

MS4 PERMIT COMPLIANCE, REGULATORY REVIEW, AND
IMPLEMENTATION ROADMAP BY YEAR

AJ - MS4 COMPLIANCE DETAILED REPORT

In order to prevent pollutants from entering the drainage system and being discharged to the environment with stormwater, Chelmsford has implemented a wide variety of Best Management Practices (BMPs) categorized under the six minimum control measures as required under the MS4 Permit. A summary of the Town's compliance to date is included herein. A more detailed summary of permit requirements and implementation timeframes for compliance with specific requirements in Years 3 through 10 of the permit as it relates to Chelmsford is attached.

AJ 1.0 Permit Requirements and Progress to Date

AJ.1.1 Public Education and Outreach

The public education and outreach minimum control measure requires the Town to make educational information available to the public and other stakeholders as specified by the permit. Chelmsford has been participating in public education and outreach activities since the 2003 MS4 Permit was enacted.

MS4 Requirement:

Section 2.3.2 of the 2016 MS4 Permit requires the permittee to "implement an education program that includes educational goals based on stormwater issues of significance within the MS4 area. The ultimate objective of a public education program is to increase knowledge and change behavior of the public so that pollutants in stormwater are reduced."

Existing Town Practices/Progress to Date:

The Town of Chelmsford has implemented several public education initiatives. They held a public presentation at the library in April 2019 where they presented information about stormwater pollution, including disposal of waste such as pet waste, grass clippings, leaf litter, and yard waste. The Town has also aired a PSA promoting proper management of pet waste, low phosphorus fertilizer, grass clippings and leaf litter on the local cable access channel at various times during the past few years. The Town Engineer has also participated on Town Talk, a local talk show, highlighting lawn care, pet waste, storm drain stenciling and leaf drop-off at the DPW. The Town has mailed brochures to all mailboxes with information on the stormwater utility fee structure and tips on how to reduce stormwater pollution. Brochures regarding pet waste management are also handed out at the time of dog license issuance/renewal. The Town has also distributed information on erosion control requirements to developers upon issuance of building permits, trench permits, sewer permits, or road opening permits. The Town's uses social media and other platforms to educate the public about stormwater management, including various town events. The Town also provided public education on stormwater management to fifth grade students using an Enviroscape Model to depict how stormwater moves in the natural environment and potential sources of stormwater pollution. On the Town of Chelmsford's Public Works page, there is a link to their Stormwater Division, which provides the public with information on stormwater pollution and the Town's ongoing stormwater initiatives. It includes various stormwater resources, as well as a copy of the Town's current Stormwater Management Program.

*AJ.1.2 Public Involvement / Participation*MS4 Requirement:

Section 2.3.3 of the 2016 MS4 Permit requires the permittee to “provide opportunities to engage the public to participate in the review and implementation of the permittee’s SWMP.” Public participation benefits the program by increasing public support, including providing additional expertise and involving community groups/organizations in practices that benefit the community.

Existing Town Practices/Progress to Date:

The Town of Chelmsford has been proactive in providing opportunities for public participation and involvement in stormwater management practices. The Town currently has free events for residents throughout the year to support collection and disposal of household hazardous waste items as well as yard waste. The DPW hosts roadside clean up days throughout the year and provides free trash bags and disposal of roadside litter. The Town promotes their storm drain stenciling program at public meetings, including presentations held at the library and in the schools, and at Board of Selectmen Meetings. The Town also offers a subsidized rain barrel program and holds a Fifth Grade Stormwater Poster Contest. The Town also updates their Stormwater Management Plan on an annual basis and posts it for public comment.

*AJ 1.3 Illicit Discharge and Detection*MS4 Requirement:

Section 2.3.4 of the 2016 MS4 General Permit requires the permittee to develop a written Illicit Discharge Detection and Elimination (IDDE) program. The IDDE program is designed to “systematically find and eliminate sources of non-stormwater discharges to its municipal separate storm sewer system and implement procedures to prevent such discharges.”

Existing Town Practices/Progress to Date:

The Town has already developed a comprehensive map of their drainage system, which includes outfalls, pipes, manholes, catch basins, interconnections with other MS4s, municipally owned stormwater treatment structures and impaired water bodies. Mapping has been completed in accordance with the 2016 MS4 Permit’s GPS accuracy guidelines and has been recorded on a publicly available Town map. Chelmsford has reviewed drainage infrastructure within Town boundaries to determine ownership, and ownership has been designated in the Town’s Drainage GIS. As part of the development of this Stormwater Master Plan, additional mapping updates were made, and outfalls and interconnections were analyzed to create a defined catchment area that includes surface runoff to catch basins tributary to the identified outfall or interconnection. The mapping will serve as a planning tool for the implementation and phasing of the Town’s IDDE Program and demonstrate the extent of completed and planned investigations.

Under the 2003 MS4 Permit, the Town established legal authority to prohibit illicit discharges, investigate suspected illicit discharges, eliminate illicit discharges, and implement enforcement procedures through adoption of *Chapter 142-6, Discharge of Water to Public Ways or Sidewalks; Discharges to Storm Sewer, of the Town of Chelmsford’s General Bylaws*.

The Town has developed a written IDDE plan that outlines procedures for systematically and progressively observing, sampling and evaluating key junction manholes in the MS4 to determine the approximate location of suspected illicit discharges. The Town has also been training employees annually on how to identify illicit discharges.

The Town is currently performing dry weather screening and sampling of outfalls to comply with the 2016 MS4 Permit and plans to complete this effort by June 30, 2021 as required by the permit.

AJ.1.4 Construction Site Stormwater Runoff Control

MS4 Requirement:

Section 2.3.5 of the 2016 MS4 Permit requires the permittee to create a program to “minimize or eliminate erosion and maintain sediment on site so that it is not transported in stormwater and allowed to discharge to a water of the US through the permittee’s MS4.” The permittee will conduct site plan reviews, site inspections, and include procedures for public involvement.

Existing Town Practices/Progress to Date:

Sediment and erosion control requirements are included in the Town’s site plan review bylaw. *Chapter 195-104, Erosion and Sediment Control Inspection Form and Procedures* provides explicit language outlining the inspection and enforcement procedures for erosion and sediment control during construction. The bylaws also include site plan review requirements to ensure the control of wastes on site during construction.

Recommended modifications to the Town’s regulations for Construction Site Stormwater Runoff Control to comply with the MS4 Permit are detailed in Section AJ 3.1.

AJ.1.5 Post-Construction Stormwater Management

MS4 Requirement:

Section 2.3.6 of the 2016 MS4 Permit requires the permittee to require developers to “reduce the discharge of pollutants found in stormwater through the retention or treatment of stormwater after construction on new or redeveloped sites.” In this case, a site is defined as the “area extent of construction activities which includes but is not limited to the creation of new impervious cover and improvement of existing impervious cover.”

New development is defined as construction activity that results in a total earth disturbance area equal to or greater than one acre on land that did not have any impervious area before work began.

Redevelopment is defined as any construction activity that disturbs greater than or equal to one acre and does not meet the requirements to be designated as new development.

Existing Town Practices/Progress to Date:

The Planning Board currently establishes uniform procedures under their *Site Plan Approval and Authority*, which includes stormwater management procedures, adopted on April 26, 2000 and revised on April 23, 2003.

Recommended modifications to the Town’s regulations for Post-Construction Stormwater Management are detailed in the next section.

AJ.1.6 Pollution Prevention / Good Housekeeping

MS4 Requirement:

Section 2.3.7 of the 2016 MS4 Permit requires the permittee to “implement an operations and maintenance program for permittee-owned operations that has a goal of preventing or reducing pollutant runoff and protecting water quality from all permittee-owned operations.”

This minimum control measure includes a training component and has the goal of preventing or reducing stormwater pollution from municipal activities and facilities such as parks and open spaces, buildings and facilities, vehicles and equipment, and providing for the long-term operation and maintenance of MS4 infrastructure.

Existing Town Practices/Progress to Date:

Chelmsford regularly performs maintenance throughout town related to overall stormwater management, including the cleaning and repair of catch basins, street sweeping, and outfall maintenance and repair. Catch basins are inspected and cleaned annually. Town roadways are swept twice per year to meet MS4 Permit requirements. The Town has developed operation and maintenance procedures for municipal activities and facilities. The Town has also developed Stormwater Pollution Prevention Plans for their DPW Facility, Highway Department, and Transfer Station.

AJ 2.0 Review of Regulatory Mechanisms for Compliance with the 2016 MS4 Permit

This section includes information regarding the Town's current regulatory mechanisms that govern town-wide stormwater management, followed by recommended updates to those regulations for construction and post-construction stormwater management that will bring Chelmsford into compliance with the current and proposed requirements of the 2016 MS4 Permit.

Overall, a comprehensive stormwater management bylaw with supporting rules and regulations that applies across all departments and all types of development would be a more effective means for regulating stormwater management. The Town recognizes this need and is in the process of initiating a comprehensive regulatory review that would support the development of a new stormwater bylaw and accompanying rules and regulations. While the Town may benefit from development of a separate stormwater management bylaw and associated rules and regulations, this review is primarily focused on those regulatory mechanisms that the Town currently has in place and were referenced in the Town's MS4 Notice of Intent, Stormwater Management Program, and Year 1 Annual Report.

A comprehensive review was conducted to evaluate whether the Town's existing regulatory mechanisms for construction and post-construction stormwater management comply with the 2016 MS4 Permit requirements, and identify what modifications are needed to bring the Town into compliance. The review considered the current edition of the 2016 MS4 Permit as well as the proposed modifications to the MS4 Permit proposed by EPA as a result of a settlement with the Center for Regulatory Reasonableness in December 2019. The modifications affect treatment requirements for stormwater runoff on new development and redevelopment sites, and their impact was considered when developing recommendations. Regulatory updates for post-construction stormwater runoff, discussed in Section AJ 3.1, are currently Year 2 permit requirements, but may not be required until Year 3 if the proposed permit modifications are adopted.

AJ 2.1 Existing Stormwater Regulatory Mechanisms

This section lists the Town's permitting and regulatory mechanisms pertaining to stormwater management. Under the 2003 MS4 Permit, the Town updated their existing regulations as needed to improve stormwater management town wide. The requirements adopted were sufficient to meet the requirements of the 2003 permit, but in many cases additional modifications are needed for compliance with the 2016 MS4 Permit.

Chapter 142-6 – Discharge of Water to Public Ways or Sidewalks; Discharges to Storm Sewer

Chapter 142-6, Discharge of Water to Public Ways or Sidewalks; Discharges to Storm Sewer, was first adopted at Town Meeting in 1973, and later amended on April 26, 2010. The objectives of this bylaw are:

1. To prevent any introduction of pollutants to the Town of Chelmsford's municipal storm drain system by any user.
2. To prohibit illicit connections to the Town of Chelmsford's municipal storm drain system; and
3. To grant the Department of Public Works the authority to investigate suspected illicit discharges, remove any such illicit discharges, and impose appropriate enforcement orders on those found to be in violation of this bylaw.

This bylaw provides the legal authority to implement and enforce the Illicit Discharge Detection and Elimination (IDDE) Plan developed by the Town. Its primary purpose is to prevent pollutants from entering the MS4, prohibit illicit connections to the MS4, and to allow the Town to monitor the system and remove any found connections.

The Department of Public Works is responsible for its enforcement and has the authority to investigate and remove illicit discharges. The bylaw mandates that in the case of a spill which may contribute pollutants to the municipal drainage system or water of the Commonwealth, the responsible person shall take all necessary steps to ensure containment and cleanup of the release. Spill of non-hazardous materials shall be reported to the Department of Public Works by the next business day.

Chapter 187 – Wetlands

Chapter 187, the Town's Wetlands Bylaw, protects wetlands, water resources, flood-prone areas, and adjoining upland areas in Chelmsford, by controlling activities that might occur in or be detrimental to neighboring water resources. The Wetlands Bylaw authorizes the Conservation Commission to review, permit, and enforce restrictions on development and other activities that would affect water resource areas.

Wetlands Bylaw Regulations

Authorized by Chapter 187, the Conservation Commission has also promulgated separate Wetlands Bylaw Regulations which set uniform standards and provisions for the filing of applications and issuance of permits for work conducted within Chelmsford's resource areas. For any work to be performed in wetlands resource areas, a Notice of Intent needs to be submitted for approval by the Conservation Commission. The Conservation Commission reviews the applications, and if a permit is issued, the Commission will impose conditions which will protect the natural resource through an Order of Conditions.

Chapter 195 – Zoning

Chapter 195, Zoning, was first adopted at Town Meeting on October 22, 1998. This chapter includes several sections relating to stormwater management. The relevant sections are discussed herein. As noted in the Town's MS4 Annual Reports under the 2003 Permit and their Year 1 Annual Report under the 2016 MS4 Permit, the Town has relied on updates to Chapter 195-104 and its affiliated rules and regulations to meet the requirements of the 2003 MS4 permit.

The 2003 MS4 Permit required the Town to develop, implement, and enforce a program to address stormwater runoff from construction activities, and address post-construction stormwater runoff from new development and redevelopment projects, that disturb greater than one acre and discharge to the MS4. That program should have also included projects disturbing less than one acre which are part of a larger common plan of development disturbing greater than one acre. As part of that program, the Town was to develop an ordinance or other regulatory mechanism to address construction runoff and address post-construction stormwater runoff from new development and redevelopment.

§195-38:40 Environmental Protection Standards:

Article VIII prohibits any discharge into a surface water or groundwater resource that can contaminate such resource or water supply. It establishes erosion control requirements to avoid erosion damage, sedimentation, or uncontrolled surface water runoff in areas where post-construction slopes will exceed 15%.

§195-69:75 Aquifer Protection District:

Article XIV regulates land use and impervious lot coverage within the overlay district. Land uses that are more vulnerable to releasing pollutants are not allowed without a special permit. Any proposed development must not exceed 15% impervious lot coverage or 2,500 square feet of any lot, whichever is greater, without receiving a special permit from the Planning Board.

§195-76:82 Floodplain District:

Article XV prohibits the use of land subject to seasonal and periodic flooding for residences or dwellings. It is in place to protect and maintain the water table and groundwater recharge areas within the Town, and to provide adequate floodwater storage capacity to protect persons and property against flood inundation.

§195-104 Site Plan Review:

The site plan review bylaw, last amended at Town Meeting on October 15, 2012, requires that construction activities meeting certain thresholds of disturbance undergo site plan review by the Planning Board. Applicable construction activities include the following:

- The construction, expansion, or change of use of any municipal, institutional, commercial, industrial, or multifamily structure by more than 500 square feet.
- The construction or expansion of a parking lot on any municipal, institutional, commercial, industrial, or multifamily lot by more than 500 square feet.
- The grading or clearing of more than 10% of a lot.
- The construction or expansion of a single-family or two-family structure by more than 4,000 square feet.

This bylaw establishes submission requirements and review procedures for site plan approval. It requires site plans to include erosion and sediment controls during construction and requires the submission of supporting drainage calculations that conform to the MA Stormwater Policy. The bylaw authorizes the Planning Board to adopt and amend supporting site plan regulations.

Planning Board Site Plan and Special Permit Regulations and Procedures

The Town has separate Site Plan and Special Permit Regulations and Procedures, which were promulgated under Chapter 195-104 of the Town's bylaws in 2000 and most recently revised on August 12, 2009. Storm drainage runoff calculations are required for all projects requiring site plan

approval and must certify that the drainage system is in compliance with the Massachusetts Stormwater Policy. Site plan applications must include a description of the erosion and sedimentation control measures that will be employed during and after construction. The Regulations and Procedures require long-term operation and maintenance of the drainage system and require the submission of an as-built plan prior to the issuance of a Certificate of Occupancy and Use.

Chapter 202—Subdivision of Land (Regulations)

Chapter 202, Rules and Regulations for the Subdivision of Land was first adopted by the Chelmsford Planning Board on December 28, 1977 and has been periodically amended since then. The Regulations, authorized by the Subdivision Control Law, MGL c. 41, §§81K-81GG, require the submission of a definitive plan for all subdivisions in the Town of Chelmsford, and they outline design standards and required improvements for all proposed subdivisions. Subdivisions are not exempt from the requirements of the Site Plan Review bylaw (Chapter 195-104).

Chapter 202-14 — Stormwater Management

Chapter 202-14, Stormwater Management, a subsection of the Subdivision Regulations, was last amended on September 28, 1994. This section outlines design standards for drainage systems associated with subdivision projects and is primarily concerned with providing adequate drainage on any new streets that may be constructed. It includes design storm frequencies, drainpipe requirements and configuration, and connections to existing infrastructure. This section does not include pollutant removal or water quality requirements for stormwater management systems on subdivisions.

AJ 3.0 Recommended Construction and Post-Construction Stormwater Management Regulatory Updates for Compliance with the MS4 Permit

AJ 3.1 Construction Site Stormwater Runoff Control

The 2016 MS4 Permit builds on the requirements of the 2003 MS4 Permit for construction site runoff control and requires the following (Year 1 requirements):

Site Inspection & Enforcement

Permit Requirement:

Development of written procedures for site inspections and enforcement of sediment and erosion control measures. These procedures shall clearly define who is responsible for site inspections as well as who has authority to implement enforcement procedures. The program shall provide that the permittee may, to the extent authorized by law, impose sanctions to ensure compliance with the local program. These procedures and regulatory authorities shall be documented in the SWMP.

Excerpts from Chelmsford's Regulations that Support Permit Requirement:

Section 2.1, Applicability, of the Regulations Governing Fees appended to the Site Plan and Special Permit Regulations and Procedures, gives the Planning Board the authority to impose a consultant review fee on those applications which require assistance from outside consultants. This assistance may include the inspection of a project or site for compliance with the Board's decisions or regulations, or the inspection of a project during construction or implementation. While this section implies that the Planning Board has the authority to enter a site and conduct an inspection, there are no clear written procedures for site inspections or enforcement actions in any of the regulatory mechanisms discussed above.

The Town has developed a Construction Site Inspection Form and an Erosion and Sediment Control Inspection Form that are used when conducting inspections and serve as written procedures.

Recommended Modification:

The Town should add language to the Site Plan and Special Permit Regulations and Procedures which explicitly gives the Planning Board or its designated agent the authority to inspect active construction sites. This section should outline those stages of construction at which an inspection must occur and require that developers inspect the erosion and sedimentation controls onsite at regular intervals. Language should also be added which outlines appropriate enforcement actions to be taken should a site be found to be in violation of the conditions of approval, the Site Plan and Special Permit Regulations and Procedures, or the Site Plan Review bylaw.

Sediment and Erosion Control BMPs

Permit Requirement:

Requires construction site operators performing land disturbance activities within the MS4 jurisdiction that result in stormwater discharges to the MS4 to implement a sediment and erosion control program. The program must include BMPs appropriate for the conditions at the construction site. Examples of appropriate sediment and erosion control measures for construction sites include local requirements to:

- Minimize the amount of disturbed area and protect natural resources
- Stabilize sites when projects are complete, or operations have temporarily ceased
- Protect slopes on the construction site
- Protect all storm drain inlets and armor all newly constructed outlets
- Use perimeter controls at the site
- Stabilize construction site entrances and exists to prevent off-site tracking
- Inspect stormwater controls at consistent intervals

EPA supports and encourages the use of design standards in local programs. The program may include references to BMP design standards in state manuals, such as the Massachusetts Stormwater Handbook or design standards developed by the MS4.

Excerpts from Chelmsford's Regulations that Support Permit Requirement:

Section E.1.(e) of Chapter 195-104, Site Plan Review, of the Zoning bylaw requires the submission of a landscaping plan which includes all proposed erosion control measures on the site. The Site Plan and Special Permit Regulations and Procedures require applicants to include a description of all proposed erosion and sedimentation control measures on the submitted site plan.

Recommended Modification:

While erosion and sediment controls are a requirement of site plan approval, language could be added to the Site Plan and Special Permit Regulations which specifies those erosion controls which are preferred in Chelmsford (for example, some communities do not allow the use of hay bales for erosion control as they may introduce invasive species to the area). The Town could also update the submission requirements in Section 2 of the Regulations and Procedures to require applicants to provide a separate Erosion and Sedimentation Control Plan, which would ease the review process and ensure compliance with the MS4 Permit.

Control of WastesPermit Requirement:

Requires construction site operators within the MS4 jurisdiction to control wastes, including but not limited to discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes. These wastes may not be discharged to the MS4.

Excerpts from Chelmsford's Regulations that Support Permit Requirement:

Section 137-1, Dumping, of Chapter 137, Solid Waste, prohibits the dumping of solid waste on any public or private property other than an area approved by the Board of Health of the Massachusetts Department of Environmental Quality Engineering. Section 142-6, Discharge of Water to Public Ways or Sidewalks; Discharges to Storm Sewer, of Chapter 142, Streets and Sidewalks, prohibits the dumping or discharge of any pollutant or non-stormwater discharge into the MS4. There is not, however, a regulatory mechanism in place which explicitly requires construction site operators to control wastes originating from the construction site.

