

RESPONSE TO PUBLIC COMMENTS

From January 14, 2008 to February 12, 2008, the United States Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) solicited public comments on a draft NPDES permit, developed pursuant to an application for a permit to discharge wastewater to the North Nashua River from the treatment facility at River Terrace Health Care. After a review of the comments received, EPA has made a final decision to issue the permit authorizing the discharge. The following response to public comment briefly describes and responds to the comments on the draft permit and also describes the changes made to the permit. A copy of the final permit may be obtained by writing or calling Betsy Davis, United States Environmental Protection Agency, 1 Congress Street, Suite 1100 (CMP), Boston, Massachusetts 02114-2023; Telephone (617) 918-1576. The final permit may also be found on the EPA Region 1 web site at: http://www.epa.gov/region1/npdes/permits_listing_ma.html.

Comments submitted by Martha S. Morgan, Water Programs Director, Nashua River Watershed Association on February 11, 2008.

Comment 1: Given the impaired status of the section of the Nashua River into which River Terrace discharges, the NRWA believes that maximizing phosphorus removal would indeed help to improve water quality on this reach. The NRWA believes the 1 mg/l total phosphorus limit is a step towards improved water quality. The NRWA has advocated for limits of 0.2 mg/l total phosphorus limits at publicly-owned Wastewater Treatment Plants up and down river from River Terrace Health Care, due to the impaired nature of the Nashua River in this river section. A lower total phosphorus limit is an option that should be reserved for future permits to maximize the potential for improved water quality. However, improvements in total phosphorus removal at the much larger municipal WWTPs will affect greater improvements in water quality than incremental improvements at this smaller facility at this time.

Response: Comment noted.

Comment 2: River Terrace Health Care, as a small facility, has the unique ability to control phosphorus limits at the source, and the NRWA encourages this potentially very effective means for achieving lower phosphorus discharge limits. For example, River Terrace could look towards purchasing dishwashing detergents that contain no phosphorus, if it is not doing so already.

Response: Recent upgrades to the treatment plant included a WALLAX™ system, an on-site phosphorus precipitation system that will remove total phosphorus from the effluent with a standard coagulant. The installation of this system should minimize the concentration of total phosphorus discharged to the river.

The Agencies support your suggestion that the facility minimize sources of phosphorus that contribute to increased levels in the influent.

Comment 3: In 2007, the NRWA’s Volunteer Monitoring Program collected nutrient samples at Route 190 and Langen Road, located upriver and downriver, respectively, of River Terrace. The samples were analyzed by a commercial laboratory.

The North Nashua upriver at Rte. 190:

	Ammonia	TKN	Nitrate	OP	TP
April 21	0.14	0.46	0.48	<0.006	<0.006
June 2	0.08	0.2	0.87	<0.006	0.015
June 16	0.11	0.48	1.4	0.05	0.084

The North Nashua at Langen Road:

	Ammonia	TKN	Nitrate	OP	TP
April 21	0.19	0.51	0.57	<0.006	<0.006
June 2	0.08	0.4	1.01	<0.006	0.028
June 16	0.09	0.54	2.1	0.048	0.055

While phosphorus did not increase down river, ammonia on average was slightly elevated, and nitrate and TKN are also somewhat elevated. Have calculations been performed to determine the potential for ammonia exceedences?

Response: Acute and chronic water quality criteria for ammonia are determined as a function of the instream temperature and pH of the receiving water. The criteria are most stringent when fish in the early life stage are present in the water. Based on pH and instream temperature data from the facility’s toxicity tests, the most stringent recommended criteria would be 5.67 mg/l. This is substantially greater than the ammonia levels recorded above. Given the receiving water low flow coupled with a projected dilution factor of 6734, the Agencies believe the instream ammonia concentration from River Terrace would be too small to be measurable.

Comment 4: While the NRWA has been interested in reductions in the amount of nutrients and bacteria in surface water discharges, we are also concerned about emerging environmental concerns, such as Pharmaceutical and Personal Care Products (PPCPs) and endocrine disrupting compounds (EDCs). This issue becomes more prominent with a discharge such as River Terrace, where it is possible the relative percentage of these compounds in the total discharge is much higher than for a municipal discharge.

The NRWA would like to know the EPA and MassDEP’s plans for testing requirements of these compounds in the future. Are there likely to be water quality standards that address these compounds in the near future? Are there ongoing investigations to assess the input of these compounds from a facility like River Terrace Health Care?

