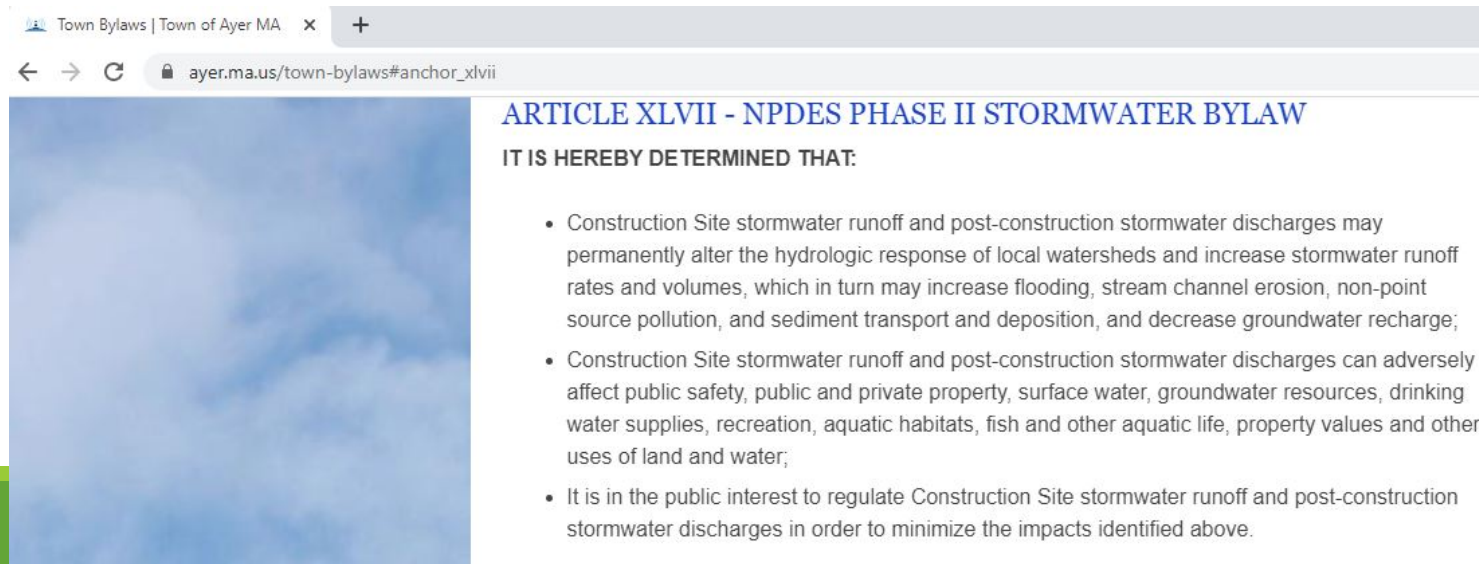


Stormwater Bylaw Revisions (Town Meeting Articles 30 and 31)

DAN VAN SCHALKWYK, P.E., TOWN ENGINEER

Ayer's Stormwater Bylaws

- Article XLVII (47) – NPDES Phase II Stormwater Bylaw
 - Construction and Post-Construction Stormwater Management
- Article XLVIII (48) – Illicit Discharges to the Municipal Storm Drain Systems Bylaw
 - Illicit Discharge Detection and Elimination (IDDE)
- Both Bylaws were adopted in 2008, amended in 2010, and meet the requirements of the 2003 MS4 Permit.



The screenshot shows a web browser window with the address bar displaying "ayer.ma.us/town-bylaws#anchor_xlvii". The page title is "ARTICLE XLVII - NPDES PHASE II STORMWATER BYLAW". Below the title, it states "IT IS HEREBY DETERMINED THAT:" followed by a bulleted list of three points regarding stormwater runoff and post-construction stormwater discharges.