Recommended Modification:

Language should be added to the Site Plan Review and Special Permit Regulations and Procedures requiring applicants to describe how construction wastes will be managed on the site. To facilitate review and ensure compliance with the MS4 Permit, the Town could require the submission of a separate Waste Control Plan under Section 2, Submittal Requirements. This would require applicants to list the construction and waste materials expected to be generated or stored at the site, and describe in narrative form the Best Management Practice that will be utilized to reduce pollutants from these materials and minimize the exposure of these materials to stormwater.

Site Plan Review, Inspection, and EnforcementPermit Requirement:

Development of written procedures for site plan review, inspection and enforcement. The site plan review procedure shall include a pre-construction review by the permittee of the site design, the planned operations at the construction site, planned BMPs during the construction phase, and the planned BMPs to be used to manage runoff created after development. The review procedure shall incorporate procedures for the consideration of potential water quality impacts, and procedures for the receipt and consideration of information submitted by the public. The site plan review procedure shall also include evaluation of opportunities for use of low impact design and green infrastructure. When the opportunity exists, the permittee shall encourage project proponents to incorporate these practices into the site design. The procedures for site inspection conducted by the permittee shall include the requirement that inspections occur during construction of BMPs as well as after construction of BMPs to ensure they are working as described in the approved plans, clearly defined procedures for inspections including qualifications necessary to perform the inspections, the use of mandated inspections forms if appropriate, and procedure for tracking the number of site reviews, inspections, and enforcement actions.

Excerpts from Chelmsford's Regulations that Support Permit Requirement:

Site plan review procedures are outlined in Chapter 195-104, Site Plan Review, of the Town's Zoning Bylaw and in the accompanying Site Plan and Special Permit Regulations and Procedures. The bylaw and the regulations do not include procedures for site inspections or enforcement actions.

Recommended Modification:

The Town should incorporate language regarding site inspections and enforcement into the Site Plan and Special Permit Regulations and Procedures as recommended in Section AJ 3.1. In order to fully meet this permit requirement, the Town should consider developing a separate document or Standard Operating Procedures (SOP) for site plan review, inspection, and enforcement, which would synthesize all pertinent regulatory mechanisms into one reference for Town staff to use when conducting reviews and performing inspections.

AJ 3.2 Post-Construction Stormwater Management

The 2016 MS4 Permit builds on the requirements of the 2003 MS4 Permit for post-construction runoff from new development and redevelopment and requires the following (Year 2 or 3 requirements):

Low Impact Development**Permit Requirement:**

Low Impact Development (LID) site planning and design strategies must be implemented unless infeasible in order to reduce discharge of stormwater from development sites.

Excerpts from Chelmsford's Regulations that Support Permit Requirement:

There is not currently any language in Chelmsford's regulatory mechanisms requiring the use of LID strategies in site plan design.

Recommended Modification:

Language should be added to Section 2.8.6, Site Improvements, of the Site Plan and Special Permit Regulations and Procedures requiring the use of low-impact development planning and design strategies. The Town can require applicants to include a narrative with the site plan review submittal describing the LID practices employed in the design or, if applicable, describing those aspects of the site which make LID infeasible.

BMP Design Guidance**Permit Requirement:**

Stormwater drainage systems' design shall be consistent with, or more stringent than, the requirements for best management practices of the 2008 Massachusetts Stormwater Handbook.

Excerpts from Chelmsford's Regulations that Support Permit Requirement:

The Site Plan Review bylaw (Chapter 195-104) and Section 2.6 of the Site Plan and Special Permit Regulations and Procedures both require stormwater management systems on projects requiring site plan approval to conform to the Massachusetts Stormwater Policy. The Rules and Procedures also require applicants to use whichever BMPs are required by the MA Stormwater Policy, or comparable BMPs, in the drainage system design.

Recommended Modification:

The Massachusetts Stormwater Policy is an outdated reference—it was last updated in 1996, while the MA Stormwater Handbook and accompanying Stormwater Standards were revised in 2008 and are scheduled to be updated in the upcoming year. The references to the Massachusetts Stormwater Policy should be removed and replaced with references to the most recent edition of the Massachusetts Stormwater Handbook.

Compliance with the Stormwater Management Standards for New Development

Permit Requirement:

Stormwater Management Systems on new development sites shall be designed to meet an average annual pollutant removal equivalent to 90% of the average annual load of Total Suspended Solids (TSS) related to the total post-construction impervious area on the site AND 60% of the average annual load of Total Phosphorus (TP) related to the total post-construction impervious surface area on the site.

- Average annual pollutant removal requirements are achieved through one of the following methods:
 - Installing BMPs that meet the pollutant removal percentages based on calculations developed consistent with EPA Region 1's BMP Accounting and Tracking Tool (2016) or other BMP performance evaluation tool provided by EPA Region 1, where available. If EPA Region 1 tools do not address the planned or installed BMP, design guidance or performance standards (e.g., State-approved stormwater handbook and design guidance manuals) may be used to calculate BMP performance; or
 - Retaining the volume of runoff equivalent to one (1.0) inch multiplied by the total post-construction impervious surface area on the new development site; or
 - Meeting a combination of retention and treatment that achieves the above standard; or
 - Utilizing offsite mitigation that meets the above standards within the same subwatershed (USGS HUC12) as the development site*

*The language above reflects the proposed permit modifications developed as a result of the settlement with the Center for Regulatory Reasonableness in December 2019. These modifications have not yet been enacted by EPA and MA DEP. Most of the requirements are the same as the current permit, however as it stands to-date, offsite mitigation is not acceptable for stormwater systems on new development sites. If these modifications are not adopted, any regulatory language allowing offsite mitigation for new development sites would be noncompliant.

Excerpts from Chelmsford's Regulations that Support Permit Requirement:

The only language currently included related to design standards for stormwater treatment is the requirement in Chapter 195-104 and the Site Plan and Special Permit Regulations and Procedures for drainage systems to conform to the Massachusetts Stormwater Policy as mentioned above. Chelmsford does not currently have any other regulatory language outlining specific stormwater standards for new development projects, nor is there language distinguishing between new development and redevelopment projects.

Recommended Modification:

Language should be added to Section 2.6 of the Site Plan and Special Permit Regulations and Procedures to meet the Permit Requirements of this section. If the Town chooses to include different requirements for new development and redevelopment, then that language should also include a definition of new development and redevelopment at least as stringent as the following:

- **New Development:** any construction activities or land alteration resulting in total earth disturbances equal to or greater than one acre (or activities that are part of a larger common

plan of development disturbing greater than one acre) on an area that has not previously been developed to include impervious cover.

- **Redevelopment:** any construction, land alteration, or improvement of impervious surfaces resulting in total earth disturbances equal to or greater than one acre (or activities that are part of a larger plan of development disturbing greater than one acre) that does not meet the definition of new development above.

If the Town chooses not to distinguish between new development and redevelopment sites, then all stormwater management systems must meet the treatment requirements above. The Town should not allow offsite mitigation for new development sites unless the proposed permit modifications have been adopted by EPA and MA DEP.

Compliance with the Stormwater Management Standards for Redevelopment

Permit Requirement:

Stormwater management systems on redevelopment sites shall be designed to meet an average annual pollutant removal equivalent to 80% of the average annual post-construction impervious area on the site AND 50% of the average annual load of Total Phosphorus (TP) related to the total post-construction impervious surface area on the site.

- Average annual pollutant removal requirements above are achieved through one of the following methods:
 - Installing BMPs that meet the pollutant removal percentages based on calculations developed consistent with EPA Region 1's BMP Accounting and Tracking Tool (2016) or other BMP performance evaluation tool provided by EPA Region 1, where available. If EPA Region 1 tools do not address the planned or installed BMP design guidance or performance standards (e.g., State-approved stormwater handbook and design guidance manuals) may be used to calculate BMP performance; or
 - Retaining the volume of runoff equivalent to 0.8 inch multiplied by the total post-construction impervious surface area on the new development site; or
 - Meeting a combination of retention and treatment that achieves the above standard; or
 - Utilizing offsite mitigation that meets the above standards within the same USGS HUC12 as the development site**

** The language above reflects the proposed permit modifications developed as a result of the settlement with the Center for Regulatory Reasonableness in December 2019. These modifications have not yet been enacted by EPA and MA DEP. The requirements for stormwater management on redevelopment sites are effectively the same as the current permit, however offsite mitigation is currently allowed within the same USGS HUC10 area as the development site. USGS HUC10 areas range in size from 40,000 to 250,000 acres; HUC12 areas are between 10,000 and 40,000 acres. In this case, the proposed permit modifications are more stringent than current permit requirements.

Redevelopment activities that are exclusively limited to maintenance and improvement of existing roadways, and do not increase the amount of impervious area by more than a single lane width, shall improve existing conditions where feasible and are exempt from any of the parts listed previously above.

Excerpts from Chelmsford's Regulations that Support Permit Requirement:

The only language currently included related to design standards for redevelopment projects is the requirement in Chapter 195-104 and the Site Plan and Special Permit Regulations and Procedures for drainage systems to conform to the Massachusetts Stormwater Policy as mentioned above. Chelmsford does not currently have any other regulatory language outlining specific stormwater standards for redevelopment projects, nor is there language distinguishing between new development and redevelopment projects.

Recommended Modification:

If the Town chooses to distinguish between new development and redevelopment projects, language should be added to the Site Plan and Special Permit Regulations and Procedures to meet the Permit Requirements of this section. If the Town chooses to allow offsite mitigation for redevelopment sites, it should be limited to the same subwatershed area (defined by USGS HUC12) to meet the more stringent proposed permit requirements and avoid the need to perform more than one round of updates.

Submission of As-BuiltsPermit Requirement:

The permittee shall require, at a minimum, the submission of as-built drawings no later than two (2) years after completion of construction projects. The as-built drawings must depict all on site controls, both structural and non-structural, designed to manage the stormwater associated with the completed site (post construction stormwater management).

Excerpts from Chelmsford's Regulations that Support Permit Requirement:

Section 5, Post-Construction Requirements, of the Site Plan and Special Permit Regulations and Procedures require applicants to submit an as-built plan following construction and prior to the issuance of a Certificate of Occupancy and Use. This plan must show all drainage structures including the cumulative volumes of all detention areas.

Recommended Modification:

The current language meets MS4 Permit requirements.

Long-Term Operation & MaintenancePermit Requirement:

The new development/redevelopment program shall have procedures to ensure adequate long-term operation and maintenance of stormwater management practices that are put in place after the completion of a construction project. These procedures may include the use of dedicated funds or escrow accounts for development projects or the acceptance of ownership by the permittee of all privately owned BMPs. These procedures may also include the development of maintenance contracts between the owner of the BMP and the permittee. Alternatively, these procedures may include the submission of an annual certification documenting the work that has been done over the last 12 months to properly operate and maintain the stormwater control measures. The procedures to require submission of as-built drawings and ensure long term operation and maintenances shall be a part of the SWMP.

Excerpts from Chelmsford's Regulations that Support Permit Requirement:

Section 2.8.16, Plan Notes, of the Site Plan and Special Permit Regulations and Procedures requires the cleaning of catch basin sumps and stormwater basins following construction and annually

thereafter, or more frequently if required by the operation and maintenance plan. No other regulatory mechanism discussed above requires applicants to submit operation and maintenance plans.

Recommended Modification:

Language should be added to Section 2, Submittal Requirements, of the Site Plan and Special Permit Regulations and Procedures which explicitly requires applicants to submit a long-term operation and maintenance plan for the stormwater system. This plan should include the name and contact information for the person responsible for the operation and maintenance of the stormwater system, as well as provisions for the transfer of responsibility when the property changes ownership.

Phosphorous Impairment

Permit Requirement:

For discharges to water quality limited water bodies and their tributaries where phosphorous is the cause of the impairment, the Town's regulatory mechanism for Stormwater Management in New Development and Redevelopment, shall include a requirement that new development and redevelopment stormwater management BMPs be optimized for phosphorus removal.

Excerpts from Chelmsford's Regulations that Support Permit Requirement:

There is no language in Chelmsford's existing regulatory mechanisms requiring BMPs to be optimized for phosphorus removal.

Recommended Modification:

Language should be added to Section 2.6 of the Site Plan and Special Permit Regulations and Procedures specifying that BMPs on new development and redevelopment sites must be optimized for phosphorus removal.

Turbidity and Oil Impairment

Permit Requirement:

For discharges to water quality limited water bodies and their tributaries where turbidity is the cause of the impairment, the Town's regulatory mechanism for Stormwater Management in New Development and Redevelopment (Year 2 or 3 Permit Requirement), shall include a requirement that all new development and redevelopment stormwater management BMPs located on commercial or industrial land incorporate designs that allow for shutdown and containment to isolate the drainage system in the event of an emergency spill or other unexpected event. EPA also encourages the Town to require that any BMPs designed to infiltrate stormwater on commercial and industrial sites be designed to obtain a level of pollutant removal that is equal to or greater than the level of pollutant removal provided by a comparable biofiltration system treating the same volume of runoff.

Excerpts from Chelmsford's Regulations that Support Permit Requirement:

Chelmsford does not currently have any additional requirements for stormwater systems that will eventually discharge to a waterbody impaired for turbidity.

Recommended Modification:

The following language should be added to Section 2.6 of the Site Plan and Special Permit Regulations and Procedures: "To support compliance with the Town's MS4 Permit, all new development and redevelopment stormwater management BMPs located on commercial or industrial land must incorporate designs that allow for shutdown and containment to isolate the drainage system in the event of an emergency spill or otherwise unexpected event".

CHELMSFORD, MA
MS4 GENERAL PERMIT COMPLIANCE - YEAR 3 (FY21)
Breakdown of Permit Requirements & Implementation Timeframes

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
SECTION 1 - INTRODUCTION				
1.10.2	Update written SWMP	As Necessary	Update the SWMP as needed on an annual basis.	Stormwater Division - Stormwater Engineer
SECTION 2- NON-NUMERIC EFFLUENT LIMITATIONS				
2.1 - Water Quality Based Effluent Limitations				
2.1.1.c	For MS4 discharges to a water body that is water quality limited and not subject to an approved TMDL or for municipalities located within Part 2.2.2a.-b., comply with Part 2.2.2 and Appendix H of the Permit	see Appendix H of the 2016 Final MA MS4 General Permit	Impaired waters in Chelmsford or impaired waters that Chelmsford is tributary to without an approved TMDL and their reason for impairment are as follows: Concord River - Phosphorus and Fecal Coliform, Black Brook - E. Coli, Deep Brook - E. Coli, Heart Pond - E. Coli, Stony Brook - E.Coli, Black Brook - Turbidity, River Meadow Brook - Fecal Coliform, and the Merrimack River - Fecal Coliform.	Requirements and any associated outside costs included under H.II, H.III, and H.V.
2.1.1.d	For all other discharges (not subject to the requirements of Part 2.1.1.b and Part 2.1.1.c of the Permit) contributing to a violation of applicable receiving water quality standards, eliminate condition causing or contributing to exceedance of water quality standards	within 60 days of becoming aware of the situation	If a discharge is identified that contributes to an exceedance of applicable water quality standards, eliminate the conditions contributing to or causing the exceedance within 60 days.	Any associated outside costs included under IDDE under Item 2.3.4.2.a.
2.1.2	Written notification to MADEP & EPA as needed & documentation in the Town's SWMP regarding new or increased stormwater discharges	as-needed	Any new or increased stormwater discharges must satisfy MA antidegradation regulations.	Stormwater Division - Stormwater Engineer
2.2 - Discharges to Impaired Waters				
2.2	Identify all outfalls/interconnections that discharge to waters with an approved TMDL or discharge to certain waters identified as "water quality limited water bodies"	SWMP (1 yr) & annual MS4 stormwater reports	Identify all outfalls or interconnections that discharge to water quality limited water bodies	Included under Item 4.4.
IMPAIRED - PHOSPHORUS (INCLUDES TRIBUTARIES)				
H.II.1.a.i.1	Distribute clippings/fertilizer message to required audiences	Annually in March/April	Develop and disseminate required public education information.	Stormwater Division - Stormwater Engineer
H.II.1.a.i.1	Distribute pet waste management message to Residential	Annually in June/July		
H.II.1.a.i.1	Distribute leaf litter disposal message to Residential/Business/Commercial	Annually August-October		
H.II.1.a.i.2	2.3.6 Ordinance to require BMPs optimized for Phosphorus removal	With 2.3.6; 2 years from effective date / may be moved to 3 years based on permit modifications	Include in Town's stormwater management regulations a requirement that new development and redevelopment stormwater BMPs be optimized for phosphorus removal.	Included under 2.3.6.a.ii.
H.II.1.a.i.3	2.3.7 Sweep streets/lots \geq 2/yr spring & fall	Sweep at least twice/year	Increase frequency of sweeping of public streets and municipal parking lots to a minimum of two times per year in catchments tributary to the Concord River.	Street sweeping included under 2.3.7.a.iii.3 & 4.
IMPAIRED - BACTERIA / PATHOGENS				
H.III.2.a.i	Distribute residential message on pet waste management (over/above 2.3.2)	Annually	Develop and disseminate required public education information, where applicable.	Stormwater Division - Stormwater Engineer
H.III.2.a.i	Send public ed. materials to septic system owners	Not specified; assume annually		
IMPAIRED - OIL/GREASE, SOLIDS OR METALS				
H.V.2.a.ii	Increased street sweeping & CB inspection/cleaning in targeted areas	Annual Reports	Increase street sweeping and catch basin cleaning in high density tributary areas with potential for high pollutant loads.	Street sweeping included under 2.3.7.a.iii.3 & 4. Catch basin cleaning included under 2.3.7.a.iii.2.

