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October 16, 2006

BY HAND

U.S. Environmental Protection Agency
Clerk of the Board, Environmental Appeals Board
1341 G Street, N.W., Suite 600
Washington, D.C. 20005

Re: Northbridge (Massachusetts) Wastewater Treatment Plant
NPDES Permit No. MA0100722

Dear Sir/Madam:

Enclosed herewith, please find one (1) original and five (5) copies of the Town of Scituate's Petition for Review for filing and consideration.

Please contact me with any questions that you may have.

Very truly yours,

Jeffrey T. Blake

JTB/jmb
Enc.
cc: Board of Selectmen
Town Administrator
DPW Director
John Gall, CDM
Tonia Bandrowicz, Esq., U.S. Environmental Protection Agency
Glen Haas, MA Department of Environmental Protection

295759/NBRI/0115

ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

NPDES Appeal No. _____

In re:

NORTHBRIDGE WASTEWATER TREATMENT PLANT

NPDES Permit No. MA0100722

PETITION FOR REVIEW

## I. INTRODUCTION

Now come the Town of Northbridge and the Northbridge Wastewater Treatment Plant ("the Town" or "Northbridge") and, pursuant to 40 CFR 124.19(a) hereby petition for review of National Pollutant Discharge Elimination System ("NPDES") Permit No. MA0100722 (the "New Permit") dated September 13, 2006. (A copy of the Permit and the cover letter accompanying the same are attached hereto as Exhibit A). The Permit authorizes the Town to discharge to an unnamed tributary to the Blackstone River.

As discussed in greater detail below, the Town asserts that certain conditions of the New Permit are based upon clearly erroneous findings of fact and errors of law and that since the data relied upon by the EPA in determining certain nutrient limits is so outdated and does not account for recent upgrades and permit adjustments to municipalities discharging to the Blackstone River this Board should grant review. Further, review of this matter is particularly apt where, as here, the EPA has acted on outdated information with full knowledge of the fact that updated information with respect the water quality of the Blackstone River is currently being developed.

Specifically, Northbridge contends that the Board should grant review because:

1) EPA has based certain conditions of the New Permit on outdated studies of the Blackstone River;
2) EPA has incorrectly interpreted the Commonwealth's Water Quality Standards;
3) The phosphorus limits contained in the New Permit are arbitrary and capricious, are not based on reliable factual data, and are based on clearly erroneous conclusions of law;
4) The condition imposing a winter level of phosphorus is not supported by the record;
5) The fact that there is no record evidence to support more stringent phosphorus limits and compliance with the New Permit's more stringent levels will cost the Town $3,000,000 represents an important policy consideration that warrants review by the Board; and
6) EPA failed to comply with 40 CFR 124.14(4)(b) when it imposed a year round disinfection condition in the final permit.

For further reasons therefor, the Petitioner relies upon the following.

## II. RELEVANT FACTS

1. The Town of Northbridge is a political subdivision of the Commonwealth of Massachusetts.

2. The Town of Northbridge is the owner and operator of a certain wastewater disposal plant known as the Northbridge Wastewater Treatment Plant ("NWTP"). The NWTP has an address of 644 Providence Road, Northbridge, Massachusetts.

3. Pursuant to the Federal Clean Water Act, the Town is authorized to discharge from the NWTP to an unnamed tributary of the Blackstone River pursuant to the terms of an NPDES permit issued on September 30, 1999 ("the 1999 Permit"). (A copy of the 1999 Permit is attached hereto as Exhibit B).

4. The 1999 Permit is still in effect since the Town has applied for its renewal and that process is still ongoing.

5. The Town submitted a permit renewal application to the Environmental Protection Agency ("EPA") for the reissuance of the 1999 Permit to discharge treated domestic sewerage effluent from Outfall 001 to an unnamed tributary of the Blackstone River.

6. From November 16, 2005 to December 15, 2005, the EPA and the Massachusetts Department of Environmental Protection ("DEP") solicited public comments on a draft NPDES permit developed pursuant to the permit renewal application from the Town. (A copy of the draft permit is attached hereto as Exhibit C).

7. The engineering firm of Camp, Dresser and McKee submitted comments on behalf of the Town. (The Comments and EPA's response thereto are attached to the New Permit at Exhibit A and at Exhibit D attached hereto).

