

# REPORT

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**Project Name:** Phase 2  
Comprehensive Wastewater  
Management Plan &  
Final Environmental Impact  
Report

EEA #13388

**Project Location:**  
Mansfield & Norton,  
Massachusetts

**Prepared for:**  
Town of Mansfield,  
Massachusetts

**Prepared by:**  
CDM Smith  
75 State Street, Suite 701  
Boston, Massachusetts 02109

**Date of Filing:** June 2015







75 State Street, Suite 701  
Boston, Massachusetts 02109  
tel: 617 452-6000

June 10, 2015

Mr. Matthew A. Beaton, Secretary  
Executive Office of Energy and Environmental Affairs  
Attn: MEPA Office  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Subject: Final Environmental Impact Report and Phase 2 Comprehensive Wastewater Management Plan, EOEPA No. 13388  
Town of Mansfield - Proponent

Dear Secretary Beaton:

On behalf of the Town of Mansfield (Town), CDM Smith Inc. (CDM Smith) submits this Final Environmental Impact Report (FEIR) and Phase 2 Comprehensive Wastewater Management Plan (CWMP) in accordance with the MEPA Regulations. The FEIR responds to the scope of work identified by MEPA and outlined in the Draft EIR Certificate dated November 26, 2014.

The recommended wastewater plan includes expansion of the existing Water Pollution Control Facility (WPCF) located in Norton and construction of wastewater effluent recharge infiltration basins for infiltration of treated wastewater effluent. In addition, the Fruit Street Landfill, located in Mansfield and previously used for sludge and grit disposal from the WPCF, will be capped and closed. The recommended wastewater management plan as described herein requires MEPA review pursuant to Section 11.03(5)(b)(2) and 11.03(5)(4)(d)ii because a 1.0 mgd expansion of the existing WPCF is proposed and effluent recharge greater than 0.5 mgd is proposed. Since the project proponent is seeking financial assistance from the Commonwealth for the project, MEPA jurisdiction extends to all aspects of the project that may cause significant damage to the environment.

We look forward to continue working with MEPA on this important project. Please find two copies of the FEIR and Phase 2 CWMP attached (one hard copy and one on compact disc).





Mr. Matthew A. Beaton, Secretary  
June 10, 2015

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Please contact me at 617-452-6544 or Edward Sanderson at 617-452-6582 with questions regarding this document.

Very truly yours,

 For

David F. Young, P.E., BCEE  
Vice President  
CDM Smith Inc.

cc: Agencies and individuals identified on the attached Distribution List  
Lee Azinheira, Town of Mansfield, Director of Public Works  
Ed Sanderson, CDM Smith  
Alex Strysky, MEPA, Environmental Analyst

# FEIR Distribution List

Secretary Matthew A. Beaton  
Executive Office of Energy and Environmental Affairs (EEA)  
Attn: MEPA Office  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Commissioner Martin Suuberg  
Department of Environmental Protection  
Commissioner's Office  
One Winter Street  
Boston, MA 02108

Department of Environmental Protection  
Southeastern Regional Office  
Attn: MEPA Coordinator  
Lakeville, MA 02347

Massachusetts Department of Transportation  
Executive Office of Transportation  
Attn: Environmental Reviewer  
10 Park Plaza – Room 3170  
Boston, MA 02116

Massachusetts Department of Transportation – District #5  
1000 County Street  
Taunton, MA 02780

Massachusetts Historical Commission  
The MA Archives Building  
220 Morrissey Boulevard  
Boston, MA 02125

Massachusetts Bay Transit Authority  
Attn: MEPA Reviewer  
10 Park Plaza, Suite 3910  
Boston, MA 02216

Southeastern Regional Planning and Economic Development District  
88 Broadway  
Taunton, MA 02780

Natural Heritage and Endangered Species Program  
Commonwealth of Massachusetts  
Route 135  
Westborough, MA 02116-3969

Water Resources Commission  
Attn: Michele Drury  
Commonwealth of Massachusetts  
100 Cambridge Street  
Boston, MA 02114

U.S. Army Corps of Engineers  
New England District  
696 Virginia Road  
Concord, MA 01810

Massachusetts Department of Conservation and Recreation  
Attn: MEPA Coordinator  
251 Causeway Street, Suite 600  
Boston, MA 02114

Massachusetts Aeronautics Division (formerly Massachusetts Aeronautics Commission)  
Logan Office Center  
One Harborside Drive  
Suite 205N  
East Boston, MA 02128-2909

Water Supply Citizens Advisory Committee  
485 Ware Road  
Belchertown, MA 01007

Mansfield Board of Selectmen/Water and Sewer Commissioners  
Town Hall  
Six Park Row  
Mansfield, MA 02048

William Ross, Mansfield Town Manager  
Six Park Row  
Mansfield, MA 02048

Mansfield Department of Public Works  
Attn: Lee Azinheira  
Six Park Row  
Mansfield, MA 02048

Mansfield Conservation Commission  
Town Hall  
Six Park Row  
Mansfield, MA 02048

Mansfield Planning Board  
Town Hall  
Six Park Row  
Mansfield, MA 02048

Mansfield Board of Health  
Town Hall  
Six Park Row  
Mansfield, MA 02048

Norton Board of Selectmen  
70 East Main Street  
Norton, MA 02766

Town of Norton  
Water & Sewer Department  
166 John Scott Boulevard  
P.O. Box 1168  
Norton, MA 02766

Norton Conservation Commission  
70 East Main Street  
Norton, MA 02766

Town of Norton  
Planning Board/Planning & Zoning Department  
70 East Main Street  
Norton, MA 02766

Town of Norton  
Highway Department  
DPW Garage  
70 Rear East Main Street (Mail to: 70 East Main St.)  
Norton, MA 02766

Norton Board of Health  
Norton Town Hall  
70 East Main Street (2nd floor)  
Norton, MA 02766

Town of Foxborough  
Board of Water and Sewer Commissioners  
40 South Street  
Foxborough, MA 02035

MFN District Commissioners  
Attn: Mike Yunits, Commission Chairman  
70 East Main Street  
Norton, MA 02766

MFN District Water Pollution Control Facility  
Attn: Chris Rositer  
80 Hill Street (at Crane St)  
Norton, Massachusetts 02766

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# Section 1

## Summary

### 1.1 Project Background and Purpose

#### 1.1.1 Project Background

In 1976, the Town of Mansfield (Town) completed and the Massachusetts Department of Environmental Protection (MassDEP) approved a wastewater facilities plan entitled *Wastewater Treatment and Collection System Facilities Planning Study* that resulted in the construction of the existing Water Pollution Control Facility (WPCF). In 1985 and through subsequent amendments, the Town initiated an update to that facilities plan with the assistance of its environmental consultant, CDM Smith Inc. (CDM Smith). Phase 1 of that plan was completed and submitted to MassDEP in 1997 and consisted mainly of a wastewater needs assessment. In 1999, the Town suspended its facilities planning efforts pending resolution of MassDEP planning requirements and input from the towns of Foxborough and Norton.

The Town reinitiated its wastewater facilities planning efforts in the spring of 2003, beginning its comprehensive wastewater management plan (CWMP) and submitting Phase 1 of the CWMP in October 2004. Foxborough and Norton also began their CWMP processes. Foxborough completed their CWMP in 2006 and Norton is in the final stage of completing their CWMP, filing it in October 2014 (Massachusetts Environmental Policy Act (MEPA) Certificate No. 15323).

Mansfield began Phase 2 CWMP activities in 2005, evaluating Phase 1 CWMP preliminary alternatives in further detail. On a parallel track, it began discussions with Foxborough, Norton, and to a lesser extent Easton and Wheaton College, regarding the formation of a regional wastewater district. The regional wastewater district approach has several potential benefits for the communities and as a result Mansfield held off on completing and submitting its Phase 2 CWMP and focused efforts on working with Foxborough and Norton to further develop the regional wastewater district. The MFN Regional Wastewater District (MFN District) became effective in July 2014 and Mansfield subsequently finalized its Phase 2 CWMP activities.

This document responds to the scope, additional analysis, and information required by the Secretary of the Executive Office of Energy and Environmental Affairs (EOEEA) in the Phase 2 CWMP/Draft Environmental Impact Report (DEIR) Certificate No. 13388, as well as comments raised by the Water Resources Commission, MassDEP, and the Norton Conservation Commission. This section describes the project purpose; details the recommended plan, including wastewater management, water conservation, infiltration/inflow, and monitoring components; summarizes previous MEPA submittals; and provides an update on project changes since the submittal of the Phase 2 CWMP/DEIR.

#### 1.1.2 Project Purpose

The Town population is projected to grow by over 7,000 people to approximately 29,500 by the year 2025. In addition, the Town anticipates substantial industrial and commercial growth, especially along the interstate Route 495 corridor. The resulting wastewater flows from this growth will result from

development, infilling of existing on-site systems not currently connected to the sewer and sewerage proposed developments adjacent to existing sewer areas. Although some sewer lines may be extended to connect new developments, no major sewer system expansion is recommended or anticipated at this time.

The current average day design capacity of the WPCF is 3.14 million gallons per day (mgd) and the treated effluent is discharged to the Three Mile River. The discharge to the river cannot exceed the present 3.14 mgd design capacity and thus future effluent over 3.14 mgd will need to be land applied through infiltration basins. In addition, in order for the Town to obtain future sewer extension permits, MassDEP will require an updated and approved CWMP. Lastly, recent flow measurements indicate that the Town is close to its allotted WPCF wastewater capacity of 1.98 mgd. During wet years, the WPCF is almost at capacity due to infiltration and inflow. Therefore, the Town working with the MFN District needs to move forward with expansion of the WPCF and effluent disposal capacity.

The purpose of the CWMP/EIR process is to provide a wastewater management plan for the Town that allows for sustainable growth within the community while meeting regulatory requirements for sewer extensions and wastewater treatment and disposal. The recommended wastewater management plan is described in detail in the next section.

## 1.2 Project Description

### 1.2.1 Recommended Wastewater Management Plan

The Town recommended wastewater plan includes upgrade and expansion of the existing WPCF and construction of wastewater effluent recharge infiltration basins for infiltration of treated wastewater effluent. In addition, the Fruit Street Landfill, located in Mansfield and previously used for sludge and grit disposal from the WPCF, would be capped and closed (the WPCF currently contracts with a sludge hauler and no longer uses the landfill). As of July 2014, the ownership of these facilities has transitioned from Mansfield to the MFN District.

The construction of these facilities would occur over a 30 month time period and accommodate expected flow increases from Mansfield, Foxborough, Norton and a portion of Easton over the next 20 years. For this plan, the WPCF will undergo an expansion to accommodate an additional 1.0 mgd. As part of this work, the WPCF would be upgraded with a four-stage Bardenpho process and other process upgrades to treat all existing and future flow to more stringent nutrient limits detailed in the WPCF National Pollutant Discharge Elimination System (NPDES) permit renewal issued in September 2014. The infiltration basins would be constructed at the Pine Street Site in Norton, accommodating up to 1.0 mgd. The implementation of such a plan will allow the Town to meet its wastewater management needs as well as protect freshwater resources including ponds and drinking water resources. The specific components of the recommended plan are detailed below.

#### 1.2.1.1 Wastewater Flows from Each Community

Mansfield currently shares the 3.14 mgd capacity of the WPCF with the towns of Foxborough and Norton. Under the previous Inter-Municipal Agreements, Foxborough and Norton are allocated 0.66 and 0.5 mgd, respectively, with the remaining flow capacity of 1.98 mgd owned by Mansfield.

Under the 1.0 mgd expansion, an additional 0.665 mgd is allocated to Mansfield, 0.17 mgd to Foxborough, and 0.165 mgd to Norton. At build out, the WPCF will have a 4.14 mgd average day

capacity, with nearly two-thirds of the capacity allocated to Mansfield, a fifth to Foxborough and the remaining capacity allocated to Norton. Allocations are summarized in Table 1-1.

**Table 1-1  
WPCF Flow and Percentage Allocations**

| Community    | Existing Flow (mgd) | Existing Percentage (%) | Expansion Flow (mgd) | Expansion Percentage (%) | Total Flow (mgd) | Total Percentage (%) |
|--------------|---------------------|-------------------------|----------------------|--------------------------|------------------|----------------------|
| Mansfield    | 1.98                | 63.1                    | 0.665 <sup>(1)</sup> | 66.5                     | 2.645            | 63.9                 |
| Foxborough   | 0.66                | 21.0                    | 0.170                | 17.0                     | 0.830            | 20.0                 |
| Norton       | 0.50                | 15.9                    | 0.165                | 16.5                     | 0.665            | 16.1                 |
| <b>Total</b> | <b>3.14</b>         | <b>100</b>              | <b>1.00</b>          | <b>100</b>               | <b>4.14</b>      | <b>100</b>           |

<sup>1</sup> 0.165 mgd of Mansfield expansion flow is anticipated to be sub-allocated to the town of Easton.

While Mansfield's flows are projected to increase by only 0.5 mgd over the next 20 years, it is allocated 0.665 mgd as part of the 1.0 mgd expansion. A portion of the 0.665 mgd, approximately 0.165 mgd, is anticipated to be sub-allocated to the town of Easton. Easton will be a customer of Mansfield. The remaining 0.5 mgd allocated to Mansfield will be used to meet Town wastewater needs.

#### 1.2.1.2 MFN Regional Wastewater District

The MFN District, established in July 2014, will be the mechanism used to manage, operate and maintain wastewater treatment and disposal services for Mansfield, Foxborough and Norton. Section 25 of Chapter 40 N of the General Laws of Massachusetts allows municipalities to join together to form a regional water and sewer district commission. In 2008, Mansfield, Foxborough, and Norton, by their votes passed at town meetings, accepted the terms of Section 25 of Chapter 40N and began in earnest to draft a regional wastewater district agreement. Chapter 101 of the Acts of 2010 furthered that effort, allowing for the establishment of the regional wastewater district for the towns of Mansfield, Foxborough and Norton, to be known as the MFN Regional Wastewater District, a body politic and corporate and political subdivision of the Commonwealth of Massachusetts.

The purpose of the MFN District is to own, manage and control the WPCF, common interceptors, effluent recharge and reuse system and appurtenances, and to provide for the collection, conveyance, and treatment of wastewater, and recharge and/or reuse of treated effluent for the member towns. The MFN District must comply with the WPCF NPDES Permit and any future Groundwater Discharge Permit(s). The powers and duties of the MFN District are vested in and exercised by the MFN District Commission whose members are appointed by the member towns for up to three year appointments.

#### 1.2.1.3 WPCF NPDES Permit Nutrient Limits

The WPCF currently discharges treated effluent to the Three Mile River, which flows to the Taunton River and ultimately to Narragansett Bay. Excessive nutrients in these water bodies have contributed to violations of water quality standards for dissolved oxygen, and thus EPA Region 1 is decreasing nutrient effluent limitations at all municipal wastewater facilities in the watershed as NPDES permits come up for renewal. The WPCF limits were recently finalized in the NPDES permit renewal issued in

September 2014 (NPDES No. MA0101702). A summary of the September 2014 NPDES permit effluent limits for the MFN District WPCF are shown in Table 1-2 and detailed in Appendix A.

**Table 1-2  
September 2014 Final NPDES Permit Effluent Limits**

| Parameter   | Limit <sup>1</sup>             |
|---|--------------------------------|
| Flow <sup>2</sup>   | 3.14 mgd                       |
| 5-day Biochemical Oxygen Demand (BOD <sub>5</sub> ) (summer/winter)           | 10/30 mg/L                     |
| Total Suspended Solids (TSS) (summer/winter)                                  | 10/30 mg/L                     |
| pH Range  | 6.5 – 8.3                      |
| Total Residual Chlorine   | 24 µg/L                        |
| Fecal Coliform <sup>4</sup>   | 200 cfu/100 ml                 |
| E. Coli   | 126 cfu/100 ml                 |
| Total Copper (TC)   | 24 µg/L                        |
| Dissolved Oxygen (DO)   | Not less than 6.0 mg/L         |
| Ammonia Nitrogen (NH <sub>3</sub> -N) (April/May/June-October/November-March) | 10/5/1/30 mg/L                 |
| Total Nitrogen (TN) (summer/winter) <sup>3</sup>                              | 131 lbs/day/<br>report lbs/day |
| Total Phosphorus (TP) (summer/winter)   | 0.17/1 mg/L                    |

<sup>1</sup> Average monthly limits

<sup>2</sup> Current flow limit

<sup>3</sup> Total nitrogen is mass only of 131 lbs/day. The mass is based on a concentration of 5.0 mg/L at a flow of 3.14 mgd.

<sup>4</sup> Fecal coliform limits are in effect for one year and will end one year from the permit effective date.

#### 1.2.1.4 System Improvements

##### ***Four-Stage Bardenpho Process and Related Expansion Needs***

The WPCF currently is designed to treat an average daily flow of 3.14 mgd, utilizing an activated sludge process followed by filtration and disinfection prior to discharge in an outfall to the Three Mile River in Norton, MA. The facility was placed online in 1986 and has had periodic upgrades to several process components.

To meet the new NPDES permit nutrient limits and the WPCF expansion needs of 1.0 mgd, the recommended treatment technology is a four-stage Bardenpho process. The four-stage Bardenpho process is a suspended growth activated sludge biological nutrient removal process that includes four stages of process tankage in series: a pre-anoxic zone, an aerobic zone, a post-anoxic zone, and a small re-aeration zone. Nitrification occurs in the main aerobic zone and the nitrified mixed liquor is recycled to the influent of the pre-anoxic zone, thus promoting a large degree of denitrification using the carbon present in the primary effluent. The post-anoxic zone serves as a location for additional denitrification of nitrate that is not recycled to the pre-anoxic zone. A supplemental carbon feed will be required to consistently meet the 5 mg/L TN effluent limits at the WPCF.

The four-stage Bardenpho process as compared to other process alternatives considered (including denitrification filters, magnetite-ballasted activated sludge, and membrane bioreactor activated

sludge), can be constructed with the lowest capital cost, it will incur the lowest annual O&M costs, it is the least operationally complex and maintenance intensive, and it does not require the procurement of proprietary process equipment.

Improvements necessary at the WPCF to upgrade to the four-stage Bardenpho process and treat an additional average daily flow of 1.0 mgd include:

- Replacement of the four influent wastewater pumps to ensure adequate capacity to convey the higher design peak hourly flow;
- Construction of a third primary clariflocculator and primary sludge pumping station;
- New anoxic tanks and modifications to existing aeration basins;
- A new aeration blower system (as the existing surface aerators would be replaced by a more efficient fine bubble diffused aeration system) and a new supplemental carbon storage and feed system;
- A new secondary clarifier with activated sludge pumping station;
- Replacement of the existing RAS pumps and WAS pumps with larger pumps to accommodate the expanded design flow and the requirements of the four-stage Bardenpho process;
- Retrofit of the remaining gravity sand filter with a second AquaDiamond® traveling bridge cloth media filter to provide equipment redundancy;
- Construction of a chlorine contact disinfection tank/effluent pumping facility, effluent forcemain and infiltration basins (discussed in more detail in next section);
- Construction of a disinfected effluent splitter structure to split flows between the effluent for Three Mile River discharge and effluent for infiltration basins at the Pine Street Site; and
- Miscellaneous site work, yard piping, electrical and instrumentation improvements.

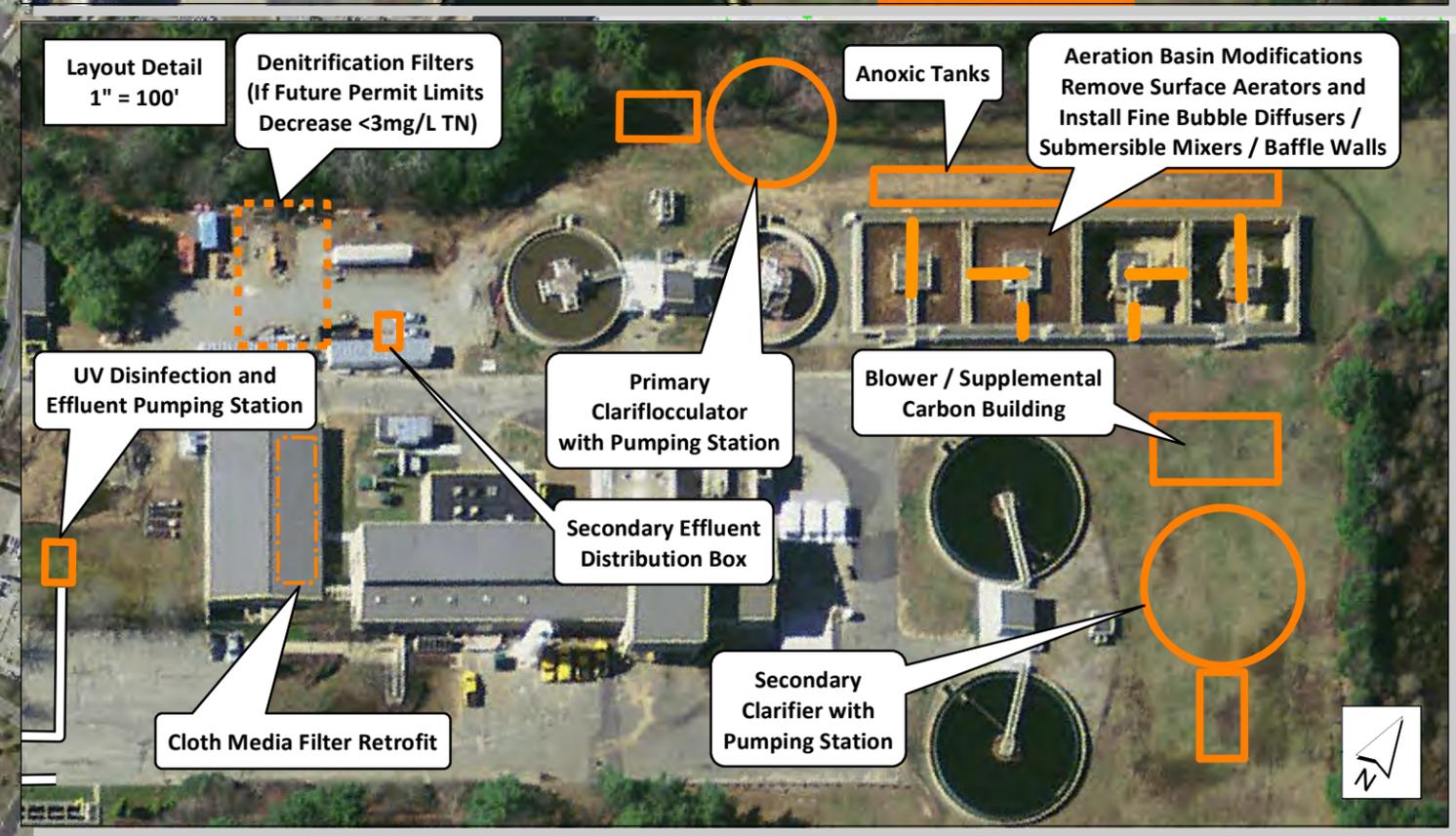
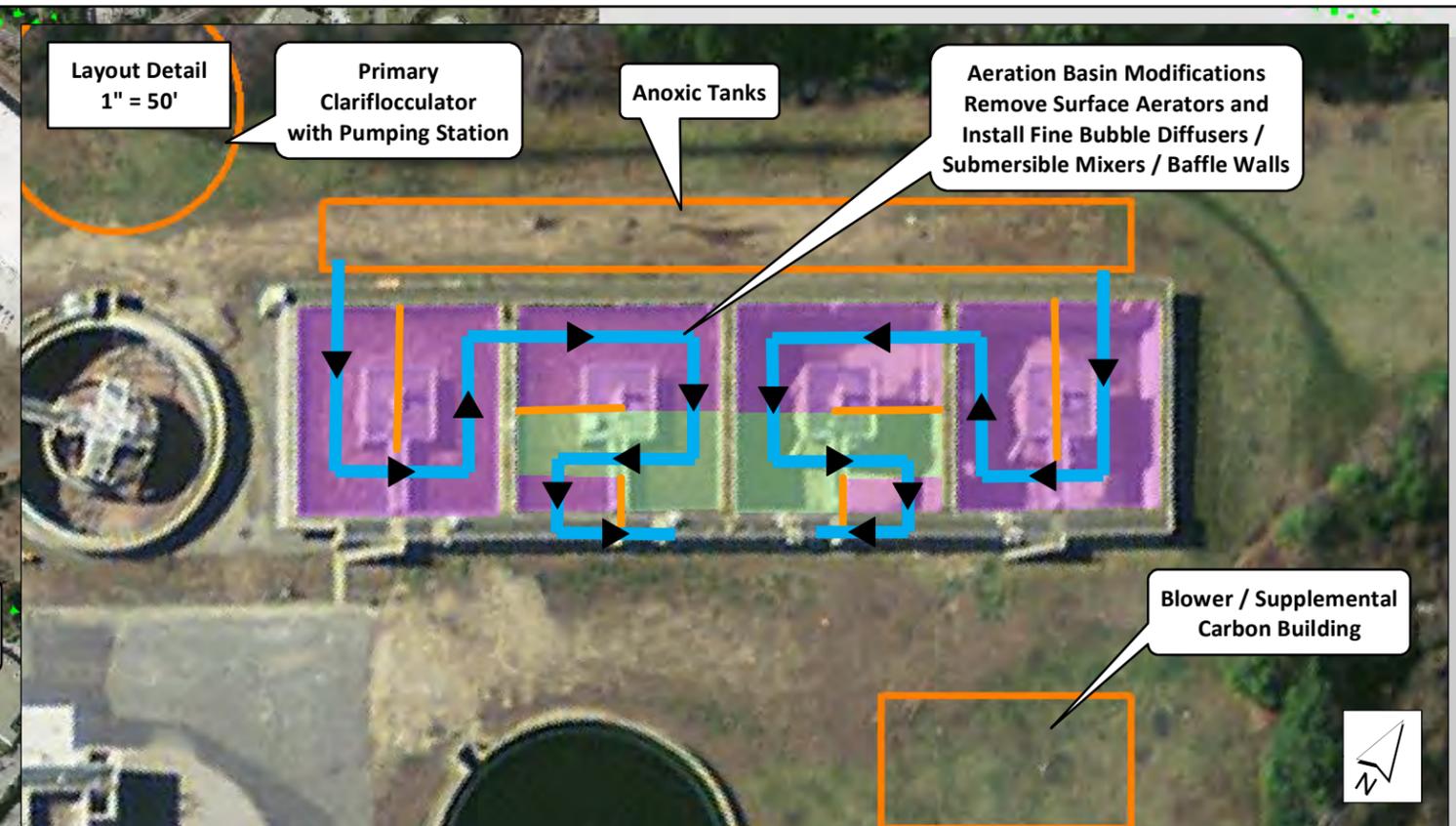
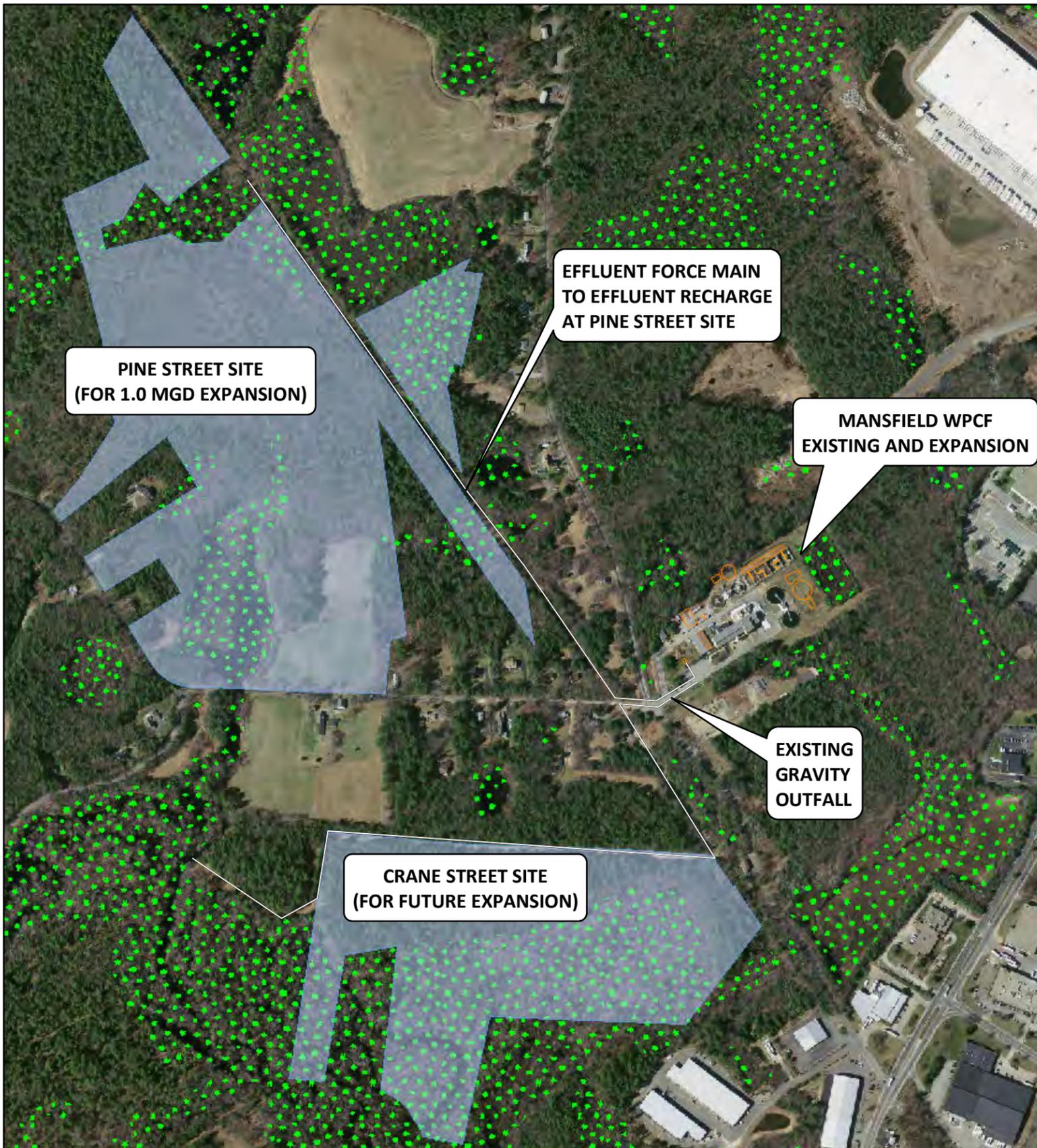
Figure 1-1 presents the site layout for the four-stage conversion for 1.0 mgd expansion, including approximate locations for the recommended improvements for construction.

