

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 from the Renaissance Health Care Corporation for a permit to discharge wastewater to the Westfield River from the treatment facility at Renaissance Manor. 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 Andrea Donlon, Connecticut River Watershed Council, on February 12, 2008.

Comment 1: The facility lies just upstream of Robinson State Park, a park which abuts the Westfield River for more than a mile. There are public access points to the river at this park, and therefore the affected area of the river is used for recreation. The West Springfield (formerly DSI) dam is the only barrier to migratory fish between the discharge point and Long Island Sound. The Westfield River downstream of this facility has one dam with both a fish ladder and an eel ladder installed. Migratory fish therefore use this section of the Westfield River, and salmon fry are stocked each year upstream.

Response: Comment noted.

Comment #2: The EPA and MassDEP have made a point to require nitrogen testing at most NPDES-permitted facilities in the Connecticut River watershed so as to better understand the quantities and sources of nitrogen reaching the Long Island Sound downstream. We do not understand why nitrogen testing was not included in the draft permit, and we request that the final permit require it at the same frequency as phosphorus testing.

Response: Nitrogen has not been added to the final permit. The discharge is to the Westfield River, a fresh water river and the nutrient of concern with fresh waterbodies is phosphorus rather than nitrogen.

In this case, the State concluded that the discharge does not constitute a lowering of water quality, or contribute to a loss of existing water uses, and therefore is insignificant, in accordance with the antidegradation provisions of the Massachusetts Surface Water Quality Standards at 314 CMR 4.00,

In making this determination, the State reviewed the available dilution in the river during 7Q10 conditions. The receiving water 7Q10, or the 7-day mean stream low flow with 10-year recurrence interval and the treatment plant design flow are used to calculate a dilution factor. The dilution factor is used to establish water quality based effluent limits in the permit. The dilution factor of 4,475:1 was calculated for this facility. A dilution factor greater than 100:1 is the threshold the State uses to determine a de minimus discharge.

Comment #3: Nursing homes and long-term care facilities can be significant sources of pharmaceuticals and personal care products (PPCPs) (see <http://www.nesc.wvu.edu/nsfc/pdf/pipline/PLwi07.pdf>). There is growing concern that these products in wastewater can have biological effects that are not yet well understood. Additionally, the July/August edition of *New England Water and Wastewater News* reported that wastewater treatment facilities in Chicago were calling on EPA to consider regulating or banning two common antibacterial agents in soaps and personal care products, triclocarban and triclosan. Renaissance Manor may be a small but concentrated source of PPCPs being discharged into the Westfield River. We think EPA should include a requirement of a Best Management Practices (BMP) Plan to control and reduce the amount of medications, cleaning products, and antibacterial products going into the wastewater treatment system at the facility. A similar requirement is in place for NPDES permits of state fish hatcheries. We specifically recommend that the facility have a ban on disposing drugs by means of flushing them down the toilet.

Because of the unusual situation of this facility having a dedicated discharge, EPA could test PPCPs at the outfall over time and use Renaissance Manor as a demonstration facility to see if a BMP plan results in reduced chemicals entering the Westfield River over time.

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/concerns before they become critical ecological or human health problems. Pollution prevention (e.g., source elimination or minimization) is recommended and 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 two annual toxicity tests 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).”

Comments submitted by Christopher Bone, Project Manager, Tighe and Bond Inc., on February 12, 2008.

Comment # 4: The treatment equipment in Paragraph IV.C on the Fact Sheet (Page 5 of 9) includes the existing treatment process. Note that the process will be upgraded to include a 4,500 gallon flow equalization tank and the chlorine contact tank will be replaced with an ultraviolet (UV) light disinfection system. It is anticipated that construction of the upgrades will be completed by Spring 2009.

Response: Comment noted.

Comment#5: In Paragraph IV.C on the Fact Sheet (Page 5 of 9), the noted average daily flows and maximum daily flows of 7,000 gpd and 8,000 gpd, respectively, do not reflect actual plant conditions. Based on the water meter readings, actual average daily flow is approximately 9,000 gpd and maximum daily flow is approximately 11,000 gpd. The plant currently does not have an effluent flow meter, although a flow meter will be added when construction of the upgrades is completed by Spring 2009.