8. The following additional parties submitted comments as well: Cindy Delpapa of the Riverways Program of the Massachusetts Department of Fisherise, Wildlife and Environmental Law Enforcement; Angelo Liberti of the Rhode Island Department of Environmental Management; and Marci Cole of Save the Bay. (See Ex. A).

9. On September 13, 2006 the EPA responded to Comments on the draft permit and issued NPDES Permit No. MA0100722, the New Permit, to the Town.

10. The New Permit did not address to the satisfaction of the Town, any of the comments submitted by the Town's consultant. Indeed, based on review of the conditions contained in the New Permit and EPA's responses to the Town's Comments on said proposed conditions, the Town has determined that the factual and legal basis cited by the EPA for its issuance of certain conditions of the New Permit are clearly

erroneous and in some cases based on significant misinterpretations of the Massachusetts Water Quality Standards.

11. Moreover, the only substantive change to the draft permit was in response to comments by the Rhode Island Department of Environmental Management which changes imposed a significant burden on the Town by requiring year round disinfectant of the discharge. Pursuant to 40 CFR §124.14(4)(b), the Town should have been allowed to comment on any concerns it may have with this significant change prior to the issuance of the New Permit.

12. The Town appeals the New Permit with respect to the following new conditions/changes contained in the New Permit;

a. the more stringent limit on the discharge of phosphorus, including the imposition of a winter time limit on the discharge of phosphorus; and

b. the requirement that the Town engage in year disinfection.

## III. ARGUMENT

### A. STANDARD OF REVIEW

In proceedings under 40 C.F.R. §124.19(a), the Environmental Appeals Board ("the Board" or "EAB") should review EPA's decision on an NPDES permit when the petition for review establishes that the permit condition in question is based on a clearly erroneous finding of fact or conclusion of law, or involves an exercise of discretion or an important policy consideration that the Board determines warrants review. 40 C.F.R. §124.19(a); In re: Gov't of D.C. Mun. Separate Storm Sewer Sys., 10 E.A.D. 323, 333 (EAB 2000).

In this matter, as outlined above and discussed in greater detail below, numerous conditions of the New Permit are based on clearly erroneous findings of fact and conclusions of law and implicate significant policy considerations; therefore, the Board should grant the Town's request for review.

B. The phosphorus limit in the New Permit is based on clearly erroneous findings of fact and conclusions of law

The 1999 Permit issued to the Town required the NWTP to meet an effluent phosphorus limit of 1.0mg/l as a monthly average between April and October of each year. (See Ex. B). This limit was derived from a Wasteload Allocation Study which established the effluent discharge limits for point sources in the Blackstone River watershed that ensured compliance with water quality standards. (See Wasteload Allocation Study at p. 1. A copy of the Wasteload Allocation Study ("the WLA") is attached hereto as Exhibit E). This WLA addresses dissolved oxygen (DO) and eutrophication concerns in the Blackstone River. Id. The pollutants targeted in the WLA included biochemical oxygen demand, ammonia, and phoshorus. Id.

As a result of the findings published in the WLA, in approximately 1999, five of municipalities discharging to the Blackstone River—Woonsocket, RI, Grafton, Northbridge, Upper Blackstone Water Pollution Abatement District, and Uxbridge—had there permit levels for phosphorus adjusted through the issuance of NPDES permits and one facility, Millbury, was decommissioned. Some of the facilities had the requisite capacity to treat the phosphorus levels of the 1999 permits without any new construction; however, three facilities—Woonsocket, Northbridge and Upper Blackstone Water Pollution Abatement District ("UBWPAD")—were required to construct upgrades to meet the more stringent permit requirements. As a result of negotiations over its circa

1999 permit, the UBWPAD entered into a consent agreement that gives them until August, 2009 to comply with the phosphorus limits contained therein. Both Woonsocket and Northbridge's upgraded plants went online in 2002. Northbridge's upgraded plant, which cost approximately $9,000,000 went online on December 18, 2002.

Notwithstanding the extensive upgrades and phosphorus limit adjustments to the numerous plants discharging into the Blackstone River and the obvious increased water quality associated with those upgrades and permit adjustments, the EPA, without any analysis as to the effect of the recent plant upgrades and permit limit level adjustments for phosphorus, issued the New Permit to the Town containing phosphorus limits, *inter alia*, that are significantly more stringent than the limits in the 1999 Permit. (Compare Ex. A and Ex. B). Specifically, under the New Permit the Town is required to meet effluent phosphorus limits of 0.2 mg/l as opposed to the 1999 Permit limit of 1.0mg/l.