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3- Requirements to Reduce Pollutants to the Maximum Extent Practicable (MEP)				
PUBLIC EDUCATION & OUTREACH				
2.3.2.a-d	Distribute at least 2 educational messages to each of 4 targeted audiences (residents, businesses/commercial/institutional, developers and industrial). Different messages to the same targeted audience shall be distributed at least one year apart.	begin year 1; continue throughout permit term	Develop/distribute a minimum of 8 messages over the permit term. Educational messages can include brochures, newsletters, information posted to the Town's website, newspaper articles, public service announcements, displays in municipal buildings, etc.	Stormwater Division - Stormwater Engineer
2.3.2.e	Identify methods to evaluate the effectiveness of the message; Implement	not stated	Determine method to evaluate message effectiveness; implement method.	
2.3.2.f	Modify any ineffective message/methods of distribution	Before next message is distributed	Modify message or distribution methods if applicable.	
2.3.2.g	Report on messages as per permit	annual MS4 stormwater report	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
PUBLIC INVOLVEMENT & PARTICIPATION				
2.3.3.a	Meet Public Notice requirements	continuous	Ensure that all public involvement comply with state public notice requirements (MGL Chapter 30A, Sections 18-25)	Stormwater Division
2.3.3.a	Make the Stormwater Management Plan & Annual MS4 Stormwater report accessible to the public	continuous	Make SWMP and annual MS4 stormwater reports available to public at Town Hall and/or on the Town's website.	Stormwater Division
2.3.3.b	Provide public opportunity to participate in the review/implementation of the Stormwater Management Program	annually	May be implemented through the use of Town website, Town hotline, clean-up teams, monitoring teams, or a stormwater advisory committee.	Stormwater Division
2.3.3.c	Report on public participation opportunities	annually	Report Progress in the annual MS4 Stormwater Permit	Included under Item 4.4.
ILLICIT DISCHARGE DETECTION & ELIMINATION				
2.3.4.2.a	Eliminate illicit discharges	60 days or as expeditiously as possible	Eliminate illicit discharges as they are identified or establish a schedule for elimination for discharges that cannot be removed within 60 days.	Stormwater Division / Sewer Division
2.3.4.2.a	Report dates of illicit identification and schedules for removal	annual MS4 stormwater report	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.4.a	Mitigate SSOs	Expediently as possible	Eliminate SSO as expeditiously as possible and take interim mitigation measures to minimize the discharge of pollutants to and from the Town until elimination is completed.	Sewer Division
2.3.4.4.c	Report SSOs	24 hours from awareness	Provide oral notice to EPA within 24 hours and a written notice to the EPA and MassDEP within five (5) days	Sewer Division
2.3.4.4.d	Update SSO inventory	annual MS4 Stormwater report	Include status of mitigation and corrective measures implemented	Included under Item 4.4.
2.3.4.5.b	Map the MS4 features required in 2.3.4.5.b under Phase 2 including outfall spatial location, pipes, manholes, catch basins, refined catchment delineations, and the municipal sanitary system (if available) and the municipal combined sewer system (if applicable).	Annually during catchment investigation procedures; Within 10 years from permit effective date	Town has in place a comprehensive map of their drainage system. Anticipated mapping additions include: refined catchment delineations, updated/new drainage from new developments and re-developments, and drainage updates based on IDDE investigations.	Stormwater Division - GIS Analyst
2.3.4.5.e	Report on mapping progress	annual MS4 Stormwater reports	Report progress in Annual MS4 Stormwater Report	Included under Item 4.4.
2.3.4.7.a	Report on list of catchments and results of rankings & update annually	annual MS4 Stormwater reports	Report progress in Annual MS4 Stormwater Report	Included under Item 4.4.
2.3.4.7.b	Complete dry-weather outfall/interconnection screening & sampling (except Problem & Excluded Outfalls)	3 years from effective date	Inventory & complete dry weather screening & sampling of every regulated MS4 outfall and interconnection. Dry weather sampling parameters shall include, at a minimum, ammonia, chlorine, E.coli, surfactants, conductivity, salinity and temperature. Phosphorus, turbidity, TSS, dissolved oxygen, and BOD ₅ will also need to be included at selected outfalls to meet the requirements for impaired waters. Some analyses can be performed with test kits while other parameters will require lab analysis.	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)
2.3.4.7.c.iii	Follow-up ranking of outfalls and interconnections	3 years from effective date	Update ranking as dry weather screening information becomes available.	Stormwater Division - Stormwater Engineer

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3.4.8.a	Begin investigation of catchments associated with Problem Outfalls	no later than 2 years from effective date	Implement Illicit Discharge Detection and Elimination Investigations as required by the conditions of the permit. It is assumed that an Illicit Discharge Detection and Elimination Investigation Program will need to be implemented in all catchments. Catchments with no potential for illicit discharges (based on the catchment ranking exercise completed under Task 2.3.4.7.c.) can be excluded from the IDDE Program.	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)
2.3.4.8.a	Begin investigation of catchments associated with High and Low Priority Outfalls	After completion of outfall ranking - latest allowable timeframe is 3 years from effective date		
2.3.4.8.a	Complete Investigation of catchments associated with Problem Outfalls	7 years from effective date		
2.3.4.8.a	Complete Investigations of catchments where info on outfall/interconnection identifies sewer input	7 years from effective date		
2.3.4.8.a	Complete Investigations of catchments associated with all Problem, High- and Low-Priority outfalls	10 years from effective date		
2.3.4.8.cii.2	Wet weather sampling	Start upon completion of dry weather investigation; Must be complete by end of Year 10	Wet weather sampling must be completed at all regulated outfalls and interconnections where the catchment has a minimum of one (1) System Vulnerability Factor. Wet weather sampling parameters shall include, at a minimum, ammonia, chlorine, conductivity, salinity, E.coli, surfactants and temperature. For outfalls that discharge to receiving waters with impairments samples collected will have to be analyzed for these parameters as well (i.e. Phosphorus, TSS, Turbidity, DO and BOD).	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)
2.3.4.8.c.iii	Report on all data collected as part of the catchment investigations	annual MS4 Stormwater Report	Report data in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.8.e.i	Report on each illicit discharge identified and date of removal	annual MS4 stormwater reports	For each confirmed source, the following information shall be included: location of discharge and source; description of discharge; method of discovery; date of discovery; date of elimination, mitigation or enforcement action or planned corrective measures; and estimate of the volume of flow removed.	Included under Item 4.4.
2.3.4.8.e.ii	Conduct confirmatory outfall or interconnection screening	1 year from removal of discharges	If confirmatory screening indicates evidence of illicit discharge, the catchment shall be scheduled for additional investigation.	Stormwater Division
2.3.4.9	Evaluate & report IDDE program progress	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.11	Conduct IDDE employee training	at least annually	Continue to train employees about the IDDE Program including how to recognize illicit discharges and SSOs.	Stormwater Division
2.3.4.11	Report on IDDE employee training	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
CONSTRUCTION SITE STORMWATER RUNOFF CONTROL				
2.3.5	Implement & enforce Construction Site Stormwater Runoff Control (CSSRC) Program	not stated	Continue to implement and enforce a program to reduce pollutants in stormwater runoff from construction activities per the 2003 Permit.	Engineering/DPW/Conservation
POST-CONSTRUCTION STORMWATER MANAGEMENT				
2.3.6.a	Implement & enforce SW management for New Development/Redevelopment	not stated	Continue to implement and enforce a program to address post-construction stormwater runoff from new development and redevelopment projects per the 2003 Permit.	Building/Planning/Zoning/Engineering/DPW/Conservation
2.3.6.a.ii	Amend existing regulatory mechanism to contain provisions at least as stringent as those outlined under Part 2.3.6.a.ii	2 years from effective date / Based on proposed permit modifications, could move to Permit Year 3	Amend existing stormwater regulations as needed to meet permit requirements.	Town has looked at pursuing grant funding to develop a separate stormwater regulatory mechanism that would include these requirements.
2.3.6.a.iii	Develop procedures for Post Construction Stormwater Management to ensure submission of as-built plans within a year from completed construction, and long-term O&M of BMPs; include in written SWMP.	2 years from effective date / Based on proposed permit modifications, could move to Permit Year 3	Existing regulations include as-builts and O&M procedures. Amend existing stormwater regulations as needed to ensure submission of as-built plans within two (2) years from completed construction, and long-term O&M of BMPs.	Town has looked at pursuing grant funding to develop a separate stormwater regulatory mechanism that would include these requirements.
2.3.6.a.iii	Report on measures to comply with 2.3.6.a.iii in annual MS4 stormwater report	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Cost included under Item 4.4.
GOOD HOUSEKEEPING AND POLLUTION PREVENTION FOR PERMITTEE OWNED OPERATIONS				

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3.7.a.ii.2	Provide training on use, storage, & disposal of petroleum products to applicable staff	not stated	Provide training on use, storage, & disposal of petroleum products to applicable municipal staff.	Stormwater Division
2.3.7.a.iii.2	Implement routine inspection/cleaning/maintenance of catch basins to ensure sumps <50% full; report on activities as specified; investigate excessive sediment; log/report CB cleaning	continuous; annual MS4 stormwater reports	Clean catch basins as needed to ensure that no sump is more than 50% full at any given time. The Town has approximately 4,500 catch basins town-wide and cleaned 100% of their catch basins during Permit Year 1. The Town is still in the process of collecting data to build their catch basin cleaning optimization plan. Assume that all catch basins will need to be cleaned annually to meet the permit requirements.	Town currently contracts out catch basin cleaning, but is looking to expand staffing and equipment resources to complete this work in-house.
2.3.7.a.iii.3 & 4.	Sweep streets/parking lots 1x/year in spring; report on efforts	annually; annual MS4 stormwater reports	The Town swept all streets at least once during Permit Year 1, and planned to increase staffing to sweep all streets twice per year in Year 2 to meet permit requirements for phosphorous-impaired waters.	Stormwater Division
2.3.7.a.iii.4	Ensure proper storage of CB cleanings & street sweeping to prevent runoff	NA	Examine storage of CB cleanings & street sweepings	Stormwater Division
2.3.7.a.iii.6	Establish/implement procedures to inspect/maintain storm drains & structural BMPs; and for annual inspection of treatment structures	not stated	Establish/implement procedures to inspect/maintain storm drains & structural BMPs; inspect treatment structures annually at a minimum.	Stormwater Division
2.3.7.a.iv	Report on all Good Housekeeping/Pollution Prevention requirements	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.7.a.v	Keep written record of all Good Housekeeping/Pollution Prevention activities	continuous	Keep written record of all maintenance activities, inspections and training completed.	Stormwater Division / Highway Division / Sewer Division
2.3.7.b.ii & iii	Perform SWPPP required actions/inspections/training	frequencies as per permit	Perform quarterly inspections at facilities and conduct annual employee training. The Town has SWPPPs in place for the DPW Facility at 9 Alpha Road, Highway Department at 54 Richardson Road and at the capped landfill at 40 Swain Road.	Stormwater Division
2.3.7.b.iv	Maintain written records for all SWPPP related items under 2.3.7.b	continuous	Keep written record of all maintenance activities, inspections and training completed.	Stormwater Division
SECTION 3 - ADDITIONAL REQUIREMENTS FOR DISCHARGES TO SURFACE DRINKING WATER SUPPLIES AND THEIR TRIBUTARIES				
3.0.a	Make MS4 discharges to surface drinking water supply sources & their tributaries a priority in the SWMP	continuous; report annually	Identify any outfalls discharging to drinking water supplies and make these a priority in implementation of the SWMP. This would include the two outfalls discharging to the Merrimack River and the two outfalls discharging to the Concord River, as the Concord River is tributary to the Merrimack River, which is a surface drinking water supply for other communities although not for Chelmsford.	As part of the IDDE Investigations, the Stormwater Division has designated catchments tributary to surface drinking water supply sources as high priority.
3.0.b	Provide pretreatment/spill control for MS4 discharges to public surface drinking water supply sources & their tributaries	continuous; report annually	Provide pretreatment/spill control for outfalls discharging to public surface drinking water supply sources and their tributaries. This includes both the Merrimack River and the Concord River.	Stormwater Division to investigate source protection needs and potential implementation of BMPs. The Concord River is impaired for phosphorus so there will be additional potential BMP retrofits installed in catchment areas tributary to the Concord River as part of the Phosphorus Source Identification Report.
3.0.c	Avoid direct discharges to Class A waters	continuous; report annually	There are no Class A Waters located in Chelmsford.	Stormwater Division

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
4.1.a	Self-evaluate compliance with the permit; include documentation of evaluation in written SWMP	annually	Annually evaluate Town's compliance with permit conditions.	Stormwater Division - Stormwater Engineer
4.1.b	Evaluate BMP effectiveness & change if needed under provisions of permit	not stated	Evaluate BMP effectiveness in achieving permit objectives & modify BMPs accordingly as needed.	
4.1.b	Report BMP modifications	annual MS4 stormwater reports	Include in Annual MS4 Stormwater Report.	
4.2	MS4 must keep records for ≥ 5 yrs; make available to public	Continuous	Maintain annual MS4 stormwater reports and make available to the public.	
4.3	Document results of MS4 outfall screening/sampling & any other monitoring/studies	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	
4.4	Submit Annual MS4 Stormwater Report	annually 90 days from effective date	Prepare Annual MS4 Stormwater Report.	

CHELMSFORD, MA
MS4 GENERAL PERMIT COMPLIANCE -YEAR 4 (FY22)
Breakdown of Permit Requirements & Implementation Timeframes

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
SECTION 1 - INTRODUCTION				
1.10.2	Update written SWMP	4 years from effective date	Update the SWMP to include those items that are required to be included in the SWMP within four years of the permit effective date as identified in Section 1.10.2.	Stormwater Division - Stormwater Engineer
SECTION 2- NON-NUMERIC EFFLUENT LIMITATIONS				
2.1 - Water Quality Based Effluent Limitations				
2.1.1.c	For MS4 discharges to a water body that is water quality limited and not subject to an approved TMDL or for municipalities located within Part 2.2.2a.-b., comply with Part 2.2.2 and Appendix H of the Permit	see Appendix H of the 2016 Final MA MS4 General Permit	Impaired waters in Chelmsford or impaired waters that Chelmsford is tributary to without an approved TMDL and their reason for impairment are as follows: Concord River - Phosphorus and Fecal Coliform, Black Brook - E. Coli, Deep Brook - E. Coli, Heart Pond - E. Coli, Stony Brook - E.Coli, Black Brook - Turbidity, River Meadow Brook - Fecal Coliform, and the Merrimack River - Fecal Coliform.	Requirements and any associated outside costs included under H.II, H.III, and H.V.
2.1.1.d	For all other discharges (not subject to the requirements of Part 2.1.1.b and Part 2.1.1.c of the Permit) contributing to a violation of applicable receiving water quality standards, eliminate condition causing or contributing to exceedance of water quality standards	within 60 days of becoming aware of the situation	If a discharge is identified that contributes to an exceedance of applicable water quality standards, eliminate the conditions contributing to or causing the exceedance within 60 days.	Any associated outside costs included under IDDE under Item 2.3.4.2.a.
2.1.2	Written notification to MADEP & EPA as needed & documentation in the Town's SWMP regarding new or increased stormwater discharges	as-needed	Any new or increased stormwater discharges must satisfy MA antidegradation regulations.	Stormwater Division - Stormwater Engineer
2.2 - Discharges to Impaired Waters				
2.2	Identify all outfalls/interconnections that discharge to waters with an approved TMDL or discharge to certain waters identified as "water quality limited water bodies"	SWMP (1 yr) & annual MS4 stormwater reports	Identify all outfalls or interconnections that discharge to water quality limited water bodies.	Included under Item 4.4.
IMPAIRED - PHOSPHORUS (INCLUDES TRIBUTARIES)				
H.II.1.a.i.1	Distribute clippings/fertilizer message to required audiences	Annually in March/April	Develop and disseminate required public education information.	Stormwater Division - Stormwater Engineer
H.II.1.a.i.1	Distribute pet waste management message to Residential	Annually in June/July		
H.II.1.a.i.1	Distribute leaf litter disposal message to Residential/Business/Commercial	Annually August-October		
H.II.1.a.i.2	2.3.6.1.b to include consideration of BMPs that Infiltrate stormwater	With 2.3.6.1.b; 4 years from effective date	Inventory and priority ranking of Town property and infrastructure that could be retrofitted with BMPs to include consideration of BMPs that infiltrate stormwater.	Included under 2.3.6.d.
H.II.1.a.i.3	2.3.7 Sweep streets/lots ≥2/yr spring & fall	Sweep at least twice/year	Increase frequency of sweeping of public streets and municipal parking lots to a minimum of two times per year in catchments tributary to the Concord River.	Included under 2.3.7.a.iii.3 & 4.
H.II.1.b	Complete Phosphorus Source Identification Report	4 years from effective date; With Year 4 Annual Report	Develop Phosphorus Source Identification Report to include the items listed in Appendix H of the MS4 Permit.	Stormwater Division - Stormwater Engineer
IMPAIRED - BACTERIA / PATHOGENS				
H.III.2.a.i	Distribute residential message on pet waste management (over/above 2.3.2)	Annually	Develop and disseminate required public education information, where applicable.	Stormwater Division - Stormwater Engineer
H.III.2.a.i	Send public ed. materials to septic system owners	Not specified; assume annually		
IMPAIRED - OIL/GREASE, SOLIDS OR METALS				
H.V.2.a.ii	Increased street sweeping & CB inspection/cleaning in targeted areas	Annual Reports	Increase street sweeping and catch basin cleaning in high density tributary areas with potential for high pollutant loads.	Street sweeping included under 2.3.7.a.iii.3 & 4. Catch basin cleaning included under 2.3.7.a.iii.2.

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3- Requirements to Reduce Pollutants to the Maximum Extent Practicable (MEP)				
PUBLIC EDUCATION & OUTREACH				
2.3.2.a-d	Distribute at least 2 educational messages to each of 4 targeted audiences (residents, businesses/commercial/institutional, developers and industrial). Different messages to the same targeted audience shall be distributed at least one year apart.	begin year 1; continue throughout permit term	Develop/distribute a minimum of 8 messages over the permit term. Educational messages can include brochures, newsletters, information posted to the Town's website, newspaper articles, public service announcements, displays in municipal buildings, etc.	Stormwater Division - Stormwater Engineer
2.3.2.e	Identify methods to evaluate the effectiveness of the message; Implement	not stated	Determine method to evaluate message effectiveness; implement method.	
2.3.2.f	Modify any ineffective message/methods of distribution	Before next message is distributed	Modify message or distribution methods if applicable.	
2.3.2.g	Report on messages as per permit	annual MS4 stormwater report	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
PUBLIC INVOLVEMENT & PARTICIPATION				
2.3.3.a	Meet Public Notice requirements	continuous	Ensure that all public involvement comply with state public notice requirements (MGL Chapter 30A, Sections 18-25)	Stormwater Division
2.3.3.a	Make the Stormwater Management Plan & Annual MS4 Stormwater report accessible to the public	continuous	Make SWMP and annual MS4 stormwater reports available to public at Town Hall and/or on the Town's website.	Stormwater Division
2.3.3.b	Provide public opportunity to participate in the review/implementation of the Stormwater Management Program	annually	May be implemented through the use of Town website, Town hotline, clean-up teams, monitoring teams, or a stormwater advisory committee.	Stormwater Division
2.3.3.c	Report on public participation opportunities	annually	Report Progress in the annual MS4 Stormwater Permit	Included under Item 4.4.
ILLICIT DISCHARGE DETECTION & ELIMINATION				
2.3.4.2.a	Eliminate illicit discharges	60 days or as expeditiously as possible	Eliminate illicit discharges as they are identified or establish a schedule for elimination for discharges that cannot be removed within 60 days.	Stormwater Division / Sewer Division
2.3.4.2.a	Report dates of illicit identification and schedules for removal	annual MS4 stormwater report	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.4.a	Mitigate SSOs	Expediently as possible	Eliminate SSO as expeditiously as possible and take interim mitigation measures to minimize the discharge of pollutants to and from the Town until elimination is completed.	Sewer Division
2.3.4.4.c	Report SSOs	24 hours from awareness	Provide oral notice to EPA within 24 hours and a written notice to the EPA and MassDEP within five (5) days	Sewer Division
2.3.4.4.d	Update SSO inventory	annual MS4 Stormwater report	Include status of mitigation and corrective measures implemented	Included under Item 4.4.
2.3.4.5.b	Map the MS4 features required in 2.3.4.5.b under Phase 2 including outfall spatial location, pipes, manholes, catch basins, refined catchment delineations, and the municipal sanitary system (if available) and the municipal combined sewer system (if applicable).	Annually during catchment investigation procedures; Within 10 years from permit effective date	Town has in place a comprehensive map of their drainage system. Anticipated mapping additions include: refined catchment delineations, updated/new drainage from new developments and re-developments, and drainage updates based on IDDE investigations.	Stormwater Division - GIS Analyst
2.3.4.5.e	Report on mapping progress	annual MS4 Stormwater reports	Report progress in Annual MS4 Stormwater Report	Included under Item 4.4.
2.3.4.7.a	Report on list of catchments and results of rankings & update annually	annual MS4 Stormwater reports	Report progress in Annual MS4 Stormwater Report	Included under Item 4.4.
2.3.4.8.a	Begin investigation of catchments associated with Problem Outfalls	no later than 2 years from effective date	Implement Illicit Discharge Detection and Elimination Investigations as required by the conditions of the permit. For budgeting purposes, it is assumed that an Illicit Discharge Detection and Elimination Investigation Program will need to be implemented in all catchments. Catchments with no potential for illicit discharges (based on the catchment ranking exercise completed under Task 2.3.4.7.c.) can be excluded from the IDDE Program.	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)
2.3.4.8.a	Begin investigation of catchments associated with High and Low Priority Outfalls	After completion of outfall ranking - latest allowable timeframe is 3 years from effective date		
2.3.4.8.a	Complete Investigation of catchments associated with Problem Outfalls	7 years from effective date		
2.3.4.8.a	Complete Investigations of catchments where info on outfall/interconnection identifies sewer input	7 years from effective date		
2.3.4.8.a	Complete Investigations of catchments associated with all Problem, High- and Low-Priority outfalls	10 years from effective date		

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3.4.8.cii.2	Wet weather sampling	Start upon completion of dry weather investigation; Must be complete by end of Year 10	Wet weather sampling must be completed at all regulated outfalls and interconnections where the catchment has a minimum of one (1) System Vulnerability Factor. Wet weather sampling parameters shall include, at a minimum, ammonia, chlorine, conductivity, salinity, E.coli, surfactants and temperature. For outfalls that discharge to receiving waters with impairments samples collected will have to be analyzed for these parameters as well (i.e. Phosphorus, TSS, Turbidity, DO and BOD).	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)
2.3.4.8.c.iii	Report on all data collected as part of the catchment investigations	annual MS4 Stormwater Report	Report data in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.8.e.i	Report on each illicit discharge identified and date of removal	annual MS4 stormwater reports	For each confirmed source, the following information shall be included: location of discharge and source; description of discharge; method of discovery; date of discovery; date of elimination, mitigation or enforcement action or planned corrective measures; and estimate of the volume of flow removed.	Included under Item 4.4.
2.3.4.8.e.ii	Conduct confirmatory outfall or interconnection screening	1 year from removal of discharges	If confirmatory screening indicates evidence of illicit discharge, the catchment shall be scheduled for additional investigation.	Stormwater Division
2.3.4.9	Evaluate & report IDDE program progress	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.11	Conduct IDDE employee training	at least annually	Continue to train employees about the IDDE Program including how to recognize illicit discharges and SSOs.	Stormwater Division
2.3.4.11	Report on IDDE employee training	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
CONSTRUCTION SITE STORMWATER RUNOFF CONTROL				
2.3.5	Implement & enforce Construction Site Stormwater Runoff Control (CSSRC) Program	not stated	Continue to implement and enforce a program to reduce pollutants in stormwater runoff from construction activities per the 2003 Permit.	Engineering/ DPW/ Conservation
POST CONSTRUCTION STORMWATER MANAGEMENT				
2.3.6.a	Implement & enforce SW management for New Development/Redevelopment	not stated	Continue to implement and enforce a program to address post-construction stormwater runoff from new development and redevelopment projects per the 2003 Permit.	Building/ Planning/ Zoning/ Engineering/ DPW/ Conservation
2.3.6.b	Develop a report assessing street/parking design related to creation of impervious cover	Report progress annually; complete 4 years from effective date	Develop report assessing current street design and parking lot guidelines and other local requirements impacting the creation of impervious cover. Determine whether design standards can be modified to support low impact design. If modifications can be made, outline recommendations and proposed schedule for modifying applicable standards.	Stormwater Division/ Planning/ Community Development
2.3.6.c	Develop a report assessing local regulations to allow the listed green practices	Report progress annually; complete 4 years from effective date	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices (green roofs, infiltration practices, water harvesting devices) allowable when appropriate site conditions exist.	Stormwater Division/ Planning/ Community Development
2.3.6.d	Identify a minimum of 5 permittee-owned properties for BMP retrofits & priority rank based on factors listed in 2.3.6.d	4 years from effective date	Complete an inventory and priority ranking of Town property and infrastructure that could be retrofitted with BMPs to reduce frequency, volume and pollutant loads associated with stormwater discharges.	Stormwater Division

