

RESPONSE TO COMMENTS - DATED SEPTEMBER 9, 2002
REISSUANCE OF NPDES PERMIT NO. NH0100986
TOWN OF PITTSFIELD, NEW HAMPSHIRE

The U.S. Environmental Protection Agency (EPA-New England) and the New Hampshire Department of Environmental Services, Water Division (NHDES-WD) solicited public comments from July 18, 2002, through August 16, 2002, on the draft National Pollutant Discharge Elimination System (NPDES) permit to be reissued to the Town of Pittsfield, New Hampshire. This permit is for the discharge of treated wastewater from the Town's Publicly Owned Treatment Works (POTW) to the Suncook River.

EPA-New England received only one (1) set of comments during the public-notice (comment) period. They were by letter postmarked and dated August 14, 2002, from Mr. Paul L. Adams, Director, Technical Assistance for Pollution Prevention, Inc. In addition, EPA-New England added a comment clarifying the Town's reporting requirements under New Hampshire State Statutes should a bypass of treatment occur. The following is a list of responses to those comments and any corrections made to the public-noticed permit as a result of those comments.

These seven (7) pages of responses and associated comments are complementary to the Fact Sheet and Draft Permit. For the reader to fully understand them, he or she should be familiar with the draft permit, the associated Fact Sheet, applicable federal National Pollutant Discharge Elimination System (NPDES) permit regulations and the State of New Hampshire's Water Quality Statutes, Administrative Rules and Surface Water Quality Regulations effective December 10, 1999.

The effective date of this permit has been set at December 1, 2002, which is a little over 60 days from the anticipated date of issuance. The Agency's general rule for NPDES Permits with comments is to make them effective 60 days following the permit's effective date.

Comments from Technical Assistance for Pollution Prevention, Inc.

COMMENT NO. 1. –Draft Permit, page 2/10

To Whole Effluent Toxicity, footnote 8 (explained on Page 4/10) line 3 add "...fathead minnow (*pimpephales promelas*) on effluent samples following the protocol in Attachment A". and brook trout (*Salvelinus fontinalis*) on effluent samples following the protocol in Attachment B (*Salmonid survival* (acute) and *growth* (chronic) tests.). NOTE: Attachment B is appended to this letter.

REASON: The Suncook River is a State-maintained brook trout habitat with a naturally occurring stock of wild trout resident in feeder streams and tributaries. Normally occurring summer and fall low water levels can severely impact resident salmonid populations; potential impact from POTW effluents needs to be monitored. The Suncook river is a class B waterway; class B waterways shall be suitable for recreation, swimming and drinking water supplies and as a habitat for indigenous fish and other aquatic life; discharges to class B waterways shall not cause adverse impact to aquatic life

in the receiving waters.

RESPONSE NO. 1:

Both the NHDES-WD and EPA-New England believe that the draft permit as public noticed includes sufficient effluent limitations and monitoring requirements, both in terms of parameters and their individual monitoring frequency, to protect New Hampshire’s Surface Water Quality Regulations at the 7Q10 flow and all flows higher. The State has certified that the permit conditions are sufficient to protect the receiving water quality. As to the species for the Whole Effluent Toxicity (WET) test, both the NHDES-WD and EPA-New England believe that the Fathead Minnow (*Pimephales promelas*), a fish species already included as part of the WET test protocol, is more than sufficiently sensitive to act as a surrogate species for the broad range of fish, including their various life stages that are found in the receiving water. This includes the species of brook trout. Therefore, the addition of a duplicative fish species to the WET test protocol, such as brook trout, cannot be justified from either an economic and/or environmental perspective.

Accordingly, the commenter’s request for the addition of brook trout to the WET test protocol is denied.

COMMENT NO. 2. –Draft Permit, page 2/10 under Whole Effluent Toxicity

Add the following:

Total Recoverable Arsenic, mg/l	Report	1/Quarter	Grab
Total Recoverable Mercury, mg/l	Report	1/Quarter	Grab

REASON: The Suncook River is a recreation river; there are 4 campgrounds immediately downstream from the Pittsfield POTW. Also, the Suncook River feeds the Chichester aquifer. Arsenic and mercury are known carcinogens with extensive EPA-directed elimination programs in place in New Hampshire. Testing for mercury and arsenic on a frequent, already-required other-toxic-metal-testing, basis costs no more than the existing program and provides a “tracking” capability to determine the effectiveness of Pittsfield’s pretreatment and septic programs as well as providing long range data for determining if Pittsfield’s sludge will be acceptable for land-application in the future (this was a stated desire in Pittsfield’s past sludge discussions).