In the Fact Sheet and response to comments for the New Permit, the EPA justifies the new limit as follows: 1) the limit is required to meet the Massachusetts Water Quality Standards as set forth in 314 CMR 4.00; and 2) the limit is necessary to prevent/control eutrophication in the unnamed tributary of the Blackstone River to which the NWTP discharges. (See Ex. A). For the detailed reasons set forth below, the significantly more stringent conditions contained in the New Permit are based on clearly erroneous findings of fact and conclusions of law thus warranting review by this Board.

1. EPA incorrectly interpreted the Commonwealth's Water Quality Standards

In the Fact Sheet, EPA states that "[t]he criteria for nutrients are found at 314 CMR §4.04(5), as part of the state's antidegradation provisions. This section requires that 'any existing point source discharge containing nutrients in concentrations which

encourage eutrophication or growth of weeds or algae shall be provided with the highest and best practicable treatment to remove such nutrients." (See Ex. A Fact Sheet p. 6). Mistakenly believing that 314 CMR §4.04(5) required the highest and best practical treatment to remove phosphorus from the Town's discharge, EPA, proposed new more stringent phosphorus limits.

Comments submitted by the Town in response to the draft permit state, in summary, that the EPA erroneously interpreted the Massachusetts Water Quality Standard for phosphorous as applying to a stream that does not flow into either a lake or pond. (See Ex. A at Comments A1-A3, A5-A9). In its response to the Town's Comments, EPA asserts, citing the italicized sentence in 314 CMR § 4.04(5) as set forth below, that the Commonwealth's Water Quality Standards require the imposition of Highest and Best Practical Treatment for phosphorus for any discharge, not just discharges to lakes and ponds as justification for the increase. (Ex. A at Response A5).

> The relevant language of the current water quality standards is as follows:
>
> (5) Control of Eutrophication. From and after the date 314 CMR 4.00 become effective there shall be no new or increased point source discharge of nutrients, primarily phosphorus and nitrogen, directly to lakes and ponds. There shall be no new or increased point source discharge to tributaries of lakes or ponds that would encourage cultural eutrophication or the growth of weeds or algae in these lakes or ponds. *Any existing point source discharge containing nutrients in concentrations which encourage eutrophication or growth of weeds or algae shall be provided with the highest and best practical treatment to remove such nutrients*. Activities which result in the nonpoint source discharge of nutrients to lakes and ponds shall be provided with all reasonable best management practices for nonpoint source control. 314 CMR 4.04(5) (emphasis supplied).

The entire above quoted paragraph discusses the control of eutrophication in lakes and ponds and tributaries thereof. The Town, however, does not discharge to a lake, pond or tributary thereof. Rather the Town's discharge flows thorough several manmade

impoundments, including Rice City Pond,[1] then into the Blackstone River which in turn flows into the Narragansett Bay. Because the discharge from the MWTP is not to a lake, pond or tributary thereof, 314 CMR § 4.04(5) is inapplicable and certainly does not provide an adequate legal basis for increasing the phosphorus limits in the New Permit.

Although EPA does not claim that the Town's discharge is to a lake or pond, notwithstanding the plain language of the above quoted regulation, EPA, in Response A5, incorrectly asserts that regardless of the context of the paragraph, the italicized sentence applies to all discharges, not just those to lakes and ponds and tributaries thereof. This strained interpretation of 314 CMR § 4.04(5) is a clearly erroneous conclusion of law.

Contrary to EPA's position, it is well-settled that "the plain meaning of statutory language, as derived from the whole of the statute, including its overall policy and purpose, controls." Rolland v. Romney, 318 F.3d 42, 48 (1st Cir. 2003)(emphasis supplied). Thus, "[r]ather than culling selected words [or sentences] from a statute's text and inserting them in an antiseptic laboratory setting, [an agency] engaged in the task of statutory interpretation must examine the statute as a whole, giving due weight to design, structure and purpose, as well as to aggregate language." Cable Vision of Boston, Inc. v. Public Improvement Commission of Boston, 184 F.3d 88, 101 (1st Cir. 1999)(quoting O'Connell v. Shalala, 79 F.3d 170, 178 (1st Cir. 1996).