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
GOOD HOUSE KEEPING AND POLLUTION PREVENTION FOR PERMITTEE OWNED OPERATIONS				
2.3.7.a.ii.2	Provide training on use, storage, & disposal of petroleum products to applicable staff	not stated	Provide training on use, storage, & disposal of petroleum products to applicable municipal staff.	Stormwater Division
2.3.7.a.iii.2	Implement routine inspection/cleaning/maintenance of catch basins to ensure sumps <50% full; report on activities as specified; investigate excessive sediment; log/report CB cleaning	continuous; annual MS4 stormwater reports	Clean catch basins as needed to ensure that no sump is more than 50% full at any given time. The Town has approximately 4,500 catch basins town-wide and cleaned 100% of their catch basins during Permit Year 1. The Town is still in the process of collecting data to build their catch basin cleaning optimization plan. Assume that all catch basins will need to be cleaned annually to meet the permit requirements.	Town currently contracts out catch basin cleaning, but is looking to expand staffing and equipment resources to complete this work in-house.
2.3.7.a.iii.3 & 4.	Sweep streets/parking lots 1x/year in spring; report on efforts	annually; annual MS4 stormwater reports	The Town swept all streets at least once during Permit Year 1, and planned to increase staffing to sweep all streets twice per year in Year 2 to meet permit requirements for phosphorous-impaired waters.	Stormwater Division
2.3.7.a.iii.4	Ensure proper storage of CB cleanings & street sweeping to prevent runoff	NA	Examine storage of CB cleanings & street sweepings	Stormwater Division
2.3.7.a.iii.6	Establish/implement procedures to inspect/maintain storm drains & structural BMPs; and for annual inspection of treatment structures	not stated	Establish/implement procedures to inspect/maintain storm drains & structural BMPs; inspect treatment structures annually at a minimum.	Stormwater Division
2.3.7.a.iv	Report on all Good Housekeeping/Pollution Prevention requirements	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.7.a.v	Keep written record of all Good Housekeeping/Pollution Prevention activities	continuous	Keep written record of all maintenance activities, inspections and training completed.	Stormwater Division / Highway Division / Sewer Division
2.3.7.b.ii & iii	Perform SWPPP required actions/inspections/training	frequencies as per permit	Perform quarterly inspections at facilities and conduct annual employee training. The Town has SWPPPs in place for the DPW Facility at 9 Alpha Road, Highway Department at 54 Richardson Road and at the capped landfill at 40 Swain Road.	Stormwater Division
2.3.7.b.iii	Report on Stormwater Pollution Prevention Plan inspections	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.7.b.iv	Maintain written records for all SWPPP related items under 2.3.7.b	continuous	Keep written record of all maintenance activities, inspections and training completed.	Stormwater Division
SECTION 3 - ADDITIONAL REQUIREMENTS FOR DISCHARGES TO SURFACE DRINKING WATER SUPPLIES AND THEIR TRIBUTARIES				
3.0.a	Make MS4 discharges to surface drinking water supply sources & their tributaries a priority in the SWMP	continuous; report annually	Identify any outfalls discharging to drinking water supplies and make these a priority in implementation of the SWMP. This would include the two outfalls discharging to the Merrimack River and the two outfalls discharging to the Concord River, as the Concord River is tributary to the Merrimack River, which is a surface drinking water supply for other communities although not for Chelmsford.	As part of the IDDE Investigations, the Stormwater Division has designated catchments tributary to surface drinking water supply sources as high priority.
3.0.b	Provide pretreatment/spill control for MS4 discharges to public surface drinking water supply sources & their tributaries	continuous; report annually	Provide pretreatment/spill control for outfalls discharging to public surface drinking water supply sources and their tributaries. This includes both the Merrimack River and the Concord River.	Stormwater Division to investigate source protection needs and potential implementation of BMPs. The Concord River is impaired for phosphorus so there will be additional potential BMP retrofits installed in catchment areas tributary to the Concord River as part of the Phosphorus Source Identification Report.
3.0.c	Avoid direct discharges to Class A waters	continuous; report annually	There are no Class A Waters located in Chelmsford.	Stormwater Division

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
4.1.a	Self-evaluate compliance with the permit; include documentation of evaluation in written SWMP	annually	Annually evaluate Town's compliance with permit conditions.	Stormwater Division - Stormwater Engineer
4.1.b	Evaluate BMP effectiveness & change if needed under provisions of permit	not stated	Evaluate BMP effectiveness in achieving permit objectives & modify BMPs accordingly as needed.	
4.1.b	Report BMP modifications	annual MS4 stormwater reports	Include in Annual MS4 Stormwater Report.	
4.2	MS4 must keep records for ≥5yrs; make available to public	Continuous	Maintain annual MS4 stormwater reports and make available to the public.	
4.3	Document results of MS4 outfall screening/sampling & any other monitoring/studies	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	
4.4	Submit Annual MS4 Stormwater Report	annually 90 days from effective date	Prepare Annual MS4 Stormwater Report.	

CHELMSFORD, MA
MS4 GENERAL PERMIT COMPLIANCE - YEAR 5 (FY23)
Breakdown of Permit Requirements & Implementation Timeframes

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
SECTION 1 - INTRODUCTION				
1.10.2	Update written SWMP	As Necessary	Update the SWMP as needed on an annual basis.	Stormwater Division - Stormwater Engineer
SECTION 2 - NON-NUMERIC EFFLUENT LIMITATIONS				
2.1 - Waster Quality Based Effluent Limitations				
2.1.1.c	For MS4 discharges to a water body that is water quality limited and not subject to an approved TMDL or for municipalities located within Part 2.2.2a.-b., comply with Part 2.2.2 and Appendix H of the Permit	see Appendix H of the 2016 Final MA MS4 General Permit	Impaired waters in Chelmsford or impaired waters that Chelmsford is tributary to without an approved TMDL and their reason for impairment are as follows: Concord River - Phosphorus and Fecal Coliform, Black Brook - E. Coli, Deep Brook - E. Coli, Heart Pond - E. Coli, Stony Brook - E.Coli, Black Brook - Turbidity, River Meadow Brook - Fecal Coliform, and the Merrimack River - Fecal Coliform.	Requirements and any associated outside costs included under H.II, H.III, and H.V.
2.1.1.d	For all other discharges (not subject to the requirements of Part 2.1.1.b and Part 2.1.1.c of the Permit) contributing to a violation of applicable receiving water quality standards, eliminate condition causing or contributing to exceedance of water quality standards	within 60 days of becoming aware of the situation	If a discharge is identified that contributes to an exceedance of applicable water quality standards, eliminate the conditions contributing to or causing the exceedance within 60 days.	Any associated outside costs included under IDDE under Item 2.3.4.2.a.
2.1.2	Written notification to MADEP & EPA as needed & documentation in the Town's SWMP regarding new or increased stormwater discharges	As Necessary	Any new or increased stormwater discharges must satisfy MA antidegradation regulations.	Stormwater Division - Stormwater Engineer
2.2 - Discharges to Impaired Waters				
2.2	Identify all outfalls/interconnections that discharge to waters with an approved TMDL or discharge to certain waters identified as "water quality limited water bodies"	SWMP (1 yr) & annual MS4 stormwater reports	Identify all outfalls or interconnections that discharge to water quality limited water bodies.	Included under Item 4.4.
IMPAIRED - PHOSPHORUS (INCLUDES TRIBUTARIES)				
H.II.1.a.i.1	Distribute clippings/fertilizer message to required audiences	Annually in March/April	Develop and disseminate required public education information.	Stormwater Division - Stormwater Engineer
H.II.1.a.i.1	Distribute pet waste management message to Residential	Annually in June/July		
H.II.1.a.i.1	Distribute leaf litter disposal message to Residential/Business/Commercial	Annually August-October		
H.II.1.a.i.3	2.3.7 Sweep streets/lots \geq 2/yr spring & fall	Sweep at least twice/year	Increase frequency of sweeping of public streets and municipal parking lots to a minimum of two times per year in catchments tributary to the Concord River.	Included under 2.3.7.a.iii.3 & 4.
H.II.1.c	Complete Retrofit Evaluation, including implementation plan & schedule	5 years from effective date; With Year 5 Annual Report	Evaluate all permittee-owned properties identified as presenting retrofit opportunities or areas for structural BMP installation under Part 2.3.6.d.ii. or identified in the Phosphorus Source Identification Report that are within the drainage area of the impaired water or its tributaries.	Stormwater Division - Some outside Assistance May Be Needed
IMPAIRED - BACTERIA / PATHOGENS				
H.III.2.a.i	Distribute residential message on pet waste management (over/above 2.3.2)	Annually	Develop and disseminate required public education information, where applicable.	Stormwater Division - Stormwater Engineer
H.III.2.a.i	Send public ed. materials to septic system owners	Not specified; assume annually		
IMPAIRED - OIL/GREASE, SOLIDS OR METALS				
H.V.2.a.ii	Increased street sweeping & CB inspection/cleaning in targeted areas	Annual Reports	Increase street sweeping and catch basin cleaning in high density tributary areas with potential for high pollutant loads	Street sweeping cost included under 2.3.7.a.iii.3 & 4. Catch basin cleaning cost included under 2.3.7.a.iii.2.

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3- Requirements to Reduce Pollutants to the Maximum Extent Practicable (MEP)				
PUBLIC EDUCATION & OUTREACH				
2.3.2.a-d	Distribute at least 2 educational messages to each of 4 targeted audiences (residents, businesses/commercial/institutional, developers and industrial). Different messages to the same targeted audience shall be distributed at least one year apart.	begin year 1; continue throughout permit term	Develop/distribute a minimum of 8 messages over the permit term. Educational messages can include brochures, newsletters, information posted to the Town's website, newspaper articles, public service announcements, displays in municipal buildings, etc.	Stormwater Division - Stormwater Engineer
2.3.2.e	Identify methods to evaluate the effectiveness of the message; Implement	not stated	Determine method to evaluate message effectiveness; implement method.	
2.3.2.f	Modify any ineffective message/methods of distribution	Before next message is distributed	Modify message or distribution methods if applicable.	
2.3.2.g	Report on messages as per permit	annual MS4 stormwater report	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
PUBLIC INVOLVEMENT & PARTICIPATION				
2.3.3.a	Meet Public Notice requirements	continuous	Ensure that all public involvement comply with state public notice requirements (MGL Chapter 30A, Sections 18-25)	Stormwater Division
2.3.3.a	Make the Stormwater Management Plan & Annual MS4 Stormwater report accessible to the public	continuous	Make SWMP and annual MS4 stormwater reports available to public at Town Hall and/or on the Town's website.	Stormwater Division
2.3.3.b	Provide public opportunity to participate in the review/implementation of the Stormwater Management Program	annually	May be implemented through the use of Town website, Town hotline, clean-up teams, monitoring teams, or a stormwater advisory committee.	Stormwater Division
2.3.3.c	Report on public participation opportunities	annually	Report Progress in the annual MS4 Stormwater Permit	Included under Item 4.4.
ILLCIT DISCHARGE DETECTION & ELIMINATION				
2.3.4.2.a	Eliminate illicit discharges	60 days or as expeditiously as possible	Eliminate illicit discharges as they are identified or establish a schedule for elimination for discharges that cannot be removed within 60 days.	Stormwater Division / Sewer Division
2.3.4.2.a	Report dates of illicit identification and schedules for removal	annual MS4 stormwater report	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.4.a	Mitigate SSOs	Expediently as possible	Eliminate SSO as expeditiously as possible and take interim mitigation measures to minimize the discharge of pollutants to and from the Town until elimination is completed.	Sewer Division
2.3.4.4.c	Report SSOs	24 hours from awareness	Provide oral notice to EPA within 24 hours and a written notice to the EPA and MassDEP within five (5) days	Sewer Division
2.3.4.4.d	Update SSO inventory	annual MS4 Stormwater report	Include status of mitigation and corrective measures implemented	Included under Item 4.4.
2.3.4.5.b	Map the MS4 features required in 2.3.4.5.b under Phase 2 including outfall spatial location, pipes, manholes, catch basins, refined catchment delineations, and the municipal sanitary system (if available) and the municipal combined sewer system (if applicable).	Annually during catchment investigation procedures; Within 10 years from permit effective date	Town has in place a comprehensive map of their drainage system. Anticipated mapping additions include: refined catchment delineations, updated/new drainage from new developments and re-developments, and drainage updates based on IDDE investigations.	Stormwater Division - GIS Analyst
2.3.4.5.e	Report on mapping progress	annual MS4 Stormwater reports	Report progress in Annual MS4 Stormwater Report	Included under Item 4.4.
2.3.4.7.a	Report on list of catchments and results of rankings & update annually	annual MS4 Stormwater reports	Report progress in Annual MS4 Stormwater Report	Included under Item 4.4.
2.3.4.8.a	Begin investigation of catchments associated with Problem Outfalls	no later than 2 years from effective date	Implement Illicit Discharge Detection and Elimination Investigations as required by the conditions of the permit. For budgeting purposes, it is assumed that an Illicit Discharge Detection and Elimination Investigation Program will need to be implemented in all catchments. Catchments with no potential for illicit discharges (based on the catchment ranking exercise completed under Task 2.3.4.7.c.) can be excluded from the IDDE Program.	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)
2.3.4.8.a	Begin investigation of catchments associated with High and Low Priority Outfalls	After completion of outfall ranking - latest allowable timeframe is 3 years from effective date		
2.3.4.8.a	Complete Investigation of catchments associated with Problem Outfalls	7 years from effective date		
2.3.4.8.a	Complete Investigations of catchments where info on outfall/interconnection identifies sewer input	7 years from effective date		
2.3.4.8.a	Complete Investigations of catchments associated with all Problem, High- and Low-Priority outfalls	10 years from effective date		

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3.4.8.cii.2	Wet weather sampling	Start upon completion of dry weather investigation; Must be complete by end of Year 10	Wet weather sampling must be completed at all regulated outfalls and interconnections where the catchment has a minimum of one (1) System Vulnerability Factor. Wet weather sampling parameters shall include, at a minimum, ammonia, chlorine, conductivity, salinity, E.coli, surfactants and temperature. For outfalls that discharge to receiving waters with impairments samples collected will have to be analyzed for these parameters as well (i.e. Phosphorus, TSS, Turbidity, DO and BOD).	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)
2.3.4.8.c.iii	Report on all data collected as part of the catchment investigations	annual MS4 Stormwater Report	Report data in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.8.e.i	Report on each illicit discharge identified and date of removal	annual MS4 stormwater reports	For each confirmed source, the following information shall be included: location of discharge and source; description of discharge; method of discovery; date of discovery; date of elimination, mitigation or enforcement action or planned corrective measures; and estimate of the volume of flow removed.	Included under Item 4.4.
2.3.4.8.e.ii	Conduct confirmatory outfall or interconnection screening	1 year from removal of discharges	If confirmatory screening indicates evidence of illicit discharge, the catchment shall be scheduled for additional investigation.	Stormwater Division
2.3.4.9	Evaluate & report IDDE program progress	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.11	Conduct IDDE employee training	at least annually	Continue to train employees about the IDDE Program including how to recognize illicit discharges and SSOs.	Stormwater Division
2.3.4.11	Report on IDDE employee training	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
CONSTRUCTION SITE STORMWATER RUNOFF CONTROL				
2.3.5	Implement & enforce Construction Site Stormwater Runoff Control (CSSRC) Program	not stated	Continue to implement and enforce a program to reduce pollutants in stormwater runoff from construction activities per the 2003 Permit.	Engineering/DPW/Conservation
POST CONSTRUCTION STORMWATER MANAGEMENT				
2.3.6.a	Implement & enforce SW management for New Development/Redevelopment	not stated	Continue to implement and enforce a program to address post-construction stormwater runoff from new development and redevelopment projects per the 2003 Permit.	Building/Planning/Zoning/Engineering/DPW/Conservation
2.3.6.d	Identify additional sites and infrastructure that could be retrofitted to maintain a minimum of 5 sites in the inventory; Report progress on implementation of BMP retrofits in Annual Report	annual MS4 stormwater reports beginning Year 5	Report progress in Annual MS4 Stormwater Report.	Stormwater Division
GOOD HOUSE KEEPING AND POLLUTION PREVENTION FOR PERMITTEE OWNED OPERATIONS				
2.3.7.a.ii.2	Provide training on use, storage, & disposal of petroleum products to applicable staff	not stated	Provide training on use, storage, & disposal of petroleum products to applicable municipal staff.	Included under Item 2.3.4.11.
2.3.7.a.iii.2	Implement routine inspection/cleaning/maintenance of catch basins to ensure sumps <50% full; report on activities as specified; investigate excessive sediment; log/report CB cleaning	continuous; annual MS4 stormwater reports	Clean catch basins as needed to ensure that no sump is more than 50% full at any given time. The Town has approximately 4,500 catch basins town-wide and cleaned 100% of their catch basins during Permit Year 1. The Town is still in the process of collecting data to build their catch basin cleaning optimization plan. Assume that all catch basins will need to be cleaned annually to meet the permit requirements.	Town currently contracts out catch basin cleaning, but is looking to expand staffing and equipment resources in the future to complete this work in-house.
2.3.7.a.iii.3 & 4.	Sweep streets/parking lots 1x/year in spring; report on efforts	annually; annual MS4 stormwater reports	The Town swept all streets at least once during Permit Year 1, and planned to increase staffing to sweep all streets twice per year in Year 2 to meet permit requirements for phosphorous-impaired waters.	Stormwater Division
2.3.7.a.iii.4	Ensure proper storage of CB cleanings & street sweeping to prevent runoff	N/A	Examine storage of CB cleanings & street sweepings	Stormwater Division
2.3.7.a.iii.6	Establish/implement procedures to inspect/maintain storm drains & structural BMPs; and for annual inspection of treatment structures	not stated	Establish/implement procedures to inspect/maintain storm drains & structural BMPs; inspect treatment structures annually at a minimum.	Stormwater Division
2.3.7.a.iv	Report on all Good Housekeeping/Pollution Prevention requirements	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3.7.a.v	Keep written record of all Good Housekeeping/Pollution Prevention activities	continuous	Keep written record of all maintenance activities, inspections and training completed.	Stormwater Division / Highway Division / Sewer Division
2.3.7.b.ii & iii	Perform SWPPP required actions/inspections/training	frequencies as per permit	Perform quarterly inspections at facilities and conduct annual employee training. The Town has SWPPPs in place for the DPW Facility at 9 Alpha Road, Highway Department at 54 Richardson Road and at the capped landfill at 40 Swain Road.	Stormwater Division
2.3.7.b.iii	Report on Stormwater Pollution Prevention Plan inspections	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.7.b.iv	Maintain written records for all SWPPP related items under 2.3.7.b	continuous	Keep written record of all maintenance activities, inspections and training completed.	Stormwater Division
SECTION 3 - ADDITIONAL REQUIREMENTS FOR DISCHARGES TO SURFACE DRINKING WATER SUPPLIES AND THEIR TRIBUTARIES				
3.0.a	Make MS4 discharges to surface drinking water supply sources & their tributaries a priority in the SWMP	continuous; report annually	Identify any outfalls discharging to drinking water supplies and make these a priority in implementation of the SWMP. This would include the two outfalls discharging to the Merrimack River and the two outfalls discharging to the Concord River, as the Concord River is tributary to the Merrimack River, which is a surface drinking water supply for other communities although not for Chelmsford.	As part of the IDDE Investigations, the Stormwater Division has designated catchments tributary to surface drinking water supply sources as high priority.
3.0.b	Provide pretreatment/spill control for MS4 discharges to public surface drinking water supply sources & their tributaries	continuous; report annually	Provide pretreatment/spill control for outfalls discharging to public surface drinking water supply sources and their tributaries. This includes both the Merrimack River and the Concord River.	Stormwater Division to investigate source protection needs and potential implementation of BMPs. The Concord River is impaired for phosphorus so there will be additional potential BMP retrofits installed in catchment areas tributary to the Concord River as part of the Phosphorus Source Identification Report.
3.0.c	Avoid direct discharges to Class A waters	continuous; report annually	There are no Class A Waters located in Chelmsford.	Stormwater Division
SECTION 4 - PROGRAM EVALUATION, RECORDKEEPING & REPORTING				
4.1.a	Self-evaluate compliance with the permit; include documentation of evaluation in written SWMP	annually	Annually evaluate Town's compliance with permit conditions.	Stormwater Division - Stormwater Engineer
4.1.b	Evaluate BMP effectiveness & change if needed under provisions of permit	not stated	Evaluate BMP effectiveness in achieving permit objectives & modify BMPs accordingly as needed.	
4.1.b	Report BMP modifications	annual MS4 stormwater reports	Include in Annual MS4 Stormwater Report.	
4.2	MS4 must keep records for ≥5yrs; make available to public	Continuous	Maintain annual MS4 stormwater reports and make available to the public.	
4.3	Document results of MS4 outfall screening/sampling & any other monitoring/studies	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	
4.4	Submit Annual MS4 Stormwater Report	annually 90 days from effective date	Prepare Annual MS4 Stormwater Report.	

