



Town of Winchester

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Board of Selectmen Meeting
Monday, October 17, 2016

BUSINESS

Docket Item G - 1:

MS4 Permit Discussion – Town Engineer Beth Rudolph

Supporting Documents:

G - 1:

Memo from Town Engineer dated October 12, 2016

Action Required:

G - 1:

Docket Item:
G - 1:
October 17, 2016



TOWN OF WINCHESTER
ENGINEERING DEPARTMENT
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TO: Winchester Board of Selectmen

FROM: Beth Rudolph, PE, Town Engineer 

DATE: October 12, 2016

RE: EPA MS4 Stormwater Permit

In April 2016, the USEPA issued the new, and long awaited MS4 stormwater permit. This permit builds upon the requirements of the first MS4 permit, which was implemented in 2003. Under this program, the Town of Winchester will need to obtain a permit through the National Pollutant Discharge Elimination System (NPDES) program for discharges from the Town-owned drainage system to "waters of the US".

Permit Overview

As a condition of this permit, USEPA has developed a series of mandatory requirements to be implemented over a period of five to 10-years, which are intended to improve the quality of stormwater runoff. They include water quality based effluent limitations and requirements for impaired waterbodies without a TMDL¹, as well as the following "Six Minimum Control Measures" designed to reduce stormwater pollution to the maximum extent practicable:

- (1) Public Outreach and Education;
- (2) Public Involvement and Participation;
- (3) Illicit Discharge Detection and Elimination (IDDE);
- (4) Construction Site Runoff Control;
- (5) Post- Construction Stormwater Management; and
- (6) Pollution Prevention/Good Housekeeping.

For waterbodies without a TMDL, special requirements apply where the cause of the impairment is bacteria or pathogens, nitrogen, phosphorus, chloride, and/or solids, metals, and oil and grease. As noted below, waterbodies in Winchester are impaired for bacteria, phosphorus, and metals. Therefore, the Town will be required to meet the additional requirements related to these pollutants of concerns.

¹ According to the "Massachusetts Year 2014 Integrated List of Waters" (i.e. the 303(d) list), the Aberjona River is impaired for un-ionized ammonia, aquatic macroinvertebrate bio-assessments, arsenic, *E. coli*, dissolved oxygen, total phosphorus, sediment bioassays (chronic toxicity), and turbidity. Wedge Pond is impaired for dissolved oxygen and total phosphorus; Winter Pond is impaired for nutrient/eutrophication biological indicators; and the Upper Mystic Lake is impaired for dissolved oxygen and dissolved oxygen saturation.

Permit Timeline and Milestones

To allow communities adequate time to fund the program, the new MS4 permit will not become effective until July 1, 2017. Once the permit is effective, communities must submit a Notice of Intent (NOI), the form of which is dictated by USEPA, by September 29, 2017. It should be noted, however, that the Year 1 timeline starts on July 1st. Below is a summary of some of the key milestones associated with the permit requirements. Note that the final permit allows communities up to 10-years to complete the requirements associated with the IDDE program (see attached figure from USEPA):