### ***Effluent Recharge at Pine Street Site***

Construction of infiltration basins is proposed at the Pine Street Site. This site will accommodate the 1.0 mgd increase in flow. The general location of the Pine Street Site in relation to the WPCF is shown in Figure 1-1. The specific location of the infiltration basins on the Pine Street Site are shown in Figure 1-2. The exact limits of the infiltration basins may be changed slightly during final design to accommodate access to the site with limited cut and fill needed while staying within design parameters (distances, depth above groundwater elevation, etc.).

The 1.0 mgd portion of the WPCF's flow that will be pumped to the infiltration basins rather than discharged to the Three Mile River will be required to meet effluent limitations for "enhanced secondary treatment" as stipulated under Chapter 314 of the Code of Massachusetts Regulations.





- Legend**
- Flow Lines
  - Process Units
  - Effluent Pipelines
  - DEP Wetlands
  - Effluent Recharge Sites
  - Aerobic
  - Anoxic

**Mansfield WPCF  
Norton, Massachusetts  
1.0 MGD Expansion Four-Stage Bardenpho Process  
Recommended Plan**

1 inch = 583 feet

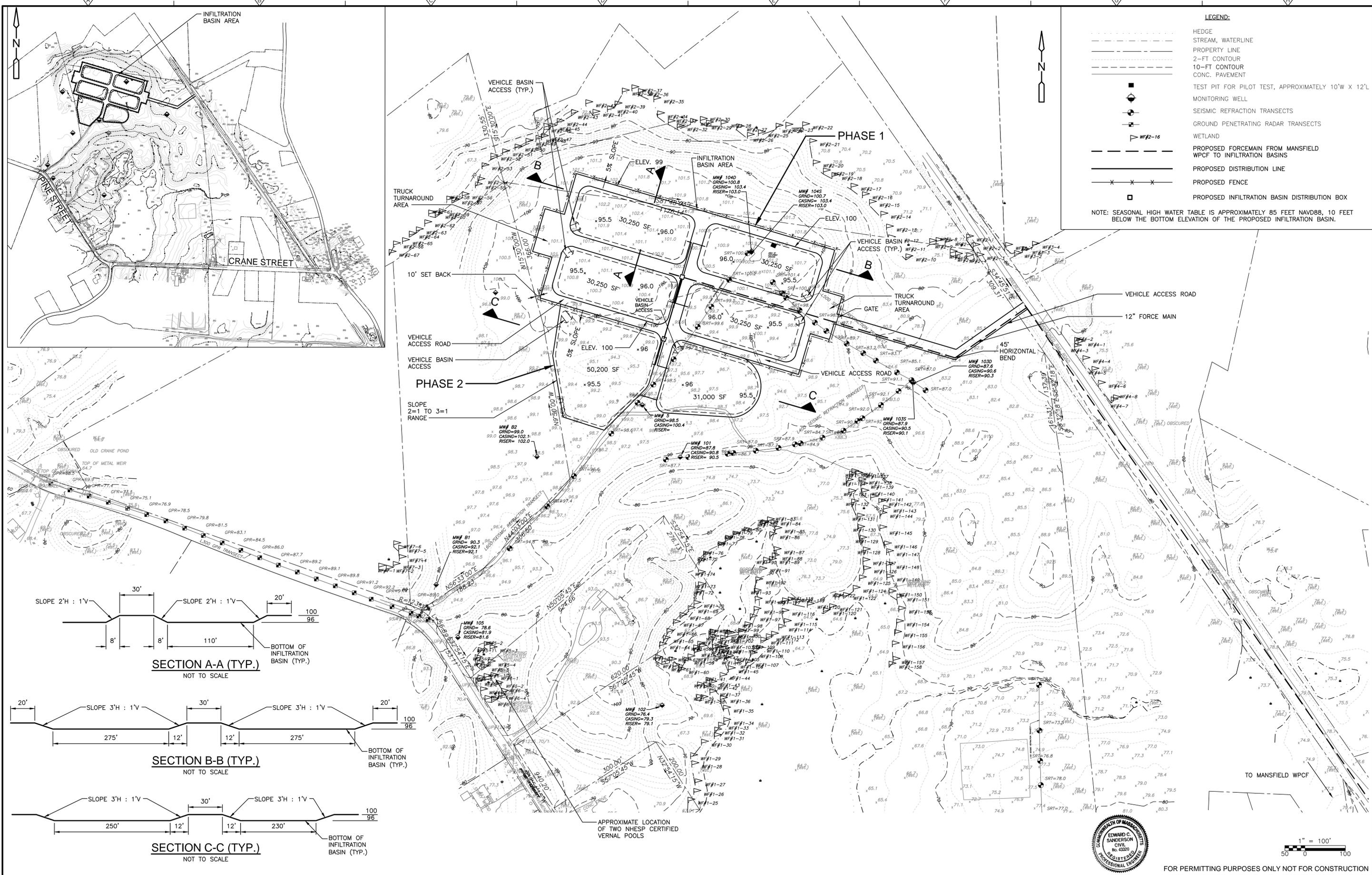
0 250 500 750 1,000 Feet

**Figure 1-1**





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DESIGNED BY: D. YOUNG  
 DRAWN BY: T. PETRUKHIN  
 SHEET CHK'D BY: E. SANDERSON  
 CROSS CHK'D BY: D. YOUNG  
 APPROVED BY: E. SANDERSON  
 DATE: AUGUST 2014

**CDM Smith**  
 50 Hampshire Street  
 Cambridge, MA 02139  
 Tel: (617) 452-6000

MANSFIELD WPCF  
 PINE STREET SITE  
 EFFLUENT RECHARGE BASINS  
 RECOMMENDED PLAN

FIGURE 1-2

PROJECT NO. 0201-99387  
 FILE NAME: C006STPL  
 SHEET NO.



Extensive hydrogeological investigations and surface water quality assessments were conducted for this effluent recharge site. This assessment resulted in an estimation of the design loading rate for the recharge facilities and prediction of the groundwater and surface water impacts. Specific concerns related to use of the site were assessed and included: potential downstream impacts to wetlands, vernal pools, and Norton water supply Well No. 1; proximity to the adjacent capped landfill, proximity to two residential properties; and downstream surface water quality impacts. A report titled *Hydrogeological Evaluation Report: Pine Street Site* detailing the hydrogeological investigations and the site's suitability for use of infiltration basins was submitted to MassDEP for review in May 2014 (see Appendix B). The hydrogeological report identified a necessary recharge area consisting of four infiltration basins, each approximately 30,250 square feet in size located in the northwest upland area of the site, to infiltrate the additional 1.0 mgd treated effluent at a design application rate of 8.3 gpd/ft<sup>2</sup> with no adverse impacts to adjacent areas. The four basins are identified as Phase 1 in Figure 1-2.

Comments on the hydrogeological report were received from MassDEP in a response letter in February 2015 (see Appendix B) and a follow-up meeting in March 2015. At that meeting it was agreed that the proposed Phase 1 design infiltration basin area and effluent recharge application rates could be utilized if two conditions were met. First, supplemental modeling at the MassDEP requested application rate of 5.0 gpd/ft<sup>2</sup> and 200,000 ft<sup>2</sup> of basin area should be conducted to show satisfactory results. Second, once the Phase 1 basins are constructed at the design parameters proposed in the hydrogeological report, a full scale loading test should be conducted to verify the application rate and basin area. If the results indicate that a lower application rate of 5.0 gpd/ft<sup>2</sup> should be utilized, the MFN District would construct the additional infiltration basin area (shown as Phase 2 on Figure 1-2) to meet that rate. A memorandum meeting the first condition was submitted to MassDEP in late May 2015 (see Appendix B). With the additional information included in the memorandum, it is anticipated that the hydrogeological report will be approved during summer 2015 and an application for a groundwater discharge permit will be prepared and submitted soon thereafter.

In 2008, a preliminary hydrogeological report was completed at both the Pine Street and Crane Street Sites. However, the MFN District has yet to pursue further detailed hydrogeological studies at the Crane Street Site (See Figure 1-1). If expansion of the WPCF beyond the proposed 1.0 mgd is needed in the future, the MFN District may choose to pursue the Crane Street Site as a viable option for additional effluent infiltration. However, at this time no additional evaluation is planned.

### ***Miscellaneous Phase 2 WPCF Upgrades***

A facilities assessment report completed in 2006 identified upgrades necessary at the WPCF prior to the identification of any needs required for future expansion. The upgrades were recommended in two phases and the majority of the Phase 1 upgrades were constructed in between 2008 and 2010. Phase 2 upgrades have yet to be designed or constructed. To reduce costs, the Town revisited the recommended Phase 2 upgrades to determine which non-essential upgrades could be delayed to a later date. In April 2012, working with WPCF personnel, CDM Smith separated the Phase 2 upgrades into two phases, Phase 2 and Phase 3. Phase 2 upgrades consist of immediate needs identified by WPCF staff that were discussed in the 2006 assessment and should be upgraded concurrently with the 1.0 mgd expansion project. Phase 3 upgrades are less immediate needs and are assumed to occur at a future date at least 10 years beyond initial WPCF expansion. Additional short-term needs that have arisen since 2006 were also identified in April 2012. Lastly, Phase 2 costs identified in 2006 for projects that Town personnel and WPCF staff have decided to forego, or have since completed or will complete under a separate budget have been eliminated from the list of Phase 2 upgrades. As a result, in

addition to the nutrient removal and expansion improvements, the following Phase 2 improvements are anticipated to be constructed:

- Mechanical equipment improvements including replacement of thickened primary sludge pumps, primary scum pumps, primary distribution box mixers, a plant water pump, low pressure plant air blowers, ferric chloride/alum storage tanks and piping, sodium bisulfite tanks and piping, and several components of sluice and slide gates throughout the facility; demolition of the dissolved air flotation units; decommissioning of the dewatering facilities; and chemical modifications for improved copper removal;
- Architectural, HVAC, electrical, and instrumentation improvements including replacing a solar panel; electrical distribution and lighting upgrades; and HVAC improvements in process building, primary sludge pumping station, and activated sludge pumping station; and
- Miscellaneous improvements including leachate pumping station improvements at the sludge landfill and an O&M manual for the four-stage Bardenpho process, expansion, and Phase 2 improvements.

### ***Wastewater Sludge Management***

From 1988 to 2010, the Town disposed of primary and secondary sludge and grit and screenings from the WPCF at its Fruit Street Landfill located in Mansfield (and now controlled by the MFN District). The Fruit Street Site contains three landfill cells constructed during two separate phases. The chemically (lime and ferric chloride) stabilized sludge was typically spread and compacted to a height of 12 inches and then covered with an approximately equal volume of loose cover material to a total height of 18 inches. The cells are lined and leachate is currently collected from each of the three cells, in a quantity ranging from about 6,000 to 30,000 gpd depending on duration and amount of precipitation. None of the three cells has yet to be capped and closed. Adjacent to the three cells, a compost facility was also operated. Compost was produced during the spring and summer seasons from 1986 to about 2001. The Town then added a compost building and began composting more year-round, disposing of less sludge in the landfill cells.

In 2006 the Town completed a sludge management study to evaluate its sludge management operations in anticipation of expansion of the WPCF. In particular the sludge management study evaluated whether the Town should: replace its existing sludge dewatering equipment at the WPCF with the same type of equipment; replace these facilities with equipment that uses a different dewatering technology; refurbish these facilities; or cease its dewatering and composting operations entirely and arrange for liquid sludge generated at the WPCF to be hauled away and disposed of by others. The sludge management study evaluated these management alternatives under various flow expansion scenarios from no increase in flow up to a 1.5 mgd increase in flow and recommended new filter presses or liquid sludge hauling as the best alternatives.

In 2010, the Town ceased sludge landfilling and composting operations at its Fruit Street Site; sludge, grit and screenings are now hauled off-site for disposal at approved locations. As the WPCF expands by 1.0 mgd, additional sludge, grit and screenings will also be hauled off-site for disposal. As a result, the three landfill cells at the Fruit Street Site will be capped and closed as part of the recommended plan. A map showing the proximity of the Fruit Street Site in relation to the WPCF is found in Appendix C.

### **Preliminary Design Report**

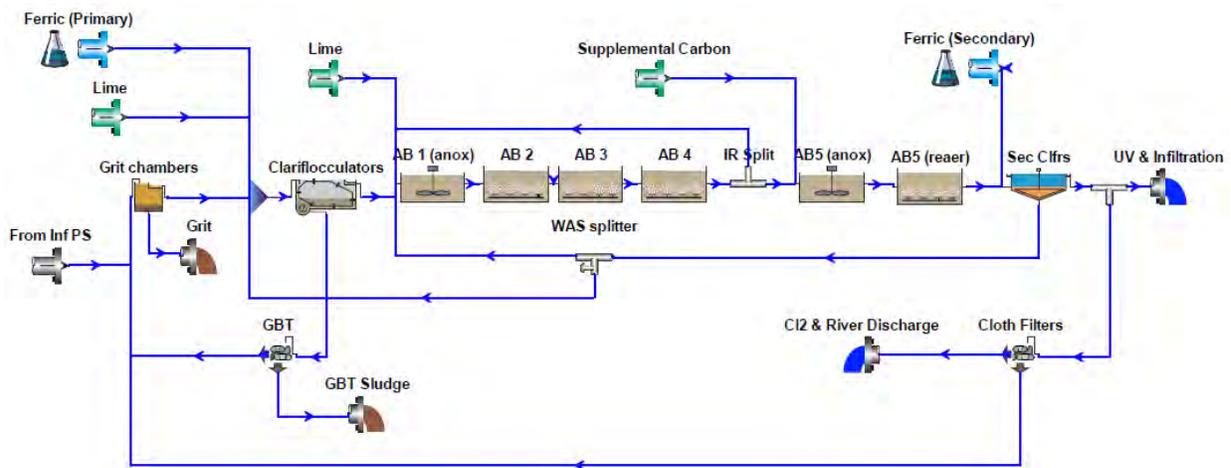
The BioWin model (as displayed in Figure 1-3) was used to develop initial design criteria for the four-stage Bardenpho process to meet the more stringent 5 mg/L TN and 0.17 mg/L TP NPDES effluent requirements. Using this information as a starting point, preliminary design of the recommended wastewater management plan began in September 2014 and culminated in a preliminary design report in April 2015. The preliminary design report includes a full evaluation of plant hydraulics, a two-week sampling period of flows and loads to improve confidence in the BioWin model results, and further refinement of process design.

#### **1.2.1.5 Financing Plan**

##### **Recommended Plan Project Costs**

The opinion of probable project cost for the recommended wastewater management plan is \$39,345,000, a breakdown of which is shown in Table 1-3. Each of the line items includes 22 percent for contractor's general conditions and overhead and profit and 25 percent construction contingency. Engineering and implementation at 25 percent of the construction subtotal is also included. Engineering and Implementation costs are \$7,447,500. Land acquisition costs to acquire land for the infiltration basins are \$2,107,500. Construction costs are \$29,790,000.

**Figure 1-3  
BioWin Model Configuration for Four-Stage Bardenpho Process**



##### **Financing the Recommended Plan**

The bond for design of the WPCF upgrades/expansion and the infiltration basins is assumed to be 20 years at 4.5 percent. The loan for construction of these facilities is assumed to be 30 years at 2.4 percent and will be funded with Clean Water State Revolving Fund (SRF) Program funds. The loan for land acquisition for the infiltration basins is assumed to be 20 years at 2 percent. Based on these assumptions, the design, construction, land acquisition, and O&M costs, as well as a miscellaneous annual payment to Norton and remaining WPCF existing debt service, were calculated for each community. Total costs for each community over 30 years (the length of the construction loan) for the WPCF upgrades/expansion and the infiltration basins are shown in Appendix D. Note that the cost estimates in Appendix D are in January 2013 dollars at an ENR index of 9437 to reflect the costs referenced in discussions and negotiations related to the establishment of the MFN District.

**Table 1-3  
Recommended Wastewater Management Plan  
Project Costs<sup>1</sup>**

| Area  | Estimated Cost      |
|---|---------------------|
| Influent Pump Replacement   | \$740,000           |
| New Primary Clariflocculator with Pumping Station                         | \$3,570,000         |
| New Anoxic Tanks  | \$2,610,000         |
| Existing Aeration Tank Modifications                                      | \$2,810,000         |
| New Blower and Supplemental Carbon Building                               | \$1,310,000         |
| New Secondary Clarifier with Pumping Station                              | \$3,550,000         |
| Replace Existing RAS and WAS/Scum Pumps                                   | \$560,000           |
| Convert Sand Filter to Cloth Media Filter                                 | \$1,330,000         |
| Secondary Effluent Flow Split Structure                                   | \$240,000           |
| UV Disinfection and Effluent Pump Station                                 | \$2,510,000         |
| Effluent Force Main to Infiltration Basins (i.e. Effluent Recharge Sites) | \$520,000           |
| Infiltration Basins (i.e. Effluent Recharge Sites)                        | \$1,570,000         |
| Site Work, Yard Piping, Site Electrical, and Instrumentation              | \$3,830,000         |
| Phase 2 Facilities Assessment Improvements                                | \$3,240,000         |
| Fruit Street Landfill Cap and Closure                                     | \$1,400,000         |
| Subtotal Construction Costs (rounded)                                     | \$29,790,000        |
| Engineering and Implementation  | \$7,447,500         |
| Land Acquisition <sup>2</sup>   | \$2,107,500         |
| <b>Opinion of Probable Project Cost (rounded)</b>                         | <b>\$39,345,000</b> |

<sup>1</sup> Cost estimates are in August 2014 dollars at an ENR index of 9846

<sup>2</sup> Actual purchase price of properties has been used.

Although costs per community for the cap and closure of the Fruit Street Landfill (estimated project cost is \$1,400,000; ENR 9846, August 2014) are not shown in Appendix D, design and construction of the landfill cap and closure will be financed in a similar manner to the WPCF upgrades/expansion and the infiltration basins.

#### 1.2.1.6 Implementation Schedule

The MFN District agreement became effective on July 1, 2014. Soon after completion of the CWMP process and related MassDEP/MEPA review process, final design of the WPCF upgrades and infiltration basins will commence. Design and bidding is anticipated to last approximately 18 months. Construction would last approximately 30 months. Per the requirements of the MFN District agreement, the design, construction and permit compliance schedule for upgrade and expansion of the WPCF is as follows:

- Design – completion by July 1, 2016
- Construction – Substantial completion by July 1, 2019
- Permit Compliance – compliance by December 2019

Design of the Fruit Street Landfill cap and closure will commence on a similar schedule. Construction would last approximately 6 months.

As noted, the construction phase of the project will be funded with SRF funds and thus the project is subject to the SRF related deadlines. As such, design documents will need to be submitted by October 15, 2015 to MassDEP. Thus, timely approval of the CWMP is critical to meeting the SRF funding schedule, which is detailed in Section 3.2.2.10.

### 1.2.2 Water Conservation Program

The Town will continue to implement a Water Conservation Program which includes free water conservation devices (low-flow faucet aerators, showerheads, leak detection tablets, and hose bibb vacuum breakers to prevent backflow) available to Mansfield water customers at no cost. The program also includes rebate offers for new replacement dishwasher, clothes washer, and toilet bowl replacements, zero flush urinals, home filtration systems, and programmable lawn sprinkler rain sensor irrigation shut offs. Eligible appliances must be on the Consortium for Energy Efficiency (CEE) qualifying list, and must provide water savings as stated in the Town's rebate offers. The Water Conservation Program is financed with federal funds from the EPA to MassDEP under a Safe Drinking Water Act State Revolving Loan Fund set aside grant.

The Town regularly implements mandatory summer water restrictions to further reduce water use. As an example, in April 2014 the Town implemented Phase I Water Restrictions that were in effect for the summer months, June 2, 2014 through Labor Day Monday September 1, 2014. These outside water restrictions are in effect and enforced in accordance with the MassDEP Bureau of Resource Protection Water Management Act 20-year Permit: Special Permit Conditions; Summer Limits on Nonessential Outdoor Water Use; and Chapter 13, Sections I and II, of the Town's bylaw. Phase I Water Restrictions require mandatory outside water restrictions consisting of odd/even watering (even numbered houses water on even numbered days and odd numbered houses water on odd numbered days). Lawn watering is further limited to the hours in the morning between 5:00 a.m. and 9:00 a.m. and in the evening between 5:00 p.m. and 9:00 p.m. with hand held hoses allowed anytime. The Mansfield Water Division monitors water activity regularly and imposes fines for violations.

### 1.2.3 I/I Program

In December 2008, as part of an update to Phase 1 CWMP flow projections, additional existing WPCF flow data was obtained and I/I flow estimates were updated. It is anticipated that over the next 20 years Mansfield's existing I/I Elimination Program will help minimize I/I flows. However, as the sewer system infrastructure is expanded to meet the demands of the increasing population and growing community, overall I/I flow is expected to increase. As such, it is assumed that the increase in I/I flow from the Town will be 10 percent of the total new flow increase. This is a lower percentage than existing but is consistent with new systems and construction techniques.

The Town continues to implement its I/I program. It recently completed a metering, gauging, and inspection program in 2012 and began construction of approximately 8,800 linear feet of cured in place pipe lining of sewers ranging from 8-inch to 18-inch in diameter in late fall 2014. Also included in this project was cementitious lining of manholes and various methods of sewer service lateral rehabilitation. The cost of the project is \$600,000 and the project will be completed in summer 2015. Similar I/I reduction efforts will be completed on an as needed basis.

## 1.2.4 Groundwater and Surface Water Quality Monitoring Program

### 1.2.4.1 Recent Sampling and Analysis Efforts

Per special condition of the Order of Resource Area Delineation (ORAD) (MassDEP File No. 250-0916) issued by the Norton Conservation Commission on December 17, 2013, for the Pine Street Site, CDM Smith wetland scientists conducted a vernal pool survey on the entire Pine Street Site to be used for infiltration basins, as well as adjacent parcels along the sewer interceptor, on April 22, 2014. This survey did not identify any additional vernal pools on the Pine Street Site that meet the state certification requirements. However, one vernal pool that meets the certification requirements was identified north of the interceptor/ abandoned railroad grade, north of the Pine Street Site. The ORAD is included in Appendix E and the results of the vernal pool monitoring are presented in a Vernal Pool Monitoring Report included in Appendix F. Water levels at the certified vernal pools on or near the Pine Street Site were also evaluated in the May 2014 *Hydrogeological Evaluation Report: Pine Street Site* (see Appendix B) to determine the potential impact of water table rise due to effluent recharge at the infiltration basins. Based on the simulated water table rise at the vernal pools near the Pine Street Site entrance, it is expected that the vernal pools will maintain appropriate seasonal wet and dry conditions.

Also, as part of the May 2014 *Hydrogeological Evaluation Report: Pine Street Site*, surface and groundwater quality sampling was conducted at or in the vicinity of the Pine Street Site. Surface water quality in Old Crane Pond and Pine Street Pond was monitored on a monthly basis from August through October 2013 to establish background water quality conditions and assess nitrogen or phosphorus-limiting conditions of these ponds that are down-gradient of the potential infiltration site. Traverses were conducted of Old Crane Pond and Pine Street Pond with a canoe and water level meter to measure pond depths and to identify the location with the maximum measured depth in each pond. The water quality samples were taken at the deepest location in each pond at various elevations so a shallow and deep sample could be collected to discern if the pond is stratified. The samples were submitted to the University of Massachusetts-Dartmouth School of Marine Science and Technology (SMAST) laboratory in New Bedford, Massachusetts, which analyzed the samples for chlorophyll-A, nutrients, and boron. In addition to the parameters above, temperature, specific conductivity, conductivity, salinity, dissolved oxygen, pH, and, oxygen reduction potential were measured at the time of the shallow and deep sample collection by slowly lowering a multi-parameter probe into the pond. Surface water clarity observations were also measured and recorded via Secchi disk and visual description.

The evaluation of the surface water quality data focused on which nutrient, nitrogen or phosphorus, is likely to control undesirable biological growth in the ponds down-gradient of the potential infiltration site. Based on this evaluation of the water quality data, both ponds are phosphorus-limited. It should be noted that both ponds, especially the Pine Street Pond, are densely vegetated during the growth season (late spring to early fall). This is further evidenced by the chlorophyll A concentrations that

were very high during the August sampling round and drop off significantly as growth slows down in September and October. Based on this observation and chlorophyll A concentrations, these ponds have been impacted by nutrients under existing conditions. Details of the surface water sampling and analysis are found in Appendix B.

Groundwater quality sampling at the Pine Street Site was conducted at the seven newly installed monitoring wells in October 2013 to establish background groundwater quality conditions. The samples were collected using low flow sampling techniques via peristaltic and submersible pumps. Prior to purging and sampling, groundwater levels were gauged with a water level meter. While purging, groundwater field parameters including temperature, specific conductance, dissolved oxygen, pH, and oxidation-reduction potential were monitored and recorded using a multi-parameter probe and flow-through cell. Groundwater samples were collected after field parameters stabilized as indicated by a change of less than 10 percent between readings for all field parameters. Dissolved samples were field filtered using 0.45-micron in-line filters. The groundwater samples were also submitted to the SMAST laboratory for chlorophyll-A, nutrients, and boron, the same parameters tested in the surface water quality samples. Groundwater quality concentration results were indicative of typical unimpacted conditions in southeastern Massachusetts. Details of the groundwater sampling and analysis are found in Appendix B.

#### **1.2.4.2 Proposed Long-Term Monitoring Plan**

In Section 6 of the May 2014 *Hydrogeological Evaluation Report: Pine Street Site* in Appendix B, a groundwater monitoring plan at the Pine Street Site was recommended, focusing on monitoring the mounding effects due to effluent recharge as well as impacts to groundwater quality based on an established baseline. The proposed program is designed to monitor anticipated constituents that will likely be included in the groundwater discharge permit to be obtained for the infiltration basins and constituents that are currently in the WPCF's existing NPDES discharge permit. All discharge nutrient requirements will adhere to the groundwater discharge permit regulations and will be attained at the WPCF.

It is recommended that six of the newly installed monitoring wells at the Pine Street site be monitored as part of the long-term monitoring plan to assess impact to groundwater as a result of the proposed effluent recharge at the site. Below are the wells proposed to be monitored and the purpose of each:

- MW-101 – Downgradient of the proposed effluent recharge area and upgradient of the nearest private property; monitor water level rise near private property.
- MW-102 – Downgradient of the proposed effluent recharge area and upgradient of the other private property near the site; monitor water level rise near private property and wetlands.
- MW-103S – Monitor water level rise and water quality east of the site.
- MW-104S – Provide water quality data in the shallow aquifer below the effluent recharge site; monitor mounding at the recharge site.
- MW-104D – Provide water quality data in the deep overburden aquifer at the effluent recharge site; monitor mounding at the recharge site.

- MW-105 – Provide water quality data immediately upstream of the Norton well field property; provide water levels for monitoring the vernal pools.

It is recommended that baseline monitoring of the above parameters be conducted for one year prior to the planned start of effluent recharge at the site. It is also recommended that water levels at MW-105 and MW-104S be taken using a pressure transducer that automatically takes readings at least once a day. This will allow for close monitoring of seasonal variability near the vernal pools, to ensure that the pools continue to support obligate vernal pool species, and near the effluent loading site. At the other locations, water levels will be taken on a monthly basis. A baseline report will be submitted at the end of that one year that establishes background groundwater quality and pre-loading water table elevations. Once the construction of the effluent loading basins is completed, there will be annual reporting of the above parameters. Details of the long-term monitoring plan are found in Appendix B. The post construction vernal pool monitoring plan will be developed as part of the Notice of Intent submittal to the Norton Conservation Commission for work within the 100-foot buffer zone to bordering vegetated wetlands and inland bank.

Monitoring required at the WPCF by the current NPDES permit will continue. In addition, a monitoring plan will be developed as part of capping and closing the three landfill cells at the Fruit Street site.

### 1.3 Previous MEPA Submittals

In accordance with MEPA, an Environmental Notification Form (ENF) was filed with the Secretary of the Executive Office of Environmental Affairs (EOEA) (name changed to EOEEA) and noticed in the Environmental Monitor on October 23, 2004. The Secretary issued a certificate on November 29, 2004, designating the project as EOEA No. 13388, and stating that an EIR is required for this project. The DEIR and a related Notice of Project Change (NPC) was filed with the Secretary of the EOEEA and noticed in the Environmental Monitor on October 8, 2014. The Secretary issued a certificate on November 26, 2014 stating that the DEIR complied with the MEPA regulations and to continue the process with submittal of the FEIR. The DEIR MEPA Certificate is included in Section 2.

