RESPONSE TO PUBLIC COMMENT

From October 27, 2003 to November 25, 2003, the United States Environmental Protection Agency (EPA) solicited Public Comments on a draft NPDES permit, developed pursuant to an application from the Town of Bridgewater for the discharge to Town River. After a review of the comments received, EPA has made a final decision to issue the permit authorizing the discharge. The following response to comment describes the changes and briefly describes and responds to the comments on the draft 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 (CMA), Boston, Massachusetts 02114-2023; Telephone (617) 918-1576.

A) Comments submitted by Joseph Shepherd, Massachusetts Department of Environmental Protection, on November 11, 2003

Comment #1: On pg 2, part 1, add dates (April 1 through October 31) that indicate dates the permittee is required to sample for fecal coliform in the effluent. The sampling type for fecal coliform should be grab not 24 hour composite.

Response: The additional language is included in the final permit and the type of sampling for fecal coliform was changed to a grab.

Comment #2: Add a monthly average and weekly average limit of 0.1 ml/l and a maximum daily limit of 0.3 ml/l sampling requirement for settleable solids. Samples should be taken 1/day with an additional grab sample taken during periods of peak flow. The facility has contact chambers which have a tendency to accumulate solids that may be resuspended during periods of peak flow.

Response: The final permit includes limits for settleable solids to be taken daily with an additional grab sample taken during periods of peak flow.

Comment #3: Change the monitoring requirements for TKN, Nitrate/Nitrite to 1/month November 1 through April 30, and 2/month May 1 through October 31. Sampling during the warm weather months should be completed 15 days apart. This data may be useful in determining the seasonal effects of nitrogen compounds in the effluent especially when the facility is transitioning in/out of nitrification and also may show the seasonal effects from septage loading on the facility.

Response: The TKN and nitrate/nitrite sampling frequency has been increased in the final permit to twice per month during the warm weather months. The final permit also stipulates that the second sample for TKN and nitrite/nitrate shall be taken 15 days after the first sample was collected during the warm weather months.

Comment #4: In footnote #2 is there a need to add “if the daily flows exceed 80% of the design flow for 90 consecutive days then the permittee shall submit to the permitting authorities a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans or, require an evaluation of the adequacy

of the treatment when the mass loading for any parameter, exceeds the limit for more than 2 weeks/month or for 2 or more consecutive months.

Response: Part I.A.1. f. of the draft permit requires the permittee to submit a projection of loadings up to the time when the design capacity of the treatment facility is reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans if the daily flows exceed 80% of the design flow for 90 consecutive days.

B) Comments submitted by Jonas Kazlauskas, Bridgewater Wastewater Treatment Plant, on November 24, 2003.

Comment #4: Our new permit, which is in the Public comment period, requires that a Phosphorus limit below 1.0 mg/l must be achieved. According to the draft Permit part I.A.1 b.states that " The pH of the effluent shall not be less than 6.5 nor greater than 8.3 at any time, unless these values are exceeded as a result of an approved treatment process".

To lower the Phosphorus to the permitted level, the addition of Ferric Chloride will be needed. Ferric chloride is an approved treatment process but has the possibility of lowering the pH below the 6.5 effluent limit.

My question is this, will it be a violation of the pH if the effluent value drops below 6.5 when adding Ferric chloride to remove Phosphorus? My interpretation would be no according to the permit language. Is this correct?

Response: EPA and MA DEP recognize the additional of ferric chloride as an approved method of treatment for phosphorus. The pH in the final permit has been changed to 6.0 to 8.3 to accommodate treating the effluent for phosphorus.

C) Comments submitted by Cindy Delpapa, Stream Ecologist at the Massachusetts Riverways Program on December 2, 2003.

Comment#5: The Fact Sheet points out the facility had a total residual chlorine range of 0-53 ug/l but further states the facility had no TRC violations. A maximum TRC concentration of 53 ug/l would be a violation under the existing permit. This discrepancy in the information in the Fact Sheet is not explained.

Response: The dates in the fact sheet are inconsistent. The facility reported 53 ug/l of TRC in August 2001 and you are correct, this is an exceedance of the permit limits. However, there were no exceedances between April 2002 and April 2003 as stated in the fact sheet.

Comment #6: The Fact Sheet provides detail on how the copper concentration for the effluent was calculated but does not include a discussion about the past compliance record for the facility with regards to copper. The information on Table 1 and available in the EPAs ECHO data base indicates the facility has been significantly out of compliance. Have steps been initiated to deal with the chronic noncompliance?

