

Wayland Town Center Wayland, Massachusetts

Final Environmental Impact Report



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EOEA No. 13844
February 15, 2008

EXHIBIT 48

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5.0 WASTEWATER AND WATER SUPPLY

The following sections expand on the discussion of wastewater management and water use at the proposed Wayland Town Center Project. As discussed below, the bulk of the wastewater generated by the Project will be discharged to the Town of Wayland Municipal Wastewater Treatment Plant, while water conservation measures will limit the demand for water from the Town of Wayland Water Department.

5.1 Wastewater

The majority of wastewater flows from the proposed Wayland Town Center Project will be discharged to and treated by the existing Town of Wayland Municipal Wastewater Treatment Plant (MWTP), which is expected to be replaced as described below, while a small portion of these flows will be treated by a new Title 5 septic system with on-site subsurface disposal. Wastewater of approximately 22,500 gallons per day (gpd) average flow (45,000 gpd maximum flow) from the residential development, restaurant tenants and some retail tenants will be directed to the MWTP, while wastewater of approximately 4,950 gpd average flow (9,900 gpd maximum flow) from the remaining development will be directed to the septic system.

The above combined approach to the management of Project wastewater was presented in detail in the DEIR, and arises from the Proponent's long-standing contractual commitment from the Town of Wayland to allocate to the Project a wastewater disposal capacity of 45,000 gpd maximum flow to the MWTP. That capacity will be discharged through an existing sewer connection from the existing on-site improvements to the MWTP. As alluded to by DEP in its comments on the DEIR, the Town of Wayland is currently working with DEP and the EPA to finalize the draft National Pollution Discharge Elimination System (NPDES) permit for the MWTP. While assurances from the Town of Wayland Wastewater Management District Commission (WWMDC) indicate that timely use of the existing connection to the existing MWTP for the Project flows is possible, recent discussions among the WWMDC, the Proponent and DEP suggest that all are working to facilitate permitting for and construction of a replaced MWTP (as described in more detail below).

5.1.1 *Project Wastewater Generation*

The anticipated Maximum Day wastewater flows for the Project have been determined using Title 5 State Environmental Code regulatory design flow criteria (310 CMR 15.00). Based upon those design criteria, the Wayland Town Center Project will generate a maximum daily flow of approximately 54,900 gpd. The anticipated flows from the various components of the proposed Wayland Town Center Project are presented in Table 5-1.

Table 5-1 Estimated Wastewater Generation ⁽⁴⁾

Land Use	Program Quantity	Maximum Daily Design Rate	Maximum Daily Wastewater Generation (GPD)	Average Daily Wastewater Generation (GPD) ⁽¹⁾
Wastewater Treatment Plant Discharge				
Fitness Center	1	2,000 GPD	2,000	1,000
Restaurants	500 Seats	35 GPD/Seat	17,500	8,750
Municipal Allocation ⁽²⁾	1	3,000 GPD	3,000	1,500
Cafes	45 Seats	35 GPD/Seat	1,575	788
Residential	190 Bedrooms	110 GPD/Bedroom	20,900	10,450
		Subtotal	44,975	22,488
Septic System Discharge				
Office	10,000 SF	75 GPD/1K SF	750	375
Supermarket	45,000 SF	97 GPD/ 1K SF	4,365	2,183
Retail	90,750 SF	50 GPD/1K SF	4,538	2,268
		Subtotal	9,653	4,826
		Total:	54,628 ⁽³⁾	27,314

(1) The Average Day Flow is 50% of the Maximum Day Flow per DEP guidelines.

(2) The Municipal Building allocation of 3,000 gpd is provided by the Proponent to the Town of Wayland for a future Municipal Building of undefined use.

(3) Rounded to 54,900 maximum daily flow for text discussion.

(4) Final program element to be finalized.

5.1.2 Town of Wayland Municipal Wastewater Treatment Plant (MWTP)

The MWTP is owned and operated by the Town of Wayland by and through the Wayland Wastewater Management District Commission (WWMDC). The plant presently operates under a draft NPDES Permit. As detailed below, the Proponent is working with the WWMDC and DEP to assess the current wastewater treatment plant conditions and determine the need for, and timing of, replacing the existing MWTP.

The Town of Wayland has confirmed the Proponent's long-standing contractual right to discharge to the MWTP a maximum daily flow of 45,000 gpd. Specifically, by letter dated July 2, 2007, the Town notified the Proponent that on June 28, 2007 the Town of Wayland

WWMDC voted "to confirm and reaffirm the Town's and the WWMDC contractual obligation to provide Twenty Wayland, LLC, as successor to the Wayland Business Center, LLC ("WBC"), 45,000 GPD of wastewater capacity at the Town's sewage treatment plant in accordance with the Memorandum of Agreement among WBC, the Town and the WWMDC dated August 30, 1999." A copy of this letter is attached at the end of this section of this document.