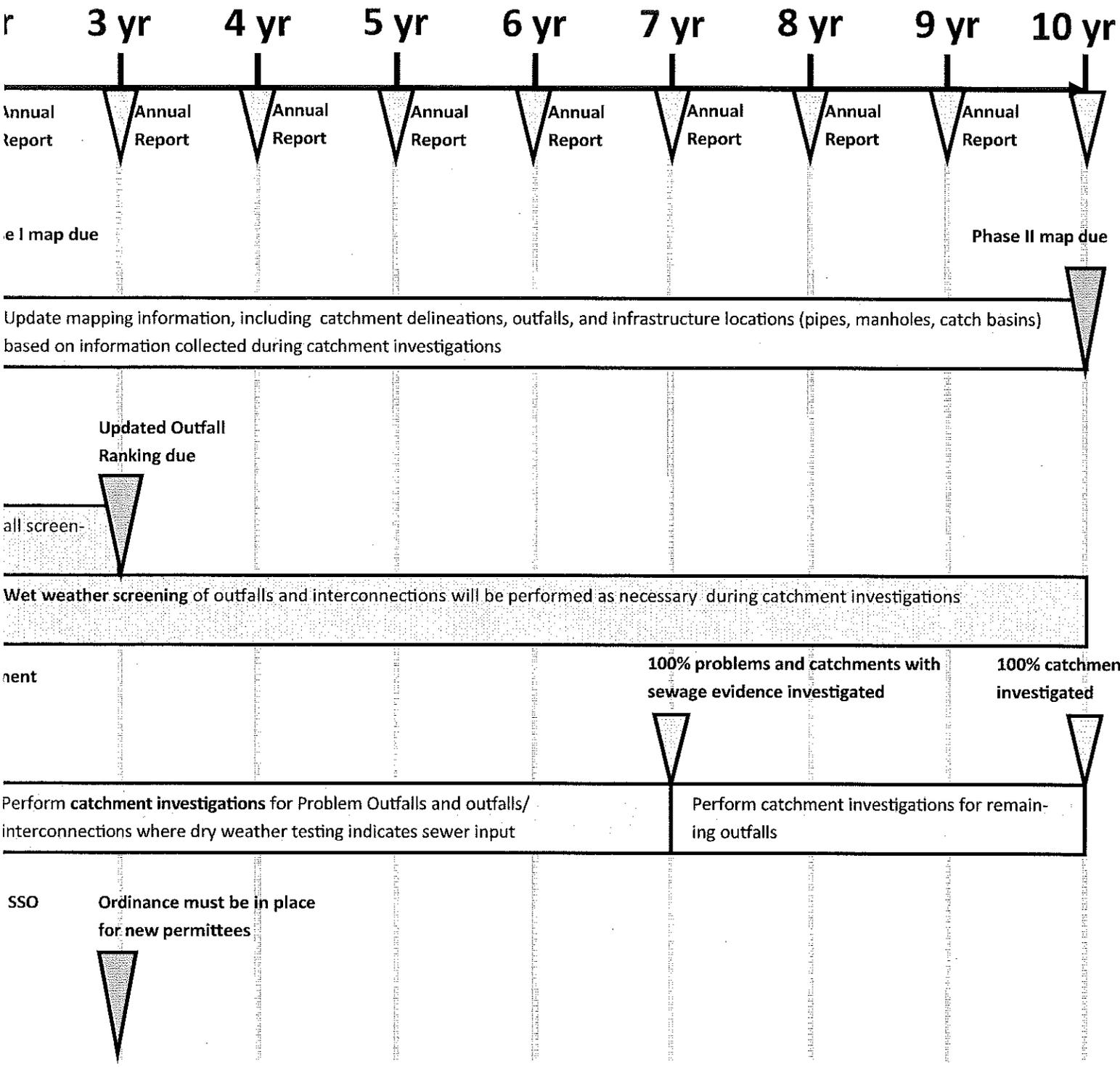
Permit Requirement	Completion Date
Permit Effective	July 1, 2017
Notice of Intent (NOI)	September 29, 2017
Stormwater Management Plan (SWMP)	July 1, 2018
Written IDDE Plan with assessment and ranking of catchments	July 1, 2018
Sanitary Sewer Overflow (SSO) inventory	July 1, 2018
Updated drainage system and outfall map	July 1, 2019
O&M Plans for municipal properties	July 1, 2019
Stormwater Pollution Prevention Plan (SWPPP) for municipal properties	July 1, 2019
Dry weather sampling and screening results for outfalls	July 1, 2020
Nutrient identification report	July 1, 2021
Evaluation of municipal properties for BMP retrofits and schedule for implementation	July 1, 2021
IDDE program implementation complete	2027

Permit Costs

A fact sheet issued by USEPA in April 2016 estimates the cost to meet the permit requirements to be between \$9,000 and \$200,000 per year, averaged over the permit term, with the increased cost primarily associated with implementation of the IDDE program, which can be difficult to predict ahead of time. USEPA expects that 50% of the program funding will be used for system operations and maintenance (street sweeping and catch basin cleaning), 30% of the program funding will be used to track and remove illicit connections from the stormwater system (i.e. removing sources of sanitary sewerage), and 20% of the program funding will be used for planning, public education, and other administrative requirements.

In 2015, the Town of Winchester had Weston & Sampson evaluate the permit requirements associated with the draft permit issued in 2014 (which is very similar to the final permit issued in April 2016). They estimated the Town's overall costs to be between \$1.5 and \$3 million. For the 2016 Capital request cycle, the Engineering Department has requested funding to cover consultant costs associated with the NOI preparation and the completion of the Year 1 permit requirements, as follows:

- NOI Preparation - \$13,000 to be funded at Fall 2016 Town Meeting, and
- Year 1 Permit Requirements – \$135,000 to be funded at Spring 2017 Town Meeting.



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3 yr

4 yr

5 yr

6 yr

7 yr

8 yr

9 yr

10 yr

Annual Report

Phase I map due

Phase II map due

Update mapping information, including catchment delineations, outfalls, and infrastructure locations (pipes, manholes, catch basins) based on information collected during catchment investigations

Updated Outfall Ranking due

Wet weather screening

Wet weather screening of outfalls and interconnections will be performed as necessary during catchment investigations

Investigation

100% problems and catchments with sewage evidence investigated

100% catchment investigated

Perform catchment investigations for Problem Outfalls and outfalls/interconnections where dry weather testing indicates sewer input

Perform catchment investigations for remaining outfalls

SSO

Ordinance must be in place for new permittees