Prior to filing the DEIR and NPC in 2014, in September 2013 CDM Smith met with Nicholas Zavolas of the Boston MEPA office to discuss the delay in filing between the ENF (October 2004) and DEIR (October 2014), primarily driven by the lengthy time spent negotiating the creation of the MFN District by Mansfield, Foxborough, and Norton. Based on direction received at the meeting with MEPA, a NPC was requested for this lapse of time between the two filings.

### 1.4 Project Updates

This section summarizes project updates since submittal of the Phase 2 CWMP/DEIR and references sections of this FEIR where additional information is provided, as appropriate. Updates include:

- An updated discussion of statutory and regulatory standards and requirements applicable to the project, discussed in Section 3;
- An energy audit of the WPCF, discussed in detail in Section 4;

- Additional information on wetlands protection and stormwater best management practices that will be implemented at the WPCF in connection with the project, discussed in detail in Section 5;
- Completion of an intensive (locational) archaeological survey of the Pine Street Site, discussed in detail in Section 6;
- An updated discussion of mitigation measures and Section 61 Findings, detailed in Section 7; and
- A preliminary design report of the recommended wastewater management plan, specifically detailing the expansion of the existing WPCF and construction of wastewater effluent recharge infiltration basins for infiltration of treated wastewater effluent, was completed on April 3, 2015. A third party engineering peer review started on April 15, 2015 and concluded May 8, 2015. Any comments or changes to be incorporated from the peer review will be incorporated during final design, which is anticipated to begin in June 2015 and be completed in February 2016.



## Section 2

# MEPA Certificate on the DEIR





*The Commonwealth of Massachusetts*  
*Executive Office of Energy and Environmental Affairs*  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Deval L. Patrick  
GOVERNOR

Maeve Vallely Bartlett  
SECRETARY

Tel: (617) 626-1000  
Fax: (617) 626-1181  
<http://www.mass.gov/envir>

November 26, 2014

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS  
ON THE  
DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT NAME : Phase 2 Comprehensive Wastewater Management Plan  
PROJECT MUNICIPALITY : Mansfield and Norton  
PROJECT WATERSHED : Taunton River and Ten Mile River  
EEA NUMBER : 13388  
PROJECT PROPONENT : Town of Mansfield  
DATE NOTICED IN MONITOR : October 8, 2014

As Secretary of Energy and Environmental Affairs, I hereby determine that the Draft Environmental Impact Report (DEIR) *adequately and properly complies* with the Massachusetts Environmental Policy Act (M.G.L. c. 30, ss. 61-62I) and with its implementing regulations (301 CMR 11.00). The Proponent may prepare and submit the Final EIR (FEIR) for review. The Scope included in this Certificate identifies additional analysis and information required in the FEIR.

Project Description

As described in the DEIR, the Town of Mansfield has completed Phase 2 of its Comprehensive Wastewater Management Plan (CWMP). The purpose of the Phase 2 CWMP is to recommend a long-term wastewater treatment and disposal program for the Town. The Town of Mansfield has a population of 23,414 based on the Southeastern Regional Planning and Economic Development District's (SPREDD) most recent estimate from 2012. Approximately 45 percent of the Town is sewered and the remainder is served by on-site Title 5 septic systems.

The Phase 2 report updated the wastewater flow data used in the Phase 1 CWMP and provided the following analysis:

- Evaluated wastewater treatment plant technologies that could be incorporated into a new facility or expansion and upgrade of the existing facility;

- Investigated potential treated wastewater effluent disposal sites;
- Completed a nitrogen loading analysis for portions of the town with on-site treatment systems to determine if additional treatment alternatives must be explored; and
- Developed additional alternatives based on cost, implementation capability, regulatory requirements, and design and reliability requirements.

As described in the DEIR, the Phase 2 report identified a Recommended Plan that includes:

- Expanding the treatment capacity of the existing Water Pollution Control Facility (WPCF) by 1.0 million gallons per day (gpd);
- Upgrading the treatment capability of the WPCF to meet new nutrient limits in the Town's National Pollutant Discharge Elimination System (NPDES) permit:
- Constructing wastewater effluent recharge basins that will infiltrate treated wastewater from the WPCF; and
- Capping and closing the Fruit Street landfill which had been used for sludge and grit disposal.

The existing wastewater flow to the WPCF is 2.41 mgd and includes wastewater from Norton, Foxborough and a portion of Easton, in addition to Mansfield. The design capacity of the WPCF is 3.14 mgd, of which 63.1 percent (1.98 mgd) is allotted to Mansfield, 21 percent is allotted to Foxborough (0.66 mgd), and 15.9 percent to Norton (0.50 mgd). The project will expand the treatment capacity of the WPCF by 1.0 mgd to 4.1 mgd in order to accommodate flow increases to the year 2025, which is the end of the 20-year planning period established in the ENF. Of this expanded capacity, Mansfield will be allotted 2.645 mgd (63.9 percent), Foxborough 0.830 mgd (20 percent), and Norton 0.665 mgd (16.1 percent).

The existing WPCF provides secondary treatment of wastewater using an activated sludge process followed by filtration disinfection prior to discharge of the effluent into the Three Mile River. In addition to the expansion of its capacity, the WPCF will be upgraded to provide additional treatment capability to meet its NPDES permit requirements related to nutrient removal. According to the DEIR, the NPDES permit requires the WPCF to meet new phosphorous limits of 0.17 milligrams per liter (mg/l) from April 1 through October 31 and 1.0 mg/l for the remainder of the year. Total nitrogen in the discharge is limited to 5 mg/l. The WPCF is designed to meet nutrient limits using the four-stage Bardenpho Process.

Proposed modifications to the WPCF include:

- Replacement of four influent wastewater pumps;
- Addition of an ultraviolet disinfection and effluent pumping facility ;
- Addition of a primary clariflocculator, secondary clarifier, and anoxic tanks; and
- Changes to the aeration basin, including replacement of surface aerators, fine bubble diffusers, submersible mixers, and baffle walls.

Because the project includes nutrient removal upgrades, it is eligible for zero percent financing through the State Revolving Fund (SRF) loan program administered by the Massachusetts Department of Environmental Protection (MassDEP). The eligibility

requirements for the zero percent loan include the development of a CWMP, public review of the CWMP (including public review through the MEPA process), and final approval of the CWMP by MassDEP.

The project will construct four effluent recharge basins to infiltrate the additional 1.0 mgd of treated wastewater from the expanded WPCF. According to the DEIR, the infiltration basins will be necessary because the Town will not be allowed to discharge the additional 1.0 mgd of effluent to be generated by the expanded facility into the Three Mile River. Each infiltration basin will be 30,250 square feet (sf) in size. The recharge basins will consist of vegetated basins surrounded by paved maintenance roads.

From 1988 to 2010, sludge from the WPCF was disposed of in three cells at the Fruit Street Landfill in Mansfield. A sludge management study completed by the Town in 2006 reviewed sludge disposal options and technologies that could be incorporated into the design of the WPCF upgrades. The Town ceased disposing of sludge at the landfill in 2010 and since then the sludge, grit, and screenings have been hauled off-site. No changes are proposed to this practice.

#### Project Site

The WPCF is located on Hill Street in the southeastern section of Norton. It was constructed in the 1980s and commenced operations in 1986. The four infiltration basins will be constructed at the 2.4-acre Pine Street site in Norton, approximately 2,000 feet west of the WPCF. The sites are located in a predominately forested area with low-density residential uses and farmland to the north and west. Commercial office and light industrial uses are located along Myles Standish Boulevard to the south.

#### Changes since the ENF

Since the ENF was reviewed, the Town has implemented one of the primary recommendations of the Phase 1 CWMP. A regional wastewater system was one of the alternatives identified in the ENF, and in July 2014, the Towns of Mansfield, Norton, and Foxborough formed the Mansfield, Foxborough, and Norton (MFN) Regional Wastewater District. According to the DEIR, the purpose of the MFN is to own, manage, and maintain the WPCF, common interceptors, and effluent recharge and reuse systems, and to provide for the collection, conveyance, and treatment of wastewater and recharge/reuse of treated effluent for the member communities.

The ENF described the Town's intent to expand its sewer system to collect and treat 956,000 gpd from infill parcels in sewer areas of the town, commercial and industrial areas, and new development in presently unsewered areas.

#### Jurisdiction and Permitting

As originally presented in the ENF, this project was subject to MEPA review and required the preparation of a mandatory EIR pursuant to 301 CMR 11.03(5)(a)(3) because it required a State Agency Action and proposed to construct New sewer mains ten or more miles

in length. The project no longer includes the construction of new sewer mains. As currently proposed, it does not exceed an EIR threshold; however, it does exceed an ENF threshold for the expansion of an existing wastewater treatment and/or disposal facility by the greater of 100,000 gpd or 10 percent of existing capacity (at 301 CMR 11.03(5)(b)(2)). The project requires a Sewer Connection and Extension Permit from MassDEP and is seeking SRF funding from MassDEP.

The project requires an Order of Conditions from the Norton Conservation Commission (or in the case of an appeal, a Superseding Order of Conditions from MassDEP). The project will also require a NPDES Construction General Permit (CGP) from the United States Environmental Protection Agency (EPA). The project is subject to the MEPA Greenhouse Gas (GHG) Emissions Policy and Protocol.

Because the Town is seeking Financial Assistance from the Commonwealth for the project, MEPA jurisdiction extends to all aspects of the project that may cause Damage to the Environment as defined in the MEPA regulations

### Review of the DEIR

The DEIR summarized the findings of the Phase 1 Report/ENF reviewed under MEPA in 2004 and included updated information on the existing and future flows from Mansfield and other communities served by the WPCF. The DEIR reviewed the alternatives analyzed in the Phase 1 report and additional alternatives designed to comply with the requirements of the September 2014 NPDES permit. The DEIR described the MNF district that has been formed based on its presentation as an alternative in the Phase 1 CWMP. The DEIR included nitrogen analyses of study areas that were identified in the Phase 1 CWMP. The DEIR reviewed water conservation measures implemented by the Town, including distribution of free water-conserving fixtures, free home water audits, rebate offers for replacement of water-consuming appliances, and mandatory summer water restrictions. The DEIR discussed the Town's Inflow and Infiltration (I/I) reduction measures, including metering, gauging and inspection programs and a construction project that will line 6,300 linear feet of sewer pipes to reduce leaks.

### *Alternatives Analysis*

The DEIR reviewed the No Action, Local, and Regional Alternatives that were addressed in the ENF. The No Action Alternative (Alternative A) would rely on private treatment facilities throughout the Town to address additional wastewater generated by Mansfield, but would not address increased flows from other communities. The Local Alternative (Alternative B) included the construction of a satellite facility in Mansfield with no expansion of the existing facility.

The Regional Alternatives identified in the ENF included three options for expansion of the WPCF to treat future flows from Mansfield as well as Norton, Foxborough and, to a lesser extent, Easton and Wheaton College. The three options included land application, reuse, or recharge of the effluent based on expansion of the WPCF by 0.4 mgd (Alternative C), 0.73 mgd (Alternative D), and 1.46 mgd (Alternative E), but did not include additional treatment processes to meet the new NPDES nutrient removal requirements. The Preferred Alternative is included in

the analysis of Regional Alternative F, which includes nutrient removal to meet NPDES requirements and effluent recharge in the vicinity of the WPCF. The DEIR evaluated six scenarios with varying flow capacities and treatment technologies. The DEIR ranked the alternatives in terms of the following criteria: environmental impacts and mitigation measures; implementation capability; regulatory, design, and reliability requirements; and costs. According to the analysis, the Local and Regional Alternatives would have comparable environmental impacts, including construction within wetlands Buffer Zones but no direct wetlands impacts. However, only Alternative F includes nutrient removal technology that meets permit requirements. The Preferred Alternative was developed by maximizing treatment efficiency and minimizing costs and environmental impacts.

The DEIR also reviewed alternatives for reuse and recharge of the effluent. Each option was evaluated on the basis of groundwater modeling, water quality impacts, and feasibility. The Reuse Alternative was evaluated in the ENF, and included the use of treated wastewater to provide irrigation for a local golf course and other seasonal uses. These options have since been determined to be infeasible because of the lack of year-round reuse applications. The DEIR also evaluated two recharge sites in Norton, identified as the Pine Street and Crane Street sites. Based on hydrogeological modeling using data from groundwater monitoring wells and geological conditions, infiltration capacity of the Pine Street site is estimated as 1.0 mgd. According to the DEIR, the Crane Street site may be further evaluated if additional effluent infiltration is necessary.

#### *CWMP Review*

The Town conducted a Nitrogen Loading Analysis to help determine the need for constructing additional sewer lines in Mansfield and to evaluate whether current and future nutrient levels in groundwater may impact Mansfield's water supply wells. The analysis was performed for each of the 16 study areas defined in the Phase 1 CWMP with a focus on their potential impacts to drinking water supply. The study used land use information, water quality data, and modeled infiltration in Zone II areas, to develop a model representing nitrate concentrations in the study areas and water supply wells. The DEIR indicates that, based on the results of the study, sewerage of additional areas is not necessary because nitrogen is not affecting the Town's drinking water supply wells in these areas. The DEIR recommended continued monitoring of nitrate levels by sampling water supply wells and surface waters.

According to MassDEP, the Town did not fully characterize the potential sources of pollution of three waterbodies that are listed as impaired on the Final Massachusetts Year 2012 Integrated List of Waters. These include Plain Street Pond in Study Area 1, the Wading River in Study Area 7, 8, and 9, and the Rumford River in Study Area 11. These water bodies are impaired due to wastewater-related pollutants such as fecal coliform, excessive algal growth, and low dissolved oxygen. Comments from MassDEP indicate that, upon issuance of the TMDL for these or any other newly listed water bodies, Mansfield will be required to revisit the needs areas around these water bodies. The Town will need to characterize the sources of impairment so that a Targeted Watershed Management Plan (TWMP) can be developed for these impaired water bodies to demonstrate that the TMDL can be met.

### *Interbasin Transfer*

The Town of Foxborough is located in four basins: the Neponset River, Taunton River, Ten Mile River, and Charles River. The Town's water supplies are located in the Neponset River and Taunton River basins, and wastewater is discharged through the WPCF into the Taunton River basin. According to the DEIR, Foxborough's CWMP has identified unsewered areas within the Neponset River basin that will be sewered with flows directed to the WPCF, resulting in an estimated flow of 27,000 gpd from the Neponset River basin to the Taunton River basin. According to the DEIR, this volume will be offset by a pending transfer of 119,000 gpd of wastewater from the Taunton River basin back into the Neponset River basin through an on-site discharge at the Patriot's Place development.

According to the Water Resources Commission (WRC), Mansfield has water supply sources in the Ten Mile River basin. Wastewater flows from these areas that are discharged to the Taunton River basin via the WPCF may be subject to the Interbasin Transfer Act (ITA). The WRC notes that this transfer may be offset by the intra-municipal transfer of water supply from the Taunton River basin that will be discharged into the Ten Mile River basin through on-site septic systems.

### *Greenhouse Gas (GHG) Emissions*

According to the DEIR, the town will conduct an energy audit of the WPCF and will upgrade the facility with energy-efficient and water-conserving features. The project may also include on-site renewable energy generation by a solar photovoltaic (PV) array or wind turbine.

The DEIR included a request to allow the Proponent to employ the "opt out" provision of the GHG Policy because it will include exceptional GHG reduction measures. The rationale for the opt-out provision is that if a proponent commits to such extraordinary measures, there is less reason for quantification and exploration of alternatives. The DEIR did not include a commitment to exceptional GHG reduction measures nor did it identify specific commitments to energy-efficiency measures or renewable energy generation. The DEIR does identify the Proponents intention to incorporate renewable energy but indicates that the type and potential capacity of such a system has not been identified.

The information included in the DEIR is not adequate to support use of the opt-out provision. The Proponent should prepare a GHG analysis consistent with the GHG Policy and Scope included below. Because the project is limited to the expansion of an existing WWTF and associated sewer collection system, the scope and effort required for this analysis will be relatively small.

### *Wetlands and Stormwater*

According to the DEIR, the project will avoid direct impacts to wetlands resource areas, but does include work within the buffer zone of wetlands resource areas. The project will be reviewed by the Norton Conservation Commission (NCC) for its consistency with the Wetlands Protection Act (WPA), its implementing regulations (310 CMR 10.00) and associated performance standards, including stormwater management standards. The DEIR noted that the

existing WPCF includes a stormwater management system that conveys runoff to two detention basins and a drainage swale. The DEIR did not quantify any increases in impervious area associated with the project or discuss the project's compliance with MassDEP's Stormwater Regulations. I note that comments from the NCC request additional information about wetlands mitigation measures, including sedimentation and erosion controls, and additional detail regarding the design of the infiltration basins.

### *Historical Resources*

According to the DEIR, the WPCF is adjacent to the White Crow Site, a Native American archaeological site that is listed in the State Register of Historic Places and may be eligible for listing in the National Register of Historic Places. The site is associated with Native American settlement of the Mansfield and Norton area between 6,000 to 2,000 years ago. In addition, the proposed effluent infiltration basins on Pine Street will be located adjacent to another Native American archaeological site known as the G.B. Crane site and is within portions of a historic agricultural landscape known as the Crane Farm. The Crane Farm may also be eligible for listing on the National Register of Historic Places. In a letter to the Town included in the DEIR, the Massachusetts Historical Commission (MHC) requested that an Intensive Archaeological Survey (IAS) be conducted for the Pine Street effluent recharge site. The MHC letter also indicated that no further investigation of the White Crow Site, or consideration of associated mitigation measures, was warranted.

## SCOPE

### General

The FEIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this scope.

### Project Description and Permitting

The FEIR should describe the project and any changes to the project since the filing of the DEIR. The FEIR should include updated site plans for existing and post-development conditions at a legible scale, if necessary. The FEIR should identify any additional statutory and regulatory standards and requirements applicable to the project not reviewed in the DEIR, and describe how the project will meet those standards. The FEIR should identify required State Permits, Financial Assistance, or other State approvals and provide an update on the status of each of these pending actions.

The formation of the MFN District and wastewater upgrades to the WPCF are critical elements of the Mansfield CWMP. The implementation of these measures is consistent with the recommendations of the Phase 1 CWMP. The FEIR should also highlight other aspects the Town's CWMP, such as Mansfield's water conservation programs. The FEIR should discuss any additional measures water conservation programs that will be implemented or whether any of the programs will be terminated. The FEIR should discuss the Town's plans for continuing to

monitor and address I/I. The FEIR should also discuss ongoing monitoring of groundwater and surface water quality in the context of its wastewater planning efforts.

### GHG Emissions

The FEIR must provide a GHG analysis consistent with the GHG Policy. The scope for the analysis outlined below is consistent with the evaluation of energy use that MassDEP will undertake during the SRF and water permitting processes. I encourage the Town to meet with MEPA staff prior to filing the FEIR for guidance on the GHG analysis.

The FEIR should include the results of an energy audit of the existing WPCF and the components to be constructed in connection with the facility's expansion. Based on the results of the energy audit, the FEIR should identify additional GHG reduction and energy conservation measures that can be installed in the existing portion of the WPCF. These measures should be described and analyzed as stationary sources in accordance with the Policy. The FEIR should also analyze the potential for on-site wind or solar energy generating facilities.

For new components of the WPCF, the analysis should develop a baseline energy use as determined by the EPA's Energy Star Program Manager with an assumed rank of 50, corresponding to the 50<sup>th</sup> percentile of energy use. The FEIR should calculate the average monthly energy use based on the design of the facility components, including:

- Average Daily Influent Flow;
- Average Influence Biological Oxygen Demand (BOD);
- Average Effluent BOD;
- Plant Design Capacity;
- The presence or absence of Fixed Film Trickle Filtration; and
- The presence or absence of Nutrient Removal.

Any new pump stations associated with the WPCF or use of the infiltration basins should be calculated separately using a model "average" pump station based on a typical pump station design. The analysis should include assumptions for pump efficiencies, peak flows, and pipe friction factors. The pump station analysis should compare a Base Case to a Preferred Alternative with improved technologies. The Town should also commit to implementing other feasible GHG reduction strategies that may be determined upon advancement of the project design. The result of the analyses should be documented in a quantitative manner where possible. I encourage the Town to consult MassDEP's *Energy Efficiency and Renewable Energy Opportunities at Water and Wastewater Facilities* webpage at: <http://www.mass.gov/eea/agencies/massdep/climate-energy/energy/water-utilities/energy-efficiency-at-water-and-wastewater-facilities.html>

### Stormwater Management

The FEIR should provide a discussion of stormwater Best Management Practices that will be implemented at the WPCF in connection with the facility upgrades. The FEIR should address the project's compliance with the stormwater regulations.

### Historic Resources

The FEIR should provide updated information on the results of the IAS performed at the Pine Street site and any necessary avoidance or mitigation measures to protect historic resources. If the design of the effluent infiltration basins must be modified, the FEIR should provide revised plans, describe existing conditions in any new areas to be affected by the realigned basins, identify any potential environmental impacts associated with the changes, and propose mitigation measures.

### Mitigation and Section 61 Findings

The FEIR should include a separate chapter summarizing proposed mitigation measures. This chapter should also include draft Section 61 Findings for each State Agency that will issue permits for the project. The FEIR should contain clear commitments to implement mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation.

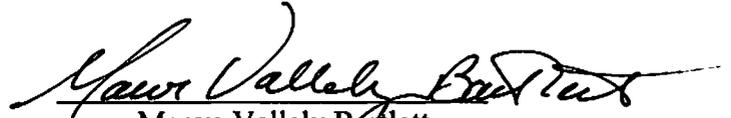
In order to ensure that all GHG emissions reduction measures adopted by the Proponent as the Preferred Alternative are actually constructed or performed by the Proponent, the Proponents must provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings included in the FEIR.

### Responses to Comments/Circulation

The FEIR should contain a copy of this Certificate and a copy of each comment letter received. In order to ensure that the issues raised by commenters are addressed, the FEIR should include direct responses to comments to the extent that they are within MEPA jurisdiction. This directive is not intended to, and shall not be construed to, enlarge the scope of the FEIR beyond what has been expressly identified in this certificate. I recommend that the Proponent use either an indexed response to comments format, or a direct narrative response.

In accordance with Section 11.16 of the MEPA Regulations and as modified by this Certificate, the Proponent should circulate a hard copy of the FEIR to each State and Town Agency from which the Proponent will seek permits. The Proponent must circulate a copy of the FEIR to all other parties that submitted individual written comments. Per 301 CMR 11.16(5), the Proponent may circulate copies of the FEIR to these other parties in CD-ROM format or by directing commenters to a project website address. However, the Proponent should make available a reasonable number of hard copies to accommodate those without convenient access to a computer and distribute these upon request on a first-come, first-served basis. The Proponent should send correspondence accompanying the CD-ROM or website address indicating that hard copies are available upon request, noting relevant comment deadlines, and appropriate addresses for submission of comments. A CD-ROM copy of the filing should also be provided to the MEPA Office. Copies of the FEIR should be made available for review at the Mansfield and Norton Public Libraries.

November 26, 2014  
Date

  
Maeve Vallely Bartlett

**Comments received:**

11/04/2014 Water Resources Commission (WRC)  
11/06/2014 Town of Mansfield  
11/07/2014 Massachusetts Department of Environmental Protection (MassDEP)/Southeast  
Regional Office (SERO)  
11/18/2014 Norton Conservation Commission

MVB/AJS/ajs

AS



THE COMMONWEALTH OF MASSACHUSETTS  
WATER RESOURCES COMMISSION  
100 CAMBRIDGE STREET, BOSTON MA 02114

November 4, 2014

Maeve Vallely Bartlett, Secretary  
Executive Office of Environmental Affairs  
Attention: Alex Strycky, MEPA Office  
EOEA #13388  
100 Cambridge Street  
Boston, MA 02114

RECEIVED  
NOV 10 2014  
MEPA

Dear Secretary Bartlett:

Staff for the Massachusetts Water Resources Commission (WRC) has reviewed the Draft Environmental Impact Report and Phase 2 Comprehensive Wastewater Management Plan (CWMP) for the Town of Mansfield. The WRC Staff has worked closely with the Town over the years on water supply issues and commented on the Phase 1 CWMP in 2004. At that stage, the plan was preliminary and WRC Staff was not sure if the Interbasin Transfer Act (ITA) would be triggered by the project. The Phase 2 report provides more detail and a preferred alternative to expand wastewater discharge capacity for the three towns using the regional wastewater system serving Mansfield, Foxborough and Norton.

In 2008, the Water Resources Commission found that the ITA does not apply to the Town of Foxborough's portion of the project. Even though water would be transferred across Town and river basin lines (from the Boston Harbor basin in Foxborough to the Taunton River basin in Norton), the Act did not apply because Foxborough's transfer would be offset by an intra-town transfer from the Taunton River basin into the Boston Harbor basin via the on-site wastewater discharge at Patriots Place in Foxborough.

All of Norton's water supply sources and land area are in the Taunton River basin, as is the discharge for the wastewater treatment plant, so the ITA will not apply to Norton's portion of the project. Mansfield has water supply sources in the Ten Mile River basin. Many areas of Mansfield will not be sewered, but will remain on on-site septic systems. This portion of the Town's wastewater will be exempt from the Interbasin Transfer Act because it will not cross both a municipal line and a river basin line. In addition, the Ten Mile River basin portion of Town is not slated for sewerage, so wastewater that remains in this river basin will not be subject to the ITA. Only the transfer from the Ten Mile River basin to the Taunton River basin in Norton would be subject to the ITA but this transfer may be partially or completely offset by the intra-town

transfer of water supply from the Taunton River basin that will be discharged via on-site septic systems into the Ten Mile River basin.

WRC Staff is currently working with the Town of Mansfield to determine, how much, if any, water is subject to the ITA under this project and is hopeful to have this resolved soon.

Thank you for the opportunity to comment. If you have any questions, please contact me at 617-626-1012 or Michele Drury at 617-626-1366.

Sincerely,

A handwritten signature in blue ink that reads "Kathleen M. Baskin".

Kathleen M. Baskin, P.E.  
Executive Director

cc: Water Resources Commission  
Michele Drury, DCR  
Lee Azinheira, Town of Mansfield  
Representative Jay Barrows



RECEIVED

NOV 07 2014

MEPA

AS  
*Town of Mansfield*

6 Park Row, Mansfield, Massachusetts 02048

*Town Manager*

William R. Ross

November 6, 2014

Mr. Richard K. Sullivan, Jr., Secretary  
Executive Office of Energy and Environmental Affairs  
Attn: MEPA Office  
Alex Strysky, EEA No. 13388  
100 Cambridge Street, Suite 900  
Boston MA 02114

Re: Mansfield Support for Phase 2 Comprehensive Wastewater Management Plan  
(CWMP) and Environmental Impact Report (EIR)

Dear Secretary Sullivan,

The Town of Mansfield and our consultant, CDM Smith, reinitiated its comprehensive wastewater planning efforts in the spring of 2003 and submitted the Phase 1 Draft CWMP and the related environmental notification form in October 2004. The adjacent towns of Foxborough and Norton also progressed on their CWMP processes. Foxborough completed its CWMP in 2002 and Norton is in the final stage of completing its CWMP. Mansfield began Phase 2 CWMP activities in 2005, evaluating Phase 1 CWMP preliminary alternatives in further detail. On a parallel track, Mansfield began discussions with Foxborough and Norton regarding the formation of a regional wastewater district. The regional wastewater district approach has several potential benefits for the communities and, as a result, Mansfield held off on completing and submitting its Phase 2 CWMP to focus efforts on working with Foxborough and Norton to further develop the regional wastewater district. The MFN Regional Wastewater District became effective in July 2014. Mansfield finalized its Phase 2 CWMP activities soon thereafter, filing with the MEPA Office on September 30, 2014.

The recommended Mansfield wastewater program includes expansion and upgrade of the existing (previously Mansfield-owned) Water Pollution Control Facility (WPCF) located in Norton and construction of wastewater effluent recharge infiltration basins for recharge of treated wastewater effluent related to the flow increase above the existing NPDES permit. In addition, the Fruit Street Landfill, located in Mansfield and previously used for sludge and grit disposal from the WPCF, will be capped and closed (the WPCF currently contracts with a sludge hauler and no longer uses the landfill). The design and construction of these facilities will occur over a five year time period and will accommodate expected flow increases from Mansfield, Foxborough, Norton and a portion of Easton (as a customer of Mansfield) over the next 20 years. For this plan, the MFN Regional Wastewater District WPCF will undergo an expansion to accommodate an additional 1.0 million gallons per day (mgd). As part of this work, the WPCF will be upgraded to treat all existing and future flow to more stringent nutrient limits per the

recently issued new NPDES permit. The infiltration basins will be constructed at a nearby site in Norton, accommodating up to 1.0 mgd.

From a community planning perspective, the plan provides the necessary expanded wastewater flow capacity to allow Mansfield to address its wastewater treatment and disposal needs so that environmental and health issues are addressed, water supplies are protected, and land use and zoning decisions can be made to allow appropriate economic development to occur.