CHELMSFORD, MA
MS4 GENERAL PERMIT COMPLIANCE - YEAR 6 (FY24)
Breakdown of Permit Requirements & Implementation Timeframes

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
SECTION 1 - INTRODUCTION				
1.10.2	Update written SWMP	As Necessary	Update the SWMP as needed on an annual basis.	Stormwater Division - Stormwater Engineer
SECTION 2- NON-NUMERIC EFFLUENT LIMITATIONS				
2.1 - Waster Quality Based Effluent Limitations				
2.1.1.c	For MS4 discharges to a water body that is water quality limited and not subject to an approved TMDL or for municipalities located within Part 2.2.2a.-b., comply with Part 2.2.2 and Appendix H of the Permit	see Appendix H of the 2016 Final MA MS4 General Permit	Impaired waters in Chelmsford or impaired waters that Chelmsford is tributary to without an approved TMDL and their reason for impairment are as follows: Concord River - Phosphorus and Fecal Coliform, Black Brook - E. Coli, Deep Brook - E. Coli, Heart Pond - E. Coli, Stony Brook - E.Coli, Black Brook - Turbidity, River Meadow Brook - Fecal Coliform, and the Merrimack River - Fecal Coliform.	Requirements and any associated outside costs included under H.II, H.III, and H.V.
2.1.1.d	For all other discharges (not subject to the requirements of Part 2.1.1.b and Part 2.1.1.c of the Permit) contributing to a violation of applicable receiving water quality standards, eliminate condition causing or contributing to exceedance of water quality standards	within 60 days of becoming aware of the situation	If a discharge is identified that contributes to an exceedance of applicable water quality standards, eliminate the conditions contributing to or causing the exceedance within 60 days.	Any associated outside costs included under IDDE under Item 2.3.4.2.a.
2.1.2	Written notification to MADEP & EPA as needed & documentation in the Town's SWMP regarding new or increased stormwater discharges	As Necessary	Any new or increased stormwater discharges must satisfy MA antidegradation regulations.	Stormwater Division - Stormwater Engineer
2.2 - Discharges to Impaired Waters				
2.2	Identify all outfalls/interconnections that discharge to waters with an approved TMDL or discharge to certain waters identified as "water quality limited water bodies"	SWMP (1 yr) & annual MS4 stormwater reports	Identify all outfalls or interconnections that discharge to water quality limited water bodies.	Included under Item 4.4.
IMPAIRED - PHOSPHORUS (INCLUDES TRIBUTARIES)				
H.II.1.a.i.1	Distribute clippings/fertilizer message to required audiences	Annually in March/April	Develop and disseminate required public education information.	Stormwater Division - Stormwater Engineer
H.II.1.a.i.1	Distribute pet waste management message to Residential	Annually in June/July		
H.II.1.a.i.1	Distribute leaf litter disposal message to Residential/Business/Commercial	Annually August-October		
H.II.1.a.i.3	2.3.7 Sweep streets/lots \geq 2/yr spring & fall	Sweep at least twice/year	Increase frequency of sweeping of public streets and municipal parking lots to a minimum of two times per year in catchments tributary to the Concord River.	Included under 2.3.7.a.iii.3 & 4.
H.II.1.c	Plan/install at least one structural BMP demonstration project	6 years from effective date	Design & construction of one structural BMP retrofit project during Year 6.	Stormwater Division - Design & Construction (limited outside assistance may be needed)
H.II.1.c	Track/report BMP installations & estimated Phosphorus removal	Annual Report after installation; not later than Year 6	Report BMP installations in the annual MS4 stormwater report for Year 6. Include all information on phosphorus removal calculations used during design.	Included under 4.4.
IMPAIRED - BACTERIA / PATHOGENS				
H.III.2.a.i	Distribute residential message on pet waste management (over/above 2.3.2)	Annually	Develop and disseminate required public education information, where applicable.	Stormwater Division - Stormwater Engineer
H.III.2.a.i	Send public ed. materials to septic system owners	Not specified; assume annually		
IMPAIRED - OIL/GREASE, SOLIDS OR METALS				
H.V.2.a.ii	Increased street sweeping & CB inspection/cleaning in targeted areas	Annual Reports	Increase street sweeping and catch basin cleaning in high density tributary areas with potential for high pollutant loads	Street sweeping cost included under 2.3.7.a.iii.3 & 4. Catch basin cleaning cost included under 2.3.7.a.iii.2.

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3- Requirements to Reduce Pollutants to the Maximum Extent Practicable (MEP)				
PUBLIC EDUCATION & OUTREACH				
2.3.2.a-d	Distribute at least 2 educational messages to each of 4 targeted audiences (residents, businesses/commercial/institutional, developers and industrial). Different messages to the same targeted audience shall be distributed at least one year apart.	begin year 1; continue throughout permit term	Develop/distribute a minimum of 8 messages over the permit term. Educational messages can include brochures, newsletters, information posted to the Town's website, newspaper articles, public service announcements, displays in municipal buildings, etc.	Stormwater Division - Stormwater Engineer
2.3.2.e	Identify methods to evaluate the effectiveness of the message; Implement	not stated	Determine method to evaluate message effectiveness; implement method.	
2.3.2.f	Modify any ineffective message/methods of distribution	Before next message is distributed	Modify message or distribution methods if applicable.	
2.3.2.g	Report on messages as per permit	annual MS4 stormwater report	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
PUBLIC INVOLVEMENT & PARTICIPATION				
2.3.3.a	Meet Public Notice requirements	continuous	Ensure that all public involvement comply with state public notice requirements (MGL Chapter 30A, Sections 18-25)	Stormwater Division
2.3.3.a	Make the Stormwater Management Plan & Annual MS4 Stormwater report accessible to the public	continuous	Make SWMP and annual MS4 stormwater reports available to public at Town Hall and/or on the Town's website.	Stormwater Division
2.3.3.b	Provide public opportunity to participate in the review/implementation of the Stormwater Management Program	annually	May be implemented through the use of Town website, Town hotline, clean-up teams, monitoring teams, or a stormwater advisory committee.	Stormwater Division
2.3.3.c	Report on public participation opportunities	annually	Report Progress in the annual MS4 Stormwater Permit	Included under Item 4.4.
ILLCIT DISCHARGE DETECTION & ELIMINATION				
2.3.4.2.a	Eliminate illicit discharges	60 days or as expeditiously as possible	Eliminate illicit discharges as they are identified or establish a schedule for elimination for discharges that cannot be removed within 60 days.	Stormwater Division / Sewer Division
2.3.4.2.a	Report dates of illicit identification and schedules for removal	annual MS4 stormwater report	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.4.a	Mitigate SSOs	Expediently as possible	Eliminate SSO as expeditiously as possible and take interim mitigation measures to minimize the discharge of pollutants to and from the Town until elimination is completed.	Sewer Division
2.3.4.4.c	Report SSOs	24 hours from awareness	Provide oral notice to EPA within 24 hours and a written notice to the EPA and MassDEP within five (5) days	Sewer Division
2.3.4.4.d	Update SSO inventory	annual MS4 Stormwater report	Include status of mitigation and corrective measures implemented	Included under Item 4.4.
2.3.4.5.b	Map the MS4 features required in 2.3.4.5.b under Phase 2 including outfall spatial location, pipes, manholes, catch basins, refined catchment delineations, and the municipal sanitary system (if available) and the municipal combined sewer system (if applicable).	Annually during catchment investigation procedures; Within 10 years from permit effective date	Town has in place a comprehensive map of their drainage system. Anticipated mapping additions include: refined catchment delineations, updated/new drainage from new developments and re-developments, and drainage updates based on IDDE investigations.	Stormwater Division - GIS Analyst
2.3.4.5.e	Report on mapping progress	annual MS4 Stormwater reports	Report progress in Annual MS4 Stormwater Report	Included under Item 4.4.
2.3.4.7.a	Report on list of catchments and results of rankings & update annually	annual MS4 Stormwater reports	Report progress in Annual MS4 Stormwater Report	Included under Item 4.4.
2.3.4.8.a	Begin investigation of catchments associated with Problem Outfalls	no later than 2 years from effective date	Implement Illicit Discharge Detection and Elimination Investigations as required by the conditions of the permit. For budgeting purposes, it is assumed that an Illicit Discharge Detection and Elimination Investigation Program will need to be implemented in all catchments. Catchments with no potential for illicit discharges (based on the catchment ranking exercise completed under Task 2.3.4.7.c.) can be excluded from the IDDE Program.	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)
2.3.4.8.a	Begin investigation of catchments associated with High and Low Priority Outfalls	After completion of outfall ranking - latest allowable timeframe is 3 years from effective date		
2.3.4.8.a	Complete Investigation of catchments associated with Problem Outfalls	7 years from effective date		
2.3.4.8.a	Complete Investigations of catchments where info on outfall/interconnection identifies sewer input	7 years from effective date		
2.3.4.8.a	Complete Investigations of catchments associated with all Problem, High- and Low-Priority outfalls	10 years from effective date		

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3.4.8.cii.2	Wet weather sampling	Start upon completion of dry weather investigation; Must be complete by end of Year 10	Wet weather sampling must be completed at all regulated outfalls and interconnections where the catchment has a minimum of one (1) System Vulnerability Factor. Wet weather sampling parameters shall include, at a minimum, ammonia, chlorine, conductivity, salinity, E.coli, surfactants and temperature. For outfalls that discharge to receiving waters with impairments samples collected will have to be analyzed for these parameters as well (i.e. Phosphorus, TSS, Turbidity, DO and BOD).	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)
2.3.4.8.c.iii	Report on all data collected as part of the catchment investigations	annual MS4 Stormwater Report	Report data in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.8.e.i	Report on each illicit discharge identified and date of removal	annual MS4 stormwater reports	For each confirmed source, the following information shall be included: location of discharge and source; description of discharge; method of discovery; date of discovery; date of elimination, mitigation or enforcement action or planned corrective measures; and estimate of the volume of flow removed.	Included under Item 4.4.
2.3.4.8.e.ii	Conduct confirmatory outfall or interconnection screening	1 year from removal of discharges	If confirmatory screening indicates evidence of illicit discharge, the catchment shall be scheduled for additional investigation.	Stormwater Division
2.3.4.9	Evaluate & report IDDE program progress	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.11	Conduct IDDE employee training	at least annually	Continue to train employees about the IDDE Program including how to recognize illicit discharges and SSOs.	Stormwater Division
2.3.4.11	Report on IDDE employee training	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
CONSTRUCTION SITE STORMWATER RUNOFF CONTROL				
2.3.5	Implement & enforce Construction Site Stormwater Runoff Control (CSSRC) Program	not stated	Continue to implement and enforce a program to reduce pollutants in stormwater runoff from construction activities per the 2003 Permit.	Engineering/DPW/Conservation
POST CONSTRUCTION STORMWATER MANAGEMENT				
2.3.6.a	Implement & enforce SW management for New Development/Redevelopment	not stated	Continue to implement and enforce a program to address post-construction stormwater runoff from new development and redevelopment projects per the 2003 Permit.	Building/Planning/Zoning/Engineering/DPW/Conservation
2.3.6.d	Identify additional sites and infrastructure that could be retrofitted to maintain a minimum of 5 sites in the inventory; Report progress on implementation of BMP retrofits in Annual Report	annual MS4 stormwater reports beginning Year 5	Report progress in Annual MS4 Stormwater Report.	Stormwater Division
GOOD HOUSE KEEPING AND POLLUTION PREVENTION FOR PERMITTEE OWNED OPERATIONS				
2.3.7.a.ii.2	Provide training on use, storage, & disposal of petroleum products to applicable staff	not stated	Provide training on use, storage, & disposal of petroleum products to applicable municipal staff.	Included under Item 2.3.4.11.
2.3.7.a.iii.2	Implement routine inspection/cleaning/maintenance of catch basins to ensure sumps <50% full; report on activities as specified; investigate excessive sediment; log/report CB cleaning	continuous; annual MS4 stormwater reports	Clean catch basins as needed to ensure that no sump is more than 50% full at any given time. The Town has approximately 4,500 catch basins town-wide and cleaned 100% of their catch basins during Permit Year 1. The Town is still in the process of collecting data to build their catch basin cleaning optimization plan. Assume that all catch basins will need to be cleaned annually to meet the permit requirements.	Town currently contracts out catch basin cleaning, but is looking to expand staffing and equipment resources in the future to complete this work in-house.
2.3.7.a.iii.3 & 4.	Sweep streets/parking lots 1x/year in spring; report on efforts	annually; annual MS4 stormwater reports	The Town swept all streets at least once during Permit Year 1, and planned to increase staffing to sweep all streets twice per year in Year 2 to meet permit requirements for phosphorous-impaired waters.	Stormwater Division
2.3.7.a.iii.4	Ensure proper storage of CB cleanings & street sweeping to prevent runoff	N/A	Examine storage of CB cleanings & street sweepings	Stormwater Division
2.3.7.a.iii.6	Establish/implement procedures to inspect/maintain storm drains & structural BMPs; and for annual inspection of treatment structures	not stated	Establish/implement procedures to inspect/maintain storm drains & structural BMPs; inspect treatment structures annually at a minimum.	Stormwater Division
2.3.7.a.iv	Report on all Good Housekeeping/Pollution Prevention requirements	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3.7.a.v	Keep written record of all Good Housekeeping/Pollution Prevention activities	continuous	Keep written record of all maintenance activities, inspections and training completed.	Stormwater Division / Highway Division / Sewer Division
2.3.7.b.ii & iii	Perform SWPPP required actions/inspections/training	frequencies as per permit	Perform quarterly inspections at facilities and conduct annual employee training. The Town has SWPPPs in place for the DPW Facility at 9 Alpha Road, Highway Department at 54 Richardson Road and at the capped landfill at 40 Swain Road.	Stormwater Division
2.3.7.b.iii	Report on Stormwater Pollution Prevention Plan inspections	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.7.b.iv	Maintain written records for all SWPPP related items under 2.3.7.b	continuous	Keep written record of all maintenance activities, inspections and training completed.	Stormwater Division
SECTION 3 - ADDITIONAL REQUIREMENTS FOR DISCHARGES TO SURFACE DRINKING WATER SUPPLIES AND THEIR TRIBUTARIES				
3.0.a	Make MS4 discharges to surface drinking water supply sources & their tributaries a priority in the SWMP	continuous; report annually	Identify any outfalls discharging to drinking water supplies and make these a priority in implementation of the SWMP. This would include the two outfalls discharging to the Merrimack River and the two outfalls discharging to the Concord River, as the Concord River is tributary to the Merrimack River, which is a surface drinking water supply for other communities although not for Chelmsford.	As part of the IDDE Investigations, the Stormwater Division has designated catchments tributary to surface drinking water supply sources as high priority.
3.0.b	Provide pretreatment/spill control for MS4 discharges to public surface drinking water supply sources & their tributaries	continuous; report annually	Provide pretreatment/spill control for outfalls discharging to public surface drinking water supply sources and their tributaries. This includes both the Merrimack River and the Concord River.	Stormwater Division to investigate source protection needs and potential implementation of BMPs. The Concord River is impaired for phosphorus so there will be additional potential BMP retrofits installed in catchment areas tributary to the Concord River as part of the Phosphorus Source Identification Report.
3.0.c	Avoid direct discharges to Class A waters	continuous; report annually	There are no Class A Waters located in Chelmsford.	Stormwater Division
SECTION 4 - PROGRAM EVALUATION, RECORDKEEPING & REPORTING				
4.1.a	Self-evaluate compliance with the permit; include documentation of evaluation in written SWMP	annually	Annually evaluate Town's compliance with permit conditions.	Stormwater Division - Stormwater Engineer
4.1.b	Evaluate BMP effectiveness & change if needed under provisions of permit	not stated	Evaluate BMP effectiveness in achieving permit objectives & modify BMPs accordingly as needed.	
4.1.b	Report BMP modifications	annual MS4 stormwater reports	Include in Annual MS4 Stormwater Report.	
4.2	MS4 must keep records for ≥5yrs; make available to public	Continuous	Maintain annual MS4 stormwater reports and make available to the public.	
4.3	Document results of MS4 outfall screening/sampling & any other monitoring/studies	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	
4.4	Submit Annual MS4 Stormwater Report	annually 90 days from effective date	Prepare Annual MS4 Stormwater Report.	

CHELMSFORD, MA
MS4 GENERAL PERMIT COMPLIANCE - YEAR 7 (FY25)
Breakdown of Permit Requirements & Implementation Timeframes

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
SECTION 1 - INTRODUCTION				
1.10.2	Update written SWMP	As Necessary	Update the SWMP as needed on an annual basis.	Stormwater Division - Stormwater Engineer
SECTION 2 - NON-NUMERIC EFFLUENT LIMITATIONS				
2.1 - Waster Quality Based Effluent Limitations				
2.1.1.c	For MS4 discharges to a water body that is water quality limited and not subject to an approved TMDL or for municipalities located within Part 2.2.2a.-b., comply with Part 2.2.2 and Appendix H of the Permit	see Appendix H of the 2016 Final MA MS4 General Permit	Impaired waters in Chelmsford or impaired waters that Chelmsford is tributary to without an approved TMDL and their reason for impairment are as follows: Concord River - Phosphorus and Fecal Coliform, Black Brook - E. Coli, Deep Brook - E. Coli, Heart Pond - E. Coli, Stony Brook - E.Coli, Black Brook - Turbidity, River Meadow Brook - Fecal Coliform, and the Merrimack River - Fecal Coliform.	Requirements and any associated outside costs included under H.II, H.III, and H.V.
2.1.1.d	For all other discharges (not subject to the requirements of Part 2.1.1.b and Part 2.1.1.c of the Permit) contributing to a violation of applicable receiving water quality standards, eliminate condition causing or contributing to exceedance of water quality standards	within 60 days of becoming aware of the situation	If a discharge is identified that contributes to an exceedance of applicable water quality standards, eliminate the conditions contributing to or causing the exceedance within 60 days.	Any associated outside costs included under IDDE under Item 2.3.4.2.a.
2.1.2	Written notification to MADEP & EPA as needed & documentation in the Town's SWMP regarding new or increased stormwater discharges	As Necessary	Any new or increased stormwater discharges must satisfy MA antidegradation regulations.	Stormwater Division - Stormwater Engineer
2.2 - Discharges to Impaired Waters				
2.2	Identify all outfalls/interconnections that discharge to waters with an approved TMDL or discharge to certain waters identified as "water quality limited water bodies"	SWMP (1 yr) & annual MS4 stormwater reports	Identify all outfalls or interconnections that discharge to water quality limited water bodies.	Included under Item 4.4.
IMPAIRED - PHOSPHORUS (INCLUDES TRIBUTARIES)				
H.II.1.a.i.1	Distribute clippings/fertilizer message to required audiences	Annually in March/April	Develop and disseminate required public education information.	Stormwater Division - Stormwater Engineer
H.II.1.a.i.1	Distribute pet waste management message to Residential	Annually in June/July		
H.II.1.a.i.1	Distribute leaf litter disposal message to Residential/Business/Commercial	Annually August-October		
H.II.1.a.i.3	2.3.7 Sweep streets/lots \geq 2/yr spring & fall	Sweep at least twice/year	Increase frequency of sweeping of public streets and municipal parking lots to a minimum of two times per year in catchments tributary to the Concord River.	Included under 2.3.7.a.iii.3 & 4.
H.II.1.c	Install remaining BMPs	As per plan/schedule in Year 5 Annual Report	Design & construction of one structural BMP retrofit project during Year 7.	Stormwater Division - Design & Construction (limited outside assistance may be needed)
H.II.1.c	Track/report BMP installations & estimated Phosphorus removal	Annual Report after installation; not later than Year 6	Report BMP installations in the annual MS4 stormwater report for Year 7. Include all information on phosphorus removal calculations used during design.	Included under 4.4.
IMPAIRED - BACTERIA / PATHOGENS				
H.III.2.a.i	Distribute residential message on pet waste management (over/above 2.3.2)	Annually	Develop and disseminate required public education information, where applicable.	Stormwater Division - Stormwater Engineer
H.III.2.a.i	Send public ed. materials to septic system owners	Not specified; assume annually		
IMPAIRED - OIL/GREASE, SOLIDS OR METALS				
H.V.2.a.ii	Increased street sweeping & CB inspection/cleaning in targeted areas	Annual Reports	Increase street sweeping and catch basin cleaning in high density tributary areas with potential for high pollutant loads	Street sweeping cost included under 2.3.7.a.iii.3 & 4. Catch basin cleaning cost included under 2.3.7.a.iii.2.