In this matter, the EPA cherry picked a single sentence and applied it out of

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[1] Because Rice City Pond is a manmade impoundment with flowing water it is not considered a lake or pond by either the MADEP or the EPA. 314 CMR 4.02 defines a pond as follows:

> Lakes and Ponds - Waterbodies situated in a topographic depression or a dammed river channel with water usually not flowing and an area greater than 20 acres; or less than 20 acres if the water depth in the deepest part of the basin exceeds two meters (6.6 feet) or if a discrete shoreline makes up all or part of the boundary. Exceptions include impervious man-made retention basins; river impoundments with flowing water; and harbors and bays which have year round navigable access to the ocean. [emphasis supplied].

context so as to achieve the result it desired. When read as a whole, it is clear that 314 CMR 4.04(5) was intended to control eutrophication in lakes, ponds and tributaries thereof, and there is no language in said section to suggest that it is intended to apply to rivers and streams (other than tributaries to lakes and ponds).

Indeed, as the Town pointed out in its comments (Ex. A pp. 1-3), the DEP has acknowledged that the existing language only applies to lakes, ponds and tributaries thereof. The Department has promulgated new, proposed water quality standards which are not yet adopted and approved by EPA. In describing these new standards, the Department clearly states as follows:

> Nutrients/Control of Eutrophication 314 CMR 4.05(5)(c): Cultural eutrophication now is addressed in the narrative nutrient criteria. *The resulting provision is expanded to ensure that all surface waters, not just lakes and ponds, are protected from excessive nutrients.* (See Massachusetts Department of Environmental Protection, Proposed Water Quality Standards Improvements, attached hereto as Exhibit F)(emphasis supplied).

Obviously, an agency's interpretation of regulations it is authorized to promulgate is given great deference. South Shore Hosp., Inc. v. Thompson, 308 F.3d 91, 97 (1st Cir.2002) ("Courts withhold such deference only when the agency's interpretation of its regulation is plainly erroneous or inconsistent with its language"); see also Bowles v. Seminole Rock & Sand Co., 325 U.S. 410, 414 (1945)("[w]here Congress has entrusted rulemaking and administrative authority to an agency, courts normally accord the agency particular deference in respect to the interpretation of regulations promulgated under that authority). Here, DEP has acknowledged that the existing regulations apply only to lakes, ponds, and tributaries thereof not to discharges to streams. Accordingly, EPA's position that 314 CMR 4.04(5) applies to all sources is based on a clearly erroneous conclusion of law.

Because the existing water quality standards cited by the EPA do not apply to the Northbridge discharge, EPA's reliance on 314 CMR § 4.04(5) as a basis for establishing a more stringent phosphorus limit is erroneous as a matter of law, therefore, the phosphorus limit of the New Permit should be stricken, and the limit set forth in the 1999 Permit should remain in effect.

2. The Phosphorus limit in the New Permit is Arbitrary and Capricious

In the Fact Sheet and response to comments for the New Permit, the EPA also justifies the new limits claiming that the limits are necessary to prevent/control eutrophication in the unnamed tributary of the Blackstone River to which the NWTP discharges. (See Ex. A). The Town, in its Comments to the draft permit emphasized that the WLA conducted on the Blackstone River watershed that served as the basis for the 1999 Permit limits has not been updated, therefore, there is no new information regarding the effect of the phosphorus discharge that warrants the sudden and dramatic change from the prior phosphorus limits of the 1999 Permit and the drastic changes to the 1999 Permit limits do not take into account the work done on phosphorus control by the EPA, DEP, RIDEM and others. (See Ex. A at Comments A1-A3, A5-A9).

In response to the Town's Comments, EPA stated that most reaches of the Blackstone River suffer from phosphorus driven eutrophication, referencing information presented in the Fact Sheet. (Ex. A). EPA's assessment of cultural eutrophication in the Blackstone River is clearly erroneous since its assessment relies upon outdated irrelevant studies of the receiving waters and is unsupported by any site specific data available for those waters. This is especially egregious since the assessments relied upon were conducted prior to the numerous plant upgrades constructed in response to the WLA of

which the EPA was aware. As predicted by the WLA, the water quality will be better than when the WLA was conducted, thus any reliance on said assessments that fail to take into account the significant work done to insure increased water quality as a basis for more stringent permit conditions is arbitrary and capricious. (See supra, pp. 4-5).