Town Bylaws | Town of Ayer MA x +

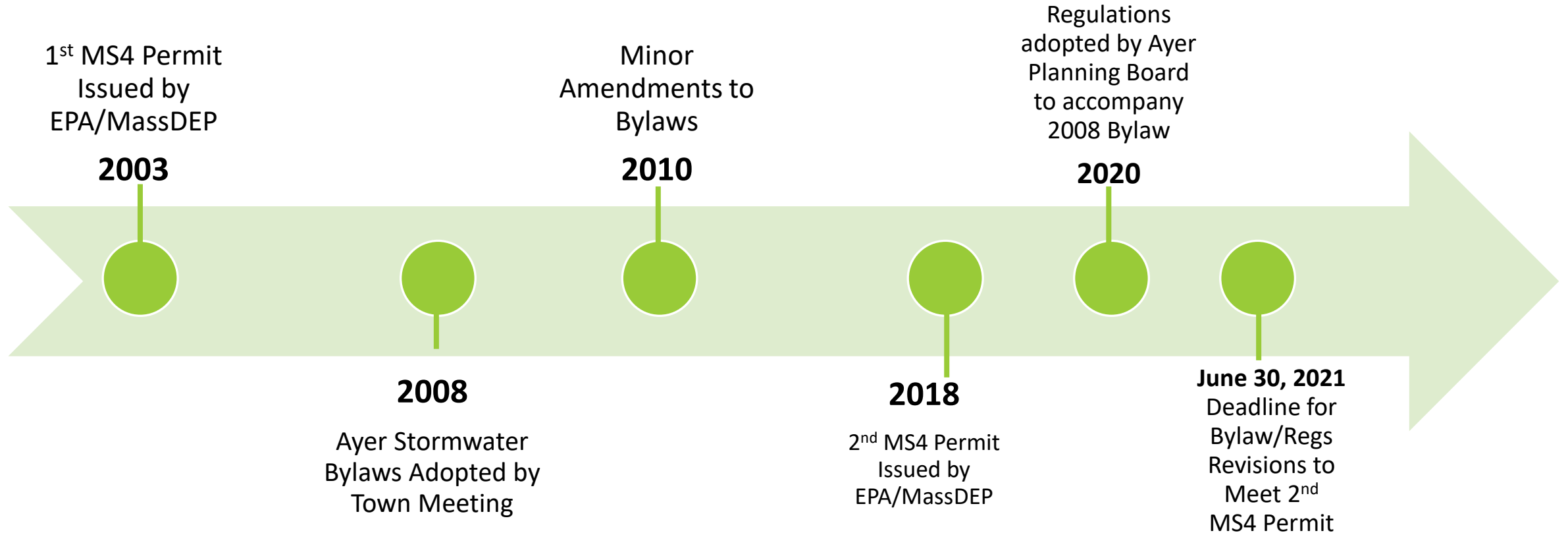
ayer.ma.us/town-bylaws#anchor_xlvii

ARTICLE XLVII - NPDES PHASE II STORMWATER BYLAW

IT IS HEREBY DETERMINED THAT:

- Construction Site stormwater runoff and post-construction stormwater discharges may permanently alter the hydrologic response of local watersheds and increase stormwater runoff rates and volumes, which in turn may increase flooding, stream channel erosion, non-point source pollution, and sediment transport and deposition, and decrease groundwater recharge;
- Construction Site stormwater runoff and post-construction stormwater discharges can adversely affect public safety, public and private property, surface water, groundwater resources, drinking water supplies, recreation, aquatic habitats, fish and other aquatic life, property values and other uses of land and water;
- It is in the public interest to regulate Construction Site stormwater runoff and post-construction stormwater discharges in order to minimize the impacts identified above.

Bylaw and Regulation Background



What is an MS4 Permit?

- Municipal Separate Storm Sewer System (MS4)
- EPA Program in place since 1990 to regulate discharges from MS4s to protect water quality
- Ayer has a NPDES Stormwater Discharge Permit and the DPW has specific responsibilities required by the Permit
- Original MS4 Permit issued to Ayer in 2003.
- **A new MS4 Permit was issued and effective on July 1, 2018**



MS4 Permit Structure – Must Address Six Minimum Control Measures (MCMs)

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination (IDDE)
4. Construction Site Stormwater Runoff Control
5. Stormwater Management in New Development and Redevelopment
6. Good Housekeeping and Pollution Prevention

MCMs 3, 4, and 5
associated with our Bylaws



MS4 Permit Requirements for Bylaw

ARTICLE 48 – ILLICIT DISCHARGES TO THE MUNICIPAL STORM DRAIN SYSTEMS BYLAW

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.”

ARTICLE 47 – NPDES PHASE II STORMWATER BYLAW

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

Changes Required by 2016 MS4 Permit (Effective July 1, 2018)

- 2016 MS4 Permit Additional Requirements:
 - As-built drawings
 - Low-Impact Site Development to Maximum Extent Feasible
 - TMDL/Impaired Water optimized BMPs
 - Design/Infiltration follow Massachusetts Stormwater Policy
 - Pollutant Removal by EPAs BMP Performance Software
 - Retain 1.0” water quality volume (1” of water from all impervious areas on site) and/or remove 90% TSS and 60% Total Phosphorus
 - ...Several More design related requirements

What We've Done

- We took advantage of assistance from Central MA Regional Stormwater Coalition.
- We established a Workgroup to collaborate on the revisions.
- The proposed changes were made available for public comment on the Town website for two weeks.