Currently, the Town is approaching its wastewater capacity limit in the WPCF. The plan provides the necessary wastewater capacity to allow Mansfield, as well as Foxborough and Norton, to capitalize on its location at the intersection of I-95 and I-495, further positioning for future economic growth and the resulting hundreds of construction and permanent jobs that will come with that growth. The Town believes that building on the existing transportation and wastewater network in the immediate vicinity to increase job and business opportunities, while protecting the environment, helps meet the objectives of the Commonwealth's Sustainable Development Principles.

Implementing this plan will increase the nutrient removal at the WPCF resulting in significant reduction of nitrogen and phosphorus in the receiving waters of the Three Mile River in the Taunton River Watershed. This river has several recreation facilities along it as it winds its way to Narragansett Bay. Removing nutrients will have both a local and regional benefit to the waters of the Commonwealth. Also, the additional wastewater flow treated at the WPCF will be land applied through the effluent recharge basins. This approach reduces the peak flows to streams and rivers and the resulting water quality problems, while also providing recharge opportunities within the WPCF's sewershed.

Implementation of this plan is vitally important to the Town so that we have the correct plan in place to meet the infrastructure and service needs of the community over the next 20 years. Thus, we ask that you approve the recommended program and allow us to continue with implementation of the various components. Should you have any questions or require additional information, please contact Lee Azinheira, Mansfield DPW Director and MFN Regional Wastewater District Executive Director at 508-261-7462 or myself at 508-261-7370.

Sincerely,



William Ross  
Town Manager

cc: Alex Strysky, MEPA Environmental Analyst  
Lee Azinheira, MFN District Executive Director  
David Young, CDM Smith



Norton Conservation Commission  
70 East Main Street  
Norton MA 02766  
508-285-0275  
508-285-0277 fax  
[conservation@nortonmaus.com](mailto:conservation@nortonmaus.com)

RECEIVED

NOV 24 2014

MEPA

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November 18, 2014

Secretary Matt Beaton  
EOEEA  
Attention: MEPA Office  
Alex Strysky: EEA No. 13388  
100 Cambridge St, Suite 900  
Boston MA 02114

RE: EOEEA 13388 DEIR and Phase 2 CWMP and NPC, Mansfield MA

Dear Mr. Strysky,

The Norton Conservation Commission has received and reviewed the Draft Environmental Impact Report (DEIR) and Phase 2 Comprehensive Wastewater Management Plan (CWMP) the Town of Mansfield MA. We offer the following comments based upon review of the DEIR.

1. The project location was listed in the Environmental Monitor as Mansfield; however, after reviewing the nearly 400-page DEIR, it is clear that the majority of the project lies within the *Town of Norton*. Without proper public notification regarding the project location, Norton residents and public officials would not have an opportunity to comment on the project. Once this oversight was acknowledged by the Conservation Director and notified the MEPA office on November 6, 2014, the public comment period was extended. While we appreciate the additional seven business days to review and comment on the project, we respectfully request that for any future notifications, the project location be clearly and accurately stated in compliance with 301 CMR 11.07(6)(a) and properly noticed in the Environmental Monitor. We further request that, at a minimum, the actual construction of the regional waste water facility be required to file an Environmental Notification Form (ENF) that accurately locates the project, in any and all documents.
2. It is unclear from the DEIR whether the existing waste water treatment plant will be upgraded so that the discharges to the Three-Mile River will also be improved over existing conditions in an effort to meet water quality standards since the Three-Mile River has been assigned a Total Daily Maximum Load (TMDL) for pathogens (formerly Fecal Coliform). The Three-Mile River is an Area of Critical Environmental Concern (ACEC). Furthermore, state listed species (*Ligumia nasuta*-2005 and *Glyptemys insculpta*-2011) have been documented in close proximity to the site and submitted to the Natural Heritage and





**Norton Conservation Commission**

70 East Main Street

Norton MA 02766

508-285-0275

508-285-0277 fax

[conservation@nortonmaus.com](mailto:conservation@nortonmaus.com)

Endangered Species Program (NHESP). These two species were documented after the 2008 printing of the Atlas and should be specifically discussed with NHESP.

3. Page 1-3, 4<sup>th</sup> bullet: The Canoe River did run dry in the 1990s. The Canoe River Aquifer Advisory Committee performed a stream cleaning when the river was dry; they can provide more specific information.
4. Page 2-14, table 2-4, line 3: The inlet to the Norton Reservoir is the Rumford River, not the Three-Mile River as listed.
5. Page 3-10, 3<sup>rd</sup> paragraph: The Norton Reservoir Dredging Project has been abandoned for at least five years. This project is not being pursued by the Town of Norton and should not be relied upon to attenuate nitrogen or phosphorus loadings. Contributions of nitrogen and phosphorus into the watershed should be further investigated and identified. As stated on page 3-11, a more extensive sampling program should be instituted. Please require the sampling program be drafted for public comment and we request the inclusion of a map to clearly show sampling locations.
6. Page 3-11, Section 3.3.4.1 Seasonal and Climatic Variability of the Water Table: How has the CWMP considered and evaluated the anticipated impacts of climate change in their evaluations? The predicted impacts of increases in flashier flooding events and more frequent summer droughts should be taken into consideration when assessing nutrient loads during low-flow periods and drought conditions. Also, if we are expected to receive more precipitation in the form of rain during winter months when the ground is frozen, less water will infiltrate into the ground to maintain base flows of the Three-Mile River. The CWMP should carefully consider this in their analysis of impacts to the river.
7. Any calculations of storm events should use the most accurate rainfall data available from the Atlas of Precipitation Extremes for the Northeastern United States and Southeastern Canada known as the "Cornell data".
8. Page 3-13, paragraph below table 3-3: What is considered "without too much water table mounding"? What is the actual amount? This statement is subjective.
9. Page 3-13, Section 3.3.5.1, Airport Sites: Do "all residences" include those in Norton?
10. Page 3-14, Section 2.2.5.2: Please provide the necessary ground water flow modeling and the field data (Page 3-15) for public comment.
11. Page 3-16, Surface Water Quality Conditions, Private site in Norton: Nitrate loadings could impact Norton water resources. The CWMP should further evaluate this, including but not limited to, field testing, monitoring protocols and mitigation plans.



**Norton Conservation Commission**

70 East Main Street

Norton MA 02766

508-285-0275

508-285-0277 fax

[conservation@nortonmaus.com](mailto:conservation@nortonmaus.com)

12. Page 2-24, 2<sup>nd</sup> bullet: Please provide the vernal pool and water table monitoring plan for public comment.
13. Page 4-16, paragraph under figure 4-12: Please provide a monitoring plan to confirm this analysis/assumption for public comment.
14. Page 4-36: Peak discharge to Three-Mile River is proposed to continue at current rates. This rate should be re-evaluated based upon anticipated changes to the flow of the river based upon climate change predictions.
15. Page 5-1, Section 5.2.1: Instituting a change to which existing bylaw?
16. Page 5-3, Alternatives C, D, E and F: The regional sewer authority should coordinate with the Transportation Alternatives Program Committee (Norton rail trail proponents) regarding the interceptor route.
17. Page 5-3, Section 5.2.1.5 Mitigation Measures: The Norton Conservation Commission does not allow the use of hay bales on projects. The project will be required to comply with the following general condition for all wetland permits: Haybales shall not be used. Biodegradable controls are preferred such as rolled erosion control products (i.e. mulch control netting, erosion control blankets, turf mats, mulch socks, fiber rolls, wattles etc.) which must be 100% natural biodegradable material. Photodegradable, UV degradable or Oxo-(bio)degradable plastics are not considered biodegradable.
18. Page 5-3, Section 5.2.1.5 Mitigation Measures: Previous sections described impacts to local ponds. Mitigation of those impacts should be added to this section. Also, it has previously been requested that conservation restrictions be placed upon portions of the two Norton properties. This mitigation should also be fully investigated and included in this section.
19. Page 5-9, Electricity: The facility should fully investigate the use of solar panels on the roof of the building to reduce electricity usage.
20. Page 6-7: The recommended plan for infiltration basins was not included in the report. As previously requested the design of the infiltration basins should be submitted for public review and comment and clearly noticed as a *Norton* location in any advertisement.
21. Page 6-11: noted discrepancies should be corrected.
22. Page 7-23, Section 7.6.7: As previously stated *Ligumia nasuta* and *Glyptemys insculpta* have been documented and submitted to the Natural Heritage and Endangered Species Program (NHESP). These species are located downstream of the proposed infiltration basin location



**Norton Conservation Commission**

70 East Main Street

Norton MA 02766

508-285-0275

508-285-0277 fax

[conservation@nortonmaus.com](mailto:conservation@nortonmaus.com)

and the existing outfall. These two species were documented after the 2008 printing of the Atlas and should be specifically discussed with NHESP.

23. Page 7-25, 2<sup>nd</sup> paragraph: The Norton Conservation Commission has previously questioned the appropriateness of the vernal pool investigation proposed for a cloudy and rainy day. Additional vernal pool investigations should be conducted following the criteria outlined in the Order of Resource Area Delineation.
24. Page 7-25, Section 7.6.7.2: This section mentions the BioMap but does not acknowledge that this area is located on the Conservation Assessment Prioritization System (CAPS) map as an Area of Regional and Statewide Importance. This section of the DEIR is a further example of the appropriateness of land conservation through conservation restriction for portions of the private land in Norton.
25. Page 7-28, Section 7.6.12: An additional 40 acres of the Crane Farm was preserved in June 2014.
26. Page 7-29, 1<sup>st</sup> paragraph: The CWMP does not mention the Agricultural Preservation Restriction or other deeded restriction/compensation that will be required for any conversion of use of active farmland under Executive Order 193. This requirement should be clearly described and added to the CWMP.
27. Page 7-32, Section 7.7.1.1, 2<sup>nd</sup> paragraph: The conversion of 5.5 acres of forest to infiltration basin or grassed areas will alter hydrology. Storm water management to control the increase in rate of runoff is very likely to be required in any permit review by the Conservation Commission.
28. Page 7-35, 1<sup>st</sup> paragraph: The 5-year monitoring plan should be submitted for public review and comment.
29. Page 7-37, 2<sup>nd</sup> paragraph: A cursory review of on-site energy generation options is not adequate to opt-out of any Greenhouse Gas Policy requirements. There should be a clear commitment to providing mitigation within a reasonable timeframe.
30. Page 7-39: The Commission will require a Storm Water Pollution Prevention Plan (SWPPP) in accordance with Storm Water Standard 8 for all projects that require one for review during the public hearing process.
31. Page 7-48, 3<sup>rd</sup> paragraph: How will the recommended plan *improve* water quality as stated? The recommended plan appears to *maintain* the existing water quality by treating the new effluent. How will water quality be *improved* for existing discharges?
32. What is the next phase of this review?



**Norton Conservation Commission**  
70 East Main Street  
Norton MA 02766  
508-285-0275  
508-285-0277 fax  
[conservation@nortonmaus.com](mailto:conservation@nortonmaus.com)

In summary, the Conservation Commission appreciates the opportunity to provide public comment on this project. The improper notice of the project, solely identifying Mansfield as the project location has extremely limited amount of time available to provide such comment, even with an extension. All future notifications of this project should clearly identify the Town of Norton as the project location.

Thank you.

Sincerely,

Jennifer Carlino,  
Conservation Agent

CC: Ed Sanderson, CDM Smith Inc.  
Lee Azhinera, Town of Mansfield  
Bernie Marshall, Water/Sewer Superintendent  
Michael Yunits, Town Manager  
Bill Napolitano, SRPEDD  
Nancy Putnam, ACEC Program Director  
Lauren Glorioso, NHESP  
Chris Chisolm, Department of Agriculture

MEMORANDUM

TO: Alex Strysky/Anne Canaday, Environmental Reviewers, MEPA Unit

THROUGH: Jonathan Hobill, Regional Engineer, Bureau of Resource Protection  
Philip Weinberg, Regional Director  
David Johnston, Deputy Regional Director, BRP  
Maria Pinaud, Deputy Regional Director, BWP  
Millie Garcia-Serrano, Deputy Regional Director, BWSC  
Brenda Chabot, Deputy Regional Director, ADMIN

CC: Elizabeth Kouloheras, Chief, Wetlands and Waterways  
Jeffrey Gould, Chief, Water Pollution Control  
Richard Rondeau, Chief, Water Supply  
Pamela Truesdale, Municipal Facilities  
David Burns, Chief, Municipal Facilities  
Tena Davies, Wetlands Program  
Leonard Pinaud, Chief, Site Management  
Allen Hemberger, Site Management

FROM: Sharon Stone, SERO MEPA Coordinator

DATE: November 7, 2014

RE: DEIR EOEEA # 13388 - *MANSFIELD* – Phase 2, Comprehensive  
Wastewater Management Plan

\*\*\*\*\*

"For Use in Intra-Agency Policy Deliberations"

The Southeast Regional Office of the Department of Environmental Protection (MassDEP) has reviewed the Draft Environmental Impact Report (DEIR) for the proposed Phase 2, Comprehensive Wastewater Management Plan (CWMP) for Mansfield, Massachusetts (EOEEA #13388). The project proponent provides the following information for the project: The Phase 2 CWMP/DEIR is organized as follows:

- **Section 1 introduces the Phase 2 CWMP project and details the background and purpose, summarizes the Phase 1 CWMP and summarizes the scope of work for Phase 2, and identifies regulatory requirements and related projects.**
- **Section 2 is a nitrogen loading analysis of the current impacts of on-site systems on Mansfield groundwater supply sources.**
- **Section 3 discusses wastewater effluent reuse and recharge alternatives, identifying sites. Compiling existing information, evaluating recharge feasibility, and identifying potential impacts to surface water quality, groundwater table elevations & water supply wells.**
- **Section 4 describes the potential wastewater treatment alternatives including**

**no action alternative, localized satellite treatment alternatives and various WPCF regional expansion alternatives.**

- **Section 5 provides an evaluation of the alternatives described in Section 4.**
- **Section 6 details the recommended plan.**
- **Section 7 is the DEIR section of the report and**
- **Section 8 provides a summary of the public participation process.**

#### *The Division of Municipal Services*

Mansfield began their work on the Phase 2 CWMP in 2005. In addition to evaluating the Phase 1 CWMP alternatives, the Town began discussions with the Towns of Foxborough and Norton regarding the formation of a regional wastewater district. Both of those neighboring communities contribute wastewater flow to the Mansfield Water Pollution Control Facility (WPCF). Due to the potential benefits to all three communities, Mansfield decided to place the Phase 2 of the CWMP on hold, and focus their efforts on developing the regional wastewater district. The regional wastewater district agreement was finalized on July 1, 2014, and Mansfield began completing its Phase 2 CWMP. Foxborough completed their CWMP in 2002 and Norton is in the final stages of completing their CWMP.

The recommended Phase 2 plan includes expansion of the existing WPCF and construction of wastewater effluent recharge infiltration basins for treated wastewater for the proposed additional 1.0 mgd flow expansion. The plant's current NPDES permit of 3.14 mgd limits the discharge to that maximum amount to the Three Mile River. Any increased flow would need to be treated and recharged to the groundwater through land application or reuse. The infiltration basins would be constructed at the Pine Street site in Norton. Part of the WPCF expansion will include upgrades to treat all existing and future flows to more stringent nutrient limits, as specified in the NPDES permit renewal issued to the WPCF in September, 2014.

The effluent from the WPCF currently discharges into the Three Mile River, which is a tributary of the Taunton River, and ultimately empties into Narragansett Bay. Excessive nutrients in these waterbodies have contributed to violations of water quality standards and EPA Region 1 is decreasing nutrient effluent limitations at all municipal wastewater facilities in the watershed as the NPDES permits come up for renewal.

Under the proposed 1.0 mgd expansion, an additional 0.665 mgd is allocated to Mansfield; 0.17 mgd to Foxborough and 0.165 mgd to Norton, through an Inter-Municipal Agreement. At build out, the WPCF will have a 4.14 mgd treatment capacity, with the infiltration basins on Pine Street to accommodate the additional 1.0 mgd flow. A small portion of Mansfield's future flows, 0.165 mgd will be sub-allocated to the Town of Easton to address some of their wastewater needs.

The Phase 2 CWMP recommendations are supported by the Town's previous studies and reports, as well as the Upper Taunton Basin (UTB) Regional Wastewater Evaluation Report, completed in 2013, and funded by MassDEP. The UTB report recommended the development of a regional agreement between Mansfield, Norton and Foxborough to

address the wastewater needs of all three communities. The establishment of the Mansfield-Foxborough-Norton Regional Wastewater District, which will own, manage and control the WPCF, common interceptors, effluent recharge and reuse system and appurtenances and will provide for the collection, conveyance and treatment of wastewater, as well as recharge and/or reuse of treated effluent for the member towns, fulfills those recommendations.

The nitrogen loading analysis was designed to determine the need for sewerage in existing and future development areas within the Town. This assessment focused only on impacts to the Town's water supply facilities and did not assess wastewater related impacts to impaired waters within the Town.

Plain Street Pond, MA52-032 (Study Area 1); The Wading River, MA62-47 (Study Areas 7, 8 and 9) and the Rumford River MA52-39 (Study Area 11) are listed as impaired water bodies in The Final Massachusetts Year 2012 Integrated List of Waters (Integrated List) due to impacts that may be wastewater related such as fecal coliform, excessive algal growth and low dissolved oxygen. The CWMP did not fully characterize the possible sources of impairment these water bodies nor does it provide planning that fully addresses correction of the impairment. Upon MassDEP's issuance of the TMDL for these or any other newly listed water bodies, Mansfield will need to revisit the needs areas around these water bodies to better characterize the sources of impairment so a Targeted Watershed Management Plan (TWMP) can be developed for these impaired water bodies so that the CWMP can be augmented to include planning that demonstrates the TMDL will met. A CWMP can only be considered complete if it addresses all impaired water bodies with a TMDL approved by the U.S. EPA.

A portion of the proposed upgrades to the WPCF are being made due more stringent permit limits proposed by the U.S. EPA. Excessive nutrients in waterways contributing to the Taunton River, Mount Hope and Narragansett Bays have contributed to violations of water quality standards and EPA Region 1 is decreasing nutrient effluent limitations at all municipal wastewater facilities in the Taunton River watershed as the NPDES permits are renewed. Because a portion of these upgrades are intended to remediate or prevent nutrient enrichment, these upgrades may be eligible for a 0% loan through the State Revolving Fund program.

The process for eligibility to receive a 0% nutrient –related project loan through the SRF program includes the following criteria: If the applicant has a MassDEP approved CWMP, then the applicant should submit a copy of the MassDEP approval letter with their SRF application. If the applicant does not already have a MassDEP approved CWMP, evidenced by a DEP approval letter, then the applicant should submit a copy of the applicant's CWMP with a copy of the certificate for the CWMP issued by the Secretary of the Executive Office of Energy and Environmental Affairs.

The only aspect of the recommended plan which could delay the system improvements is if significant archeological resources are found at the proposed Pine Street recharge site.

### Bureau of Waste Site Cleanup

Based upon the information provided, the Bureau of Waste Site Cleanup (BWSC) searched its databases for disposal sites and release notifications located within and near the proposed project area. A disposal site is a location where there has been a release to the environment of oil and/or hazardous material that is regulated under M.G. L. c. 21E, and the Massachusetts Contingency Plan [MCP – 310 CMR 40.0000].

The proposed project involves the development of a 20-year wastewater management plan for the Town of Mansfield, with wastewater flows from the neighboring towns of Foxboro and Norton. Please be advised that there are many BWSC disposal sites located near and possibly within the proposed planning area. Many of the sites have been closed under the MCP, but many other disposal sites are open, and require continued environmental response actions under the MCP. A listing and discussion of the status of each MCP site will not be presented here. The Project Proponent is encouraged to consult the BWSC Waste Sites/Reportable Release Lookup at: <http://public.dep.state.ma.us/SearchableSites2/Search.aspx>

In addition, the Project Proponent can view a map showing BWSC disposal sites located within and near the proposed planning area using the MassGIS online data viewer (Oliver) at: [http://maps.massgis.state.ma.us/map\\_ol/oliver.php](http://maps.massgis.state.ma.us/map_ol/oliver.php) Under “Available Data Layers” select “Regulated Areas”, and then “DEP Tier Classified 21E Sites”.

The Project Proponent is advised that if oil and/or hazardous material are identified during the implementation of this project, notification pursuant to the Massachusetts Contingency Plan (310 CMR 40.0000) must be made to MassDEP, if necessary. A Licensed Site Professional (LSP) should be retained to determine if notification is required and, if need be, to render appropriate opinions. The LSP may evaluate whether risk reduction measures are necessary or prudent if contamination is present. The BWSC may be contacted for guidance if questions arise regarding cleanup.

### Proposed s.61 Findings

The “Certificate of the Secretary of Energy and Environmental Affairs on the Draft Environmental Impact Report” may indicate that this project requires further MEPA review and the preparation of a Final Environmental Impact Report. Pursuant to MEPA Regulations 301 CMR 11.12(5)(d), the Proponent will prepare Proposed Section 61 Findings to be included in the EIR in a separate chapter updating and summarizing proposed mitigation measures. In accordance with 301 CMR 11.07(6)(k), this chapter should also include separate updated draft Section 61 Findings for each State agency that will issue permits for the project. The draft Section 61 Findings should contain clear commitments to implement mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation.

The MassDEP Southeast Regional Office appreciates the opportunity to comment on this proposed project. If you have any questions regarding these comments, please contact Sharon Stone at (508) 946-2846.

## Section 3

# Permitting and Regulatory Requirements

### 3.1 Introduction and Summary of MEPA Scope

According to the Secretary's DEIR Certificate, the FEIR must address statutory and regulatory standards and requirements applicable to the project not reviewed in the DEIR and describe how the project meets these standards including state permits, financial assistance, or other state approvals and provide an update on the status of each of these pending actions. To meet this requirement, and provide a comprehensive reference, Section 3 lists and describes all statutory and regulatory standards and requirements applicable to the project reviewed in the DEIR as well as any additional requirements identified since the DEIR. In addition, Section 3 addresses specific regulatory agency requirements identified in the DEIR Certificate, namely MassDEP requirements to develop a Targeted Watershed Management Plan to address future Total Maximum Daily Load (TMDL) limits and Water Resources Commission (WRC) requirements related to applicability of the Interbasin Transfer Act to Mansfield water supplies. Specific FEIR scope requirements related to greenhouse gas emissions, wetlands protection and stormwater management, historical resources, and mitigation and section 61 findings, which require more detailed analysis, are addressed in Sections 4, 5, 6, and 7, respectively.

### 3.2 Permitting and Regulatory Requirements

The following federal, state and local permits or reviews are anticipated to be needed at various stages of the CWMP's implementation:

- NPDES Construction Stormwater General Permit from the US Environmental Protection Agency (EPA)
- Massachusetts Historical Commission (MHC) Approval
- Coordination with the Massachusetts Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP)
- Orders of Conditions under the Massachusetts Wetlands Protection Act
- Interbasin Transfer Act applicability review with the WRC
- Targeted Watershed Management Plan and TMDL requirements from MassDEP
- Treatment Works Plan Approval from MassDEP
- Sewer Connection and Extension Permit from MassDEP
- Groundwater Discharge Permit from MassDEP
- Air Quality Permits/Compliance with the Environmental Results Program with MassDEP

- Clean Water State Revolving Fund (SRF) Program with MassDEP
- Orders of Conditions from the Norton and Mansfield Conservation Commission
- Site Plan Review from the Norton Planning Board

The following additional permits are not anticipated to be needed at this time, but are included herein should they be deemed necessary during any of the future design and construction phases:

- US Army Corps of Engineers Section 10 and/or Section 404 Permits

This section discusses the applicability of the permits and approvals listed above. Review times indicate the approximate duration for agency review from submittal of applications to the issuance of permits. Typically, permit applications are initiated around the 30 percent design milestone for each construction contract. At this stage, sufficient detail is available to allow reviewing agencies to understand the project, and sufficient time is left in the design phase to incorporate any changes that result from the permit review process. Permits applied for by the contractor are initiated once construction contracts have been signed.

Note that permitting for the additional, potential Crane Street treatment and disposal site is not considered below.

### 3.2.1 Federal Permits

#### 3.2.1.1 NPDES Construction Stormwater General Permit

A NPDES Construction Stormwater General Permit is required from the EPA, pursuant to Section 402 of the Clean Water Act, to address storm water controls during project construction. This permit is needed for any construction area exceeding one acre that will involve a point source discharge to wetlands or water bodies. Since upgrades of the WPCF, preparation of the effluent infiltration basins, and installation of the effluent pipeline to the infiltration basins from the WPCF will exceed one acre, this permit is applicable. A Storm Water Pollution Prevention Plan (SWPPP) addressing construction must be prepared, describing erosion and sedimentation controls and treatment and the ultimate discharge of stormwater and uncontaminated groundwater during construction. Typically this permit is to be completed and submitted by the contractor for each phase of construction. EPA review time is approximately 2 to 4 weeks.

#### 3.2.1.2 US Army Corps of Engineers Section 10 and/or Section 404 Permits

Work in wetlands and waterways are regulated by the U.S. Army Corps of Engineers (the Corps) under the authority of Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. In Massachusetts, the Corps has developed the Massachusetts General Permit (GP) to expedite their evaluation of permit applications and streamline the permitting process. There are three categories associated with the GP, Category I, Category II and Individual Permits. Category I activities are projects that impact less than 5,000 square feet of a federally-defined wetland or water body and require pre-construction notification, but do not require formal approval or permit from the Corps. If impacts to wetlands are greater than 5,000 square feet, but less than 1 acre, a Category II permit application must be filed. The Corps along with other federal resource agencies (U.S. Fish and Wildlife Service, National Marine Fisheries Service, EPA and the Massachusetts CZM Office) reviews this application

and determines that either: (1) the project meets the criteria of the GP and can proceed with no changes and no additional Corps review is needed; (2) additional information is needed before making a permitting decision; or (3) the project does not meet GP criteria and an Individual Permit is required. An Individual Permit is generally reserved for large projects which exceed the established criteria for either Category I or Category II activities. Note, however, that the Corps may act at any time to exercise its discretionary authority and require an Individual Permit and /or an Environmental Impact Statement, even if GP criteria are met. As noted above, implementation of the CWMP is not anticipated to require a Section 404 or Section 10 permit from the Corps.

## 3.2.2 State Requirements

### 3.2.2.1 Historic Preservation Act, MHC Section 106 and Chapter 254 Compliance

The MHC is the state agency which identifies, evaluates, and protects the state's significant cultural resources under Section 106 of the National Historic Preservation Act (NHPA). Any new construction projects or renovations to existing buildings or structures that require state funds, licenses, or permits are subject to the review requirements of the M.G.L. Chapter 9, Sections 26-27c, as amended by Chapter 254 of the Acts of 1988 (950 CMR 71.00). The state regulations set up a review process to identify historic properties, assess effects, and consult interested parties to avoid, minimize, or mitigate any adverse impacts.

Construction of the upgrades to the WPCF and the effluent recharge area will require state and federal permits for work within previously undisturbed areas, and the project will be funded by the SRF program. As such, consultation with the MHC is required to determine whether potentially sensitive archaeological/historical features could be affected by construction. The MHC was notified of the project as part of the DEIR process and provided comments requesting that an intensive (locational) archaeological survey be completed for the Pine Street Site infiltration basin impact area to locate and identify any significant archaeological resources prior to any ground related project impacts. The intensive (locational) archaeological survey fieldwork was completed from November 17 to December 11, 2014 and was conducted under State Archaeologist's permit number 3504 issued by the MHC on November 4, 2014. A detailed discussion of the survey is found in Section 6.

### 3.2.2.2 Review by Massachusetts Division of Fisheries and Wildlife NHESP

A primary responsibility of the NHESP is the regulatory protection of rare species and their habitats as codified under the Massachusetts Endangered Species Act (M.G.L. c 131A) and the Wetlands Protection Act (M.G.L. c.131s.40). Projects affecting rare species and/or habitats, and triggering specified requirements or permits, are reviewed by the NHESP. NHESP was notified as part of the DEIR process and determined that the project site is not mapped as Priority or Estimated Habitat and that the NHESP database does not contain any state-listed species records in the immediate vicinity of the site. A copy of the NHESP Response letter dated August 13, 2014 is included in Appendix G.

### 3.2.2.3 Orders of Conditions under the Massachusetts Wetlands Protection Act

Under the state Wetlands Protection Act (M.G.L. c.131s.40) and its regulations (310 CMR 10.00), alterations of wetland resource areas, and work adjacent to certain resource areas, require issuance of an Order of Conditions by the local Conservation Commission. Work within the 100-foot Buffer Zone to certain resource areas can be approved via a Determination of Applicability. An Order of Conditions is required for any work within a protected wetland resource area (including but not limited to Bordering Vegetated Wetlands, Bank, 200-foot Riverfront areas and/or 100-year flood

plains), or when the Conservation Commission determines that an Order of Conditions will be required for work in a 100-foot Buffer Zone area.

In addition to the Wetlands Protection Act requirements, the town of Norton has the following five Conservation Commission policies which also must be addressed:

- (1) A 25-foot no Disturbance Zone along the entire length of an approved wetland boundary;
- (2) Written rules for hiring outside consultants;
- (3) All wetland permit applications are to be submitted with supporting plans that are signed and stamped by a Registered Professional Engineer or Registered Land Surveyor;
- (4) The Conservation Commission adopts the so-called Mullins Rule (i.e. a member of a board, committee or commission holding an adjudicatory hearing shall not be disqualified from voting in the matter solely due to the member's absence from one session of such hearing); and
- (5) A Policy Regarding the 100- year Floodplain at the Norton Reservoir.