Furthermore, a watershed action plan, developed in 2004 under the auspices of Massachusetts's EOEA, with advisory committee members from Massachusetts DEP, EPA and the Rhode Island Department of Environmental Management, has recognized that further study of the Blackstone River is necessary. (See 2004 Blackstone River Watershed Five-Year Action Plan attached hereto as Exhibit I) ("Watershed Action Plan"). This document cited the development of bi-state water quality and water quantity and bi-state hydrogeologic simulation model as the top priorities of the water quality improvement and protection and the water quantity streamflow protection and management planning categories. These categories were, respectively, the two most important planning categories considered by the advisory committee. (See id. at pp. 14-17).

Recognizing the importance of these recommendations to fully and adequately understand the Blackstone River, and to plan for its proper management, The United States Geological Survey (USGS) and the Upper Blackstone Water Pollution Abatement District (UBWPAD) have commenced the development of the models suggested by Watershed Action Plan. The USGS is undertaking the hydrogeologic simulation model in concert with the Rhode Island Water Resources Board, and with cooperation from the UBWPAD. The UBWPAD is undertaking the development of the HSPF watershed scale model (building on the HSPF quantity model developed by USGS), including the conduct

of additional wet and dry weather sampling, the installation of continuous recording analytical devices and the integration of the extensive volunteer data sets into the program. (The scopes of work for the studies being undertaken by the UBWPAD are attached hereto as Exhibit J). Significant outputs from these models are expected in the summer of 2007. (See Ex. J). With the release of these models, the EPA will have a better understanding of the affect of the various plant upgrades and permit adjustments on the water quality of the Blackstone River and thus, and adequate factual basis for setting permit limits. Until the release of the modeling information, EPA's reliance on outdated studies for imposing stricter permit limits lacks an adequate factual basis and EPA's conclusion that the Blackstone River continues to suffer from cultural eutrophication is clearly erroneous.

Finally, the Fact Sheet discusses the presence of various forms of rooted vegetation as well as levels of algae as measured by chlorophyll a. (See Ex. A. Fact Sheet at p. 7). However, those assessments relied on data from 1991, 2001 and 2002, a period when none of the permittees discharging to the Blackstone River had finished construction of facilities necessary to meet the limits included in their respective circa 1999 permits. Indeed, the Northbridge and Woonsocket treatment plants did not go on line until 2002. It is thus not surprising that the Blackstone River exhibited these conditions, since these are the same conditions that compelled the conduct of the earlier wasteload allocation studies that formed the basis for the 1999 permits.

Rather than relying on irrelevant outdated data, EPA should have looked to its wasteload allocation studies to determine if there is evidence of cultural eutrophication once the dischargers have complied with the terms of the 1999 permits. Although it is

correct that a primary driver for the previous wasteload allocation study was compliance with dissolved oxygen standards, the studies included evaluations of chlorophyll a, and throughout the wasteload allocation document the level of chlorophyll a resulting from different treatment strategies is reported. Levels of chlorophyll a are commonly used as an indictor of the trophic status of waterbodies, and have been used by EPA Region 1 to assess the degree of eutrophication of receiving waters. (See Fact Sheet for permit NH0100790, Keene, NH at p. 16 ("Keene Permit") attached hereto as Exhibit G). The reference cited in the Keene Permit suggests that receiving waters would be considered eutrophic at mean (average) chlorophyll a levels ranging from 6.7 to 31 ug/l, and that levels below 4 ug/l are oligotrophic.[2] (See Ex. G at pp. 12-17). Although the wasteload allocation analyses conducted on the Blackstone River are for worst case low flow conditions (and thus do not represent average conditions), they clearly show that levels of chlorophyll a in critical Massachusetts impoundments are typically less than 2 to 3 ug/l. (See Ex. E). Chlorophyll a levels this low are not indicative of eutrophic conditions, and cannot be considered to represent cultural eutrophication. For this reason, the phosphorus level included in the 199 Permit cannot be considered as contributing to cultural eutrophication, as EPA erroneously asserts based on outdated data.