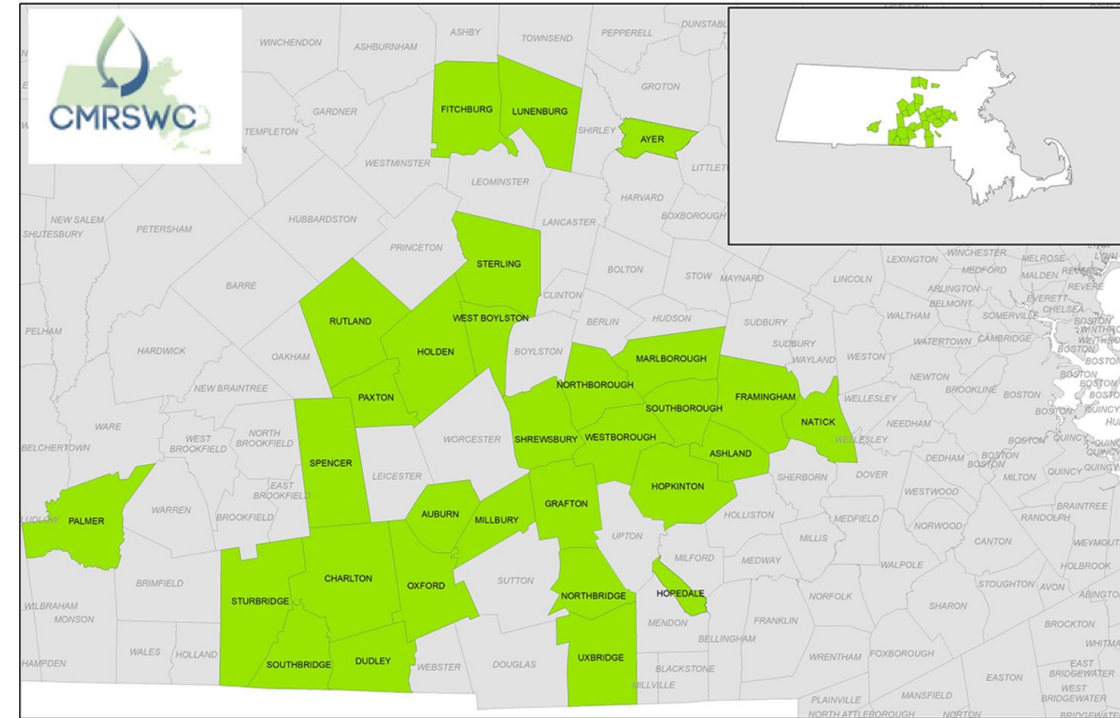
CMRSWC / Consultant



The Town of Ayer is a member of the Central Massachusetts Regional Stormwater Coalition (CMRSWC)

Arcadis Engineering consultant for CMRSWC:

- Reviewed existing Bylaws of all Towns and identified compliance with new MS4 Permit
- Prepared recommendations memo for Bylaw and Regulation revisions
- Prepared Bylaw and Regulation templates



Workgroup

A Workgroup was established to collaborate on the revisions with different perspectives. The members include representatives from:

- DPW
- Conservation Commission
- Planning Board
- Residents
- Consultant

The Workgroup Drafted Bylaw Revisions

- Utilized consultant recommendations as guidance, applied as we saw best fit for Ayer.
- Key items we reviewed include:
 1. Structure of Bylaw and Regulations
 2. Separate vs Consolidated Bylaws
 3. Authorized Enforcement Agent (the Authority)
 4. Land Disturbance Thresholds
 5. Enforcement/Violations and Penalties
 6. Roles/Responsibilities and Implementation
 7. Streamlining with Overlapping Permits

The Workgroup Drafted Bylaw Revisions

- Summary of Draft Revisions to Article 47 NPDES Phase II Stormwater Bylaw:
 - Added Zone II Critical Area and Impaired Waterbodies
 - Revised land disturbance thresholds triggering Stormwater Permit
 - Change minimum land disturbance threshold to 20,000 sq. ft. from 40,000 sq. ft.
 - Add 30% percent net increase in impervious area on lot with at least 5,000 sq. ft. of existing impervious area
 - Add 2,000 sq. ft. land disturbance in Zone II area or where discharge is directly or indirectly to an Impaired Waterbody
 - Add activities subject to Site Plan Review or Subdivision Control Law.
 - Moved Minor and Major project distinction from Bylaw to Regulations
 - Add right to enter property to assess/repair

The Workgroup Drafted Bylaw Revisions

- Summary of Revisions to Article 48 Illicit Discharge to the Municipal Storm Drain System Bylaw:
 - Added two items to the allowable non-stormwater discharges to match the MS4 permit
 - Allow DPW Supt. and/or Planning Board to adopt regulations

Thank You

Dan Van Schalkwyk, P.E.

Town Engineer

dvanschalkwyk@ayer.ma.us