Response: Comment noted.

Comment #6: In the Effluent Limits Table in Part I (Page 2 of 7), we request that the average monthly flow limit be increased to 0.0125 MGD. The proposed limit of 0.01 MGD (10,000 gpd) is very close to the actual current average daily flow and less than current maximum daily flows, as noted above. The attached memorandum provides an evaluation of the

existing process tankage and equipment, indicating that the treatment facility has sufficient capacity to treat flows up to 0.0125 MGD.

Response: An increase in the average monthly flow limit has been made in the final permit to reflect the capacity of the existing wastewater treatment facility. A memorandum evaluating the treatment plants existing capacity was submitted with these comments. The memo is now part of the NPDES administrative file for this facility, and available to the public for review upon request. Given the considerable receiving water flow during 7Q10 conditions, we believe this slight flow increase will not adversely impact the instream water quality of this segment of the river.

Comment #7: Finally, Renaissance Manor of Westfield requests consideration of a permit implementation schedule that considers the planned construction activities at the wastewater treatment facility. Renaissance Manor is proceeding in good faith to meet regulatory compliance schedules and to upgrade the wastewater treatment facility as soon as possible. However, there is concern that the existing facility may not be able to consistently achieve the proposed NPDES permit limits until the planned upgrade work is completed. The following provides a brief project history and anticipated construction schedule:

- In accordance with MADEP's Consent Order ACO-WE-07-1N003, design plans for the treatment plant upgrade were submitted to MADEP on October 5, 2007.
- Supplemental information addressing MADEP comments was submitted on January 9, 2008.
- On January 10, 2008, MADEP approved the proposed design documents.
- Renaissance Manor anticipates soliciting construction bids for the wastewater treatment facility upgrade work in the near future.
- It is anticipated that construction of the upgrades will commence in Summer 2008 and be completed in Spring 2009. Some work, such as demolition of the existing chlorine contact tank, installation of the new UV disinfection system, and construction of the wooden treatment building above the UV channels, cannot be initiated until the end of the disinfection season on October 31st.

Based on this schedule, Renaissance Manor requests that issuance of the proposed NPDES permit be delayed until January 1, 2009 or that interim limits be considered until such time as the upgrade construction work is complete.

Response: A compliance schedule for completion of the facility upgrades, total residual chlorine, and e.coli has been added to the final permit. (See Section E. of the final permit.) The compliance schedule requires upgrades shall be completed eighteen months from the effective date of the permit. It also specifies the permittee be in compliance with the monthly average and maximum daily effluent limits for total residual chlorine and e.coli bacteria by April 1, 2010, the seasonal monitoring period after the upgrades are required to be completed

During the interim period, the permittee is required to report the total residual chlorine concentration and geometric mean of e.coli bacteria in the final effluent. Monitoring of the discharge shall be done in accordance with the requirements of Part I A.1. of the permit.

EPA is required to establish permit limits that satisfy the technology and water quality requirements of the federal Clean Water Act. In establishing such limits, EPA is not authorized to consider whether or not the permittee can comply with them.

If the permittee reliably achieves these effluent limits prior to the end of the eighteen month schedule, it shall notify EPA on its monthly discharge monitoring report and the final limit will go into effect on the first day of the month following notification.

Final permit flow limit

The final permit reflects a slight increase in the flow limit from the limit in the draft permit. Recent correspondence from the facility's consultants show the design of the upgrades will have the capacity to treat 0.0125 MGD. Given the instream flow during 7Q10 conditions is 80 cfs, the flow increase in the final permit will have minimal impact to the water quality of the river.

Summary of Required Report Submittals*

Required Report	Date Due	Submitted by:	Submitted to:
Discharge Monitoring Report	By the 15 th of every month	Renaissance Manor of Westfield	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	Renaissance Manor of Westfield	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	Renaissance Manor of Westfield	Environmental Protection Agency Water Technical Unit (SEW) P.O. Box 8127 Boston, MA 02114 <hr/> 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.