As the abutting property owner and a major customer of the MWTP, the Proponent has repeatedly and publicly confirmed its willingness to work with the WWMDC as it evaluates and implements any upgrades or replacement of the MWTP, whether before or after the Project begins its discharge.

In this regard, and as required under the Development Agreement, the Proponent has provided the WWMDC with a Wastewater Treatment Assessment Study conducted by the firm of Metcalf and Eddy, Inc. A copy of the Metcalf and Eddy study is included in Appendix C of this FEIR. The WWMDC engaged Weston & Sampson Engineers, Inc. to review and comment on the Metcalf and Eddy study, and the Proponent and Metcalf & Eddy have engaged in productive discussions with Weston & Sampson as regards each of these studies. A copy of Weston & Sampson's report is also included in Appendix C of this FEIR.

Most recently, the Proponent has facilitated a multi-party meeting at DEP to discuss the steps necessary to undertake more detailed evaluation and design of a preferred alternative for a replaced MWTP. After this initial discussion, it appears likely that at least some discharges from the Project will begin before a replacement facility is permitted, built and operational. The WWMDC has indicated it understands that it is responsible for maintaining the plant's compliance with applicable permit conditions as flows include these discharges and discharges from other customers.

Looking forward, the Proponent has committed to swap land necessary for a replacement MWTP and pay for its proportionate share based on percentage of flow to a similarly-sized facility plus an additional 7% (capped at \$175,000) of the hard and soft costs for an upgraded or replaced MWTP. The Proponent is willing to manage construction of the replacement MWTP, consistent with applicable law, as a way to accelerate the schedule for this facility becoming operational so that the time during which the Project discharges to the existing facility is minimized.

Based on recent discussions, it is anticipated that a full replacement of the MWTP will be necessary, that the new MWTP will be approximately the same size in average and maximum daily flow capacity as the existing MWTP, and that it will result in a surface discharge of treated effluent to the nearby wetlands. The ultimate location, size and design (including discharge type and location) will ultimately be determined by the WWMDC and the permitting agencies.

5.1.3 Septic System Design Requirements

Potential locations for the proposed Title 5 septic system are shown on Figure 5-1. Other locations may be identified as design and permitting efforts proceed. The preferred location of the septic system leaching field is under the parking lot east of the existing municipal wastewater treatment plant. An alternative location would be beneath the eastern side of the proposed Town Green. Soil mounding of the leaching field is not preferred and if required shall be addressed with landscaping as may be approved in the MSP Phase I Site Plan Review.

The location of the septic system in either of the above locations will not impact the site programming. The parking lot east of the wastewater treatment plant would not be impacted by the siting of the septic system in that area. Similarly, the use of the Town Green for active and passive recreational activities would not be limited if the septic system were located beneath that area. The ultimate location of the septic system will be determined during the local site plan permitting process and will be based on the ongoing assessments by Raytheon, Raytheon's environmental consultants, the Project Engineers, and the permitting agencies, including the Town of Wayland Board of Health.

5.1.4 Nitrogen Sensitive Areas (Zone II)

Section 15.214 of the Title 5 State Environmental Code sets limitations for subsurface sewage disposal from septic systems located within nitrogen sensitive areas. Per Title 5, the size of the wastewater disposal is limited to a maximum discharge rate of 440 gallons of design flow per day per acre of site area. The Wayland Town Center Project site is located within a Zone II aquifer protection district and therefore is designated as a nitrogen sensitive area. The Project site has an area of 56.9 acres; hence, the allowable septic system design flow is calculated as the sum 56.9 acres multiplied by 440 gallons per day, or 25,036 gallons per day for the Wayland Town Center site. The proposed septic system design flow is 9,900 gallons per day, which is well within the Title 5 nitrogen loading limitations for the site.

The Wayland Board of Health septic system design requirements establish standards for residential and restaurant uses that are more stringent than those under Title 5. However, since wastewater from the Project's proposed residential and restaurant uses will be directed to the MWTP, these added Wayland Board of Health design features are not applicable to the proposed septic system.

5.2 Proposed Water Use

As noted by the Secretary of Energy and Environmental Affairs in the Certificate on the DEIR, "the proposed project does not require a State agency permit associated with water usage nor does it exceed a threshold under the MEPA regulations." Nonetheless, projected