

NEPONSET RIVER WATERSHED ASSOCIATION

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May 24, 2004

Mr. Arthur Johnson
Massachusetts Department of Environmental Protection
Division of Watershed Management
627 Main Street, Second Floor
Worcester, MA 01608

Re: Proposed Massachusetts Year 2004 Integrated List of Waters

Dear Mr. Johnson:

As you know, the Neponset River Watershed Association (NepRWA) has conducted significant sampling of stream segments within the Neponset River Watershed. NepRWA data was cited extensively in your "Boston Harbor 1999 Water Quality Assessment Report", published in October, 2002. Data from NepRWA sampling done as late as 2001 was used in that Report.

We have now analyzed the results of our ***sampling from 2001 through March, 2003***, most of which DEP has not yet seen (*we have attached a copy of the Draft CMWN Final Report 2003 which contains full sampling results for each monitored stream segment*). By comparing these sampling results to your "Proposed listing of the condition of Massachusetts' water pursuant to Sections 303(d) and 305(b) of the Clean Water Act", we have identified a number of stream segments that we feel should be added to either Category 4a Waters ("TMDL is Completed") or Category 5 Waters ("Waters requiring a TMDL").

Proposed additions to Category 4a Waters (TMDL is completed for pathogens) based on MA Surface Water Quality Standard of 200 cfu/100 mL and on NepRWA sampling from 2001 through March, 2003:

- Pecunit Brook. NepRWA sampling for fecal coliform found wet weather problems rendering the segment unswimmable more than 25% of the time and dry weather problems rendering it unswimmable more than 10% of the time.
- Steep Hill Brook. NepRWA sampling for fecal coliform found wet weather problems rendering the segment unswimmable more than 25% of the time.
- Spring Brook. NepRWA sampling for fecal coliform found wet weather problems rendering the segment unswimmable more than 10% of the time.

- Beaver Brook. NepRWA sampling for fecal coliform found *dry* weather problems rendering the segment unswimmable more than 10% of the time.
- Tributary to Massapoag Brook (segment 73-31). The DEP “Boston Harbor 1999 Water Quality Assessment Report” found that this segment supported primary and secondary contact recreation. However, based on EPA’s reaction to DEPs methodology for assessing wet weather pathogen problems in the 1999 Assessment, Rick McVoy of your office recently told us that DEP considers this segment as impaired for primary contact recreation due to wet weather fecal coliform problems.

Proposed additions to Category 5 Waters (Waters requiring a TMDL) based on NepRWA sampling from 2001 through March, 2003:

- *Pollutant Needing TMDL: Nutrients.* In evaluating the stream segments listed below for nutrients, NepRWA considered the average percentage of samples where we found Total Nitrogen at greater than 0.1 mg/L and Orthophosphates at more than 0.08 mg/L; Orthophosphates from 0.01 to 0.08 mg/L were also factored in by assuming that two samples in this range were equal to one sample over 0.08 mg/L. These parameters are based on water quality thresholds in Dunne, Thomas and Luna B. Leopold, “Water in Environmental Planning,” 1978, WH Freeman & Company, New York.
 - Purgatory Brook Nutrient problems found 59% of the time.
 - Steep Hill Brook Nutrient problems found 58% of the time (DEPs “1999 Boston Harbor Watershed Assessment” also cited nutrients as a “known cause” for rating this brook as only partially supporting aquatic life).
 - Pine Tree Brook Nutrient problems found 58% of the time.
 - Traphole Brook Nutrient problems found 50% of the time.
 - Ponkapoag Brook Nutrient problems found 50% of the time.
 - Pecunit Brook Nutrient problems found 48% of the time.
 - Lower mainstem Nutrient problems found 48% of the time.
 - Mill Brook Nutrient problems found 48% of the time.
 - Beaver Br. Nutrient problems found 48% of the time.
 - Neponset Estuary Nutrient problems found 46% of the time.
 - Mill Brook Nutrient problems found 42% of the time.
 - Middle mainstem Nutrient problems found 36% of the time.
 - Hawes Brook Nutrient problems found 30% of the time.
 - East Branch Nutrient problems found 29% of the time.
 - Spring Brook Nutrient problems found 23% of the time.
 - School Meadow Nutrient problems found 22% of the time.
 - Mine Brook Nutrient problems found 19% of the time.
 - Beaver Meadow Nutrient problems found 18% of the time.

- *Pollutant Needing TMDL: Flow Alterations.* Based on NepRWA's visual monitoring of low flows, we feel the following segments should be added to Category 5:
 - Massapoag Brook (the DEP "1999 Boston Harbor Watershed Assessment" also listed flow alterations as a "suspected cause" for its partial support rating for aquatic life, and DEPs 1999 Technical Memorandum, "Boston Harbor Watershed 1999 Biological Assessment" by John Fiorentino, noted an overabundance of fine particulate organic matter, which is often related to shallow, slow flowing water.)
 - School Meadow Brook
 - Spring Brook
 - Steep Hill Brook (DEPs 1999 Technical Memorandum, "Boston Harbor Watershed 1999 Biological Assessment" by John Fiorentino, also noted an overabundance of fine particulate organic matter, which is often related to shallow, slow flowing water.)

- *Pollutant Needing TMDL: Metals.* For the reasons stated below, NepRWA feels the following segments should be added to Category 5:
 - Massapoag Lake: On MA DPH's "Freshwater Fish Consumption Advisory List - April 2004" for mercury.

- *Pollutant Needing TMDL: Siltation.* Based on NepRWAs visual monitoring of siltation, we feel the following segments should be added to Category 5:
 - Traphole Brook. Severe sedimentation in lower reach (the DEP "1999 Boston Harbor Watershed Assessment" also put the Brook on "Alert Status" due to sediment deposition (as well as high levels of phosphorus).
 - Pequit Brook.
 - Pine Tree Brook.
 - Beaver Meadow Brook. Sedimentation in upper reaches.

- *Pollutant Needing TMDL: Color and Odors.* NepRWA feels the following segments should be added to Category 5:
 - Hawes Brook. Listed in DEP 1999 Boston Harbor Assessment as partially supporting aesthetic uses due to odors
 - Upper Mainstem. Past inspections at the NPDES discharge point for Certainteed Roofing have indicated color problems.

- *Pollutant Needing TMDL: Other Habitat Alterations.* Based on visual observations, NepRWA feels the following segment should be added to Category 5:
 - Steep Hill Brook Channelization, lack of riparian buffer & dumping by neighbors.

Thank you very much for your attention on this matter.

Sincerely yours,

Steve Pearlman
Water Resource Analyst

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