40 CFR 122 requires the incorporation into NPDES permits of “any more stringent limitations, treatment standards, or schedule of compliance requirements established under Federal or State law or regulations...”. In 1985, EPA stated “...the POTW or Approval Authority must identify other pollutants of concern (Ed. Note: Other than the originally identified 7 metals of concern: cadmium, chromium, copper, lead, nickel and zinc). 40 CFR 403, 40 CFR 503, NH Env-Ws 800 and NH Env-Ws 1700 all recognize arsenic and mercury as “pollutants of concern”.

Further, EPA Publication “Guidance Manual on the Development and Implementation of Local Discharge Limitations Under the Pretreatment program (December 1987), states “POTWs should use toxicity based approaches and chemical-specific approaches and chemical-specific approaches involving applicable water quality standards or criteria in order to comply with such (regulatory) standards (Pg. 2.2) and goes on to state “Even if there are no identifiable chemicals of concern in a POTW discharge, it is desirable to test effluents for toxicity (pg.2-30)”.

EPA’s Best Management Practices (40 CFR 125-100, Federal Register Vol. 64, No. 149, July 22, 1999, page 30590, clearly states the need to identify and control pollutants that are inimical to public health, such as those in POTW effluents; identifying and eliminating/reducing these pollutants is the purpose of Discharge Monitoring Requirements.

It is impossible to know if toxicity values cited in 40 CFR 403, 40 CFR 503, NH Env-Ws 800 and NH Env-Ws 1700 are being met if no testing is done. Recent inquires into the effectiveness of Industrial Pretreatment Programs can only be answered if quantitative values are determined and documented.

RESPONSE NO. 2:

Regulations cited above by the commenter only give EPA authority to regulate pollutants if, and only if, a “pollutant of concern” has “a reasonable potential to cause or contribute to an excursion of numeric or narrative Water Quality Criteria” which, for New Hampshire, can be found in their Surface Water Quality Regulations (NHStandards). Furthermore, the commenter has not presented any arguments that the Agency can use to justify a monitor-only requirement for either element. In fact, there is sufficient evidence to show that Pittsfield does not need a “monitoring-only” requirement for either element and that evidence comes from two separate sources: (1)“**influent**” monitorings collected by the Town as part of their own pretreatment program (Phone conversation between Mr. Gay [permit engineer] of EPA-New England and Mr. Vien, Superintendent of Pittsfield’s POTW on August 26, 2002); and (2) “**sludge**” monitorings collected by the Town as part of their sludge removal efforts. First, an influent sample collected by the Town on October 22, 2001, showed arsenic and mercury concentrations of 5 and 0.1 micrograms per liter (ug/l), respectively, and that sample was taken prior to any treatment that would partition a portion of each element into the lagoons’ sludge blanket thus lowering its respective concentration even further in the discharged effluent. From the NH Standards, aquatic-life chronic criteria for arsenic and mercury is 150 and 0.77 ug/l, respectively, to which the available dilution of 6.7 needs to be multiplied to obtain each elements respective average monthly effluent limitation, the results of which indicate neither a monitoring-only requirement nor a limit are needed for either element. Second, chemical analysis on May 28, 1999, of sludge from the POTW’s lagoons shows arsenic and mercury concentrations of 24 and 3.5 mg/kg, respectively, which are well below the criteria needed to meet EPA’s “exceptional quality” sludge designation which for arsenic and mercury are 41 and 17 mg/kg, respectively [40 CFR Section 503.13(b)(3), Table 3]. Therefore, the concentrations of arsenic and mercury in the sludge made it available for application to home lawns and gardens had not other metals in that sludge exceeded their respective ceiling concentrations, thus disqualifying the sludge. The Agency also believes that the chemical analysis of sludge can

also provide a useful window into past concentrations of various pollutants in a POTW's influent/effluent because sludge acts as a sink for those pollutants integrating the effects of variable influent concentrations. In general, the higher the pollutant concentration in the influent over time the higher the concentration of that substance in the sludge blanket due to partitioning of these pollutants between the sludge and the effluent by the treatment processes. Since both these elements in the sludge were well below their respective ceiling concentrations for EPA's "exceptional quality" sludge designation, the Agency infers from this, that past concentrations of arsenic and mercury in the POTW's influent were too low to have caused exceedances of the State's Surface Water Quality Regulations in the discharged effluent after accounting for available dilution.