Moreover, the same analyses show that the level of treatment provided to the Northbridge discharge makes no material difference in the level of chlorophyll a in the receiving waters. The estimated chlorophyll a concentrations in Rice City Pond, immediately downstream of the Northbridge treatment plant do not change regardless of the concentration of phosphorus in the Northbridge discharge. (Compare scenario 6 and

[2] Webster's dictionary defines oligotrophic as follows: "characterized by a low accumulation of dissolved nutrient salts, supporting but a sparse growth of algae and other organisms, and having a high oxygen content owing to the low organic content".

scenario 7 from Table VIII of the WLA at Ex. E). This being the case, the Northbridge discharge cannot be said to contribute to cultural eutrophication, since the most appropriate measure of cultural eutrophication (chlorophyll a concentration) is insensitive to the concentration in Northbridge's discharge.

Therefore, not only are the New Permit conditions based on outdated and irrelevant assessments but the EPA has erroneously concluded that compliance will have an affect on the cultural eutrophication of the Blackstone River. To the contrary, the factual evidence supports the opposite conclusion, i.e., cultural eutrophication is insensitive to the concentration in Northbridge's current discharge. Thus EPA's conclusion and subsequent issuance of the New Permit with more stringent permit limits is based on clearly erroneous findings of fact.

C. The condition imposing a winter level of 1.0 mg/l Total Phosphorus is not supported in the record

The EPA has imposed, in addition to the seasonal total phosphorus limits of 0.2 mg/l, a total phosphorus limit of 1.0 mg/l and an ortho-phosphorus monitory requirement during November through March. (See Ex. A. Fact Sheet p. 8). EPA has reasoned that this additional permit limit is necessary to ensure that the higher levels of phosphorus discharged in the winter period do not result in the accumulation of phosphorous in sediment.

The Town in its Comment A9 questioned the apparent contradiction between statements contained in the Fact Sheet and the EPA's subsequent issuance of the winter time limits and the EPA's total lack of any data supporting a winter time limit. Specifically, EPA claims that effluent phosphorus loads in the winter can contain a

significant quantity of particulate phosphorus (Response to comment A9).[3] Thus, the EPA has imposed a winter level for total phosphorus of 1.0/mg/l. This new limit directly contradicts the statement in the Fact Sheet that says "EPA expects the vast majority of the phosphorus discharged in this period would be in the form of ortho-phosphorus, or dissolved fraction of phosphorus" and finds absolutely no factual support in the record and therefore is clearly erroneous. (See Ex. A. Fact Sheet, p. 8). EPA presents no data or authoritative source to support either of these positions.

Moreover, in an attempt to justify these winter limits, EPA engages in rank speculation of the fate of particulate phosphorus discharged in the winter when it asserts "particulate phosphorus is more likely to settle in downstream impoundments and then recycle into the water column, contributing to algae blooms" (Response to Comment A9). EPA has no basis for this statement; it has conducted no analysis of the propensity of solids discharged into the Blackstone River in the winter time to settle in impoundments, has made no evaluation of the potential that the conditions necessary to induce phosphorus recycling from bottom sediments exist, in the summer, and has not quantified the degree to which this may contribute to algal blooms, if at all.

It is particularly disturbing that EPA takes this position for this river system because the Agency's own Science Advisory Board ("SAB") had cautioned EPA that the studies it had conducted on the Blackstone River

> "will not provide an adequate scientific basis for some of the management decisions that are under consideration for the Blackstone River-Narragansett Bay

[3] The Fact Sheet states in relevant part that the "EPA expects the vast majority of the phosphours discharged during this period would be in the form of ortho-phosphorus, or dissolved fraction of phosphorus. The dissolved fraction of phosphorus is believed to pass though the system given the lack of plant growth during the winter period, whereas the particulate phosphorus, or the fraction which is remaining after subtracting out the dissolved fraction from the total phosphorus concentration, would tend to stay in the system and be taken up when water temperatures warm up in the spring." (Ex. A p. 8).

system. For example, load allocation decisions will require an improved understanding of the relative contributions of point and non-point sources within the watershed; selection of remedial options for the river (including possible removal of some of the dams) will require a better understanding of the cycling of metals and other contaminants within the impoundments, as well as watershed sources of such contaminants; and management decisions to control nutrient loadings to Narragansett Bay would be improved by a more rigorous approach to forecasting pollutant loads from the Blackstone River to the Bay." (See EPA-SAB-EPEC-98-011, Evaluation of the Blackstone River Initiative, p. 2 attached hereto as Exhibit H).