The Conservation Commissions in Norton and Mansfield hold public hearings to review the proposed activities subject to jurisdiction of the Wetlands Protection Act and receive input from the public before issuing a permit decisions. Abutters to the jurisdictional areas must be notified of the public hearing.

Orders of Conditions will be required from the Norton Conservation Commission for the CWMP recommended plan work in 100-foot buffer zones related to the WPCF upgrade and expansion and the infiltration basins. An Order of Conditions will also be required from the Mansfield Conservation Commission for the CWMP recommended plan work in 100-foot buffer zones related to the Fruit Street Landfill cap and closure. The review time for a Notice of Intent is approximately 2 months.

#### **3.2.2.4 Water Resources Commission Interbasin Transfer Act Requirements**

During the DEIR comment period, WRC submitted a comment letter noting that Mansfield has water supply sources in the Ten Mile River basin. Wastewater flows from these areas that are discharged to the Taunton River basin via the WPCF may be subject to the Interbasin Transfer Act. The WRC notes that this transfer may be offset by the intra-municipal transfer of water supply from the Taunton River basin that will be discharged into the Ten Mile River basin through on-site septic systems.

Since filing the DEIR the WRC has determined that the proposed project will not result in an increase in the present rate of interbasin transfer from the Ten Mile River basin to the Taunton River basin and will not be subject to the Interbasin Transfer Act for the following reasons:

- The Ten Mile River Basin portion of Mansfield will not be sewered, so there will not be an additional quantity of wastewater leaving this basin.

- The capacity of Mansfield’s water supply sources in the Ten Mile River Basin will not be increased. Water from these sources is currently being transferred into the Taunton River Basin.

A letter from the WRC to the Town summarizing this determination is found Appendix H.

### **3.2.2.5 Targeted Watershed Management Plans to address TMDLs**

According to MassDEP, the Town did not fully characterize the potential sources of the pollution of three water bodies that are listed as impaired on the Final Massachusetts Year 2012 Integrated List of Waters. These water bodies include Plain Street Pond in Study Area 1, the Wading River in Study Areas 1, 2, 3 and 4, and the Rumford River in Study Area 11. Figure 3-1 provides a map of the study areas. These water bodies are impaired due to impacts that may be wastewater related such as fecal coliform, excessive algal growth, and low dissolved oxygen. Upon MassDEP’s issuance of a TMDL for the aforementioned water bodies, Mansfield will develop an education program and display material about impacts from nutrients, particularly phosphorus for freshwater ponds and rivers, to help mitigate existing and future impacts in needs areas to help MassDEP in its development of targeted wastewater management plans.

### **3.2.2.6 Treatment Works Plan Approval**

A Treatment Works Plan Approval (BRP WP 68) serves to protect the public health, welfare and the environment through the control of pollutant discharges to groundwater or surface water. It is required for any modification to a treatment works which does not require a modification to the NPDES discharge permit of the facility, which is the case for the existing WPCF. Approvals of this type may require MEPA review. It is assumed this FEIR will serve as the necessary MEPA documentation to support the Treatment Works Plan Approval, but this assumption will be confirmed with the MEPA office.

### **3.2.2.7 Sewer Connection and Extension Permit**

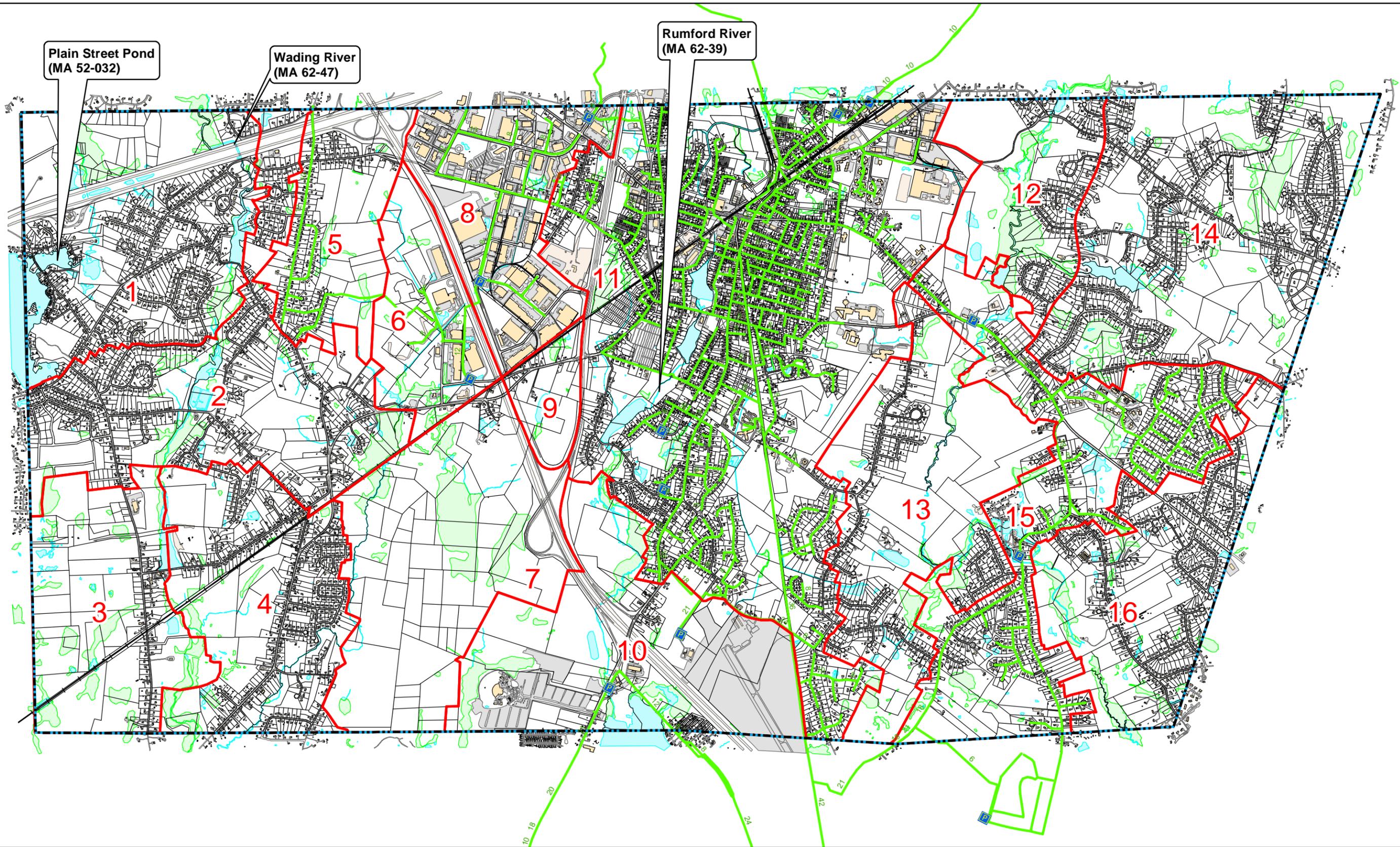
Under 314 CMR 7.00, new connections to sanitary sewers, increases in flow to existing sanitary sewers, and discharges from businesses that are not considered to be “industrial wastewater” are subject to state requirements based on their expected discharge volume.

Sewer extensions are subject to state requirements in 314 CMR 7.00 based on their length. Note that sewer extension projects that obtain a Project Approval Certificate from MassDEP’s Clean Water SRF Program are exempt from permitting requirements, due to MassDEP’s detailed review before the certificate is issued.

### **3.2.2.8 Groundwater Discharge Permit**

Any facility that discharges 10,000 gpd or more into the ground must have a valid discharge permit from MassDEP pursuant to 314 CMR 5.00. There may also be instances, particularly in nitrogen sensitive areas, where a groundwater discharge permit will be required for flows less than 10,000 gpd. Infiltration of WPCF effluent at the Pine Street Site will require such a permit.





Plain Street Pond  
(MA 52-032)

Wading River  
(MA 62-47)

Rumford River  
(MA 62-39)

- Legend**
- |                               |                                   |
|-------------------------------|-----------------------------------|
| <b>GENERAL</b>                | <b>INFRASTRUCTURE</b>             |
| Town Boundary                 | Building                          |
| CWMP Study Area Boundary      | Parcels                           |
| Sewer Pipe                    | <b>TRANSPORTATION</b>             |
| Sewer Pump Station            | Paved Street                      |
| <b>LAND USE</b>               | Other Paved Areas                 |
| Rivers, Streams, Water Bodies | Unpaved Street, Parking, Driveway |
| Wetland (marsh / swamp)       | Railroad                          |

TOWN OF MANSFIELD  
MASSACHUSETTS  
IMPAIRED WATERS



FIGURE 3-1



\\dacs02\Projects\38562-Mansfield\CWMP\_Phase2\MXD\MXD\_2014\Figure\_3\_1.mxd - 2/12/2015



An application to upgrade the WPCF must include an engineering report along with a statement by a registered professional engineer that the plans and specifications have been prepared in accordance with the regulations. Along with the report, applications must include hydrogeological studies of the disposal site and its surroundings as well as a groundwater monitoring plan. The plans and specifications must describe in detail the collection, treatment and disposal components of the facility.

A report titled *Hydrogeological Evaluation Report: Pine Street Site* detailing the hydrogeological investigations and the site's suitability for use of infiltration basins was submitted to MassDEP in May 2014 (see Appendix B). The report also included a recommended groundwater monitoring plan. Comments on the report were received from MassDEP in February 2015. Responses to comments have been prepared and were submitted to MassDEP in a memorandum in May 2015. With the additional information included in the memorandum, it is anticipated that this report will be approved during summer 2015 and an application for a groundwater discharge permit will be prepared and submitted soon thereafter. In addition, preliminary design of the WPCF upgrades and the infiltration basins was completed in April 2015. Final design is scheduled to begin in June 2015 with design documents submitted with the SRF loan application on October 15, 2015.

Review time by MassDEP of the groundwater discharge is approximately 3 to 4 months.

#### **3.2.2.9 Air Quality Permit/Compliance with the Environmental Results Program**

A pre-construction permit is not required, but a certification of the pertinent equipment will be required within 60 days of startup.

#### **3.2.2.10 Clean Water SRF Program**

The Clean Water SRF Program for water pollution abatement projects offers low-interest loans (0 percent interest for nutrient removal projects and up to 2 percent for most other projects) to assist municipalities in complying with federal and state water quality requirements. The program is administered by MassDEP and the Massachusetts Water Pollution Abatement Trust. A major goal is to encourage communities to undertake projects with meaningful water quality and public health benefits and which address the needs of communities and watersheds.

In response to the 2015 SRF cycle, Mansfield (as part of the MFN District and in cooperation with the towns of Foxborough and Norton) submitted a Project Evaluation Form (PEF) for the Mansfield Phase 2 CWMP/DEIR recommended plan. The final SRF Intended Use Plan (IUP) released in December 2015 indicates that the WPCF upgrades and expansion and the infiltration basins, identified as the WPCF Upgrades Project SRF ID 4037, received a score of 93 and will receive funding in 2015. In addition, in March 2015, the MFN District was notified that some projects on the IUP dropped out and additional funding is available to finance the closure of the Fruit Street Landfill, identified as Landfill Closure Project SRF ID 4036. Thus, the entire recommended plan will be financed with SRF funding. A copy of the 2015 SRF IUP and related documentation can be found in Appendix I.

The following outlines the schedule for 2015 SRF funding:

- |   |                   |
|---|-------------------|
| ▪ PEF submission deadline:                                      | August 15, 2014   |
| ▪ IUP issued by MassDEP:  | December 31, 2014 |
| ▪ Debt authorization secured by the MFN District:               | June 30, 2015     |
| ▪ Loan Applications and design documents submission To MassDEP: | October 15, 2015  |
| ▪ Project Approval issued by MassDEP:                           | December 31, 2015 |
| ▪ Project must commence 6 months after Project Approval:        | June 30, 2016     |

### 3.2.3 Local Approval

#### 3.2.3.1 Norton Planning Board Site Plan Review Approval

The proposed effluent infiltration basins at the Pine Street Site are subject to Site Plan Review per the Norton Zoning By-Law, including but not limited to provisions for Earth Moving Materials (Article IX). The Planning Board may hold a public hearing to review the proposed activities subject to jurisdiction of the Zoning Bylaw, and receives input from the public before issuing a permit decision.

Approximate time required to prepare and file a Site Plan Review application is two to three weeks. The Planning Board will hold a public hearing within 65 days of receipt of the application and will issue the approval within 90 days of the public hearing.

## Section 4

# Greenhouse Gas Emissions Analysis

### 4.1 Introduction and Summary of MEPA Scope

According to the Secretary's DEIR Certificate, the DEIR did not include adequate information to support use of the opt-out provision of the Greenhouse Gas (GHG) Emissions Policy. As such, the DEIR certificate requires that the FEIR include a GHG analysis consistent with the GHG Policy, an effort similar to the evaluation of energy use that MassDEP undertakes as part of the SRF process. The FEIR should include the results of an energy audit of the existing WPCF and the components to be constructed in connection with the facility's expansion and upgrade and specifically:

- Identify additional GHG reduction and energy conservation measures that can be installed in the existing portion of the WPCF, described and analyzed as stationary sources;
- Analyze the potential for on-site wind or solar energy generating facilities;
- For new components, develop a baseline energy use as determined by the EPA's Energy Star Program Manager with an assumed rank of 50, corresponding to the 50<sup>th</sup> percentile of energy use and calculate the average monthly energy use based on the design of the following facility components:
  - Average daily influent flows
  - Average Influent Biological Oxygen Demand (BOD)
  - Average Effluent BOD
  - Plant Design Capacity
  - The presence or absence of Fixed Film Trickle Filtration
  - The presence or absence of Nutrient Removal
- For any new pump stations associated with the WPCF or use of the infiltration basins, calculate separately using a model "average" pump station based on a typical pump station design, including assumptions for pump efficiencies, peak flows, and pipe friction factors. The pump station analysis should compare a Base Case to a Preferred Alternative with improved technologies;
- Include any other feasible GHG reduction strategies that may be determined upon advancement of the project design; and.
- Document results of the analyses in a quantitative manner where possible.

MassDEP's *Energy Efficiency and Renewable Energy Opportunities at Water and Wastewater Facilities* (<http://www.mass.gov/eea/agencies/massdep/climate-energy/energy/water-utilities/energy-efficiency-at-water-and-wastewater-facilities.html>) is suggested as a resource when completing the energy audit.

## 4.2 WPCF Energy Audit

In April 2015 an energy audit was performed at the MFN District WPCF by CDM Smith. The energy audit was performed as part of the preliminary design report discussed in Section 1. The purpose of the audit was to summarize the existing conditions of the WPCF and the planned improvements identified to date as part of the preliminary design stage as they relate to energy consumption and efficiency. The WPCF energy audit was performed for the following disciplines: architectural, heating, ventilating and air conditioning (HVAC), process mechanical, and electrical. The WPCF upgrades consist of the following improvements:

- Expand capacity of the WPCF from 3.14 to 4.14 mgd, including but not limited to the following:
  - New influent wastewater pumps;
  - New primary clariflocculator and associated pumps;
  - Reconfigured aeration tanks with fine bubble diffusers and new anoxic tanks;
  - New secondary clarifier;
  - Converted existing sand filter into a cloth filter to match the upgraded filter from Phase I;
  - New effluent pumping station to convey a portion of the treated wastewater effluent to new recharge infiltration basins;
- Replace all equipment that has reached or is nearing the end of its service life including pumps, blowers, etc. and replace all motors with high efficiency motors utilizing variable frequency drives where applicable;
- Remove all sludge thickening and dewatering equipment not currently in use;
- Repurpose a portion of the process building to allow for further office or maintenance space, storage, or to construct a new electrical room;
- Replace or renovate all HVAC systems not upgraded in Phase I (completed between 2008 and 2010);
- Install new lighting in areas where lighting was not upgraded in Phase I;
- Install new electrical wiring to support new process equipment;
- Complete of plant communication system upgrades; and

- Convert from oil fuel to natural gas (if allowed by the gas provider).

The baseline energy consumption and efficiency are generally focused around the improvements noted above. The following summarizes the fuel and electricity use at the WPCF, and outlines the mitigations measures to be taken.

#### 4.2.1 Fuel Use

The WPCF used 30,050 gallons of no. 2 fuel oil for heating from March 11, 2013 to March 12, 2014 for a monthly average of 2,504 gallons. It is not anticipated that there will be increase in fuel consumption after the WPCF upgrade is complete. Additionally, the WPCF will be converted to natural gas assuming the natural gas company has sufficient supply.

#### 4.2.2 Electricity Use

The WPCF used 2,310,630 kWh of electricity in fiscal year 2013. This is an average of 192,553 kWh per month. This includes all electricity for the WPCF including lighting, process equipment, HVAC equipment, etc. The majority of the electricity used was for the process equipment. However, the increase in WPCF capacity by 1.0 mgd will not increase the required power to operate the WPCF. Therefore, it can be assumed that the electrical consumption will not significantly change following the upgrade, even though the treatment capacity of the WPCF will be expanded by over 30 percent.

#### 4.2.3 Renewable Energy Generation

Two studies were completed to determine the feasibility of generating electricity onsite through solar panels and micro wind turbines. In both studies, it was concluded that neither technology would be feasible for the WPCF as the payback period would be too great to justify use.

#### 4.2.4 Mitigation Measures

Based on the preliminary design completed to date, relevant mitigation measures from the GHG Emissions Policy were identified and will be taken to improve energy use and efficiency as part of the WPCF upgrade. As the design progresses additional mitigation measures may also be considered. The mitigation measures to be implemented include:

- Improve building envelope through higher R-value insulation in walls, roof, and if appropriate, basement walls and ceiling;
- Conduct inspection and comprehensive air sealing of building envelope to minimize air leakage;
- Install lower U-value windows to improve envelope performance;
- Incorporate window glazing to balance and optimize daylighting, heat loss and solar heat gain performance;
- Maximize interior daylighting through floor plates, and use of skylights, celestories and light wells;
- Install high-efficiency HVAC systems and premium efficiency motors;

- Use energy efficient boilers, heaters, furnaces, incinerators, or generators;
- Seal and leak-check all supply air ductwork;
- Incorporate motion sensors into lighting, daylighting, and climate controls;
- Size piping systems to minimize pressure loss;
- Design pumping, blower, filtration and associated control systems to achieve overall efficiency;
- Select high efficiency equipment including pumps, blowers, and motors; and
- Include sufficient metering and controls for real-time monitoring and optimization of the process operations.

The mitigation measures listed above are also reproduced in Section 7, a separate section summarizing proposed mitigation measures and Section 61 findings. The energy audit in its entirety is attached in Appendix J.

### 4.3 GHG Analysis

Based on the results of the energy audit, a GHG analysis was completed in April 2015. The following three scenarios were analyzed using EPA's Energy Star Program Manager (ESPM):

1. **Existing WPCF:** under this scenario, the existing fuel and electricity used at the WPCF and identified in the energy audit was input into the ESPM to determine GHG emissions and an ESPM energy performance rank (from 0 to 100).
2. **50<sup>th</sup> Percentile Baseline Scenario:** under this scenario, a baseline energy use of typical wastewater treatment plants was determined based on the following inputs: average daily influent flow, average influent Biological Oxygen Demand (BOD), average effluent BOD, WPCF design capacity (after upgrade and expansion), the presence or absence of fixed film trickle filtration, and the presence or absence of nutrient removal. The resulting energy use corresponds to the 50<sup>th</sup> percentile of energy use of typical wastewater treatment plants, which is an assumed ESPM energy performance rank of 50. The resulting energy use and GHG emissions were compared to energy use and GHG emissions at the existing WPCF to provide a sense of the energy saving measures necessary to obtain a minimum ESPM energy performance rank of 50.
3. **1.0 mgd WPCF Upgrade and Expansion:** The 1.0 mgd WPCF upgrade and expansion scenario includes the energy reduction/mitigation measures outlined in Section 4.2.4; increases the area of buildings by approximately 2,200 square feet; converts no. 2 fuel oil usages to natural gas (pending utility approval); and (as noted in Section 4.2.2), reduces overall horsepower capacity at the WPCF by 26 hp, translating into additional electricity use savings. Based on this information, energy use for this scenario was determined and input into the ESPM to determine the GHG emissions and an ESPM energy performance rank (from 0 to 100).

The outputs from the ESPM analysis are summarized below in Table 4-1. Even though the WPCF upgrade and expansion will increase capacity by 1.0 mgd, it is expected to increase the ESPM energy performance rank by 33 points above the existing WPCF (from 28 to 61), putting the facility ahead of the 50<sup>th</sup> percentile baseline requirement. In addition, GHG emissions are expected to be reduced by approximately 315 short tons per year (as measured in CO<sub>2</sub> emissions). This result is largely due to the reduction in horsepower at the WPCF. Many of the pumps currently in operation at the WPCF are from the original plant design and are now considered out of date. Any new equipment and all replacements in kind will utilize new motors with higher or premium efficiencies. In addition, variable frequency drives (VFDs) will be installed on most of the new pumps, allowing for motors to operate at varying speeds and therefore draw less power and reduce the electrical consumption of the motors.

The GHG analysis in its entirety is attached in Appendix J.

**Table 4-1**  
**Energy Star Program Manager Analysis Results**

|   | Scenario                             | ESPM Energy Performance Rank | Monthly Site kBTU | Site kBTU/gpd | CO <sub>2</sub> Emissions (short tons per year) |
|---|--------------------------------------|------------------------------|-------------------|---------------|---|
| 1 | Existing WPCF                        | 28                           | 1,007,572.5       | 3.85          | 1074.9  |
| 2 | 50 <sup>th</sup> Percentile Baseline | 50                           | 883,998.4         | 2.56          | 865.4   |
| 3 | 1.0 mgd WPCF Upgrade and Expansion   | 61                           | 764,021.4         | 2.21          | 758.5   |

Notes:

1. kBTU = thousand British thermal units
2. Because the energy audit and greenhouse gas analysis were completed at the preliminary design stage of the project, specifics related to pump efficiencies and pipe friction factors have yet to be analyzed in great detail. As such, a separate calculation using a model “average” pump station based on a typical pump station design, including assumptions for pump efficiencies, peak flows, and pipe friction factors, was not completed. Final design, expected to begin in June 2015 will include a detailed pump selection at which time more detail can be provided on pump efficiencies and pipe friction factors.



## Section 5

# Wetlands Protection and Stormwater Management

### 5.1 Introduction and Summary of MEPA Scope

According to the Secretary's DEIR Certificate, the FEIR should provide a discussion of stormwater best management practices that will be implemented at the WPCF in connection with the facility upgrades. The FEIR should address the project's compliance with the stormwater regulations.

### 5.2 WPCF Upgrades and Expansion

The existing WPCF includes drainage infrastructure that conveys runoff to two detention basins and a drainage swale. Paved areas are currently designed to convey stormwater away from roads and structures and into the drainage infrastructure. This infrastructure discharges via a 24-inch RC pipe into a detention basin on the east side of the site and into a detention basin on the west side near the entrance to the site.

To implement the recommended plan, expansion beyond the footprint of the existing WPCF is needed in some locations. This will include the construction of one primary clariflocculator, one secondary clarifier, additional aeration tanks, a primary sludge pumping station with a roof, and a disinfection/effluent pumping facility. New paving will be limited to prevent stormwater runoff and minimize costs and will only be constructed to the north of the clariflocculators and aeration tanks and in front of the aeration tanks to provide further access. Only the new paving and primary sludge pumping station will result in increased impervious surface at the WPCF site. Together, the additional paving and pumping station result in an approximate increase of 0.5 acres of impervious area.

Efforts will be made to keep alterations to the site drainage to a minimum. New catch basins may be located to assist in drainage of newly paved areas. Stormwater runoff will be attenuated with detention basins and swales and existing drainage patterns will generally be maintained. It is expected that the existing detention basin at the eastern end of the parcel is sized appropriately to handle the additional stormwater flow, however this will be determined as part of the drainage analysis during the final design phase.

During construction, potential impacts from stormwater erosion will be managed in accordance with applicable "best management practices" (BMPs) including catch basin inserts and 100 percent natural biodegradable rolled erosion control products (i.e. mulch, control netting, erosion control blankets, turf mats, mulch socks, fiber rolls, wattles, etc.) to prevent the migration of soil and silt deposits from the construction area into habitat and resources areas.

The project will avoid direct impacts to wetland resource areas, but does include work within the buffer zone of wetlands resource areas. The project will be reviewed by the Norton Conservation Commission for its consistency with the Wetlands Protection Act (WPA) and associated stormwater

management standards. A Notice of Intent (NOI) will be submitted to the Norton Conservation Commission for an Order of Conditions (OOC) to build the project.

### 5.3 Pine Street Site Infiltration Basins

The Pine Street Site encompasses a combined area of approximately 72 acres of primarily wooded land and a few unpaved, logging roads. The right-of-way for the existing wastewater interceptor to the WPCF, which runs along an abandoned railroad line, borders the Pine Street Site to the northeast. The construction of the effluent recharge infiltration basins, related underground piping, and an access road from the interceptor right-of-way will permanently alter approximately 5.5 acres of forested upland (see Figure 1-2). In addition, a forcemain from the WPCF to the basins will be constructed adjacent to the existing wastewater interceptor within the existing right-of-way. Site improvements will be designed to minimize the increase in impervious area as much as possible. Stormwater runoff from the site improvements will be attenuated with swales and other low impact development BMPs and natural drainage patterns will be maintained to the extent practical. Specific BMPs and site design characteristics will be determined as part of the drainage analysis during the design phase.

Sedimentation and erosion controls will be installed prior to any earth moving activities to ensure that sediment will not enter the downgradient wetlands to the north and south of the proposed infiltration basin location. Similar measures will be taken to minimize impacts to wetlands adjacent to the access road and forcemain. Potential controls include the use of 100 percent natural biodegradable rolled erosion control products (i.e. mulch, control netting, erosion control blankets, turf mats, mulch socks, fiber rolls, wattles, etc.) to prevent the migration of soil and silt deposits from the construction area into the wetlands.

The infiltration basins, related underground piping, and access road will avoid direct impacts to wetland resource areas, but does include work within the buffer zone of wetlands resource areas. The project will be reviewed by the Norton Conservation Commission for its consistency with the WPA and associated stormwater management standards. An NOI will be submitted to the Norton Conservation Commission for an OOC to build the project.

### 5.4 Fruit Street Landfill

The three cells at the Fruit Street landfill will be capped and closed as part of the recommended plan. The cells are approximately 4 acres in size in total. As part of the cap and closure, three monitoring wells will be installed at the site to allow for long-term monitoring of the cap and closure effectiveness. Stormwater runoff from the closed landfill cells will be collected and routed to on-site drainage basins. No additional roads or other improvements beyond cap and closure of the three cells are anticipated as part of the project.

Sedimentation and erosion controls will be installed prior to any earth moving activities to ensure that sediment will not enter the downgradient wetlands and Back Bay Brook to the east of the landfill. Potential controls include the use of 100 percent natural biodegradable rolled erosion control products (i.e. mulch, control netting, erosion control blankets, turf mats, mulch socks, fiber rolls, wattles, etc.) to prevent the migration of soil and silt deposits from the construction area into the wetlands.

The cap and closure of the landfill cells will avoid direct impacts to wetland resource areas, but does include work within the buffer zone of wetlands resource areas. The project will be reviewed by the Mansfield Conservation Commission for its consistency with the WPA and associated stormwater management standards. An NOI will be submitted to the Mansfield Conservation Commission for an OOC to build the project.

## 5.5 Compliance with MassDEP's Stormwater Regulations

Site improvements related to the upgrade and expansion of the WPCF, construction of the infiltration basins, and cap and closure of the Fruit Street landfill will be required to comply with the Massachusetts Stormwater Management Standards and best management practices will be incorporated as part of the site design. This section summarizes how the project complies with the ten Standards, with each Standard presented in italics and responses presented in normal type face.

1. *No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.*

No new pipe and pond drainage infrastructure is proposed at the WPCF or the Pine Street Site, and therefore no point source discharges are proposed. Any additional runoff at the WPCF will be attenuated with the existing detention basins and swales and existing drainage patterns will generally be maintained. At the Pine Street site, post construction conditions will mimic existing conditions and runoff will be discharged via sheet to access road shoulders and will infiltrate into the ground.

At the Fruit Street landfill, rerouting of drainage infrastructure and new detention basin may be necessary to allow solids to settle out of stormwater and minimize downstream impacts to Back Bay Brook and the adjacent wetlands.

2. *Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates. This Standard may be waived for discharges to land subject to coastal storm flowage as defined in 310 CMR 10.04.*

At the WPCF, post-development peak discharges rates will not exceed pre-development peak discharge rates through use of the existing detention basins and swales. The access road along the interceptor route will be paved. At the Pine Street Site, a portion of the access road will be paved and a portion will be constructed of packed gravel or crushed stone. Along the interceptor route access road and at the Pine Street Site, post-development peak discharges rates will not exceed pre-development peak discharge rates through the use of swales and other low impact development approaches focused on capturing runoff from access roads. At the Fruit Street landfill, post-development peak discharges rates will not exceed pre-development peak discharge rates through the construction of detention basins and/or swales.