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3- Requirements to Reduce Pollutants to the Maximum Extent Practicable (MEP)				
PUBLIC EDUCATION & OUTREACH				
2.3.2.a-d	Distribute at least 2 educational messages to each of 4 targeted audiences (residents, businesses/commercial/institutional, developers and industrial). Different messages to the same targeted audience shall be distributed at least one year apart.	begin year 1; continue throughout permit term	Develop/distribute a minimum of 8 messages over the permit term. Educational messages can include brochures, newsletters, information posted to the Town's website, newspaper articles, public service announcements, displays in municipal buildings, etc.	Stormwater Division - Stormwater Engineer
2.3.2.e	Identify methods to evaluate the effectiveness of the message; Implement	not stated	Determine method to evaluate message effectiveness; implement method.	
2.3.2.f	Modify any ineffective message/methods of distribution	Before next message is distributed	Modify message or distribution methods if applicable.	
2.3.2.g	Report on messages as per permit	annual MS4 stormwater report	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
PUBLIC INVOLVEMENT & PARTICIPATION				
2.3.3.a	Meet Public Notice requirements	continuous	Ensure that all public involvement comply with state public notice requirements (MGL Chapter 30A, Sections 18-25)	Stormwater Division
2.3.3.a	Make the Stormwater Management Plan & Annual MS4 Stormwater report accessible to the public	continuous	Make SWMP and annual MS4 stormwater reports available to public at Town Hall and/or on the Town's website.	Stormwater Division
2.3.3.b	Provide public opportunity to participate in the review/implementation of the Stormwater Management Program	annually	May be implemented through the use of Town website, Town hotline, clean-up teams, monitoring teams, or a stormwater advisory committee.	Stormwater Division
2.3.3.c	Report on public participation opportunities	annually	Report Progress in the annual MS4 Stormwater Permit	Included under Item 4.4.
ILLCIT DISCHARGE DETECTION & ELIMINATION				
2.3.4.2.a	Eliminate illicit discharges	60 days or as expeditiously as possible	Eliminate illicit discharges as they are identified or establish a schedule for elimination for discharges that cannot be removed within 60 days.	Stormwater Division / Sewer Division
2.3.4.2.a	Report dates of illicit identification and schedules for removal	annual MS4 stormwater report	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.4.a	Mitigate SSOs	Expediently as possible	Eliminate SSO as expeditiously as possible and take interim mitigation measures to minimize the discharge of pollutants to and from the Town until elimination is completed.	Sewer Division
2.3.4.4.c	Report SSOs	24 hours from awareness	Provide oral notice to EPA within 24 hours and a written notice to the EPA and MassDEP within five (5) days	Sewer Division
2.3.4.4.d	Update SSO inventory	annual MS4 Stormwater report	Include status of mitigation and corrective measures implemented	Included under Item 4.4.
2.3.4.5.b	Map the MS4 features required in 2.3.4.5.b under Phase 2 including outfall spatial location, pipes, manholes, catch basins, refined catchment delineations, and the municipal sanitary system (if available) and the municipal combined sewer system (if applicable).	Annually during catchment investigation procedures; Within 10 years from permit effective date	Town has in place a comprehensive map of their drainage system. Anticipated mapping additions include: refined catchment delineations, updated/new drainage from new developments and re-developments, and drainage updates based on IDDE investigations.	Stormwater Division - GIS Analyst
2.3.4.5.e	Report on mapping progress	annual MS4 Stormwater reports	Report progress in Annual MS4 Stormwater Report	Included under Item 4.4.
2.3.4.7.a	Report on list of catchments and results of rankings & update annually	annual MS4 Stormwater reports	Report progress in Annual MS4 Stormwater Report	Included under Item 4.4.
2.3.4.8.a	Begin investigation of catchments associated with Problem Outfalls	no later than 2 years from effective date	Implement Illicit Discharge Detection and Elimination Investigations as required by the conditions of the permit. For budgeting purposes, it is assumed that an Illicit Discharge Detection and Elimination Investigation Program will need to be implemented in all catchments. Catchments with no potential for illicit discharges (based on the catchment ranking exercise completed under Task 2.3.4.7.c.) can be excluded from the IDDE Program.	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)
2.3.4.8.a	Begin investigation of catchments associated with High and Low Priority Outfalls	After completion of outfall ranking - latest allowable timeframe is 3 years from effective date		
2.3.4.8.a	Complete Investigation of catchments associated with Problem Outfalls	7 years from effective date		
2.3.4.8.a	Complete Investigations of catchments where info on outfall/interconnection identifies sewer input	7 years from effective date		
2.3.4.8.a	Complete Investigations of catchments associated with all Problem, High- and Low-Priority outfalls	10 years from effective date		

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3.4.8.cii.2	Wet weather sampling	Start upon completion of dry weather investigation; Must be complete by end of Year 10	Wet weather sampling must be completed at all regulated outfalls and interconnections where the catchment has a minimum of one (1) System Vulnerability Factor. Wet weather sampling parameters shall include, at a minimum, ammonia, chlorine, conductivity, salinity, E.coli, surfactants and temperature. For outfalls that discharge to receiving waters with impairments samples collected will have to be analyzed for these parameters as well (i.e. Phosphorus, TSS, Turbidity, DO and BOD).	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)
2.3.4.8.c.iii	Report on all data collected as part of the catchment investigations	annual MS4 Stormwater Report	Report data in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.8.e.i	Report on each illicit discharge identified and date of removal	annual MS4 stormwater reports	For each confirmed source, the following information shall be included: location of discharge and source; description of discharge; method of discovery; date of discovery; date of elimination, mitigation or enforcement action or planned corrective measures; and estimate of the volume of flow removed.	Included under Item 4.4.
2.3.4.8.e.ii	Conduct confirmatory outfall or interconnection screening	1 year from removal of discharges	If confirmatory screening indicates evidence of illicit discharge, the catchment shall be scheduled for additional investigation.	Stormwater Division
2.3.4.9	Evaluate & report IDDE program progress	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.11	Conduct IDDE employee training	at least annually	Continue to train employees about the IDDE Program including how to recognize illicit discharges and SSOs.	Stormwater Division
2.3.4.11	Report on IDDE employee training	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
CONSTRUCTION SITE STORMWATER RUNOFF CONTROL				
2.3.5	Implement & enforce Construction Site Stormwater Runoff Control (CSSRC) Program	not stated	Continue to implement and enforce a program to reduce pollutants in stormwater runoff from construction activities per the 2003 Permit.	Engineering/DPW/Conservation
POST CONSTRUCTION STORMWATER MANAGEMENT				
2.3.6.a	Implement & enforce SW management for New Development/Redevelopment	not stated	Continue to implement and enforce a program to address post-construction stormwater runoff from new development and redevelopment projects per the 2003 Permit.	Building/Planning/Zoning/Engineering/DPW/Conservation
2.3.6.d	Identify additional sites and infrastructure that could be retrofitted to maintain a minimum of 5 sites in the inventory; Report progress on implementation of BMP retrofits in Annual Report	annual MS4 stormwater reports beginning Year 5	Report progress in Annual MS4 Stormwater Report.	Stormwater Division
GOOD HOUSE KEEPING AND POLLUTION PREVENTION FOR PERMITTEE OWNED OPERATIONS				
2.3.7.a.ii.2	Provide training on use, storage, & disposal of petroleum products to applicable staff	not stated	Provide training on use, storage, & disposal of petroleum products to applicable municipal staff.	Included under Item 2.3.4.11.
2.3.7.a.iii.2	Implement routine inspection/cleaning/maintenance of catch basins to ensure sumps <50% full; report on activities as specified; investigate excessive sediment; log/report CB cleaning	continuous; annual MS4 stormwater reports	Clean catch basins as needed to ensure that no sump is more than 50% full at any given time. The Town has approximately 4,500 catch basins town-wide and cleaned 100% of their catch basins during Permit Year 1. The Town is still in the process of collecting data to build their catch basin cleaning optimization plan. Assume that all catch basins will need to be cleaned annually to meet the permit requirements.	Town currently contracts out catch basin cleaning, but is looking to expand staffing and equipment resources in the future to complete this work in-house.
2.3.7.a.iii.3 & 4.	Sweep streets/parking lots 1x/year in spring; report on efforts	annually; annual MS4 stormwater reports	The Town swept all streets at least once during Permit Year 1, and planned to increase staffing to sweep all streets twice per year in Year 2 to meet permit requirements for phosphorous-impaired waters.	Stormwater Division
2.3.7.a.iii.4	Ensure proper storage of CB cleanings & street sweeping to prevent runoff	N/A	Examine storage of CB cleanings & street sweepings	Stormwater Division
2.3.7.a.iii.6	Establish/implement procedures to inspect/maintain storm drains & structural BMPs; and for annual inspection of treatment structures	not stated	Establish/implement procedures to inspect/maintain storm drains & structural BMPs; inspect treatment structures annually at a minimum.	Stormwater Division
2.3.7.a.iv	Report on all Good Housekeeping/Pollution Prevention requirements	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3.7.a.v	Keep written record of all Good Housekeeping/Pollution Prevention activities	continuous	Keep written record of all maintenance activities, inspections and training completed.	Stormwater Division / Highway Division / Sewer Division
2.3.7.b.ii & iii	Perform SWPPP required actions/inspections/training	frequencies as per permit	Perform quarterly inspections at facilities and conduct annual employee training. The Town has SWPPPs in place for the DPW Facility at 9 Alpha Road, Highway Department at 54 Richardson Road and at the capped landfill at 40 Swain Road.	Stormwater Division
2.3.7.b.iii	Report on Stormwater Pollution Prevention Plan inspections	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.7.b.iv	Maintain written records for all SWPPP related items under 2.3.7.b	continuous	Keep written record of all maintenance activities, inspections and training completed.	Stormwater Division
SECTION 3 - ADDITIONAL REQUIREMENTS FOR DISCHARGES TO SURFACE DRINKING WATER SUPPLIES AND THEIR TRIBUTARIES				
3.0.a	Make MS4 discharges to surface drinking water supply sources & their tributaries a priority in the SWMP	continuous; report annually	Identify any outfalls discharging to drinking water supplies and make these a priority in implementation of the SWMP. This would include the two outfalls discharging to the Merrimack River and the two outfalls discharging to the Concord River, as the Concord River is tributary to the Merrimack River, which is a surface drinking water supply for other communities although not for Chelmsford.	As part of the IDDE Investigations, the Stormwater Division has designated catchments tributary to surface drinking water supply sources as high priority.
3.0.b	Provide pretreatment/spill control for MS4 discharges to public surface drinking water supply sources & their tributaries	continuous; report annually	Provide pretreatment/spill control for outfalls discharging to public surface drinking water supply sources and their tributaries. This includes both the Merrimack River and the Concord River.	Stormwater Division to investigate source protection needs and potential implementation of BMPs. The Concord River is impaired for phosphorus so there will be additional potential BMP retrofits installed in catchment areas tributary to the Concord River as part of the Phosphorus Source Identification Report.
3.0.c	Avoid direct discharges to Class A waters	continuous; report annually	There are no Class A Waters located in Chelmsford.	Stormwater Division
SECTION 4 - PROGRAM EVALUATION, RECORDKEEPING & REPORTING				
4.1.a	Self-evaluate compliance with the permit; include documentation of evaluation in written SWMP	annually	Annually evaluate Town's compliance with permit conditions.	Stormwater Division - Stormwater Engineer
4.1.b	Evaluate BMP effectiveness & change if needed under provisions of permit	not stated	Evaluate BMP effectiveness in achieving permit objectives & modify BMPs accordingly as needed.	
4.1.b	Report BMP modifications	annual MS4 stormwater reports	Include in Annual MS4 Stormwater Report.	
4.2	MS4 must keep records for ≥5yrs; make available to public	Continuous	Maintain annual MS4 stormwater reports and make available to the public.	
4.3	Document results of MS4 outfall screening/sampling & any other monitoring/studies	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	
4.4	Submit Annual MS4 Stormwater Report	annually 90 days from effective date	Prepare Annual MS4 Stormwater Report.	

CHELMSFORD, MA
MS4 GENERAL PERMIT COMPLIANCE - YEAR 8 (FY26)
Breakdown of Permit Requirements & Implementation Timeframes

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
SECTION 1 - INTRODUCTION				
1.10.2	Update written SWMP	As Necessary	Update the SWMP as needed on an annual basis.	Stormwater Division - Stormwater Engineer
SECTION 2 - NON-NUMERIC EFFLUENT LIMITATIONS				
2.1 - Waster Quality Based Effluent Limitations				
2.1.1.c	For MS4 discharges to a water body that is water quality limited and not subject to an approved TMDL or for municipalities located within Part 2.2.2a.-b., comply with Part 2.2.2 and Appendix H of the Permit	see Appendix H of the 2016 Final MA MS4 General Permit	Impaired waters in Chelmsford or impaired waters that Chelmsford is tributary to without an approved TMDL and their reason for impairment are as follows: Concord River - Phosphorus and Fecal Coliform, Black Brook - E. Coli, Deep Brook - E. Coli, Heart Pond - E. Coli, Stony Brook - E.Coli, Black Brook - Turbidity, River Meadow Brook - Fecal Coliform, and the Merrimack River - Fecal Coliform.	Requirements and any associated outside costs included under H.II, H.III, and H.V.
2.1.1.d	For all other discharges (not subject to the requirements of Part 2.1.1.b and Part 2.1.1.c of the Permit) contributing to a violation of applicable receiving water quality standards, eliminate condition causing or contributing to exceedance of water quality standards	within 60 days of becoming aware of the situation	If a discharge is identified that contributes to an exceedance of applicable water quality standards, eliminate the conditions contributing to or causing the exceedance within 60 days.	Any associated outside costs included under IDDE under Item 2.3.4.2.a.
2.1.2	Written notification to MADEP & EPA as needed & documentation in the Town's SWMP regarding new or increased stormwater discharges	As Necessary	Any new or increased stormwater discharges must satisfy MA antidegradation regulations.	Stormwater Division - Stormwater Engineer
2.2 - Discharges to Impaired Waters				
2.2	Identify all outfalls/interconnections that discharge to waters with an approved TMDL or discharge to certain waters identified as "water quality limited water bodies"	SWMP (1 yr) & annual MS4 stormwater reports	Identify all outfalls or interconnections that discharge to water quality limited water bodies.	Included under Item 4.4.
IMPAIRED - PHOSPHORUS (INCLUDES TRIBUTARIES)				
H.II.1.a.i.1	Distribute clippings/fertilizer message to required audiences	Annually in March/April	Develop and disseminate required public education information.	Stormwater Division - Stormwater Engineer
H.II.1.a.i.1	Distribute pet waste management message to Residential	Annually in June/July		
H.II.1.a.i.1	Distribute leaf litter disposal message to Residential/Business/Commercial	Annually August-October		
H.II.1.a.i.3	2.3.7 Sweep streets/lots \geq 2/yr spring & fall	Sweep at least twice/year	Increase frequency of sweeping of public streets and municipal parking lots to a minimum of two times per year in catchments tributary to the Concord River.	Included under 2.3.7.a.iii.3 & 4.
H.II.1.c	Install remaining BMPs	As per plan/schedule in Year 5 Annual Report	Design & construction of one structural BMP retrofit project during Year 8.	Stormwater Division - Design & Construction (limited outside assistance may be needed)
H.II.1.c	Track/report BMP installations & estimated Phosphorus removal	Annual Report after installation; not later than Year 6	Report BMP installations in the annual MS4 stormwater report for Year 8. Include all information on phosphorus removal calculations used during design.	Included under 4.4.
IMPAIRED - BACTERIA / PATHOGENS				
H.III.2.a.i	Distribute residential message on pet waste management (over/above 2.3.2)	Annually	Develop and disseminate required public education information, where applicable.	Stormwater Division - Stormwater Engineer
H.III.2.a.i	Send public ed. materials to septic system owners	Not specified; assume annually		
IMPAIRED - OIL/GREASE, SOLIDS OR METALS				
H.V.2.a.ii	Increased street sweeping & CB inspection/cleaning in targeted areas	Annual Reports	Increase street sweeping and catch basin cleaning in high density tributary areas with potential for high pollutant loads	Street sweeping cost included under 2.3.7.a.iii.3 & 4. Catch basin cleaning cost included under 2.3.7.a.iii.2.

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3- Requirements to Reduce Pollutants to the Maximum Extent Practicable (MEP)				
PUBLIC EDUCATION & OUTREACH				
2.3.2.a-d	Distribute at least 2 educational messages to each of 4 targeted audiences (residents, businesses/commercial/institutional, developers and industrial). Different messages to the same targeted audience shall be distributed at least one year apart.	begin year 1; continue throughout permit term	Develop/distribute a minimum of 8 messages over the permit term. Educational messages can include brochures, newsletters, information posted to the Town's website, newspaper articles, public service announcements, displays in municipal buildings, etc.	Stormwater Division - Stormwater Engineer
2.3.2.e	Identify methods to evaluate the effectiveness of the message; Implement	not stated	Determine method to evaluate message effectiveness; implement method.	
2.3.2.f	Modify any ineffective message/methods of distribution	Before next message is distributed	Modify message or distribution methods if applicable.	
2.3.2.g	Report on messages as per permit	annual MS4 stormwater report	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
PUBLIC INVOLVEMENT & PARTICIPATION				
2.3.3.a	Meet Public Notice requirements	continuous	Ensure that all public involvement comply with state public notice requirements (MGL Chapter 30A, Sections 18-25)	Stormwater Division
2.3.3.a	Make the Stormwater Management Plan & Annual MS4 Stormwater report accessible to the public	continuous	Make SWMP and annual MS4 stormwater reports available to public at Town Hall and/or on the Town's website.	Stormwater Division
2.3.3.b	Provide public opportunity to participate in the review/implementation of the Stormwater Management Program	annually	May be implemented through the use of Town website, Town hotline, clean-up teams, monitoring teams, or a stormwater advisory committee.	Stormwater Division
2.3.3.c	Report on public participation opportunities	annually	Report Progress in the annual MS4 Stormwater Permit	Included under Item 4.4.
ILLICIT DISCHARGE DETECTION & ELIMINATION				
2.3.4.2.a	Eliminate illicit discharges	60 days or as expeditiously as possible	Eliminate illicit discharges as they are identified or establish a schedule for elimination for discharges that cannot be removed within 60 days.	Stormwater Division / Sewer Division
2.3.4.2.a	Report dates of illicit identification and schedules for removal	annual MS4 stormwater report	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.4.a	Mitigate SSOs	Expediently as possible	Eliminate SSO as expeditiously as possible and take interim mitigation measures to minimize the discharge of pollutants to and from the Town until elimination is completed.	Sewer Division
2.3.4.4.c	Report SSOs	24 hours from awareness	Provide oral notice to EPA within 24 hours and a written notice to the EPA and MassDEP within five (5) days	Sewer Division
2.3.4.4.d	Update SSO inventory	annual MS4 Stormwater report	Include status of mitigation and corrective measures implemented	Included under Item 4.4.
2.3.4.5.b	Map the MS4 features required in 2.3.4.5.b under Phase 2 including outfall spatial location, pipes, manholes, catch basins, refined catchment delineations, and the municipal sanitary system (if available) and the municipal combined sewer system (if applicable).	Annually during catchment investigation procedures; Within 10 years from permit effective date	Town has in place a comprehensive map of their drainage system. Anticipated mapping additions include: refined catchment delineations, updated/new drainage from new developments and re-developments, and drainage updates based on IDDE investigations.	Stormwater Division - GIS Analyst
2.3.4.5.e	Report on mapping progress	annual MS4 Stormwater reports	Report progress in Annual MS4 Stormwater Report	Included under Item 4.4.
2.3.4.7.a	Report on list of catchments and results of rankings & update annually	annual MS4 Stormwater reports	Report progress in Annual MS4 Stormwater Report	Included under Item 4.4.
2.3.4.8.a	Begin investigation of catchments associated with Problem Outfalls	no later than 2 years from effective date	Implement Illicit Discharge Detection and Elimination Investigations as required by the conditions of the permit. For budgeting purposes, it is assumed that an Illicit Discharge Detection and Elimination Investigation Program will need to be implemented in all catchments. Catchments with no potential for illicit discharges (based on the catchment ranking exercise completed under Task 2.3.4.7.c.) can be excluded from the IDDE Program.	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)
2.3.4.8.a	Begin investigation of catchments associated with High and Low Priority Outfalls	After completion of outfall ranking - latest allowable timeframe is 3 years from effective date		
2.3.4.8.a	Complete Investigation of catchments associated with Problem Outfalls	7 years from effective date		
2.3.4.8.a	Complete Investigations of catchments where info on outfall/interconnection identifies sewer input	7 years from effective date		
2.3.4.8.a	Complete Investigations of catchments associated with all Problem, High- and Low-Priority outfalls	10 years from effective date		