The SAB further describes the deficiencies of the Blackstone River Initiative ("BRI")

with respect to winter loads in particular as follows

> The BRI study only examined wet and dry weather conditions in the summer. This means that the processes and rates of materials fluxes occurring under normal winter low flow, wet weather flow, winter storm, and snow melt conditions are not captured by the BRI-based estimates. As one example of the problem this causes, consider that nitrogen inputs differ considerably in the winter, both because the human-engineered system for nitrification is turned off during the winter (thereby allowing ammonia inputs rather than nitrates) and because the natural denitrification processes are suppressed in the winter. Another example is the pulse of material fluxes that would be expected to occur following melt of major snow events. The contributions from such winter-based loadings are simply unknown from the BRI study. (Id. at 31).

The SAB further suggested how these deficiencies could be rectified;

> the Committee recommends the following approach:
>
> a) A watershed model (e.g., HSPF) is needed to provide time-variable loads (flow and concentrations) from the watershed to the river during the entire year.
>
> b) A time-variable receiving water model is needed to simulate the water quality in the Blackstone River following the receipt of the watershed loads and point source loads during the dry and wet weather conditions throughout the year. Therefore, the model must be run for at least one full year. Ibid, page 31
>
> ***
>
> c) To support such a modeling effort, a field monitoring program for the watershed and the receiving water must be carried out on a continuous basis; this is needed to improve predictions of loading to the river, as well as to improve estimates of loads from the river to the Bay.

> The Committee strongly recommends that, in a subsequent phase of the BRI,continuous monitoring of water quality data be conducted at the Pawtucket dam, at the head of tide. The USGS and other organizations operate continuous, flow-weighted samplers at many gaging stations in the U.S. These samplers can be modified to take "clean" metal samples, and/or to preserve nutrient samples through time. A continuous monitoring station likely would be the most efficient way to provide accurate Narragansett Bay loading data for TMDL calculations and for Narragansett Bay modeling efforts. Since very high flow events may load many years worth of some components, it is critical to capture these events.
>
> The monitoring station should collect samples for metals, nutrients, basic water chemistry, and potential organic contaminants, along with flow. Such a data base could provide direct measurements of loading inputs into Narragansett Bay, both of great utility in analyses of total loading inputs and in calibration and validation of watershed models. Well calibrated and validated models would be extremely valuable in estimating the consequences of potential watershed management options (e.g., some of the options under consideration by the Corps of Engineers with respect to loading inputs of metals, nutrients and organics into Narragansett Bay.) (Id. at 34).

Consistent with these recommendations, a watershed action plan, developed in 2004 under the auspices of Massachusetts's EOEA, with advisory committee members from Massachusetts DEP, EPA and the Rhode Island Department of Environmental Management, made similar recommendations. This document cited the development of bi-state water quality and water quantity and bi-state hydrogeologic simulation model as the top priorities of the water quality improvement and protection and the water quantity streamflow protection and management planning categories. These categories were, respectively, the two most important planning categories considered by the advisory committee. (See Ex. I at pp. 14-17).

Recognizing the importance of these recommendations to fully and adequately understand the Blackstone River, and to plan for its proper management, The United States Geological Survey (USGS) and the Upper Blackstone Water Pollution Abatement District (UBWPAD) have commenced the development of the models suggested by The

SAB and the Watershed Action Plan. The USGS is undertaking the hydrogeologic simulation model in concert with the Rhode Island Water Resources Board, and with cooperation from the UBWPAD. The UBWPAD is undertaking the development of the HSPF watershed scale model (building on the HSPF quantity model developed by USGS), including the conduct of additional wet and dry weather sampling, the installation of continuous recording analytical devices and the integration of the extensive volunteer data sets into the program. (See Ex. J). Significant outputs from these models are expected in the summer of 2007. (See Ex. J).