3. *Loss of annual recharge to groundwater shall be eliminated or minimized through the use of infiltration measures including environmentally sensitive site design, low impact development techniques, stormwater best management practices, and good operation and maintenance. At a minimum, the annual recharge from the post-development site shall approximate the annual*

*recharge from pre-development conditions based on soil type. This Standard is met when the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook.*

At the WPCF, continued use of the current detention basins and swales will allow for runoff to recharge to the groundwater. At the Pine Street Site, the use of swales and other low impact development approaches will allow for recharge of runoff to groundwater. Any rainfall into the infiltration basins will infiltrate along with the treated wastewater effluent. At the Fruit Street landfill, the runoff flowing off the landfill caps will be discharged to a new detention basin allowing for runoff to recharge to the groundwater.

4. *Stormwater management systems shall be designed to remove 80% of the average annual post-construction load of Total Suspended Solids (TSS). This Standard is met when:*
  - a. *Suitable practices for source control and pollution prevention are identified in a long-term pollution prevention plan, and thereafter are implemented and maintained;*
  - b. *Structural stormwater best management practices are sized to capture the required water quality volume determined in accordance with the Massachusetts Stormwater Handbook; and*
  - c. *Pretreatment is provided in accordance with the Massachusetts Stormwater Handbook.*

There are limited drainage structures and point source discharges at the WPCF. No new drainage structures or point source discharges are anticipated at the WPCF. At the Pine Street Site, the vast majority, if not all, of the runoff is infiltrated into the ground along access road shoulders. Infiltration of runoff is considered to remove 80% TSS per the MassDEP Stormwater Management Policy Handbook. Good housekeeping, storage, maintenance, and spill prevention and response practices at the WPCF will continue to further reduce potential TSS loading.

At the Fruit Street landfill, the new detention basin will be sized to capture the required water quality volume and designed to meet TSS removal requirements.

5. *For land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable. If through source control and/or pollution prevention all land uses with higher potential pollutant loads cannot be completely protected from exposure to rain, snow, snow melt, and stormwater runoff, the proponent shall use the specific structural stormwater BMPs determined by the Department to be suitable for such uses as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from land uses with higher potential pollutant loads shall also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53 and the regulations promulgated thereunder at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00.*

Land uses with NPDES permits are considered to have higher potential pollutant loads. As such, the WPCF and the Fruit Street landfill are considered land uses with higher potential pollutant loads. The source control and pollution prevention measures in place at the WPCF will continue. Specific to stormwater, wastewater treatment operations are designed, constructed and operated so that they do not come into contact with stormwater discharges. The caps to be installed at the three cells at the Fruit Street landfill will include an HDPE layer, which acts as a barrier to infiltration of rainfall, minimizing the development of landfill leachate and thus reducing overall pollution at the site.

The Pine Street Site does not fall under an NPDES permit and is thus not characterized as a land use with higher potential for pollutant loads.

6. *Stormwater discharges within the Zone II or Interim Wellhead Protection Area of a public water supply, and stormwater discharges near or to any other critical area, require the use of the specific source control and pollution prevention measures and the specific structural stormwater best management practices determined by the Department to be suitable for managing discharges to such areas, as provided in the Massachusetts Stormwater Handbook. A discharge is near a critical area if there is a strong likelihood of a significant impact occurring to said area, taking into account site-specific factors. Stormwater discharges to Outstanding Resource Waters and Special Resource Waters shall be removed and set back from the receiving water or wetland and receive the highest and best practical method of treatment. A "storm water discharge" as defined in 314 CMR 3.04(2)(a)1 or (b) to an Outstanding Resource Water or Special Resource Water shall comply with 314 CMR 3.00 and 314 CMR 4.00. Stormwater discharges to a Zone I or Zone A are prohibited unless essential to the operation of a public water supply.*

Both the WPCF and the Pine Street Site are not within Zone II wellhead protection areas. However, both sites are located in aquifer recharge areas. No new point source discharges are included with this project. As noted above, additional runoff will be treated through use of the current detention basins and swales. At the Pine Street Site, the use of swales and other low impact development approaches will allow for natural treatment of the runoff and recharge of runoff to groundwater. These low impact development improvements will be located at least 100 feet from vernal pools in the vicinity of the Pine Street Site. To further minimize the potential impacts of stormwater runoff, salt for the deicing of impervious surfaces will be prohibited.

The Fruit Street landfill is not within a Zone II wellhead protection area or aquifer recharge area.

7. *A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural best management practice requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions.*

Since there will be a slight increase in impervious cover as a result of this project, by definition the project is not a redevelopment project.

8. *A plan to control construction-related impacts including erosion, sedimentation and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan) shall be developed and implemented.*

Erosion and sediment controls are incorporated into the project plan. An outline of controls was presented in the Phase 2 CWMP/DEIR and is also presented in Section 7 of this FEIR.

9. *A long-term operation and maintenance plan shall be developed and implemented to ensure that stormwater management systems function as designed.*

The current operation and maintenance plan in place for the WPCF detention basins and related collection systems will continue. Operation and maintenance tasks associated with low impact development improvements at the Pine Street Site and new detention basins at the Fruit Street landfill will be incorporated in the WPCF operation and maintenance plan to ensure all facilities are maintained on a similar schedule.

10. *All illicit discharges to the stormwater management system are prohibited.*

The current operation and maintenance of the WPCF prohibits illicit discharges to the stormwater management system. This approach will continue at the WPCF as well as the Pine Street Site and Fruit Street landfill.

## Section 6

# Historic Resources

### 6.1 Introduction and Summary of MEPA Scope

As noted in the DEIR, the WPCF is adjacent to the White Crow site, a Native American archaeological site that is listed in the State Register of Historic Places and may be eligible for listing in the National Register of Historic Places. The site is associated with Native American settlement of the Mansfield and Norton area between 6,000 to 2,000 years ago. In addition the proposed effluent infiltration basins on Pine Street will be located adjacent to another Native American archaeological site known as the G.B. Crane site and is within portions of a historic agricultural landscape known as the Crane Farm. In a letter to the Town included in the DEIR, the Massachusetts Historical Commission (MHC) requested that an intensive archaeological survey be conducted for the Pine Street effluent recharge site. The MHC letter also indicated that no further investigation of the White Crow Site, or consideration of associated mitigation measures, was warranted.

According to the Secretary's DEIR Certificate, the FEIR should provide updated information on the results of the intensive archaeological survey performed at the Pine Street Site and any necessary avoidance or mitigation measures to protect historic resources. If the design of the effluent infiltration basins must be modified, the FEIR should provide revised plans, describe existing conditions in any new areas to be affected by the realigned basins, identify any potential environmental impacts associated with the changes, and propose mitigation measures.

### 6.2 Pine Street Site Intensive Archaeological Survey Update

The Public Archaeology Laboratory, Inc. (PAL) was hired to complete an intensive (locational) archaeological survey of the Pine Street Site. The goal of the intensive (locational) survey was to locate and identify any significant archaeological resources that may be present within the project's Area of Potential Effects for direct effects (APE-DE), which includes the proposed locations of a force main and new infiltration basins with pipelines, access road improvements, stormwater management improvements, and a buffer zone surrounding the proposed facilities. The intensive survey was also designed to collect basic information about the locations and densities of any cultural deposits within the project area and to make recommendations about any need for additional archaeological testing. The survey field work was conducted from November 17 to December 11, 2014 and was conducted under State Archaeologist's permit number 3504 issued by the MHC on November 4, 2014.

PAL's intensive (locational) archaeological survey was conducted in accordance with the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 Fed. Reg. 44716–44742, 1983) and the MHC's *Public Planning and Environmental Review: Archaeology and Historic Preservation* (MHC 1985c). PAL personnel involved in the survey meet the Secretary of the Interior's Professional and Qualification Standards (36 CFR Part 61, Appendix A). This report follows the guidelines established by the National Park Service in *Recovery of Scientific, Prehistoric, Historic, and Archaeological Data* (36 CFR Part 66, Appendix A).

Archival research indicated that the sensitivity of the project area for pre-contact Native American archaeological resources was defined primarily by its proximity to a cluster of known pre-contact archaeological sites along wetlands and tributary streams within the Wading/Three Mile River drainage, an area used intensively from the Middle Archaic to Late Woodland periods. The sensitivity of the project area for post-contact Euro-American archaeological resources was defined by its proximity to zones of settlement along Pine, Crane and Hill streets and a railroad crossing. An initial walkover survey and surface inspection confirmed that most of the project area was wooded, in good condition, and sensitive for pre-contact and post-contact archaeological resources.

Subsurface testing was done using 95, 50-x-50- cm test pits placed within 3, 30-x-30-m sampling blocks on four judgmentally placed transects and in 7 close interval (2.5-m and 5-m) array patterns. Seven judgmentally placed test pits (JTP-01 to JTP-07) were used to sample specific archaeologically sensitive locations. Six small find spots of pre-contact cultural material designated as Loci 1–6 were found within the proposed location of the four infiltration basins, access road, force main route, and surrounding buffer zone. One post-contact archaeological resource, a small earth fill dam with fieldstone rubble, was found along a stream in the northwest corner of the project area, outside of the area proposed for disturbance.

Five of the pre-contact archaeological resources (Loci 1–5) yielded non-diagnostic chipping debris or burned rock. Although these loci contribute to current knowledge of pre-contact Native American settlement and resource use in the Three Mile River and upper Taunton drainage basins, they are not considered potentially significant resources due to their low information content and lack of temporal/cultural affiliation. Locus 6 yielded a unifacial pebble tool and what may be a shoulder barb from an Early Archaic bifurcate-base projectile point. Close interval subsurface testing of this find spot yielded one piece of chipping debris. Locus 6 is not considered potentially significant, and additional archaeological investigation is unlikely to yield more information.

The post-contact dam and associated borrow pit are within a wetland and buffer zone outside the project's Area of Potential Effects for direct effects (APE-DE) but are within the larger parcel of land controlled by the MFN District. PAL recommended that the dam and borrow pit be avoided during any construction-related project activities. No additional archaeological investigation of the MWPCF project area is recommended.

The technical report developed by PAL describing the details results of the intensive (locational) archaeological survey of the Pine Street Site was submitted to the MHC for review in February 2015. In their response, MHC indicated that the proposed project at the Pine Street Site will have no adverse effect on the the G.B. Crane site and the Crane Farm. The report and MHC approval letter are found in Appendix K.

### 6.3 Avoidance or Mitigation Measures

As proposed and shown in the DEIR, the infiltration basin and related access road, force main, and stormwater management improvements are not located within an area that requires protection of historic resources. The nearby dam and borrow pit will be avoided during construction and operation to ensure its historic integrity remains and this approach will be listed as a mitigation measure in Section 7 of this document.

## Section 7

# Mitigation and Section 61 Findings

### 7.1 Introduction and Summary of MEPA Scope

According to the Secretary's DEIR Certificate, the FEIR should include a separate chapter summarizing proposed mitigation measures and Section 61 findings for each state agency that will issue permits for the project.

In regards to GHG emissions reduction measures, to ensure the measures that are adopted are actually constructed or performed, the Proponent must provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. The commitment to provide this self-certification should be incorporated into the FEIR.

### 7.2 Discussion of Mitigation Measures

The recommended plan detailed in Section 1 includes the installation of equipment upgrades and expansion at the WPCF site, installation of forcemain and access road improvements along an existing wastewater interceptor right-of-way, construction of effluent infiltration basins at the Pine Street site, and cap and closure of the Fruit Street landfill. While the WPCF improvements and landfill closure will occur on existing developed lots, the forcemain and access roads will be constructed in cross country areas and the infiltration basins will be constructed on a currently undeveloped lot. Due to the sensitivity of the archaeological resources and ecosystem in the area, careful layout of the project has taken place to ensure that impacts to the environment are minimal. Most impacts are construction related and temporary. The most significant post-construction impact is beneficial – improved environmental quality and public health by providing increased wastewater treatment, dispersed groundwater recharge instead of increased point discharges to Three Mile River, and closure of the landfill. Mitigation measures for the project have been developed for the following broad areas of concerns:

- Land Alteration;
- Water Quality and Wetlands;
- Air Quality and Dust;
- Noise and Vibration;
- Traffic and Public Safety;
- Historical/Archaeological Resources;
- Agricultural and Open Space; and
- Greenhouse Gas Emissions.

Mitigation measures as they pertain to potential short-term construction-related impacts are described below. Mitigation measures to address potential long-term impacts are described separately in Section 7.3.

### 7.2.1 Land Alteration

- The Contractor will not be permitted to enter or occupy private land outside of easements, except by written permission of the landowner and/or the town of Norton or the MFN District.
- The Contractor will be responsible for the preservation of all public and private property and must use every precaution necessary to prevent damage thereto, to the extent practicable. If direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, the Contractor will be required to restore such property to a condition similar or equal to that existing before the damage was done.
- Work areas will be restored to conditions that existed prior to construction. Land resources within the project boundaries and outside the limits of permanent work will be restored to a condition, after completion of construction, that will appear to be natural and not detract from the appearance of the project. All construction activities will be confined to areas shown on the contract drawings.
- The locations of the Contractor's storage and temporary buildings will be located outside wetland resource areas and the 100-foot buffer zones and on previously cleared areas, if feasible. The preservation of the landscape will be a consideration in the selection of all such sites.
- All signs of temporary construction facilities such as haul roads, work areas, structures, stockpiles of excess or waste materials, or any other vestiges of construction will be removed by the Contractor and restored upon completion of construction.
- The Contractor will assume full responsibility for the protection of all buildings, structures, pavement, sidewalks, curbing, driveway aprons, fencing, landscaping, and utilities, public or private, including poles, signs, services to buildings, utilities in the street, gas pipes, water pipes, hydrants, sewers, drains and electric and telephone cables, whether or not they are shown on the contract drawings. If necessary, curbing, driveway aprons and fencing will be removed and restored or replaced after backfilling. All existing facilities damaged by the construction will be promptly replaced with material equal to that existing prior to construction to the satisfaction of the MFN District.
- Topsoil will be stripped, stockpiled separately from the subsoil, and reused unless the area contains invasive species. At the Contractor's option, topsoil may be otherwise disposed of and replaced, when required, with approved topsoil of equal quality.
- On slopes, the Contractor will provide against washouts by an approved method. Any washout which occurs will be regraded and reseeded until a good sod is established.

## 7.2.2 Water Quality and Wetlands

Measures to protect water quality and wetlands in the vicinity of the construction areas include using appropriate dewatering procedures and sedimentation and erosion control BMPs. The Contractor's responsibilities as defined in the construction specifications will include the following items, categorized into regulatory and pre-construction provisions and other water quality and sedimentation/erosion prevention provisions.

### ***Regulatory and Pre-Construction Provisions***

- Necessary permits required for proper execution of the project will be obtained prior to commencement of work.
- The Contractor will apply for and obtain a Construction General Permit (CGP) from EPA pursuant to the NPDES program. The permit requires preparing and submitting a Notice of Intent (NOI) for Storm Water Discharges and Notice of Termination Form and preparation of a Storm Water Pollution Prevention Plan (SWPPP).
- The Contractor will prepare an Erosion and Sedimentation Control Plan and submit to the Engineer for review and approval. Once approved by the Engineer, the Contractor will incorporate the Erosion and Sedimentation Control Plan into the SWPPP.
- The Contractor will update the Erosion and Sedimentation Control Plan and the SWPPP as necessary so that the documents are always current in accordance with the NPDES regulations and describe erosion and sediment control and storm water pollution prevention at all locations of construction and for all activities of construction.
- The requirements of the Norton and Mansfield Conservation Commission Orders of Conditions will be followed. A preconstruction meeting will be held with the conservation agents.
- The Contractor will submit a dewatering plan for review and approval by the Conservation Commissions prior to the start of work. The plan will include the methods and discharge points proposed to be used by the Contractor. The Contractor will be required to retain the services of a Professional Engineer registered in Massachusetts to prepare dewatering and drainage system designs and submittals.
- The Contractor will submit the location of proposed stockpile areas to the Conservation Commissions for approval prior to the start of work.
- The Contractor will have a copy of the Orders of Conditions and the approved SWPPP and Erosion and Sedimentation Control Plan on-site at all times.

### ***Other Water Quality and Sedimentation/Erosion Prevention Provisions***

- The Contractor will take sufficient precautions during construction to minimize the runoff of sediment laden water into adjacent wetlands or waterways.
- Per the requirements of the Norton Conservation Commission, biodegradable controls such as rolled erosion control products (i.e. mulch, control netting, erosion control blankets, turf mats, mulch socks, fiber rolls, wattles etc.) that are 100 percent natural biodegradable material will be

provided at points where drainage from the work site leaves the site, to reduce the sediment content of the water. Photodegradable, UV degradable or Oxo-(bio) degradable plastics are not considered biodegradable. Haybales shall not be used. The Contractor will be required to contact the Norton Conservation Agent to inspect siltation controls prior to excavation.

- All work will be scheduled and conducted in a manner that will minimize the erosion of soils in the area of the work.
- The Contractor will not discharge water from dewatering operations directly into any live or intermittent stream, channel, wetlands, surface water or any stormwater. Water from dewatering operations will be treated by filtration, settling basins, or other approved method to reduce the amount of sediment contained in the water to allowable levels. Dewatering hose intakes will be kept off the bottom of the trench to minimize the pumping of silt.
- The Contractor will repair any damage caused by dewatering and drainage system operations.
- Existing sanitary sewers will not be used to dispose of drainage unless written permission is obtained from the MFN District.
- Crushed stone for sediment filtration devices, access ways and staging areas will conform to Massachusetts Department of Transportation "Standards and Specifications for Highways and Bridges" Section M2.01.3.
- Filter bags or a similar product will be placed around catch basins that discharge into wetlands, water supply or surface water bodies.
- Straw mulch will be utilized on all newly graded areas to protect areas against washouts and erosion.
- Staging areas and access ways, which in the opinion of the Engineer will erode due to truck traffic, will be surfaced with a minimum depth of 4-in of crushed stone laid over filter fabric.
- The Contractor will visually inspect all sedimentation control devices once per week and promptly after every rainstorm greater than ¼ inch. If such inspection reveals that additional measures are needed to prevent movement of sediment to offsite areas, the Contractor will promptly install additional devices as needed. Sediment controls in need of maintenance will be repaired promptly.
- Where silt fence is used, accumulated sediment will be removed once it builds up to 1/2 of the height of the fabric. Damaged fabric will be replaced or patched with a 2-ft minimum overlap. Other repairs will be made as necessary to ensure that the fence is filtering all runoff directed to the fence.
- In the recharge area, brush and stumps will not be removed and the ground surface will not be disturbed until no more than one week prior to the start of excavation and pipe laying in that area.

- Loaming and seeding or mulching of cross-country areas will take place as soon after laying the pipeline as practicable.
- Once the site has been fully stabilized against erosion, sediment control devices and all accumulated silt will be removed and disposed of in a proper manner.
- All preventative measures will be taken to avoid the spillage of petroleum products and other pollutants. Routine vehicle and equipment maintenance and refueling will only occur in designated areas located more than 100 feet from wetland resource areas. At each staging area, spill clean-up equipment (shovels, brooms, absorbent pads and materials) will be maintained for use in the event of an accidental spill.
- All fuel, oil, solvents, etc. will be stored in original containers or in containers manufactured for storing such material that are clearly labeled as to the contents of the container. Fuel, oil and other potentially hazardous materials will be kept secured in a locked storage locker designed and properly vented for storing such material. Copies of Material Safety Data Sheets for all applicable materials will be maintained at the construction site and will be readily accessible for employees or inspection officials.
- The Contractor will immediately clean up any and all spills of fuel, oil, or other potentially hazardous materials. Any and all reportable spills will be reported to the proper authorities (Fire Department, Board of Health, MassDEP, and others as applicable).

### 7.2.3 Air Quality and Dust

- The Contractor will perform dust control operations, in an approved manner, whenever a nuisance or hazard occurs or when directed by the Engineer, even though other work on the project may be suspended.
- Methods of controlling dust will meet all air pollutant standards as set forth by federal and state regulatory agencies.
- All road surfaces will be broomed clean after backfilling.
- Paved streets adjacent to work areas will be swept regularly.
- Dump trucks will be covered with tarpaulins and have tightly fitting tailgates.
- The Contractor will be required to maintain all excavations, embankments, stockpiles, access roads, plant sites, waste areas, borrow areas, and all other work areas within or outside the project boundaries free from dust which could cause the standards for air pollution to be exceeded, and which would cause a hazard or nuisance to others.
- Dust control will be generally accomplished by the use of water. An approved method of stabilization consisting of sprinkling or other similar methods will be permitted. Calcium chloride may be used if permitted. The use of petroleum products is prohibited.

- Construction equipment will be required to be equipped with proper pollution control measures to provide a positive means to prevent airborne dust and reduce vehicle emissions.
- Sprinkling will be repeated at such intervals as to keep all parts of the disturbed area at least damp, and the Contractor must have sufficient competent equipment on the job to accomplish this if sprinkling is used.

#### 7.2.4 Noise and Vibration

- Construction noise will be mitigated by restricting construction activities to daytime hours (7 a.m. to 6 p.m.).
- Equipment will be equipped with silencers or mufflers designed to operate with the least possible noise level in compliance with state and federal regulations and Norton and Mansfield regulations, whichever is more stringent.
- During construction, the following measures will be used to control noise: (1) loud pieces of equipment will be substituted with quieter equipment; (2) effective intake and exhaust mufflers will be used on internal combustion engines; and (3) truck loading, unloading, and hauling operations will be conducted in a manner that keeps noise and vibration to a minimum.

#### 7.2.5 Traffic and Public Safety

The following traffic and public safety measures will be required by the Contractor:

- Provide adequate safeguards for all open excavations using temporary barricades, caution signs, lights and other means to prevent accidents to persons and damage to property. The work at the Pine Street Site will be fenced and secured to prevent unauthorized access and provide public safety, and to limit impacts to the abutters and the general public.
- Provide suitable and safe bridges and other crossings for accommodating travel by pedestrians and workmen.
- Take precautions to prevent injury to the public. Provide adequate light at all trenches, excavated material, equipment, or other obstacles, which could be dangerous to the public at night. Night watchmen may be required where special hazards exist, or police protection provided for traffic while work is in progress.
- Unless permission to close a street is received in writing from the Norton Police Department, place all excavated material so that vehicular and pedestrian traffic may be maintained at all times. If the Contractor's operations cause traffic hazards, repair the road surface, provide temporary ways, erect wheel guards or fences, or take other measures for safety satisfactory to the Engineer.
- Construction related traffic will be minor. The number of construction vehicles generated by the various components of the recommended plan is not expected to be significant enough to warrant mitigation measures except for the construction of the effluent force main. A traffic management plan will be developed prior to construction if necessary. This plan will include

phased plans showing the setup, number, and width of open lanes and a schedule for approval by the Engineer.

- Notify affected property owners 48 hours prior to road closures or any work that will interfere with access to their residences or places of business. Residents will be provided access to their properties at all times.
- Provide access for emergency vehicles and school buses to all streets at all times.
- Plate all streets, as necessary, every night. No open excavations will be allowed after working hours.
- Perform all traffic control work in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

## 7.3 Proposed Section 61 Findings

### 7.3.1 Introduction

This section of the FEIR addresses the Section 61 Findings in accordance with Massachusetts General Laws Chapter 30, Section 61 of state agencies that will issue permits for the proposed project to be implemented. Under M.G.L. c.30 s.61, state agencies and authorities are required to review, evaluate, and determine the impacts on the natural environment of all work, projects, or activities conducted by them and to undertake all feasible means and measures to minimize and prevent damage to the environment. As part of any determination made, this law requires that state agencies and authorities issue a “finding” describing any impacts of the project and certifying that all feasible measures have been undertaken to either avoid or minimize these impacts. These findings address the activities necessary to implement the Mansfield Phase 2 CWMP recommended plan, including both temporary (construction phase) and permanent impacts. These findings present an up-to-date overview of mitigation measures presented in documents previously filed for environmental review, and those developed in response to concerns outlined in the Secretary’s certificate issued on November 26, 2014.

### 7.3.2 Project Description

The recommended wastewater plan includes expansion of the existing WPCF and construction of wastewater effluent recharge infiltration basins for infiltration of treated wastewater effluent. In addition, the Fruit Street Landfill, located in Mansfield and previously used for sludge and grit disposal, would be capped and closed (the WPCF currently contracts with a sludge hauler and no longer uses the landfill). The WPCF will undergo an expansion to accommodate an additional 1.0 mgd of wastewater. As part of this work, the WPCF would be upgraded with a four-stage Bardenpho process and other process upgrades to treat all existing and future flow to more stringent nutrient limits detailed in the WPCF NPDES permit renewal issued in September 2014. The infiltration basins would be constructed at the Pine Street Site in Norton, accommodating up to 1.0 mgd. Since most of the construction will occur within previously disturbed areas and along the existing interceptor route or in existing roadways, most impacts are construction-related and temporary.

### 7.3.3 State Agency Jurisdiction

The state agency having primary jurisdiction over this project for wastewater treatment, disposal, and permitting and landfill closure is MassDEP. State agency action will include: MassDEP siting approval for the WPCF upgrades and expansion; MassDEP approval of a groundwater discharge permit for the infiltration basins; MassDEP approval of a post closure monitoring plan for the landfill closure; and local conservation commission order of conditions permit for work near wetland resource areas.

Siting of the WPCF facility upgrades and expansion and review of the design will be subject to MassDEP review and approval.

MassDEP also has jurisdiction over the construction, permitting, and operation of the infiltration basins. The Pine Street Site will require a groundwater discharge permit from MassDEP. Preliminary hydrogeologic testing has been completed to evaluate the site's potential capacity. Downgradient groundwater monitoring will be required as part of the groundwater discharge permit process.

Long-term mitigation will include permanent monitoring wells located at the infiltration basins site to evaluate the quality and effects of the treated effluent on resource areas. The six newly installed monitoring wells at the Pine Street site will be used to monitor potential water table mounding at the recharge site; conditions downgradient of the recharge area; conditions upgradient of the nearest private property; and any water level rise near wetlands and vernal pools.

In regards to the Fruit Street landfill closure, MassDEP has jurisdiction over the construction, permitting, and long-term monitoring of the site. The post closure monitoring plan that will be submitted to MassDEP will include the location of existing and new wells to be used to monitor cap and closure effectiveness, specifically focusing on groundwater quality downgradient of the three landfill cells.

Work within and/or adjacent to wetland resource areas during construction will be permitted through an Order of Conditions from the Norton Conservation Commission.

### 7.3.4 Overview of Alternatives, Project Impacts and Mitigation Measures

Alternative locations for components of this recommended plan were evaluated as part of previous CWMP studies. None of the other alternatives studied were found to be preferable to the recommended plan based on the factors evaluated, including environmental impacts; implementation capability; regulatory, design, and reliability requirements; and costs. Potential project impacts include temporary impacts to traffic and abutting properties due to construction of the WPCF upgrades and expansion, forcemain piping, access road, infiltration basins, and landfill cap and closure; and long-term impacts from the discharge of treated effluent to the infiltration basins. Specific impacts and mitigation measures are discussed below.

### 7.3.5 Land Alteration

The recommended plan will permanently alter approximately 5.5 acres of forested upland from the construction of the effluent recharge basins at the Pine Street Site and access road from the existing interceptor. This new access road will result in an increase in impervious area. Site improvement to the existing WPCF will result in an approximate increase of 0.5 acres of impervious area. The landfill closure will include capping approximately 4 acres of landfill (over three cells) with an HDPE layer,

which acts as a barrier to infiltration of rainfall, minimizing the development of landfill leachate and thus reducing overall pollution at the site.

The design of the new effluent recharge basins and cap and closure of the landfill will incorporate stormwater management systems developed in compliance with the Massachusetts Stormwater Management Standards (the Standards). Any increase in the impervious area is viewed as new development under the Standards and as such is required to provide recharge to groundwater, water quality treatment (80% TSS removal), and peak attenuation (post construction runoff rates not to exceed pre construction runoff rates). A HydroCAD model will be developed for existing and proposed conditions to determine peak rates of runoff from the sites. Low impact development solutions will be evaluated and incorporated into the design to the maximum extent practicable where applicable. In addition, tree cutting and clearing will be minimized to the extent practicable at the infiltration basin site.

Site improvements at the WPCF will also be required to comply with the Standards. It is expected that the existing detention basin at the eastern end of the parcel is sized appropriately to handle the additional stormwater flow, however this will be determined as part of the drainage analysis during the final design phase.

### 7.3.6 Water Quality and Wetlands

Implementation of the recommended plan will greatly benefit groundwater and surface water quality. Upgrades to the existing WPCF will provide a single location for wastewater treatment and one effluent recharge site, resulting in a high level of treatment and elimination of point and non-point source pollution from the construction of additional on-site treatment and disposal systems. It also provides a net benefit by reducing nutrient (nitrogen and phosphorus) discharges to groundwater and surface waters as a result of the implementation of the four-stage Bardenpho nutrient removal process as part of the upgrades to the existing WPCF. At the landfill site, capping and closure of the three cells will eliminate rainfall contact with wastewater sludge and grit, reducing the amount of leachate produced.

Measures to protect water quality and wetlands in the vicinity of the construction areas include using appropriate dewatering procedures and sedimentation and erosion control BMPs, as listed in Section 7.2.2. The proposed project will not result in any direct loss of wetland resource areas; there will be some temporary alteration to adjacent buffer zones. Long-term mitigation measures include implementation of a groundwater monitoring plan to monitor the mounding effects of the effluent recharge and impacts to groundwater quality based on an established baseline, as well as a 5-year post-construction vernal pool monitoring plan to ensure that the pools continue to support obligate vernal pool species. The post construction vernal pool monitoring plan will be submitted as part of the Notice of Intent submittal to the Norton Conservation Commission for work within the 100-foot buffer zone to bordering vegetated wetlands and inland bank. Section 7.2.2 lists the mitigation measures that will be implemented prior to and during construction to avoid and minimize any adverse impacts to wetland resource areas. Section 1.2.4 of this document describes the monitoring plan.