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3.4.8.cii.2	Wet weather sampling	Start upon completion of dry weather investigation; Must be complete by end of Year 10	Wet weather sampling must be completed at all regulated outfalls and interconnections where the catchment has a minimum of one (1) System Vulnerability Factor. Wet weather sampling parameters shall include, at a minimum, ammonia, chlorine, conductivity, salinity, E.coli, surfactants and temperature. For outfalls that discharge to receiving waters with impairments samples collected will have to be analyzed for these parameters as well (i.e. Phosphorus, TSS, Turbidity, DO and BOD).	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)
2.3.4.8.c.iii	Report on all data collected as part of the catchment investigations	annual MS4 Stormwater Report	Report data in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.8.e.i	Report on each illicit discharge identified and date of removal	annual MS4 stormwater reports	For each confirmed source, the following information shall be included: location of discharge and source; description of discharge; method of discovery; date of discovery; date of elimination, mitigation or enforcement action or planned corrective measures; and estimate of the volume of flow removed.	Included under Item 4.4.
2.3.4.8.e.ii	Conduct confirmatory outfall or interconnection screening	1 year from removal of discharges	If confirmatory screening indicates evidence of illicit discharge, the catchment shall be scheduled for additional investigation.	Stormwater Division
2.3.4.9	Evaluate & report IDDE program progress	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.11	Conduct IDDE employee training	at least annually	Continue to train employees about the IDDE Program including how to recognize illicit discharges and SSOs.	Stormwater Division
2.3.4.11	Report on IDDE employee training	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
CONSTRUCTION SITE STORMWATER RUNOFF CONTROL				
2.3.5	Implement & enforce Construction Site Stormwater Runoff Control (CSSRC) Program	not stated	Continue to implement and enforce a program to reduce pollutants in stormwater runoff from construction activities per the 2003 Permit.	Engineering/DPW/Conservation
POST CONSTRUCTION STORMWATER MANAGEMENT				
2.3.6.a	Implement & enforce SW management for New Development/Redevelopment	not stated	Continue to implement and enforce a program to address post-construction stormwater runoff from new development and redevelopment projects per the 2003 Permit.	Building/Planning/Zoning/Engineering/DPW/Conservation
2.3.6.d	Identify additional sites and infrastructure that could be retrofitted to maintain a minimum of 5 sites in the inventory; Report progress on implementation of BMP retrofits in Annual Report	annual MS4 stormwater reports beginning Year 5	Report progress in Annual MS4 Stormwater Report.	Stormwater Division
GOOD HOUSE KEEPING AND POLLUTION PREVENTION FOR PERMITTEE OWNED OPERATIONS				
2.3.7.a.ii.2	Provide training on use, storage, & disposal of petroleum products to applicable staff	not stated	Provide training on use, storage, & disposal of petroleum products to applicable municipal staff.	Included under Item 2.3.4.11.
2.3.7.a.iii.2	Implement routine inspection/cleaning/maintenance of catch basins to ensure sumps <50% full; report on activities as specified; investigate excessive sediment; log/report CB cleaning	continuous; annual MS4 stormwater reports	Clean catch basins as needed to ensure that no sump is more than 50% full at any given time. The Town has approximately 4,500 catch basins town-wide and cleaned 100% of their catch basins during Permit Year 1. The Town is still in the process of collecting data to build their catch basin cleaning optimization plan. Assume that all catch basins will need to be cleaned annually to meet the permit requirements.	Town currently contracts out catch basin cleaning, but is looking to expand staffing and equipment resources in the future to complete this work in-house.
2.3.7.a.iii.3 & 4.	Sweep streets/parking lots 1x/year in spring; report on efforts	annually; annual MS4 stormwater reports	The Town swept all streets at least once during Permit Year 1, and planned to increase staffing to sweep all streets twice per year in Year 2 to meet permit requirements for phosphorous-impaired waters.	Stormwater Division
2.3.7.a.iii.4	Ensure proper storage of CB cleanings & street sweeping to prevent runoff	N/A	Examine storage of CB cleanings & street sweepings	Stormwater Division
2.3.7.a.iii.6	Establish/implement procedures to inspect/maintain storm drains & structural BMPs; and for annual inspection of treatment structures	not stated	Establish/implement procedures to inspect/maintain storm drains & structural BMPs; inspect treatment structures annually at a minimum.	Stormwater Division
2.3.7.a.iv	Report on all Good Housekeeping/Pollution Prevention requirements	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3.7.a.v	Keep written record of all Good Housekeeping/Pollution Prevention activities	continuous	Keep written record of all maintenance activities, inspections and training completed.	Stormwater Division / Highway Division / Sewer Division
2.3.7.b.ii & iii	Perform SWPPP required actions/inspections/training	frequencies as per permit	Perform quarterly inspections at facilities and conduct annual employee training. The Town has SWPPPs in place for the DPW Facility at 9 Alpha Road, Highway Department at 54 Richardson Road and at the capped landfill at 40 Swain Road.	Stormwater Division
2.3.7.b.iii	Report on Stormwater Pollution Prevention Plan inspections	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.7.b.iv	Maintain written records for all SWPPP related items under 2.3.7.b	continuous	Keep written record of all maintenance activities, inspections and training completed.	Stormwater Division
SECTION 3 - ADDITIONAL REQUIREMENTS FOR DISCHARGES TO SURFACE DRINKING WATER SUPPLIES AND THEIR TRIBUTARIES				
3.0.a	Make MS4 discharges to surface drinking water supply sources & their tributaries a priority in the SWMP	continuous; report annually	Identify any outfalls discharging to drinking water supplies and make these a priority in implementation of the SWMP. This would include the two outfalls discharging to the Merrimack River and the two outfalls discharging to the Concord River, as the Concord River is tributary to the Merrimack River, which is a surface drinking water supply for other communities although not for Chelmsford.	As part of the IDDE Investigations, the Stormwater Division has designated catchments tributary to surface drinking water supply sources as high priority.
3.0.b	Provide pretreatment/spill control for MS4 discharges to public surface drinking water supply sources & their tributaries	continuous; report annually	Provide pretreatment/spill control for outfalls discharging to public surface drinking water supply sources and their tributaries. This includes both the Merrimack River and the Concord River.	Stormwater Division to investigate source protection needs and potential implementation of BMPs. The Concord River is impaired for phosphorus so there will be additional potential BMP retrofits installed in catchment areas tributary to the Concord River as part of the Phosphorus Source Identification Report.
3.0.c	Avoid direct discharges to Class A waters	continuous; report annually	There are no Class A Waters located in Chelmsford.	Stormwater Division
SECTION 4 - PROGRAM EVALUATION, RECORDKEEPING & REPORTING				
4.1.a	Self-evaluate compliance with the permit; include documentation of evaluation in written SWMP	annually	Annually evaluate Town's compliance with permit conditions.	Stormwater Division - Stormwater Engineer
4.1.b	Evaluate BMP effectiveness & change if needed under provisions of permit	not stated	Evaluate BMP effectiveness in achieving permit objectives & modify BMPs accordingly as needed.	
4.1.b	Report BMP modifications	annual MS4 stormwater reports	Include in Annual MS4 Stormwater Report.	
4.2	MS4 must keep records for ≥5yrs; make available to public	Continuous	Maintain annual MS4 stormwater reports and make available to the public.	
4.3	Document results of MS4 outfall screening/sampling & any other monitoring/studies	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	
4.4	Submit Annual MS4 Stormwater Report	annually 90 days from effective date	Prepare Annual MS4 Stormwater Report.	

CHELMSFORD, MA
MS4 GENERAL PERMIT COMPLIANCE - YEAR 9 (FY27)
Breakdown of Permit Requirements & Implementation Timeframes

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
SECTION 1 - INTRODUCTION				
1.10.2	Update written SWMP	As Necessary	Update the SWMP as needed on an annual basis.	Stormwater Division - Stormwater Engineer
SECTION 2 - NON-NUMERIC EFFLUENT LIMITATIONS				
2.1 - Waster Quality Based Effluent Limitations				
2.1.1.c	For MS4 discharges to a water body that is water quality limited and not subject to an approved TMDL or for municipalities located within Part 2.2.2a.-b., comply with Part 2.2.2 and Appendix H of the Permit	see Appendix H of the 2016 Final MA MS4 General Permit	Impaired waters in Chelmsford or impaired waters that Chelmsford is tributary to without an approved TMDL and their reason for impairment are as follows: Concord River - Phosphorus and Fecal Coliform, Black Brook - E. Coli, Deep Brook - E. Coli, Heart Pond - E. Coli, Stony Brook - E.Coli, Black Brook - Turbidity, River Meadow Brook - Fecal Coliform, and the Merrimack River - Fecal Coliform.	Requirements and any associated outside costs included under H.II, H.III, and H.V.
2.1.1.d	For all other discharges (not subject to the requirements of Part 2.1.1.b and Part 2.1.1.c of the Permit) contributing to a violation of applicable receiving water quality standards, eliminate condition causing or contributing to exceedance of water quality standards	within 60 days of becoming aware of the situation	If a discharge is identified that contributes to an exceedance of applicable water quality standards, eliminate the conditions contributing to or causing the exceedance within 60 days.	Any associated outside costs included under IDDE under Item 2.3.4.2.a.
2.1.2	Written notification to MADEP & EPA as needed & documentation in the Town's SWMP regarding new or increased stormwater discharges	As Necessary	Any new or increased stormwater discharges must satisfy MA antidegradation regulations.	Stormwater Division - Stormwater Engineer
2.2 - Discharges to Impaired Waters				
2.2	Identify all outfalls/interconnections that discharge to waters with an approved TMDL or discharge to certain waters identified as "water quality limited water bodies"	SWMP (1 yr) & annual MS4 stormwater reports	Identify all outfalls or interconnections that discharge to water quality limited water bodies.	Included under Item 4.4.
IMPAIRED - PHOSPHORUS (INCLUDES TRIBUTARIES)				
H.II.1.a.i.1	Distribute clippings/fertilizer message to required audiences	Annually in March/April	Develop and disseminate required public education information.	Stormwater Division - Stormwater Engineer
H.II.1.a.i.1	Distribute pet waste management message to Residential	Annually in June/July		
H.II.1.a.i.1	Distribute leaf litter disposal message to Residential/Business/Commercial	Annually August-October		
H.II.1.a.i.3	2.3.7 Sweep streets/lots \geq 2/yr spring & fall	Sweep at least twice/year	Increase frequency of sweeping of public streets and municipal parking lots to a minimum of two times per year in catchments tributary to the Concord River.	Included under 2.3.7.a.iii.3 & 4.
H.II.1.c	Install remaining BMPs	As per plan/schedule in Year 5 Annual Report	Design & construction of one structural BMP retrofit project during Year 9.	Stormwater Division - Design & Construction (limited outside assistance may be needed)
H.II.1.c	Track/report BMP installations & estimated Phosphorus removal	Annual Report after installation; not later than Year 6	Report BMP installations in the annual MS4 stormwater report for Year 9. Include all information on phosphorus removal calculations used during design.	Included under 4.4.
IMPAIRED - BACTERIA / PATHOGENS				
H.III.2.a.i	Distribute residential message on pet waste management (over/above 2.3.2)	Annually	Develop and disseminate required public education information, where applicable.	Stormwater Division - Stormwater Engineer
H.III.2.a.i	Send public ed. materials to septic system owners	Not specified; assume annually		
IMPAIRED - OIL/GREASE, SOLIDS OR METALS				
H.V.2.a.ii	Increased street sweeping & CB inspection/cleaning in targeted areas	Annual Reports	Increase street sweeping and catch basin cleaning in high density tributary areas with potential for high pollutant loads	Street sweeping cost included under 2.3.7.a.iii.3 & 4. Catch basin cleaning cost included under 2.3.7.a.iii.2.

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3- Requirements to Reduce Pollutants to the Maximum Extent Practicable (MEP)				
PUBLIC EDUCATION & OUTREACH				
2.3.2.a-d	Distribute at least 2 educational messages to each of 4 targeted audiences (residents, businesses/commercial/institutional, developers and industrial). Different messages to the same targeted audience shall be distributed at least one year apart.	begin year 1; continue throughout permit term	Develop/distribute a minimum of 8 messages over the permit term. Educational messages can include brochures, newsletters, information posted to the Town's website, newspaper articles, public service announcements, displays in municipal buildings, etc.	Stormwater Division - Stormwater Engineer
2.3.2.e	Identify methods to evaluate the effectiveness of the message; Implement	not stated	Determine method to evaluate message effectiveness; implement method.	
2.3.2.f	Modify any ineffective message/methods of distribution	Before next message is distributed	Modify message or distribution methods if applicable.	
2.3.2.g	Report on messages as per permit	annual MS4 stormwater report	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
PUBLIC INVOLVEMENT & PARTICIPATION				
2.3.3.a	Meet Public Notice requirements	continuous	Ensure that all public involvement comply with state public notice requirements (MGL Chapter 30A, Sections 18-25)	Stormwater Division
2.3.3.a	Make the Stormwater Management Plan & Annual MS4 Stormwater report accessible to the public	continuous	Make SWMP and annual MS4 stormwater reports available to public at Town Hall and/or on the Town's website.	Stormwater Division
2.3.3.b	Provide public opportunity to participate in the review/implementation of the Stormwater Management Program	annually	May be implemented through the use of Town website, Town hotline, clean-up teams, monitoring teams, or a stormwater advisory committee.	Stormwater Division
2.3.3.c	Report on public participation opportunities	annually	Report Progress in the annual MS4 Stormwater Permit	Included under Item 4.4.
ILLCIT DISCHARGE DETECTION & ELIMINATION				
2.3.4.2.a	Eliminate illicit discharges	60 days or as expeditiously as possible	Eliminate illicit discharges as they are identified or establish a schedule for elimination for discharges that cannot be removed within 60 days.	Stormwater Division / Sewer Division
2.3.4.2.a	Report dates of illicit identification and schedules for removal	annual MS4 stormwater report	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.4.a	Mitigate SSOs	Expediently as possible	Eliminate SSO as expeditiously as possible and take interim mitigation measures to minimize the discharge of pollutants to and from the Town until elimination is completed.	Sewer Division
2.3.4.4.c	Report SSOs	24 hours from awareness	Provide oral notice to EPA within 24 hours and a written notice to the EPA and MassDEP within five (5) days	Sewer Division
2.3.4.4.d	Update SSO inventory	annual MS4 Stormwater report	Include status of mitigation and corrective measures implemented	Included under Item 4.4.
2.3.4.5.b	Map the MS4 features required in 2.3.4.5.b under Phase 2 including outfall spatial location, pipes, manholes, catch basins, refined catchment delineations, and the municipal sanitary system (if available) and the municipal combined sewer system (if applicable).	Annually during catchment investigation procedures; Within 10 years from permit effective date	Town has in place a comprehensive map of their drainage system. Anticipated mapping additions include: refined catchment delineations, updated/new drainage from new developments and re-developments, and drainage updates based on IDDE investigations.	Stormwater Division - GIS Analyst
2.3.4.5.e	Report on mapping progress	annual MS4 Stormwater reports	Report progress in Annual MS4 Stormwater Report	Included under Item 4.4.
2.3.4.7.a	Report on list of catchments and results of rankings & update annually	annual MS4 Stormwater reports	Report progress in Annual MS4 Stormwater Report	Included under Item 4.4.
2.3.4.8.a	Begin investigation of catchments associated with Problem Outfalls	no later than 2 years from effective date	Implement Illicit Discharge Detection and Elimination Investigations as required by the conditions of the permit. For budgeting purposes, it is assumed that an Illicit Discharge Detection and Elimination Investigation Program will need to be implemented in all catchments. Catchments with no potential for illicit discharges (based on the catchment ranking exercise completed under Task 2.3.4.7.c.) can be excluded from the IDDE Program.	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)
2.3.4.8.a	Begin investigation of catchments associated with High and Low Priority Outfalls	After completion of outfall ranking - latest allowable timeframe is 3 years from effective date		
2.3.4.8.a	Complete Investigation of catchments associated with Problem Outfalls	7 years from effective date		
2.3.4.8.a	Complete Investigations of catchments where info on outfall/interconnection identifies sewer input	7 years from effective date		
2.3.4.8.a	Complete Investigations of catchments associated with all Problem, High- and Low-Priority outfalls	10 years from effective date		