Rather than engage in rank speculation concerning processes that it had been warned it knows very little about, EPA should have waited until these efforts had produced useful results on which coherent plans could be built. Instead, EPA ignored the admonishments of the Agency's own Science Advisory Board and plowed ahead and issued the Town's New Permit with limits for total phosphorus that are based on outdated, and unreliable assessments that have clearly been rendered obsolete and useless thus any findings of fact based on these assessments are clearly erroneous and the conclusion of law based on those clearly erroneous findings are likewise erroneous.

3. The Board should grant review because this matter involves an important policy consideration

Finally the Board should grant review because this matter involves an important policy consideration. 40 C.F.R. §124.19(a). Specifically, as the Town has outlined above, the New Permit is based on outdated assessments that do not take it account the numerous upgrades and adjusted permit limits on discharges to the Blackstone River. There is currently a study to determine the impacts that these upgrades and adjusted permit limits have had on the effluent levels in the Blackstone River. (Ex. J). If the New

Permit conditions are allowed to take effect, then the Town will be required to undertake yet another upgrade which is estimated to cost approximately $3,000,000. (See Estimated Cost to comply with New Permit limits from Town's Engineering firm, Camp Dresser and McKee attached hereto as Exhibit K). The Town will be required to expend these funds without the benefit of an updated assessment of the current conditions of the Blackstone River. Thus, the Town would be required to begin engineering an upgrade only to have to reengineer or update the proposed upgrade once the new assessment of the Blackstone River is completed or worse find that no upgrade was necessary. As it currently stands, no agency or individual knows, in fact, whether the current conditions of the Blackstone River warrant the more stringent permit conditions.

While it is acknowledge that costs are generally not given much weight in considering compliance with permit conditions, where, as here, the cost are wholly out of proportion to the benefits sought, if any, the conditions should be deemed arbitrary and capricious. See BAFS Wyandotte Corp. v. Costle, 598 F2d 637, 656 (1st Cir. 1979). Here, the factual predicate of said conditions are so dated and unreliable and an updated assessment is so near completion the Board should exercise its discretion and decide this important policy consideration in favor of the Town and stay implementation of the New Permit conditions with respect to phosphorus.

D. The Inclusion of Year Round Disinfection Compelled Re-issuance of a Draft Permit

The EPA has failed to comply with 40 CFR §124.14 by issuing a final permit without reopening the public comment period when it, for the first time, included a year round disinfection requirement that was not contained in the draft permit. The draft permit contained requirements for seasonal disinfection, as had the previous permit

issued to the Town of Northbridge. The final permit contains a requirement for year round disinfection, at the request of the Rhode Island Department of Environmental Management. The response to comments justifies the imposition of the limit purportedly based on data provided to EPA by consultants to RIDEM. (See Ex. A. at Comments pp. 6-7). The final permit is thus materially different from the draft permit, and the Town has had no opportunity to review or comment on the data underlying EPA's decision. Instead of issuing the permit with the year round limitation, the Agency should have re-advertised the permit, as is required by 40 CFR §124.14.

40 CFR §124.14(4)(b) states in relevant part:

> (b) If any data information or argument submitted during the public comment period, including information or arguments required under §124.13, appear to raise substantial new questions concerning a permit, the Regional Administrator may take one or more of the following actions:
>
> (1) Prepare a new draft permit, appropriately modified, under §124.6;
> (2) Prepare a revised statement of basis under §124.7, a fact sheet or revised fact sheet under §124.8 and reopen the comment period under §124.14; or
> (3) Reopen or extend the comment period under §124.10 to give interested persons an opportunity to comment on the information or arguments submitted.

Here, without benefit of the Town's input with respect to adding a significant condition to the New Permit the EPA has in response to RIDEM's comments required the Town to engage in year round disinfection. If the issue raised by RIDEM was substantial enough to warrant a change in the draft permit then it must be considered a "substantial new questions concerning a permit" and the EPA was required to comply with 40 CFR §124.14(4)(b). The EPA did not and, as a result of EPA's non-compliance with its own regulations, the Board should strike the year round disinfection requirement.

IV. CONCLUSION

For the foregoing reasons, the Board should grant review and order the EPA to amend the New Permit as follows:

1. Restore the phosphorus limits to the 1999 Permit levels;

2. Strike the condition imposing a winter level of 1.0 mg/l Total Phosphorus; and

3. Strike the condition imposing a year round disinfection requirement.

Town of Northbridge

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