Because the closest pond south of the site (the Pine Street Pond) appears to be somewhat more susceptible to water quality impacts from additional nitrogen than the adjacent pond to the north/northwest (Old Crane Pond), it is advantageous for the highest percentage of effluent to

discharge to Old Crane Pond. This will be achieved by positioning the infiltration basins in the northeast portion of the site.

In regards to the Fruit Street landfill closure, the post closure monitoring plan will include the location of existing and new wells to be used to monitor cap and closure effectiveness, specifically focusing on groundwater quality downgradient of the three landfill cells.

### **7.3.7 Air Quality and Dust**

There will be some temporary impacts to air quality from the generation of dust and emissions by construction equipment. To reduce these construction related impacts, construction equipment will be required to be equipped with proper pollution control measures to provide a positive means to prevent airborne dust and reduce vehicle emissions (see Section 7.2.3). Dust control during construction will be achieved through standard mitigation measures including regular watering of construction sites when needed (see Section 7.2.3). Odors generated during WPCF operations will be limited by designing centralized treatment facilities with appropriate odor control.

### **7.3.8 Noise and Vibration**

The majority of noise impacts will be generated during the construction phase of the project. Construction of the infiltration basins, the effluent force main, and upgrades to the existing WPCF, as well as closure of the landfill, will generate minimal impacts to neighboring properties. The existing properties have adequate buffer distances from the construction sites. These minor noise impacts would be minimized by conducting all work during normal daytime hours (7 a.m. to 6 p.m.). All construction equipment will be equipped with proper noise attenuation devices such as mufflers and silencers. Please refer to Section 7.2.4 for additional short-term mitigation measures. The process and equipment upgrades at the WPCF will be engineered to minimize noise from pumps and blowers by designing the structures/buildings accordingly.

### **7.3.9 Traffic and Public Safety**

Short-term construction related traffic impacts will be minor as the number of construction vehicles generated by the various components of the recommended plan is not expected to be significant enough to warrant mitigation measures except for the in street construction component of the effluent force main from the existing WPCF to the effluent recharge site. In terms of potential long-term impacts, the Norton Rail Trail, which is proposed to follow the forcemain route along the existing interceptor, is currently in preliminary planning. The forcemain construction will be coordinated as necessary with the Norton Rail Trail construction.

### **7.3.10 Historical and Archaeological Resources**

An intensive (locational) archaeological survey of the Pine Street Site was recently completed and is described in detail in Section 6. The goal of the intensive (locational) survey was to locate and identify any significant archaeological resources that may be present within the project's Area of Potential Effects for direct effects (APE-DE), which includes the proposed locations of a force main and new infiltration basins with pipelines, access road improvements, stormwater management improvements, and a buffer zone surrounding the proposed facilities. Based on the results of the survey, the infiltration basin and related access road, force main, and stormwater management improvements are

not located within an area that requires protection of historic resources. The nearby dam and borrow pit will be avoided during construction and operation to ensure its historic integrity remains.

### 7.3.11 Agricultural and Open Space

The recommended plan will not adversely impact open space and is not anticipated to adversely affect agricultural land. A portion of one of the parcels (Parcel ID 24-4-0) that makes up the Pine Street Site may in the future have an APR as part of the one being considered for the Crane Street Farm property south of Pine Street. The APR will be considered only after approval of the *Hydrogeological Evaluation Report: Pine Street Site* report by MassDEP, Site Plan Review approval by the town of Norton, and review and approval of a groundwater discharge permit by MassDEP.

### 7.3.12 Greenhouse Gas Emissions

The MFN District is committed to making equipment and structural upgrades to reduce greenhouse gas emissions as part of implementation of the recommended plan. As detailed in Section 4, an energy audit was completed in April 2015 as part of the preliminary design stage of the WPCF upgrades and expansion. The WPCF energy audit was performed for the following disciplines – architectural, heating, ventilating and air conditioning (HVAC), process mechanical, and electrical – at each major building or process area. WPCF general operational considerations were also reviewed. Based on the preliminary design completed to date, relevant mitigation measures from the GHG Emissions Policy were identified and will be taken to improve energy use and efficiency as part of the WPCF upgrade. As the design progresses additional mitigation measures may also be considered. The mitigation measures to be implemented include:

- Improve building envelope through higher R-value insulation in walls, roof, and if appropriate, basement walls and ceiling;
- Conduct inspection and comprehensive air sealing of building envelope to minimize air leakage;
- Install lower U-value windows to improve envelope performance;
- Incorporate window glazing to balance and optimize daylighting, heat loss and solar heat gain performance;
- Maximize interior daylighting through floor plates, and use of skylights, celestories and light wells;
- Install high-efficiency HVAC systems and premium efficiency motors;
- Use energy efficient boilers, heaters, furnaces, incinerators, or generators;
- Seal and leak-check all supply air ductwork;
- Incorporate motion sensors into lighting, daylighting, and climate controls;
- Size piping systems to minimize pressure loss;
- Design pumping, blower, filtration and associated control systems to achieve overall efficiency;

- Select high efficiency equipment including pumps, blowers, and motors; and
- Include sufficient metering and controls for real-time monitoring and optimization of the process operations.

As noted in Section 4, the proposed changes at the WPCF, including these mitigation measures, are expected to increase the ESPM energy performance rank by 33 points above the existing WPCF (from 28 to 61), putting the facility ahead of the 50<sup>th</sup> percentile baseline requirement.

## 7.4 Summary of Mitigation Measures

The mitigation measures proposed for this project involve differing time frames for implementation, depending on the type of impact involved and when it occurs. Some of the mitigation measures will be implemented prior to construction, while other mitigation measures involve following specified procedures during construction, and implementation of these measures coincides with the performance of the specific construction activities. After completion of construction, some mitigation measures will be instituted to restore disturbed areas to pre-construction conditions or to provide mitigation for impacts incurred during construction. Operation mitigation (such as odor and noise control and monitoring) will also be in place following construction.

The mitigation measures, responsible parties and implementation phase for the mitigation measures are listed below in Table 7-1.

**Table 7-1  
Summary of Mitigation Measures**

| Mitigation Measures |  | Responsibility           | Implementation Phase |
|---------------------|--|--------------------------|----------------------|
| Land Alteration     |  |                          |                      |
| 1                   | Do not enter or occupy private land outside of easements, except by written permission.  | Construction contractors | Construction         |
| 2                   | Preserve all public and private property and use every precaution necessary to prevent damage thereto, to the extent practicable. If direct or indirect damage is done, restore such property to a condition similar or equal to that existing before the damage was done. | Construction contractors | Construction         |
| 3                   | Restore work areas to conditions that existed prior to construction. All construction activities will be confined to areas shown on the contract drawings.   | Construction contractors | Construction         |
| 4                   | Locate contractor's storage and temporary buildings outside wetland resource areas and the 100-foot buffer zones and on previously cleared areas, if feasible.   | Construction contractors | Construction         |
| 5                   | Remove all signs of temporary construction facilities such as haul roads, work areas, structures, stockpiles of excess or waste materials and restore upon completion of construction.   | Construction contractors | Construction         |
| 6                   | Protect all buildings, structures, pavement, sidewalks, curbing, driveway aprons, fencing, landscaping, and utilities, public or   | Construction contractors | Construction         |

|                                   |  |   |                         |
|-----------------------------------|--|---|-------------------------|
|                                   | private, including poles, signs, services to buildings, utilities in the street, gas pipes, water pipes, hydrants, sewers, drains and electric and telephone cables, whether or not they are shown on the contract drawings. All existing facilities damaged will be promptly replaced with material equal to that existing prior to construction. |   |                         |
| 7                                 | Strip and stockpile topsoil separately from subsoil and reuse unless the area contains invasive species.   | Construction contractors                      | Construction            |
| 8                                 | On slopes provide against washouts by an approved method. Any washout which occurs will be regraded and reseeded until a good sod is established.  | Construction contractors                      | Construction            |
| 9                                 | Incorporate a stormwater management system developed in compliance with the Massachusetts Stormwater Management Standards. Low impact development solutions will be evaluated and incorporated into the design to the maximum extent practicable.  | Design engineers and construction contractors | Design and construction |
| 10                                | Minimize tree cutting and clearing to the extent practicable.  | Design engineers and construction contractors | Design and construction |
| <b>Water Quality and Wetlands</b> |  |   |                         |
| 11                                | Obtain required permits prior to commencement of work.   | Design engineers and construction contractors | Design and construction |
| 12                                | Apply for and obtain a CGP from EPA pursuant to the NPDES program, including submitting a NOI for stormwater discharges and Notice of Termination Form and preparing a SWPPP.  | Design engineers and construction contractors | Design and construction |
| 13                                | Prepare an Erosion and Sedimentation Control Plan.   | Construction contractors                      | Construction            |
| 14                                | Update the Erosion and Sedimentation Control Plan and the SWPPP as necessary so that the documents are always current in accordance with the NPDES regulations.  | Construction contractors                      | Construction            |
| 15                                | Follow the requirements of the Norton Conservation Commission Order of Conditions. A preconstruction meeting will be held with the Conservation Agent.   | Design engineers and construction contractors | Design and construction |
| 16                                | Submit a dewatering plan for review and approval by the Conservation Commission prior to the start of work. The plan will include the methods and discharge points proposed to be used by the Contractor.  | Construction contractors                      | Construction            |
| 17                                | Submit the location of proposed stockpile areas to the Conservation Commission for approval prior to the start of work.  | Construction contractors                      | Construction            |
| 18                                | Maintain a copy of the Order of Conditions and the approved SWPPP and Erosion and Sedimentation Control Plan on-site at all times.   | Construction contractors                      | Construction            |
| 19                                | Take sufficient precautions during construction to minimize the  | Construction                                  | Construction            |

|    |  |                          |              |
|----|--|--------------------------|--------------|
|    | runoff of sediment laden water into adjacent wetlands or waterways.  | contractors              |              |
| 20 | Per the requirements of the Norton Conservation Commission, provide biodegradable controls such as rolled erosion control products (i.e. mulch, control netting, erosion control blankets, turf mats, mulch socks, fiber rolls, wattles etc.) that are 100% natural biodegradable material at points where drainage from the work site leaves the site. Haybales shall not be used. Contact the Norton Conservation Agent to inspect siltation controls prior to excavation. | Construction contractors | Construction |
| 21 | Schedule and conduct all work in a manner that will minimize the erosion of soils in the area of the work.   | Construction contractors | Construction |
| 22 | Do not discharge water from dewatering operations directly into any live or intermittent stream, channel, wetlands, surface water or any stormwater. Treat water from dewatering operations by filtration, settling basins, or other approved method to reduce the amount of sediment contained in the water to allowable levels.  | Construction contractors | Construction |
| 23 | Repair any damage caused by dewatering and drainage system operations.   | Construction contractors | Construction |
| 24 | Do not use existing sanitary sewers to dispose of drainage unless written permission is obtained from the town of Norton and/or the MFN District.  | Construction contractors | Construction |
| 25 | Crushed stone for sediment filtration devices, access ways and staging areas will conform to Massachusetts Department of Transportation "Standards and Specifications for Highways and Bridges" Section M2.01.3.   | Construction contractors | Construction |
| 26 | Place filter bags or a similar product around catch basins that discharge into wetlands, water supply or surface water bodies.   | Construction contractors | Construction |
| 27 | Use straw mulch on all newly graded areas to protect areas against washouts and erosion.   | Construction contractors | Construction |
| 28 | Surface staging areas and access ways with a minimum depth of 4-in of crushed stone laid over filter fabric.   | Construction contractors | Construction |
| 29 | Visually inspect all sedimentation control devices once per week and promptly after every rainstorm greater than ¼ inch and install additional or replacement devices as needed.   | Construction contractors | Construction |
| 30 | Where silt fence is used, remove accumulated sediment once it builds up to 1/2 of the height of the fabric. Replace or patch damaged fabric with a 2-ft minimum overlap.   | Construction contractors | Construction |
| 31 | In the recharge area, do not remove brush and stumps and do not disturb ground surface more than one week prior to the start of excavation and pipe laying in that area.   | Construction contractors | Construction |
| 32 | Loam and seed or mulch cross-country areas as soon after laying the pipeline as practicable.   | Construction contractors | Construction |
| 33 | Remove and dispose of sediment control devices and accumulated silt once the site has been fully stabilized against erosion.   | Construction contractors | Construction |
| 34 | Take preventative measures to avoid the spillage of petroleum  | Construction             | Construction |

|                             |  |   |                             |
|-----------------------------|--|---|-----------------------------|
|                             | products and other pollutants. Routine vehicle and equipment maintenance and refueling will only occur in designated areas located more than 100 feet from wetland resource areas. At each staging area, spill clean-up equipment (shovels, brooms, absorbent pads and materials) will be maintained for use in the event of an accidental spill.  | contractors                             |                             |
| 35                          | Store all fuel, oil, solvents, etc. in original containers or in containers manufactured for storing such material that are clearly labeled as to the contents of the container and keep secured in a locked storage locker designed and properly vented for storing such material. Maintain copies of Material Safety Data Sheets for all applicable materials at the construction site and make readily accessible.  | Construction contractors                | Construction                |
| 36                          | Immediately clean up any and all spills of fuel, oil, or other potentially hazardous materials. Report any and all reportable spills to the proper authorities (Norton Fire Department, Board of Health, MassDEP, and others as applicable).   | Construction contractors                | Construction                |
| 37                          | Implement a groundwater monitoring plan to monitor the mounding effects of the effluent recharge and impacts to groundwater quality based on an established baseline, as well as a 5-year post-construction vernal pool monitoring plan to ensure that the pools continue to support obligate vernal pool species. The post construction vernal pool monitoring plan will be submitted as part of the Notice of Intent submittal to the Norton Conservation Commission for work within the 100-foot buffer zone to bordering vegetated wetlands and inland bank. | District personnel and design engineers | Post construction/operation |
| 38                          | Because the closest pond south of the site (the Pine Street Pond) appears to be somewhat more susceptible to water quality impacts from additional nitrogen than the adjacent pond to the north/northwest (Old Crane Pond), position the infiltration basins at the northeast portion of the site so that the highest percentage of effluent discharges to Old Crane Pond.   | Design engineer                         | Design                      |
| 39                          | In regards to the Fruit Street landfill closure, implement a post closure monitoring plan to monitor cap and closure effectiveness, specifically focusing on groundwater quality downgradient of the three landfill cells.   | District personnel and design engineers | Post construction/operation |
| <b>Air Quality and Dust</b> |  |   |                             |
| 40                          | Perform dust control operations whenever a nuisance or hazard occurs even though other work on the project may be suspended.   | Construction contractors                | Construction                |
| 41                          | Meet all air pollutant standards for dust control methods.   | Construction contractors                | Construction                |
| 42                          | Broom all road surfaces after backfilling.   | Construction contractors                | Construction                |
| 43                          | Regularly sweep paved streets adjacent to work areas.  | Construction contractors                | Construction                |

|                                  |   |                          |              |
|----------------------------------|---|--------------------------|--------------|
| 44                               | Cover dump trucks with tarpaulins and have tightly fitting tailgates.   | Construction contractors | Construction |
| 45                               | Maintain all excavations, embankments, stockpiles, access roads, plant sites, waste areas, borrow areas, and all other work areas within or outside the project boundaries free from dust which could cause the standards for air pollution to be exceeded, and which would cause a hazard or nuisance to others.   | Construction contractors | Construction |
| 46                               | Dust control will be generally accomplished by the use of water. An approved method of stabilization consisting of sprinkling or other similar methods will be permitted. Calcium chloride may be used if permitted. The use of petroleum products is prohibited.   | Construction contractors | Construction |
| 47                               | Equipped construction equipment with proper pollution control measures to provide a positive means to prevent airborne dust and reduce vehicle emissions.   | Construction contractors | Construction |
| 48                               | Repeat sprinkling at such intervals as to keep all parts of the disturbed area at least damp.   | Construction contractors | Construction |
| 49                               | Design treatment facility upgrades and expansions with odor control units and tank covers to limit odors during WPCF operations.  | Design engineers         | Design       |
| <b>Noise and Vibration</b>       |   |                          |              |
| 50                               | Mitigate construction noise by restricting construction activities to daytime hours (7 a.m. to 6 p.m.).   | Construction contractors | Construction |
| 51                               | Operate equipment with silencers or mufflers to minimize noise level in compliance with state and federal regulations and Norton and Mansfield regulations, whichever is more stringent.  | Construction contractors | Construction |
| 52                               | During construction, use the following measures to control noise: (1) substitute loud pieces of equipment with quieter equipment; (2) use effective intake and exhaust mufflers on internal combustion engines; and (3) conduct truck loading, unloading, and hauling operations in a manner that keeps noise and vibration to a minimum.                         | Construction contractors | Construction |
| 53                               | Design process and equipment upgrades at the WPCF to minimize noise from pumps and blowers.   | Design engineers         | Design       |
| <b>Traffic and Public Safety</b> |   |                          |              |
| 54                               | Provide adequate safeguards for all open excavations using temporary barricades, caution signs, lights and other means to prevent accidents to persons and damage to property. The work at the Pine Street Site will be fenced and secured to prevent unauthorized access and provide public safety, and to limit impacts to the abutters and the general public. | Construction contractors | Construction |
| 55                               | Provide suitable and safe bridges and other crossings for accommodating travel by pedestrians and workmen.  | Construction contractors | Construction |
| 56                               | Take precautions to prevent injury to the public. Provide adequate light at all trenches, excavated material, equipment, or other obstacles, which could be dangerous to the public at night.   | Construction contractors | Construction |

|                                     |   |  |   |
|-------------------------------------|---|--|---|
| 57                                  | Unless permission to close a street is received in writing from the Norton Police Department, place all excavated material so that vehicular and pedestrian traffic may be maintained at all times. If the Contractor's operations cause traffic hazards, repair the road surface, provide temporary ways, erect wheel guards or fences, or take other measures for safety satisfactory to the Engineer.  | Construction contractors   | Construction  |
| 58                                  | If necessary, submit a traffic management plan for review and approval prior to any work commencing within the right of way. This plan will include phased plans showing the setup, number, and width of open lanes and a schedule for approval by the Engineer.  | Design engineers and construction contractors                      | Design and construction                               |
| 59                                  | Notify affected property owners 48 hours prior to road closures or any work that will interfere with access to their residences or places of business. Residents will be provided access to their properties at all times.  | Construction contractors   | Construction  |
| 60                                  | Provide access for emergency vehicles and school buses to all streets at all times.   | Construction contractors   | Construction  |
| 61                                  | Plate all streets, as necessary, every night. No open excavations will be allowed after working hours.  | Construction contractors   | Construction  |
| 62                                  | Perform all traffic control work in accordance with the MUTCD.  | Construction contractors   | Construction  |
| 63                                  | Coordinate forcemain design with Norton Rail Trail proponents.  | Design engineers   | Design  |
| Historical/Archaeological Resources |   |  |   |
| 64                                  | An intensive (locational) archaeological survey of the Pine Street Site was recently completed to locate and identify any significant archaeological resources. Based on the results of the survey, the infiltration basin and related access road, force main, and stormwater management improvements are not located within an area that requires protection of historic resources. The nearby dam and borrow pit will be avoided during construction and operation to ensure its historic integrity remains. | Design engineers, construction contractors, and District Personnel | Design, construction, and post construction/operation |
| Agricultural and Open and Space     |   |  |   |
| 65                                  | Create an APR on a portion of one of the parcels (Parcel ID 24-4-0) that makes up the Pine Street Site as part of the one being considered for the Crane Street Farm property south of Pine Street. The APR will be considered only after approval of the Hydrogeological Evaluation Report: Pine Street Site report by MassDEP, Site Plan Review approval by the town of Norton, and review and approval of a groundwater discharge permit by MassDEP.   | District personnel   | Post construction/operation                           |
| Greenhouse Gas Emissions            |   |  |   |
| 66                                  | Improve building envelope through higher R-value insulation in walls, roof, and if appropriate, basement walls and ceiling.   | Design engineers   | Design  |
| 67                                  | Conduct inspection and comprehensive air sealing of building envelope to minimize air leakage.  | Design engineers   | Design  |

|    |   |                  |        |
|----|---|------------------|--------|
| 68 | Install lower U-value windows to improve envelope performance.  | Design engineers | Design |
| 69 | Incorporate window glazing to balance and optimize daylighting, heat loss and solar heat gain performance.    | Design engineers | Design |
| 70 | Maximize interior daylighting through floor plates, and use of skylights, celestories and light wells.        | Design engineers | Design |
| 71 | Install high-efficiency HVAC systems and premium efficiency motors.   | Design engineers | Design |
| 72 | Use energy efficient boilers, heaters, furnaces, incinerators, or generators.                                 | Design engineers | Design |
| 73 | Seal and leak-check all supply air ductwork.  | Design engineers | Design |
| 74 | Incorporate motion sensors into lighting, daylighting, and climate controls.                                  | Design engineers | Design |
| 75 | Size piping systems to minimize pressure loss.  | Design engineers | Design |
| 76 | Design pumping, blower, filtration and associated control systems to achieve overall efficiency.              | Design engineers | Design |
| 77 | Select high efficiency equipment including pumps, blowers, and motors.  | Design engineers | Design |
| 78 | Include sufficient metering and controls for real-time monitoring and optimization of the process operations. | Design engineers | Design |

## 7.5 Summary of Impacts and Findings of Limitation of Impacts

The Town of Mansfield finds that the environmental impacts resulting from construction of the proposed project are those impacts described in the DEIR and FEIR. The Town finds that, with implementation of the mitigation measures described, all feasible means and measures will have been taken to avoid or minimize adverse impacts to the environment relating to construction and operation of the proposed project.

## 7.6 Self-Certification

The mitigation measures in Table 7-1 above will be implemented as described herein to minimize, to the maximum extent feasible, the environmental impacts of the recommended plan. Applicable federal, state, and local permits will be obtained during design and construction of each phase of the project. In regards to GHG emissions reduction measures, to ensure the measures that are adopted are actually constructed or performed, the Proponent will provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed.

## Section 8

# Responses to DEIR Comments/Circulation

### 8.1 Introduction and Summary of MEPA Scope

As requested in the Secretary’s Certificate to the September 2014 Phase 2 CWMP/DEIR, this section responds to the comments received (to the extent that the comments are within MEPA jurisdiction), presenting additional analysis as appropriate to address the concerns raised. In particular, detailed responses to the comments that focus on impacts and mitigation associated with the preferred alternative are presented. The circulation requirements and distribution list are also provided.

### 8.2 Index Table

Table 8-1 summarizes the comments received on the Phase 2 CWMP/DEIR and included with the DEIR Certificate found in Section 2 of this document.

**Table 8-1  
Index to DEIR Certificate No. 13388 Comment Letters**

| Comment Letter Number | Commenter/Issues  |
|-----------------------|---|
| <b>1</b>              | <b>Water Resources Commission (WRC)</b>   |
|                       | 1.1 Potential applicability of Interbasin Transfer Act (ITA) for water supply transferred from the Ten Mile River basin to the Taunton River basin  |
| <b>2</b>              | <b>Town of Mansfield</b>  |
|                       | 2.1 Supports project  |
| <b>3</b>              | <b>MassDEP SERO</b>   |
|                       | 3.1 Wastewater related impacts to impaired water bodies within the Town and the development of a Targeted Watershed Management Plan to augment the CWMP and demonstrate that it addresses all impaired water bodies with approved TMDLs |
|                       | 3.2 Process for eligibility to receive SRF 0% nutrient-related project loan   |
|                       | 3.3 Potential for finding archaeological resources at the Pine Street Site  |
|                       | 3.4 Potential for proximity to open disposal sites in the vicinity of project and need for continued environmental response actions under the MCP   |
|                       | 3.5 Proposed Section 61 Findings should contain clear commitment to implement mitigation measures   |
| <b>4</b>              | <b>Norton Conservation Commission</b>   |
|                       | 4.1 Proper future notification of project in Environmental Monitor and request for ENF filing for WPCF upgrade construction   |
|                       | 4.2 WPCF upgrade in relation to the Three Mile River TMDL for pathogens   |
|                       | 4.3 Canoe River running dry in the 1990s  |
|                       | 4.4 Correction to Norton Reservoir inlet name   |
|                       | 4.5 Request that a surface water quality sampling program for the Norton Reservoir be made  |

|  |   |
|--|---|
|  | available for public comment  |
|  | 4.6 Clarification on how the CWMP considers impacts of climate change in evaluations  |
|  | 4.7 Use of “Cornell data” for rainfall data in calculation of storm events  |
|  | 4.8 Clarification of water table mounding discussion  |
|  | 4.9 Provide clarification of the term “residences” in discussion of impacts on water supply wells   |
|  | 4.10 Request for groundwater flow modeling and field data to be made available for public comment   |
|  | 4.11 Request that the CWMP further evaluate surface water quality conditions at the Pine Street Site  |
|  | 4.12 Request that the vernal pool and water table monitoring plan be made available for public comment  |
|  | 4.13 Request that a total phosphorus monitoring plan to confirm jar testing and modeling be made available for public comment   |
|  | 4.14 Request that peak discharges rates to the Three Mile River be reevaluated based upon climate change predictions  |
|  | 4.15 Clarification of the bylaw(s) that might change to mitigate adverse impacts  |
|  | 4.16 Coordination with Norton rail trail proponents regarding interceptor route   |
|  | 4.17 Substitution of biodegradable controls for hay bales   |
|  | 4.18 Add mitigation measures related to local ponds to this section and consider use of conservation restrictions as mitigation measure   |
|  | 4.19 Investigation of use of solar panels on building roofs to reduce electricity usage   |
|  | 4.20 Submittal of design of infiltration basins for public review   |
|  | 4.21 Address noted discrepancies related to influent total suspended solids and total phosphorus sampling at the WPCF   |
|  | 4.22 Discussion of <i>Ligumia nasuta</i> and <i>Glyptemys insculpta</i> species with NHESP  |
|  | 4.23 Provide clarification of the weather on the day of the vernal pool sampling  |
|  | 4.24 Provide updated discussion of the Conservation Assessment Prioritization System and potential use of conservation restrictions as mitigation measures  |
|  | 4.25 Note that an additional 40 acres of the Crane Farm was preserved in June 2014  |
|  | 4.26 Request that additional information be added related to Executive Order 193, which requires restriction or compensation for any conversion of use of active farmland   |
|  | 4.27 Note that the construction of the infiltration basins and the alteration of hydrology will require storm water management to control the increase in runoff as part of any permit review by the Norton Conservation Commission |
|  | 4.28 Request that the vernal pool monitoring plan be made available for public comment  |
|  | 4.29 Address Greenhouse Gas Policy requirements   |
|  | 4.30 Requirement by the Norton Conservation Commission for a SWPPP for all projects that require review during the public hearing process   |
|  | 4.31 Provide additional information on how the recommended plan will improve future water quality vs. maintain existing water quality   |
|  | 4.32 Provide information on the next steps in the CWMP/EIR process  |

## 8.3 Response to Comments

Each comment is presented below in *italics* and is a direct quote from the applicable comment letter. Responses are provided below each comment in normal type face. Comments or concerns are addressed in the body of this FEIR in more detail, and reference is made below to the applicable sections where supplemental information can be found.

### 8.3.1 Comment Letter 1 – Water Resources Commission

#### Comment 1.1

*Only the transfer from the Ten Mile River basin to the Taunton River basin in Norton would be subject to the ITA but this transfer may be partially or completely offset by the intra-town transfer of water supply from the Taunton River basin that will be discharge via on-site septic systems into the Ten Mile River basin.*

The Town of Mansfield and its consultant CDM Smith met with WRC staff on November 20, 2014 to discuss the Town's Phase 2 CWMP/DEIR. Specifically WRC staff was concerned that wastewater originating from Mansfield's water supply sources in the Ten Mile River basin, which previously had been discharged via on-site septic systems, would now be transferred across both a municipal line and a river basin line, negating the intra-town exemption and subjecting this transfer to the ITA. However, since this meeting, WRC has determined that the Phase 2 CWMP/DEIR recommended plan is not subject to the ITA. This final decision is discussed in more detail in Section 3.2.2.4.

### 8.3.2 Comment Letter 2 – Town of Mansfield

#### Comment 2.1

Supports project.

### 8.3.3 Comment Letter 3 – MassDEP SERO

#### Comment 3.1

*The nitrogen loading analysis was designed to determine the need for sewerage in existing and future development areas within the Town. This assessment focused only on impacts to the Town's water supply facilities and did not assess wastewater related impacts to impaired waters within the Town. Plain Street Pond, MA52-032 (Study Area 1); The Wading River, MA62-47 (Study Areas 7, 8 and 9) and the Rumford River MA52-39 (Study Area 11) are listed as impaired water bodies in The Final Massachusetts Year 2012 Integrated List of Waters (Integrated List) due to impacts that may be wastewater related such as fecal coliform, excessive algal growth and low dissolved oxygen. The CWMP did not fully characterize the possible sources of impairment these water bodies nor does it provide planning that fully addresses correction of the impairment. Upon MassDEP's issuance of the TMDL for these or any other newly listed water bodies, Mansfield will need to revisit the needs areas around these water bodies to better characterize the sources of impairment so a Targeted Watershed Management Plan (TWMP) can be developed for these impaired water bodies so that the CWMP can be augmented to include planning that demonstrates the TMDL will met. A CWMP can only be considered complete if it addresses all impaired water bodies with a TMDL approved by the U.S. EPA.*

Upon MassDEP's issuance of a TMDL for the for mentioned water bodies, Mansfield will develop an education program and display material about impacts from nutrients, particularly phosphorus for freshwater ponds and rivers, to help mitigate existing and future impacts in needs areas to help MassDEP in its development of targeted wastewater management plans.