Response: The facility has been out consistently out of compliance with the average monthly copper limits in the existing permit. Currently, the facility is under an EPA Administrative Compliance Order with interim copper limits. As part of the order, the Town is required to submit a complete copper evaluation.

Comment #7: The draft permit shows the dissolved oxygen concentration remains at 6.0 mg/l though the Fact Sheet narrative states the DO is being dropped to 5.0 mg/l to reflect class B water quality standards. Keeping the standard at 6.0 mg/l is a sound course of action given the limited dilution available (2.2) and the elevated nutrient levels being found downstream of the effluent discharge point in the Town River, (in three out of the five months listed in the Fact Sheet, phosphorus levels were well above the EPA's recommended levels for this region and an order of magnitude above concentration found upstream of the WWTP). An excess of nutrients will lead to organic enrichment and depressed DO levels. Requiring a higher DO concentration in the effluent would help mitigate this problem to an extent. The facility is currently meeting the higher standard of 6 mg/l and should be asked to continue at this higher level to help offset the impacts of the nutrient loading to the Town River from the facility's discharge.

Response: The dissolved oxygen limit in the permit is based on State Water Standards. DO for Class B warm water fisheries is 5.0 mg/l. Since the Town River is a warm water fishery the final permit has been changed to reflect Class B standards..

Comment #8: While the Town River is a fresh water system it is tributary to the Taunton River, Mount Hope Bay and Narragansett Bay. The estuarine sections of this system are nitrogen sensitive embayments and this sensitivity should be considered when developing nutrient criteria for this facility. The draft permit has requirements for monthly monitoring of TKN and nitrate/nitrite. This requirement will add valuable information to the work being done to reduce nitrogen and phosphorus loadings to the Taunton River and Narragansett Bay systems. Should future work indicate the need to reduce point and nonpoint sources of nutrients to meet TMDL allocation or other goals this information will help to make management decisions. More frequent summer monitoring to reflect the once per week monitoring of phosphorus and ammonia would more thoroughly characterize the loads of nitrogen compounds from the facility. Weekly summer monitoring should be considered given the sensitivity of the downstream waters.

Response: The monitoring frequency for TKN and nitrite/nitrate during the warm weather months has been increased in the final permit. See Response to Comment # 3.

Effluent limitations and/or monitoring requirements in the final permit will not necessarily be maintained in subsequent permits. The data collected for TKN and nitrite/nitrate will be re-evaluated when this permit expires and EPA and MA DEP will have better understanding of the nutrient impacts from the Bridgewater WWTP at that time.

Comment #9: The start of seasonal limits for phosphorus and ammonia are not identical as is typical with many NPDES municipal permits. Is there a rationale for the delay of one month before the facility must meet an ammonia limit? Given the toxicity of ammonia to aquatic organisms and the early spring plankton blooms and increased presence of larval forms of

aquatic and other organisms makes a compelling argument for an earlier ammonia limit.

Response: The ammonia limits in the final permit have been changed to coincide with the warm weather phosphorus limit.

Comment #10: The staff at Riverways does not fully agree with the rationale used to establish a phosphorus concentration above the recommended levels established by the EPA. While there may not have been easily observable signs of eutrophication upon visual inspection of the Town River, there may be more subtle impacts to the aquatic community due to the considerable increase in total phosphorus levels below the WWTP when compared to concentrations found above the discharge, (as reported on page 5 of the Fact Sheet). Without a study of the aquatic community and targeted water quality assessment, the status of the waterway downstream of the discharge is not definitive. Also, the Town River is part of the larger Taunton River system which has problems with excess nutrient loadings. All of this should be investigated before dismissing the EPA recommended criteria for phosphorus; however it is recognized the state does not have nutrient criteria in place. Until water quality standards are set or TMDL or other waste load allocations are completed for this basin, we understand the difficulty of establishing a defensible maximum nutrient concentration.

Response: The Taunton River system is on the State's 303(d) list for organic enrichment and low dissolved oxygen from the Berkley Street in Dighton to the Somerset boundary, a considerable distance from the point of discharge at the treatment plant. The Town River, although a tributary to the Taunton River, is not listed as an impaired water in the Commonwealth. The phosphorus limit in the final permit will at a minimum, provide EPA and MA DEP useful data to further assess the need for more stringent phosphorus limits.

A more stringent phosphorus limit is likely in subsequent NPDES permit when further evaluations have been completed such as a TMDL or a study of the aquatic community that justifies a more stringent limit in the permit.