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3.4.8.cii.2	Wet weather sampling	Start upon completion of dry weather investigation; Must be complete by end of Year 10	Wet weather sampling must be completed at all regulated outfalls and interconnections where the catchment has a minimum of one (1) System Vulnerability Factor. Wet weather sampling parameters shall include, at a minimum, ammonia, chlorine, conductivity, salinity, E.coli, surfactants and temperature. For outfalls that discharge to receiving waters with impairments samples collected will have to be analyzed for these parameters as well (i.e. Phosphorus, TSS, Turbidity, DO and BOD).	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)
2.3.4.8.c.iii	Report on all data collected as part of the catchment investigations	annual MS4 Stormwater Report	Report data in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.8.e.i	Report on each illicit discharge identified and date of removal	annual MS4 stormwater reports	For each confirmed source, the following information shall be included: location of discharge and source; description of discharge; method of discovery; date of discovery; date of elimination, mitigation or enforcement action or planned corrective measures; and estimate of the volume of flow removed.	Included under Item 4.4.
2.3.4.8.e.ii	Conduct confirmatory outfall or interconnection screening	1 year from removal of discharges	If confirmatory screening indicates evidence of illicit discharge, the catchment shall be scheduled for additional investigation.	Stormwater Division
2.3.4.9	Evaluate & report IDDE program progress	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.11	Conduct IDDE employee training	at least annually	Continue to train employees about the IDDE Program including how to recognize illicit discharges and SSOs.	Stormwater Division
2.3.4.11	Report on IDDE employee training	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
CONSTRUCTION SITE STORMWATER RUNOFF CONTROL				
2.3.5	Implement & enforce Construction Site Stormwater Runoff Control (CSSRC) Program	not stated	Continue to implement and enforce a program to reduce pollutants in stormwater runoff from construction activities per the 2003 Permit.	Engineering/DPW/Conservation
POST CONSTRUCTION STORMWATER MANAGEMENT				
2.3.6.a	Implement & enforce SW management for New Development/Redevelopment	not stated	Continue to implement and enforce a program to address post-construction stormwater runoff from new development and redevelopment projects per the 2003 Permit.	Building/Planning/Zoning/Engineering/DPW/Conservation
2.3.6.d	Identify additional sites and infrastructure that could be retrofitted to maintain a minimum of 5 sites in the inventory; Report progress on implementation of BMP retrofits in Annual Report	annual MS4 stormwater reports beginning Year 5	Report progress in Annual MS4 Stormwater Report.	Stormwater Division
GOOD HOUSE KEEPING AND POLLUTION PREVENTION FOR PERMITTEE OWNED OPERATIONS				
2.3.7.a.ii.2	Provide training on use, storage, & disposal of petroleum products to applicable staff	not stated	Provide training on use, storage, & disposal of petroleum products to applicable municipal staff.	Included under Item 2.3.4.11.
2.3.7.a.iii.2	Implement routine inspection/cleaning/maintenance of catch basins to ensure sumps <50% full; report on activities as specified; investigate excessive sediment; log/report CB cleaning	continuous; annual MS4 stormwater reports	Clean catch basins as needed to ensure that no sump is more than 50% full at any given time. The Town has approximately 4,500 catch basins town-wide and cleaned 100% of their catch basins during Permit Year 1. The Town is still in the process of collecting data to build their catch basin cleaning optimization plan. Assume that all catch basins will need to be cleaned annually to meet the permit requirements.	Town currently contracts out catch basin cleaning, but is looking to expand staffing and equipment resources in the future to complete this work in-house.
2.3.7.a.iii.3 & 4.	Sweep streets/parking lots 1x/year in spring; report on efforts	annually; annual MS4 stormwater reports	The Town swept all streets at least once during Permit Year 1, and planned to increase staffing to sweep all streets twice per year in Year 2 to meet permit requirements for phosphorous-impaired waters.	Stormwater Division
2.3.7.a.iii.4	Ensure proper storage of CB cleanings & street sweeping to prevent runoff	N/A	Examine storage of CB cleanings & street sweepings	Stormwater Division
2.3.7.a.iii.6	Establish/implement procedures to inspect/maintain storm drains & structural BMPs; and for annual inspection of treatment structures	not stated	Establish/implement procedures to inspect/maintain storm drains & structural BMPs; inspect treatment structures annually at a minimum.	Stormwater Division
2.3.7.a.iv	Report on all Good Housekeeping/Pollution Prevention requirements	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
2.3.7.a.v	Keep written record of all Good Housekeeping/Pollution Prevention activities	continuous	Keep written record of all maintenance activities, inspections and training completed.	Stormwater Division / Highway Division / Sewer Division
2.3.7.b.ii & iii	Perform SWPPP required actions/inspections/training	frequencies as per permit	Perform quarterly inspections at facilities and conduct annual employee training. The Town has SWPPPs in place for the DPW Facility at 9 Alpha Road, Highway Department at 54 Richardson Road and at the capped landfill at 40 Swain Road.	Stormwater Division
2.3.7.b.iii	Report on Stormwater Pollution Prevention Plan inspections	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.7.b.iv	Maintain written records for all SWPPP related items under 2.3.7.b	continuous	Keep written record of all maintenance activities, inspections and training completed.	Stormwater Division
SECTION 3 - ADDITIONAL REQUIREMENTS FOR DISCHARGES TO SURFACE DRINKING WATER SUPPLIES AND THEIR TRIBUTARIES				
3.0.a	Make MS4 discharges to surface drinking water supply sources & their tributaries a priority in the SWMP	continuous; report annually	Identify any outfalls discharging to drinking water supplies and make these a priority in implementation of the SWMP. This would include the two outfalls discharging to the Merrimack River and the two outfalls discharging to the Concord River, as the Concord River is tributary to the Merrimack River, which is a surface drinking water	As part of the IDDE Investigations, the Stormwater Division has designated catchments tributary to surface drinking water supply sources as high priority.
3.0.b	Provide pretreatment/spill control for MS4 discharges to public surface drinking water supply sources & their tributaries	continuous; report annually	Provide pretreatment/spill control for outfalls discharging to public surface drinking water supply sources and their tributaries. This includes both the Merrimack River and the Concord River.	Stormwater Division to investigate source protection needs and potential implementation of BMPs. The Concord River is impaired for phosphorus so there will be additional potential BMP retrofits installed in catchment areas tributary to the Concord River as part of the Phosphorus Source Identification Report.
3.0.c	Avoid direct discharges to Class A waters	continuous; report annually	There are no Class A Waters located in Chelmsford.	Stormwater Division
SECTION 4 - PROGRAM EVALUATION, RECORDKEEPING & REPORTING				
4.1.a	Self-evaluate compliance with the permit; include documentation of evaluation in written SWMP	annually	Annually evaluate Town's compliance with permit conditions.	Stormwater Division - Stormwater Engineer
4.1.b	Evaluate BMP effectiveness & change if needed under provisions of permit	not stated	Evaluate BMP effectiveness in achieving permit objectives & modify BMPs accordingly as needed.	
4.1.b	Report BMP modifications	annual MS4 stormwater reports	Include in Annual MS4 Stormwater Report.	
4.2	MS4 must keep records for ≥5yrs; make available to public	Continuous	Maintain annual MS4 stormwater reports and make available to the public.	
4.3	Document results of MS4 outfall screening/sampling & any other monitoring/studies	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	
4.4	Submit Annual MS4 Stormwater Report	annually 90 days from effective date	Prepare Annual MS4 Stormwater Report.	

CHELMSFORD, MA

MS4 GENERAL PERMIT COMPLIANCE - YEAR 10 (FY28)

Breakdown of Permit Requirements & Implementation Timeframes

Item No.	Requirements	Deadline	Needs Specific to Chelmsford	Party Responsible / Estimated Cost to Comply
SECTION 1 - INTRODUCTION				
1.10.2	Update written SWMP	As Necessary	Update the SWMP as needed on an annual basis.	Stormwater Division - Stormwater Engineer
SECTION 2 - NON-NUMERIC EFFLUENT LIMITATIONS				
2.1 - Waster Quality Based Effluent Limitations				
2.1.1.c	For MS4 discharges to a water body that is water quality limited and not subject to an approved TMDL or for municipalities located within Part 2.2.2a.-b., comply with Part 2.2.2 and Appendix H of the Permit	see Appendix H of the 2016 Final MA MS4 General Permit	Impaired waters in Chelmsford or impaired waters that Chelmsford is tributary to without an approved TMDL and their reason for impairment are as follows: Concord River - Phosphorus and Fecal Coliform, Black Brook - E. Coli, Deep Brook - E. Coli, Heart Pond - E. Coli, Stony Brook - E.Coli, Black Brook - Turbidity, River Meadow Brook - Fecal Coliform, and the Merrimack River - Fecal Coliform.	Requirements and any associated outside costs included under H.II, H.III, and H.V.
2.1.1.d	For all other discharges (not subject to the requirements of Part 2.1.1.b and Part 2.1.1.c of the Permit) contributing to a violation of applicable receiving water quality standards, eliminate condition causing or contributing to exceedance of water quality standards	within 60 days of becoming aware of the situation	If a discharge is identified that contributes to an exceedance of applicable water quality standards, eliminate the conditions contributing to or causing the exceedance within 60 days.	Any associated outside costs included under IDDE under Item 2.3.4.2.a.
2.1.2	Written notification to MADEP & EPA as needed & documentation in the Town's SWMP regarding new or increased stormwater discharges	As Necessary	Any new or increased stormwater discharges must satisfy MA antidegradation regulations.	Stormwater Division - Stormwater Engineer
2.2 - Discharges to Impaired Waters				
2.2	Identify all outfalls/interconnections that discharge to waters with an approved TMDL or discharge to certain waters identified as "water quality limited water bodies"	SWMP (1 yr) & annual MS4 stormwater reports	Identify all outfalls or interconnections that discharge to water quality limited water bodies.	Included under Item 4.4.
IMPAIRED - PHOSPHORUS (INCLUDES TRIBUTARIES)				
H.II.1.a.i.1	Distribute clippings/fertilizer message to required audiences	Annually in March/April	Develop and disseminate required public education information.	Stormwater Division - Stormwater Engineer
H.II.1.a.i.1	Distribute pet waste management message to Residential	Annually in June/July		
H.II.1.a.i.1	Distribute leaf litter disposal message to Residential/Business/Commercial	Annually August-October		
H.II.1.a.i.3	2.3.7 Sweep streets/lots \geq 2/yr spring & fall	Sweep at least twice/year	Increase frequency of sweeping of public streets and municipal parking lots to a minimum of two times per year in catchments tributary to the Concord River.	Included under 2.3.7.a.iii.3 & 4.
H.II.1.c	Install remaining BMPs	As per plan/schedule in Year 5 Annual Report	Design & construction of one structural BMP retrofit project during Year 10.	Stormwater Division - Design & Construction (limited outside assistance may be needed)
H.II.1.c	Track/report BMP installations & estimated Phosphorus removal	Annual Report after installation; not later than Year 6	Report BMP installations in the annual MS4 stormwater report for Year 10. Include all information on phosphorus removal calculations used during design.	Included under 4.4.
IMPAIRED - BACTERIA / PATHOGENS				
H.III.2.a.i	Distribute residential message on pet waste management (over/above 2.3.2)	Annually	Develop and disseminate required public education information, where applicable.	Stormwater Division - Stormwater Engineer
H.III.2.a.i	Send public ed. materials to septic system owners	Not specified; assume annually		
IMPAIRED - OIL/GREASE, SOLIDS OR METALS				
H.V.2.a.ii	Increased street sweeping & CB inspection/cleaning in targeted areas	Annual Reports	Increase street sweeping and catch basin cleaning in high density tributary areas with potential for high pollutant loads	Street sweeping cost included under 2.3.7.a.iii.3 & 4. Catch basin cleaning cost included under 2.3.7.a.iii.2.

2.3- Requirements to Reduce Pollutants to the Maximum Extent Practicable (MEP)

PUBLIC EDUCATION & OUTREACH

2.3.2.a-d	Distribute at least 2 educational messages to each of 4 targeted audiences (residents, businesses/commercial/institutional, developers and industrial). Different messages to the same targeted audience shall be distributed at least one year apart.	begin year 1; continue throughout permit term	Develop/distribute a minimum of 8 messages over the permit term. Educational messages can include brochures, newsletters, information posted to the Town's website, newspaper articles, public service announcements, displays in municipal buildings, etc.	Stormwater Division - Stormwater Engineer
2.3.2.e	Identify methods to evaluate the effectiveness of the message; Implement	not stated	Determine method to evaluate message effectiveness; implement method.	
2.3.2.f	Modify any ineffective message/methods of distribution	Before next message is distributed	Modify message or distribution methods if applicable.	
2.3.2.g	Report on messages as per permit	annual MS4 stormwater report	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.

PUBLIC INVOLVEMENT & PARTICIPATION

2.3.3.a	Meet Public Notice requirements	continuous	Ensure that all public involvement comply with state public notice requirements (MGL Chapter 30A, Sections 18-25)	Stormwater Division
2.3.3.a	Make the Stormwater Management Plan & Annual MS4 Stormwater report accessible to the public	continuous	Make SWMP and annual MS4 stormwater reports available to public at Town Hall and/or on the Town's website.	Stormwater Division
2.3.3.b	Provide public opportunity to participate in the review/implementation of the Stormwater Management Program	annually	May be implemented through the use of Town website, Town hotline, clean-up teams, monitoring teams, or a stormwater advisory committee.	Stormwater Division
2.3.3.c	Report on public participation opportunities	annually	Report Progress in the annual MS4 Stormwater Permit	Included under Item 4.4.

ILLICIT DISCHARGE DETECTION & ELIMINATION

2.3.4.2.a	Eliminate illicit discharges	60 days or as expeditiously as possible	Eliminate illicit discharges as they are identified or establish a schedule for elimination for discharges that cannot be removed within 60 days.	Stormwater Division / Sewer Division
2.3.4.2.a	Report dates of illicit identification and schedules for removal	annual MS4 stormwater report	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.4.a	Mitigate SSOs	Expediently as possible	Eliminate SSO as expeditiously as possible and take interim mitigation measures to minimize the discharge of pollutants to and from the Town until elimination is completed.	Sewer Division
2.3.4.4.c	Report SSOs	24 hours from awareness	Provide oral notice to EPA within 24 hours and a written notice to the EPA and MassDEP within five (5) days	Sewer Division
2.3.4.4.d	Update SSO inventory	annual MS4 Stormwater report	Include status of mitigation and corrective measures implemented	Included under Item 4.4.
2.3.4.5.b	Map the MS4 features required in 2.3.4.5.b under Phase 2 including outfall spatial location, pipes, manholes, catch basins, refined catchment delineations, and the municipal sanitary system (if available) and the municipal combined sewer system (if applicable).	Annually during catchment investigation procedures; Within 10 years from permit effective date	Town has in place a comprehensive map of their drainage system. Anticipated mapping additions include: refined catchment delineations, updated/new drainage from new developments and re-developments, and drainage updates based on IDDE investigations.	Stormwater Division - GIS Analyst
2.3.4.5.e	Report on mapping progress	annual MS4 Stormwater reports	Report progress in Annual MS4 Stormwater Report	Included under Item 4.4.
2.3.4.7.a	Report on list of catchments and results of rankings & update annually	annual MS4 Stormwater reports	Report progress in Annual MS4 Stormwater Report	Included under Item 4.4.
2.3.4.8.a	Begin investigation of catchments associated with Problem Outfalls	no later than 2 years from effective date	Implement Illicit Discharge Detection and Elimination Investigations as required by the conditions of the permit. For budgeting purposes, it is assumed that an Illicit Discharge Detection and Elimination Investigation Program will need to be implemented in all catchments. Catchments with no potential for illicit discharges (based on the catchment ranking exercise completed under Task 2.3.4.7.c.) can be excluded from the IDDE Program.	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)
2.3.4.8.a	Begin investigation of catchments associated with High and Low Priority Outfalls	After completion of outfall ranking - latest allowable timeframe is 3 years from effective date		
2.3.4.8.a	Complete Investigation of catchments associated with Problem Outfalls	7 years from effective date		
2.3.4.8.a	Complete Investigations of catchments where info on outfall/interconnection identifies sewer input	7 years from effective date		
2.3.4.8.a	Complete Investigations of catchments associated with all Problem, High- and Low-Priority outfalls	10 years from effective date		
2.3.4.8.cii.2	Wet weather sampling	Start upon completion of dry weather investigation; Must be complete by end of Year 10	Wet weather sampling must be completed at all regulated outfalls and interconnections where the catchment has a minimum of one (1) System Vulnerability Factor. Wet weather sampling parameters shall include, at a minimum, ammonia, chlorine, conductivity, salinity, E.coli, surfactants and temperature. For outfalls that discharge to receiving waters with impairments samples collected will have to be analyzed for these parameters as well (i.e. Phosphorus, TSS, Turbidity, DO and BOD).	Stormwater Division - Stormwater Engineer (Only associated costs include costs for an outside laboratory where analysis cannot be completed on-site with test kits or testing equipment.)

2.3.4.8.c.iii	Report on all data collected as part of the catchment investigations	annual MS4 Stormwater Report	Report data in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.8.e.i	Report on each illicit discharge identified and date of removal	annual MS4 stormwater reports	For each confirmed source, the following information shall be included: location of discharge and source; description of discharge; method of discovery; date of discovery; date of elimination, mitigation or enforcement action or planned corrective measures; and estimate of the volume of flow removed.	Included under Item 4.4.
2.3.4.8.e.ii	Conduct confirmatory outfall or interconnection screening	1 year from removal of discharges	If confirmatory screening indicates evidence of illicit discharge, the catchment shall be scheduled for additional investigation.	Stormwater Division
2.3.4.9	Evaluate & report IDDE program progress	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.4.11	Conduct IDDE employee training	at least annually	Continue to train employees about the IDDE Program including how to recognize illicit discharges and SSOs.	Stormwater Division
2.3.4.11	Report on IDDE employee training	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
CONSTRUCTION SITE STORMWATER RUNOFF CONTROL				
2.3.5	Implement & enforce Construction Site Stormwater Runoff Control (CSSRC) Program	not stated	Continue to implement and enforce a program to reduce pollutants in stormwater runoff from construction activities per the 2003 Permit.	Engineering/DPW/Conservation
POST CONSTRUCTION STORMWATER MANAGEMENT				
2.3.6.a	Implement & enforce SW management for New Development/Redevelopment	not stated	Continue to implement and enforce a program to address post-construction stormwater runoff from new development and redevelopment projects per the 2003 Permit.	Building/Planning/Zoning/Engineering/DPW/Conservation
2.3.6.d	Identify additional sites and infrastructure that could be retrofitted to maintain a minimum of 5 sites in the inventory; Report progress on implementation of BMP retrofits in Annual Report	annual MS4 stormwater reports beginning Year 5	Report progress in Annual MS4 Stormwater Report.	Stormwater Division
GOOD HOUSE KEEPING AND POLLUTION PREVENTION FOR PERMITTEE OWNED OPERATIONS				
2.3.7.a.ii.2	Provide training on use, storage, & disposal of petroleum products to applicable staff	not stated	Provide training on use, storage, & disposal of petroleum products to applicable municipal staff.	Included under Item 2.3.4.11.
2.3.7.a.iii.2	Implement routine inspection/cleaning/maintenance of catch basins to ensure sumps <50% full; report on activities as specified; investigate excessive sediment; log/report CB cleaning	continuous; annual MS4 stormwater reports	Clean catch basins as needed to ensure that no sump is more than 50% full at any given time. The Town has approximately 4,500 catch basins town-wide and cleaned 100% of their catch basins during Permit Year 1. The Town is still in the process of collecting data to build their catch basin cleaning optimization plan. Assume that all catch basins will need to be cleaned annually to meet the permit requirements.	Town currently contracts out catch basin cleaning, but is looking to expand staffing and equipment resources in the future to complete this work in-house.
2.3.7.a.iii.3 & 4.	Sweep streets/parking lots 1x/year in spring; report on efforts	annually; annual MS4 stormwater reports	The Town swept all streets at least once during Permit Year 1, and planned to increase staffing to sweep all streets twice per year in Year 2 to meet permit requirements for phosphorous-impaired waters.	Stormwater Division
2.3.7.a.iii.4	Ensure proper storage of CB cleanings & street sweeping to prevent runoff	N/A	Examine storage of CB cleanings & street sweepings	Stormwater Division
2.3.7.a.iii.6	Establish/implement procedures to inspect/maintain storm drains & structural BMPs; and for annual inspection of treatment structures	not stated	Establish/implement procedures to inspect/maintain storm drains & structural BMPs; inspect treatment structures annually at a minimum.	Stormwater Division
2.3.7.a.iv	Report on all Good Housekeeping/Pollution Prevention requirements	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.7.a.v	Keep written record of all Good Housekeeping/Pollution Prevention activities	continuous	Keep written record of all maintenance activities, inspections and training completed.	Stormwater Division / Highway Division / Sewer Division
2.3.7.b.ii & iii	Perform SWPPP required actions/inspections/training	frequencies as per permit	Perform quarterly inspections at facilities and conduct annual employee training. The Town has SWPPPs in place for the DPW Facility at 9 Alpha Road, Highway Department at 54 Richardson Road and at the capped landfill at 40 Swain Road.	Stormwater Division
2.3.7.b.iii	Report on Stormwater Pollution Prevention Plan inspections	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	Included under Item 4.4.
2.3.7.b.iv	Maintain written records for all SWPPP related items under 2.3.7.b	continuous	Keep written record of all maintenance activities, inspections and training completed.	Stormwater Division

SECTION 3 - ADDITIONAL REQUIREMENTS FOR DISCHARGES TO SURFACE DRINKING WATER SUPPLIES AND THEIR TRIBUTARIES				
3.0.a	Make MS4 discharges to surface drinking water supply sources & their tributaries a priority in the SWMP	continuous; report annually	Identify any outfalls discharging to drinking water supplies and make these a priority in implementation of the SWMP. This would include the two outfalls discharging to the Merrimack River and the two outfalls discharging to the Concord River, as the Concord River is tributary to the Merrimack River, which is a surface drinking water supply for other communities although not for Chelmsford.	As part of the IDDE Investigations, the Stormwater Division has designated catchments tributary to surface drinking water supply sources as high priority.
3.0.b	Provide pretreatment/spill control for MS4 discharges to public surface drinking water supply sources & their tributaries	continuous; report annually	Provide pretreatment/spill control for outfalls discharging to public surface drinking water supply sources and their tributaries. This includes both the Merrimack River and the Concord River.	Stormwater Division to investigate source protection needs and potential implementation of BMPs. The Concord River is impaired for phosphorus so there will be additional potential BMP retrofits installed in catchment areas tributary to the Concord River as part of the Phosphorus Source Identification Report.
3.0.c	Avoid direct discharges to Class A waters	continuous; report annually	There are no Class A Waters located in Chelmsford.	Stormwater Division
SECTION 4 - PROGRAM EVALUATION, RECORDKEEPING & REPORTING				
4.1.a	Self-evaluate compliance with the permit; include documentation of evaluation in written SWMP	annually	Annually evaluate Town's compliance with permit conditions.	Stormwater Division - Stormwater Engineer
4.1.b	Evaluate BMP effectiveness & change if needed under provisions of permit	not stated	Evaluate BMP effectiveness in achieving permit objectives & modify BMPs accordingly as needed.	
4.1.b	Report BMP modifications	annual MS4 stormwater reports	Include in Annual MS4 Stormwater Report.	
4.2	MS4 must keep records for ≥ 5 yrs; make available to public	Continuous	Maintain annual MS4 stormwater reports and make available to the public.	
4.3	Document results of MS4 outfall screening/sampling & any other monitoring/studies	annual MS4 stormwater reports	Report progress in Annual MS4 Stormwater Report.	
4.4	Submit Annual MS4 Stormwater Report	annually 90 days from effective date	Prepare Annual MS4 Stormwater Report.	