### **Comment 3.2**

*A portion of the proposed upgrades to the WPCF are being made due to more stringent permit limits proposed by the U.S. EPA. Excessive nutrients in waterways contributing to the Taunton River, Mount Hope and Narragansett Bays have contributed to violations of water quality standards and EPA Region 1 is decreasing nutrient effluent limitations at all municipal wastewater facilities in the Taunton River watershed as the NPDES permits are renewed. Because a portion of these upgrades are intended to remediate or prevent nutrient enrichment, these upgrades may be eligible for a 0% loan through the State Revolving Fund program. The process for eligibility to receive a 0% nutrient –related project loan through the SRF program includes the following criteria: If the applicant has a MassDEP approved CWMP, then the applicant should submit a copy of the MassDEP approval letter with their SRF application. If the applicant does not already have a MassDEP approved CWMP, evidenced by a DEP approval letter, then the applicant should submit a copy of the applicant's CWMP with a copy of the certificate for the CWMP issued by the Secretary of the Executive Office of Energy and Environmental Affairs.*

In response to the 2015 SRF cycle, Mansfield (as part of the MFN District and in cooperation with the towns of Foxborough and Norton) submitted a Project Evaluation Form (PEF) for the Mansfield Phase 2 CWMP/DEIR recommended plan. The final SRF Intended Use Plan (IUP) released in December 2015 indicates that the WPCF upgrades and expansion and the infiltration basins, identified as the WPCF Upgrades Project SRF ID 4037, received a score of 93 and will receive funding in 2015. In addition, in March 2015, the MFN District was notified that some projects on the IUP dropped out and additional funding is available to finance the closure of the Fruit Street Landfill, identified as Landfill Closure Project SRF ID 4036. Thus, the entire recommended plan will be financed with SRF funding. At the time of the August 2014 filing of the PEF, the Phase 2 CWMP/DEIR had yet to be filed with MEPA. Per the comment above, the SRF application will be supplemented with a copy of the MassDEP CWMP approval letter after approval by MassDEP, or a copy of the Phase 2 CWMP and the related FEIR certificate issued by the Secretary of the Executive Office of Energy and Environmental Affairs.

A copy of the 2015 SRF IUP and related documentation can be found in Appendix I.

### **Comment 3.3**

*The only aspect of the recommended plan which could delay the system improvements is if significant archeological resources are found at the proposed Pine Street recharge site.*

An intensive archaeological survey was performed at the Pine Street site in November and December 2014 and no significant archaeological resources were found. The details of the survey are discussed in Section 6 and the survey in its entirety can be found in Appendix K.

### Comment 3.4

*Based upon the information provided, the Bureau of Waste Site Cleanup (BWSC) searched its databases for disposal sites and release notifications located within and near the proposed project area. A disposal site is a location where there has been a release to the environment of oil and/or hazardous material that is regulated under M.G. L. c. 21E, and the Massachusetts Contingency Plan [MCP – 310 CMR 40.0000]. The proposed project involves the development of a 20-year wastewater management plan for the Town of Mansfield, with wastewater flows from the neighboring towns of Foxboro and Norton. Please be advised that there are many BWSC disposal sites located near and possibly within the proposed planning area. Many of the sites have been closed under the MCP, but many other disposal sites are open, and require continued environmental response actions under the MCP. A listing and discussion of the status of each MCP site will not be presented here. The Project Proponent is encouraged to consult the BWSC Waste Sites/Reportable Release Lookup at: <http://public.dep.state.ma.us/SearchableSites2/Search.aspx>. In addition, the Project Proponent can view a map showing BWSC disposal sites located within and near the proposed planning area using the MassGIS online data viewer (Oliver) at: [http://maps.massgis.state.ma.us/map\\_ol/oliver.php](http://maps.massgis.state.ma.us/map_ol/oliver.php). Under “Available Data Layers” select “Regulated Areas”, and then “DEP Tier Classified 21E Sites”. The Project Proponent is advised that if oil and/or hazardous material are identified during the implementation of this project, notification pursuant to the Massachusetts Contingency Plan (310 CMR 40.0000) must be made to MassDEP, if necessary. A Licensed Site Professional (LSP) should be retained to determine if notification is required and, if need be, to render appropriate opinions. The LSP may evaluate whether risk reduction measures are necessary or prudent if contamination is present. The BWSC may be contacted for guidance if questions arise regarding cleanup.*

The WPCF is located at the intersection of Crane and Hill Streets in Norton, adjacent to the Taunton city line. The proposed location of the Pine Street Site infiltration basins is approximately 0.6 miles northwest of the WPCF. Using the BWSC Waste Sites/Reportable Release Lookup, the closest open disposal site to the WPCF or the Pine Street Site is Kilburn Glass Industries, located at 111 South Worcester Street in Norton, approximately 4.5 miles to the west. This site will not be impacted by construction of upgrades and expansion at the WPCF or construction of the infiltration basins.

The Fruit Street Landfill previously used for sludge and grit disposal from the WPCF that would be capped and closed as part of the project, is located at the end of Fruit Street in Mansfield adjacent to Route 495. Using the BWSC Waste Sites/Reportable Release Lookup, the closest open disposal site to the landfill is the Norton Mobile Homes Estates Realty Trust located at 157 Mansfield Avenue in Norton, more than a mile to the south. This site will not be impacted by the cap and closure of the landfill.

If oil and/or hazardous material are identified during construction at any of these sites or within the Town planning areas, notification pursuant to the MCP will be made to MassDEP if necessary and an LSP will be retained to determine if notification is required or risk reduction measures are necessary. In addition, individual sewer extension projects that will result in increased flows to the WPCF will be evaluated on an individual basis as necessary to determine the presence of oil and/or hazardous material.

**Comment 3.5**

*Proposed s.61 Findings - The “Certificate of the Secretary of Energy and Environmental Affairs on the Draft Environmental Impact Report” may indicate that this project requires further MEPA review and the preparation of a Final Environmental Impact Report. Pursuant to MEPA Regulations 301 CMR 11.12(5)(d), the Proponent will prepare Proposed Section 61 Findings to be included in the EIR in a separate chapter updating and summarizing proposed mitigation measures. In accordance with 301 CMR 11.07(6)(k), this chapter should also include separate updated draft Section 61 Findings for each State agency that will issue permits for the project. The draft Section 61 Findings should contain clear commitments to implement mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation.*

In accordance with 301 CMR 11.7(6)(k), Section 7 of this document contains mitigation measures and Section 61 Findings and identifies responsible parties and the implementation phase of the mitigation measures.

**8.3.4 Comment Letter 4 – Norton Conservation Commission****Comment 4.1**

*The project location was listed in the Environmental Monitor as Mansfield; however, after reviewing the nearly 400-page DEIR, it is clear that the majority of the project lies within the Town of Norton. Without proper public notification regarding the project location, Norton residents and public officials would not have an opportunity to comment on the project. Once this oversight was acknowledged by the Conservation Director and notified the MEPA office on November 6, 2014, the public comment period was extended. While we appreciate the additional seven business days to review and comment on the project, we respectfully request that for any future notifications, the project location be clearly and accurately stated in compliance with 301 CMR 11.07(6)(a) and properly noticed in the Environmental Monitor. We further request that, at a minimum, the actual construction of the regional waste water facility be required to file an Environmental Notification Form (ENF) that accurately locates the project, in any and all documents.*

For any future notifications, the project location will be clearly and accurately stated in compliance with 301 CMR 11.07(6)(a) and properly noticed in the Environmental Monitor.

An ENF was filed for this project with the Secretary of the EOE (name changed to EOEEA) and noticed in the Environmental Monitor on October 23, 2004. The Secretary issued a certificate on November 29, 2004, designating the project as EOE No. 13388, and stating that an EIR is required for this project. The DEIR and a related NPC was filed with the Secretary of the EOEEA and noticed in the Environmental Monitor on October 8, 2014. The Secretary issued a certificate on November 26, 2014 stating that the DEIR complied with the MEPA regulations and to continue the process with submittal of the FEIR. This document serves as the FEIR.

**Comment 4.2**

*It is unclear from the DEIR whether the existing waste water treatment plant will be upgraded so that the discharges to the Three-Mile River will also be improved over existing conditions in an effort to meet water quality standards since the Three-Mile River has been assigned a Total Daily Maximum Load (TMDL) for pathogens (formerly Fecal Coliform). The Three-Mile River is an Area of Critical Environmental Concern (ACEC). Furthermore, state listed species (*Ligumia nasuta*-2005 and *Glyptemys insculpta*-2011) have been documented in close proximity to the site and submitted to the Natural Heritage and Endangered Species Program (NHESP). These two species were documented after the 2008 printing of the Atlas and should be specifically discussed with NHESP.*

The existing WPCF will be upgraded to treat both existing and future flows to meet the requirements of the WPCF's most recent NPDES permit, finalized in September 2014. The new permit replaces the WPCF NPDES permit issued in April 2004 and includes most notably requirements to meet more stringent nitrogen, phosphorus, and E. coli limits.

**Comment 4.3**

*Page 1-3, 4<sup>th</sup> bullet: The Canoe River did run dry in the 1990s. The Canoe River Aquifer Advisory Committee performed a stream cleaning when the river was dry; they can provide more specific information.*

Thank you for the information. Mansfield will contact the Committee as necessary for more information if significant changes in water supply pumping are anticipated from the wells in the Canoe River sub-basin.

**Comment 4.4**

*Page 2- 14, table 2-4, line 3: The inlet to the Norton Reservoir is the Rumford River, not the Three-Mile River as listed.*

Thank you for the clarification. Any references to the Norton Reservoir inlet in additional documents will reflect this change.

**Comment 4.5**

*Page 3-10, 3<sup>rd</sup> paragraph: The Norton Reservoir Dredging Project has been abandoned for at least five years. This project is not being pursued by the Town of Norton and should not be relied upon to attenuate nitrogen or phosphorus loadings. Contributions of nitrogen and phosphorus into the watershed should be further investigated and identified. As stated on page 3-11, a more extensive sampling program should be instituted. Please require the sampling program be drafted for public comment and we request the inclusion of a map to clearly show sampling locations.*

The evaluation of potential impacts to surface water quality in the Norton Reservoir was completed as part of the analysis of potential effluent recharge sites at the Mansfield Municipal Airport. The Airport recharge sites were not carried forward as part of the recommended plan. Instead, all recharge of treated effluent will occur at the Pine Street Site in Norton.

**Comment 4.6**

*Page 3-11, Section 3.3.4.1 Seasonal and Climatic Variability of the Water Table: How has the CWMP considered and evaluated the anticipated impacts of climate change in their evaluations? The predicted impacts of increases in flashier flooding events and more frequent summer droughts should be taken into consideration when assessing nutrient loads during low-flow periods and drought conditions. Also, if we are expected to receive more precipitation in the form of rain during winter months when the ground is frozen, less water will infiltrate into the ground to maintain base flows of the Three-Mile River. The CWMP should carefully consider this in their analysis of impacts to the river.*

The WPCF will be upgraded and expanded to accommodate an additional 1.0 mgd. However, effluent flow from the WPCF to the Three Mile River will not increase and will remain at 3.14 mgd.

The additional 1.0 mgd will be infiltrated at the Pine Street Site. A detailed analysis of the water table was conducted for the Pine Street Site and is found in the *Hydrogeological Evaluation Report: Pine Street Site*, submitted to MassDEP in May 2014. This report is attached in Appendix B. The infiltration basins will also be designed with redundancy in mind to allow for fluctuations in flows and ground conditions.

**Comment 4.7**

*Any calculations of storm events should use the most accurate rainfall data available from the Atlas of Precipitation Extremes for the Northeastern United States and Southeastern Canada known as the "Cornell data".*

Noted.

**Comment 4.8**

*Page 3-13, paragraph below table 3-3: What is considered "without too much water table mounding"? What is the actual amount? This statement is subjective.*

This groundwater flow modeling was completed as part of the analysis of potential effluent recharge sites at the Mansfield Municipal Airport. The Airport recharge sites were not carried forward as part of the recommended plan. Instead, all recharge of treated effluent will occur at the Pine Street Site in Norton.

**Comment 4.9**

*Page 3- 13, Section 3.3.5.1, Airport Sites: Do "all residences" include those in Norton?*

Potential impacts on water supply wells was completed as part of the analysis of potential effluent recharge sites at the Mansfield Municipal Airport. The Airport recharge sites were not carried forward as part of the recommended plan. Instead, all recharge of treated effluent will occur at the Pine Street Site in Norton.

**Comment 4.10**

*Page 3-14, Section 2.2.5.2: Please provide the necessary ground water flow modeling and the field data (Page 3-15) for public comment.*

Section 3.3.5.2 (I believe this is the section the commenter is referencing) was completed as part of a preliminary analysis of potential effluent recharge sites. Since that time, the “Private Site in Norton” has been purchased by the Town of Mansfield (now owned by the MFN District). Now, it is commonly referred to the Pine Street Site. A more detailed analysis of the Pine Street Site was completed in May 2014 in the report titled the *Hydrogeological Evaluation Report: Pine Street Site*. The groundwater flow modeling and field data is included in this report and can be found in Appendix B.

**Comment 4.11**

*Page 3-16, Surface Water Quality Conditions, Private site in Norton: Nitrate loadings could impact Norton water resources. The CWMP should further evaluate this, including but not limited to, field testing, monitoring protocols and mitigation plans.*

The Phase 2 CWMP/DEIR included as an appendix the report titled *Hydrogeological Evaluation Report: Pine Street Site*, submitted to MassDEP in May 2014. The report included a detailed analysis of surface water quality conditions. It is attached to this document as Appendix B.

**Comment 4.12**

*Page 2-24, 2<sup>nd</sup> bullet: Please provide the vernal pool and water table monitoring plan for public comment.*

The vernal pool and water table monitoring plan referenced on page 3-24 (I believe this is the page the commenter is referencing) was outlined in the report titled *Hydrogeological Evaluation Report: Pine Street Site*, submitted to MassDEP in May 2014 and appended to the Phase 2 CWMP/DEIR submittal. The monitoring plan, including recent sampling and analysis efforts and proposed long-term monitoring, is summarized in Section 1.2.4 of this document.

**Comment 4.13**

*Page 4-16, paragraph under Figure 4-12: Please provide a monitoring plan to confirm this analysis/assumption for public comment.*

The comment is in regards to jar testing completed as part of modeling effort to determine potential total phosphorus concentration in the WPCF effluent given particular upgrades. The existing WPCF will be upgraded to treat both existing and future flows to meet the requirements of the WPCF’s most recent NPDES permit, finalized in September 2014. The new permit limits include a phosphorus limit of 0.17 mg/l from April 1 through October 31. Preliminary design of the WPCF upgrade and expansion was completed in April 2015 and the WPCF will meet these new phosphorus limits. As part of preliminary design, additional sampling of a variety of parameters was completed to better inform the design.

**Comment 4.14**

*Page 4-36: Peak discharge to Three-Mile River is proposed to continue at current rates. This rate should be re-evaluated based upon anticipated changes to the flow of the river based upon climate change predictions.*

The WPCF has a current capacity of 3.14 mgd and NPDES permit allows for disposal of treated effluent up to 3.14 mgd to the Three Mile River. The additional 1.0 mgd expansion will be treated at the WPCF, however the treated effluent will be discharged via infiltration basins at the Pine Street Site. Thus peak discharge to the Three Mile River meets the WPCF's current NPDES permit. Any reevaluation based on climate change predictions will be driven by changes to the WPCF's next NPDES permit renewal cycle.

**Comment 4.15**

*Page 5-1, Section 5.2.1: Instituting a change to which existing bylaw?*

The reference to changing an existing bylaw is to the No Action alternative. Under this alternative, development could be prohibited by changing zoning laws or imposing a sewer moratorium to prevent indirect adverse impacts caused by growth and expansion of existing infrastructure.

**Comment 4.16**

*Page 5-3, Alternatives C, D, E and F: The regional sewer authority should coordinate with the Transportation Alternatives Program Committee (Norton rail trail proponents) regarding the interceptor route.*

The forcemain that will convey treated effluent from the WPCF to the infiltration basins at the Pine Street Site will be sited within the corridor of the current interceptor route. After MassDEP approves the report titled *Hydrogeological Evaluation Report: Pine Street Site*, Mansfield will submit a Site Plan Review application to the town of Norton as a first step in the permitting, design, and construction process of the infiltration basins and related forcemain and access road. The public SPR process will provide an opportunity for Norton rail trail components to see the project and determine the potential to integrate a rail trail project into the construction schedule of the infiltration basin project.

**Comment 4.17**

*Page 5-3, Section 5.2.1.5 Mitigation Measures: The Norton Conservation Commission does not allow the use of haybales on projects. The project will be required to comply with the following general condition for all wetland permits: Haybales shall not be used. Biodegradable controls are preferred such as rolled erosion control products (i.e. mulch, control netting, erosion control blankets, turf mats, mulch socks, fiber rolls, wattles etc.) which must be 100% natural biodegradable material. Photodegradable, UV degradable or Oxo-(bio)degradable plastics are not considered biodegradable.*

For any wetland projects, biodegradable controls with 100% natural biodegradable material will be used in lieu of haybales. This change in mitigation measures is reflected in Section 7.2.2 of this document.

**Comment 4.18**

*Page 5-3, Section 5.2.1.5 Mitigation Measures: Previous sections described impacts to local ponds. Mitigation of those impacts should be added to this section. Also, it has previously been requested that conservation restrictions be placed upon portions of the two Norton properties. This mitigation should also be fully investigated and included in this section.*

The Phase 2 CWMP/DEIR recommended various alternatives for both wastewater treatment and effluent disposal. As part of the analysis, potential impacts to various water bodies were evaluated based on effluent recharge amounts, locations of potential infiltration basins, and many other parameters. In terms of impacts to local ponds from the recommended plan, Old Crane Pond and the Pine Street Pond are the two ponds in the vicinity of the infiltration basins proposed for the Pine Street Site. Potential surface water quality impacts to these two ponds were evaluated in detail in the report titled *Hydrogeological Evaluation Report: Pine Street Site*, submitted to MassDEP in May 2014 and appended to the Phase 2 CWMP/DEIR submittal. That report showed the two ponds to be phosphorus limited under current conditions. In addition, because the closest pond south of the site (the Pine Street Pond) appears to be somewhat more susceptible to water quality impacts from additional nitrogen than the adjacent pond to the north/northwest (Old Crane Pond), it is advantageous for the highest percentage of effluent to discharge to Old Crane Pond. This will be achieved by positioning the infiltration basins in the northeast portion of the site.

In terms of agricultural preservation restrictions (APR), Section 7.6.12 of the Phase 2 CWMP/DEIR discussed that a portion of one of the parcels (Parcel ID 24-4-0) that makes up the Pine Street Site may in the future have an APR as part of the one being considered for the Crane Street Farm property south of Pine Street and will be considered after approval of the *Hydrogeological Evaluation Report: Pine Street Site* report by MassDEP, Site Plan Review approval by the town of Norton, and review and approval of a groundwater discharge permit by MassDEP.

**Comment 4.19**

*Page 5-9, Electricity: The facility should fully investigate the use of solar panels on the roof of the building to reduce electricity usage.*

An energy audit was recently completed as part of the preliminary design phase of the WPCF upgrade and expansion. The results of the energy audit and recommended energy and greenhouse gas reduction measures are discussed in Section 4 of this document.

**Comment 4.20**

*Page 6-7: The recommended plan for infiltration basins was not included in the report. As previously requested the design of the infiltration basins should be submitted for public review and comment and clearly noticed as a Norton location in any advertisement.*

The recommended plan for the infiltration basins was included as a 24x36 scaled drawing, included in a map pocket as Figure 6-2 on page 6-7 of the Phase 2 CWMP/DEIR. If Figure 6-2 was not included in the commenter's copy of the Phase 2 CWMP/DEIR please let the Town of Mansfield know and an additional copy will be made available.

In addition, after MassDEP approves the report titled *Hydrogeological Evaluation Report: Pine Street Site*, Mansfield will submit a Site Plan Review application to the town of Norton as a first step in the permitting, design, and construction process of the infiltration basins. The public SPR process will provide an opportunity for Norton residents to see and comment on the infiltration basin project.

#### **Comment 4.21**

*Page 6-11: noted discrepancies should be corrected.*

Discrepancies related to influent total suspended solids and total phosphorus sampling at the WPCF were investigated as part of the WPCF preliminary design process in April 2015, including both additional field testing and data analysis.

#### **Comment 4.22**

*Page 7-23, Section 7.6.7: As previously stated *Ligumia nasuta* and *Glyptemys insculpta* have been documented and submitted to the Natural Heritage and Endangered Species Program (NHESP). These species are located downstream of the proposed infiltration basin location and the existing outfall. These two species were documented after the 2008 printing of the Atlas and should be specifically discussed with NHESP.*

The NHESP was contacted as part of the Phase 2 CWMP/DEIR process regarding state-listed rare species in the vicinity of the project. In their response letter dated August 13, 2014, NHESP determined that the project site is not mapped as Priority or Estimated Habitat and that the NHESP database does not contain any state-listed species records in the immediate vicinity of this site. A copy of the NHESP response letter is included in Appendix G.

#### **Comment 4.23**

*Page 7-25, 2<sup>nd</sup> paragraph: The Norton Conservation Commission has previously questioned the appropriateness of the vernal pool investigation proposed for a cloudy and rainy day. Additional vernal pool investigations should be conducted following the criteria outlined in the Order of Resource Area Delineation.*

Per special condition of the Order of Resource Area Delineation (ORAD) (MassDEP File No. 250-0916) issued by the Norton Conservation Commission on December 17, 2013, for the Pine Street Site, CDM Smith wetland scientists conducted a vernal pool survey on the entire Pine Street Site to be used for infiltration basin, as well as adjacent parcels along the sewer interceptor, on April 22, 2014. The weather on that day was sunny with a high temperature of 67°F and very good for observing egg masses within the water column. Please see Section 1.2.4.1 for further discussion and Appendix F for a copy of the Vernal Pool Monitoring Report and related photographs.

#### **Comment 4.24**

*Page 7-25, Section 7.6.7.2: This section mentions the BioMap but does not acknowledge that this area is located on the Conservation Assessment Prioritization System (CAPS) map as an Area of Regional and Statewide Importance. This section of the DEIR is a further example of the appropriateness of land conservation through conservation restriction for portions of the private land in Norton.*

The commenter is correct that the Pine Street Site is located on the Conservation Assessment Prioritization System (CAPS). However, the Pine Street Site is approximately 70 acres in size and the portion of the Pine Street Site that will be used for infiltration basins will be less than 3 acres. By their very nature the basins will be pervious to allow infiltration of the treated wastewater effluent. The site will also contain an access road from the adjacent interceptor route. Neither the access road nor the infiltration basins will be constructed within vernal pools or wetlands located on the site and mitigation measures will be taken during construction to reduce any impacts to these habitat areas, including minimizing tree clearing and installing erosion control measures. Specific wetlands protection and stormwater management measures for the project are outlined in Section 5 of this document and mitigation measures are detailed in Section 7.

In terms of agricultural conservation, a portion of one of the parcels (Parcel ID 24-4-0) that makes up the Pine Street Site may in the future have an APR as part of the one being considered for the Crane Street Farm property south of Pine Street and will be revisited after approval of the *Hydrogeological Evaluation Report: Pine Street Site* report by MassDEP, Site Plan Review approval by the town of Norton, and review and approval of a groundwater discharge permit by MassDEP.

In regards to further land conservation, no other buildings, roads, or operations other than those related to the infiltration basins area are planned for the Pine Street Site.

#### **Comment 4.25**

*Page 7-28, Section 7.6.12: An additional 40 acres of the Crane Farm was preserved in June 2014.*

Thank you for the updated information.

#### **Comment 4.26**

*Page 7-29, 1<sup>st</sup> paragraph: The CWMP does not mention the Agricultural Preservation Restriction or other deeded restriction/compensation that will be required for any conversion of use of active farmland under Executive Order 193. This requirement should be clearly described and added to the CWMP.*

Similar to the response to Comment 4.18, in terms of APR, Section 7.6.12 of the Phase 2 CWMP/DEIR discussed that a portion of one of the parcels (Parcel ID 24-4-0) that makes up the Pine Street Site may in the future have an APR as part of the one being considered for the Crane Street Farm property south of Pine Street and will be revisited after approval of the Hydrogeological Evaluation Report: Pine Street Site report by MassDEP, Site Plan Review approval by the town of Norton, and review and approval of a groundwater discharge permit by MassDEP. However, the portion of the Pine Street Site to be used for infiltration basins is not currently used as active farmland.

#### **Comment 4.27**

*Page 7-32, Section 7.7.1.1, 2<sup>nd</sup> paragraph: The conversion of 5.5 acres of forest to infiltration basin or grassed areas will alter hydrology. Storm water management to control the increase in rate of runoff is very likely to be required in any permit review by the Conservation Commission.*

The infiltration basins design will meet all applicable MassDEP stormwater regulations and Norton Conservation Commission requirements. Stormwater management is discussed in detail in Section 5 of this document. In addition, as part of the SPR process, surface water and drainage plans will be developed for review by the Norton Planning Board.

#### **Comment 4.28**

*Page 7-35, 1<sup>st</sup> paragraph: The 5-year monitoring plan should be submitted for public review and comment.*

The vernal pool and water table monitoring plan was outlined in the report titled *Hydrogeological Evaluation Report: Pine Street Site*, submitted to MassDEP in May 2014 and appended to the Phase 2 CWMP/DEIR submittal. The monitoring plan, including recent sampling and analysis efforts and proposed long-term monitoring, is summarized in Section 1.2.4 of this document.

#### **Comment 4.29**

*Page 7-37, 2<sup>nd</sup> paragraph: A cursory review of on-site energy generation options is not adequate to opt-out of any Greenhouse Gas Policy requirements. There should be a clear commitment to providing mitigation within a reasonable timeframe.*

According to the Secretary's DEIR Certificate, the DEIR did not include adequate information to support use of the opt-out provision of the Greenhouse Gas (GHG) Emissions Policy. As such, the DEIR Certificate requires that the FEIR include a GHG analysis consistent with the GHG Policy, an effort similar to the evaluation of energy use that MassDEP undertakes as part of the SRF process. An energy audit of the existing WPCF and the components to be constructed in connection with the facility's expansion and upgrade was conducted as part of WPCF preliminary design. The results are included in Section 4.

#### **Comment 4.30**

*Page 7-39: The Commission will require a Storm Water Pollution Prevention Plan (SWPPP) in accordance with Storm Water Standard 8 for all projects that require one for review during the public hearing process.*

Thank you for the information. The project design will meet all applicable MassDEP stormwater regulations and Norton Conservation Commission requirements. Stormwater management is discussed in detail in Section 5 of this document.

#### **Comment 4.31**

*Page 7-48, 3<sup>rd</sup> paragraph: How will the recommended plan improve water quality as stated? The recommended plan appears to maintain the existing water quality by treating the new effluent. How will water quality be improved for existing discharges?*

The existing WPCF will be upgraded to treat both existing and future flows to meet the requirements of the WPCF's most recent NPDES permit, finalized in September 2014. The new permit replaces the

WPCF NPDES permit issued in April 2004 and includes most notably requirements to meet more stringent nitrogen, phosphorus, and E. coli limits.

### **Comment 4.32**

*What is the next phase of this review?*

According to the Secretary of EOE, the DEIR adequately and properly complied with MEPA and its implementing regulations (301 CMR 11.00) and the Town of Mansfield can prepare and submit the FEIR. The scope in the DEIR Certificate identified additional analysis and information required in the FEIR. In response, this FEIR document has been structured to respond to the DEIR Certificate scope requirements.

Per Section 301 CMR 11.16 of the MEPA regulations, this FEIR will be circulated to each state and town agency from which the proponent will seek permits, all parties that submitted individual written comments, the MEPA office, and the Mansfield and Norton libraries.

Similar to the DEIR, the FEIR will be published in the Environmental Monitor in accordance with 301 CMR 11.15(2), which begins the FEIR review period. The FEIR review period lasts for 37 Days, during which the Secretary will receive into the record written comments from any agency or person concerning the project, provided that the subject matter of the comment is within the scope in the DEIR Certificate. Comments on the FEIR shall be filed with the Secretary within 30 days of the publication of the notice of the availability of the FEIR in the Environmental Monitor. Within seven days after the close of the public comment period, the Secretary shall issue a written certificate stating whether or not the FEIR adequately and properly complies with MEPA and 301 CMR 11.00.

## **8.4 Circulation**

Per the requirements of the DEIR Certificate, this FEIR has been circulated as follows:

- Hard copies to each state and town agency from which the proponent will seek permits
- Electronic copies (and hard copies upon request) to all parties that submitted individual written comments, as well as links to the FEIR on Mansfield's website
- Electronic copy to the MEPA office
- Hard copies to the Mansfield and Norton libraries

Each recipient received a cover letter indicating hard copies are available upon request, noting relevant comment deadlines, and appropriate addresses for submission of comments. The Distribution List is attached as Appendix L.