Response: The EPA and MassDEP have been and are currently involved in research into the effects of Pharmaceutical and Personal Care Products (PPCPs) and Endocrine Disrupting Compounds (EDCs) on the environment.

PPCPs

EPA considers PPCPs, as any product used by individuals for personal health or cosmetic reasons or used by agribusiness to enhance growth or health of livestock. PPCPs comprise a diverse collection of thousands of chemical substances, including prescription and over-the-counter therapeutic drugs, veterinary drugs, fragrances, lotions, and cosmetics.

EPA began research in 1999 with a publication of a [critical review \(PDF\)](#) article that attempted to bring together the many different aspects of PPCPs. A major objective has been to stimulate a proactive versus a reactive approach to this environmental issue.

A primary goal of the U.S. EPA's Office of Research and Development is to identify and foster investigation of potential environmental issues and concerns before they become critical ecological or human health problems. Pollution prevention (e.g., source elimination or minimization) is recommended and is preferable to remediation or restoration to minimize both public cost and human/ecological exposure.

EDCs

In December 2007, EPA published a [Federal Register Notice \(PDF\)](#) announcing the draft policies and procedures for the Endocrine Disruptor Screening Program that EPA is considering adopting.

EPA's websites for PPCPs and EDCs are www.epa.gov/ppcp and www.epa.gov/edc.

MassDEP's website is www.mass.gov/dep/toxics.

PPCPs and EDCs cover a broad range of products and can not be limited to a specific numeric criteria. However, Part 1.A.3 of the final permit prohibits the permittee from discharging any pollutant or combination of pollutants in toxic amounts and the permittee is required to conduct an annual toxicity test to measure the toxic effect of the effluent on the receiving water.

Section 101(a)(3) of the CWA specifically prohibits the discharge of toxic pollutants in toxic amounts. The Commonwealth of Massachusetts has similar narrative criteria in its water quality regulations that prohibits such discharges (see Massachusetts 314 CMR 4.05(e)).

Under Section 301(b)(1) of the CWA, discharges are subject to effluent limitations based on water quality standards. The Massachusetts Surface Water Quality Standards [314 CMR 4.05(5)(e)], include the following narrative statements and require that EPA criteria established pursuant to Section 304(a)(1) of the CWA be used as guidance for interpretation of the following narrative criteria:

“All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife. Where the State determines that a specific pollutant not otherwise listed in 314 CMR 4.00 could reasonably be expected to adversely affect existing or designated uses, the State shall use the recommended limit published by EPA pursuant to 33 U.S.C. 1251 §304(a) as the allowable receiving water concentrations for the affected waters unless a site-specific limit is established. Site specific limits, human health risk levels and permit limits will be established in accordance with 314 CMR 4.05(5)(e)(1)(2)(3)(4).”

Required reports

The table below is a list of reports that the permittee is required to submit to EPA and MassDEP at various times from the effective date through the expiration date of the permit. The table is provided as a reference for the permittee to meet the reporting requirements.

Summary of Required Report Submittals*

Required Report	Date Due	Submitted by:	Submitted to:
Discharge Monitoring Report	By the 15 th of every month	River Terrace Health Care	Environmental Protection Agency Water Technical Unit (SEW) P.O. Box 8127 Boston, MA 02114
			MassDEP Bureau of Resource Protection Central Regional Office 627 Main Street Worcester, MA 01887
			MassDEP Division of Watershed Management Surface Water Discharge Permit Program 627 Main Street, 2 nd Floor Worcester, MA 01608
Whole Effluent Toxicity Test Report (Part I.A.1)	By October 30 th of each year	River Terrace Health Care	Environmental Protection Agency Water Technical Unit (SEW) P.O. Box 8127 Boston, MA 02114

Required Report	Date Due	Submitted by:	Submitted to:
			MassDEP Division of Watershed Management Surface Water Discharge Permit Program 627 Main Street, 2 nd Floor Worcester, MA 01608
Annual Sludge Report (Part I.)	Annually by February 19	River Terrace Health Care	Environmental Protection Agency Water Technical Unit (SEW) P.O. Box 8127 Boston, MA 02114
			MassDEP Bureau of Resource Protection Central Regional Office 627 Main Street Worcester, MA 01887

* This table is a summary of the reports required to be submitted under this NPDES permit as an aid to the permittee(s). If there are any discrepancies between the permit and this summary, the permittee(s) shall follow the permit requirements.