Accordingly, the commenter's request for the addition of arsenic and mercury to the issued permit is denied.

COMMENT NO. 3. – Draft Permit Attachment A.VI, page A-8

Add the following:

<u>Metal</u>	<u>Minimum Quantification Level (mg/l)</u>
As	0.005
Hg	0.0025

REASON: See Comment 2.

RESPONSE NO. 3:

Since the commenter's request to add Arsenic and Mercury to the WET test was denied in the Response to Comment Number 2, this commenter's request is not longer applicable.

COMMENT NO. 4. – Draft Permit, page 7/10 Section B, Sludge Conditions

Add the following:

C. Septage Conditions.

1. Septage known to be harmful to the treatment process will not be accepted. Wastes which contain heavy metals, toxic chemicals, extreme pH and flammable or corrosive materials in concentrations harmful to the treatment operations shall be refused.

2. The addition of septage shall not cause the treatment facilities design capacity to be exceeded. If, for any reason, the treatment facility becomes overloaded, receipt of septage shall be reduced or terminated in order to eliminate the overload condition.

3. At no time shall the addition of septage cause or contribute to effluent quality violations. If such conditions do exist, receipt of septage shall be suspended until effluent quality can be maintained.

REASON: Pittsfield's solid waste transfer facility has very infrequent Hazardous Waste days, perhaps once each 5 years. Consequently, the possibility of excessive toxics being present in accepted septage is high. The possibility should be noted and corrective procedures established.

RESPONSE NO. 4:

The Agency and the NHDES-WD believe that various narrative statements, conditions and provisions that already exist in the draft permit, which are designed to protect the treatment works and/its processes from harmful effects, exceedances of design flow and/or effluent exceedances in the receiving water, are broad enough to encompass and control the limited septage contributions; therefore, the commenter's suggested additions for septage are considered redundant and duplicative. (See issued permit, page 5 of 11, **Part I.A.**, Items 5. through 8.) In a phone conversation with Mr. Gay on August 26th, Mr. Vien estimates septage contributions to Pittsfield's POTW not to exceed two (2) percent of the overall flow past the headworks. Even though septage is a small portion of the sewage received by the treatment works, EPA-New England believes it is no more susceptible to contamination from improper disposal of toxics than is the sewage component. Sewage is defined as the liquid and the solid waste materials carried to the treatment works from homes and commercial establishments by way of an underground network of pipes called "collection system"; whereas, septage is defined as liquid and solids found in septic tanks at homes and commercial establishments not connected to a POTW's collection system that is collected in tanker trucks for later discharge at infrequent but controlled intervals into the POTW's collection system at a point hydraulically upgradient of its headworks. Thus both sewage and septage commingle prior to passing through the POTW's headworks for treatment and, therefore, by definition both are covered by the NPDES permit and any applicable sewer-use ordinances.

Furthermore, in phone conversations with Mr. Vien on August 21st and August 26th he indicated that the POTW only accepts septage from Pittsfield homes and commercial establishments during the POTW's normal business hours Monday through Friday and then only after pH monitorings show the septage's pH is within the permitted range (6.5 to 8.0 Standards Units). Given that the POTW knows the origin of each septage load, coupled with the fact they only accept septage from sites within the Town boundaries that are within a specific pH range, indicates to the Agency the Town's desire to control/limit the amount of septage in order to safeguard its treatment works, sludge blanket and discharged effluent.

Accordingly, the commenter's request to add septage conditions to the permit, which the Agency considers duplicative, is denied.

COMMENT NO. 5. –Fact Sheet IV.C Available Dilution, page 7

Fact Sheet IV.C. Available Dilution states “Available dilution was ...determined to be 6.7 in the current permit and was carried forward unchanged.” and “Since a gaged (sic) value of the 7Q10 flow is not available at the outfall, one was estimated using a known 7Q10 value on the Suncook River at a U.S. Geological Survey (USGS) gaging (sic) station (Gage (sic) No. 01089500) at a site 4.1 miles downstream ...” **The USGS advises that this gauging station was abandoned in 1970.** A new 7Q10 value needs to be determined.

REASON: The Suncook River is a controlled river; major controlling facilities are the dam at Lower Suncook Pond and hydroelectric facility at the Pittsfield dam. The measured flow at the abandoned weir (Gauging Station 01089500) 4.1 miles South was less than 4.0 CFS on this date - considerably less than the permit value of 4.53 CFS.

RESPONSE NO. 5:

The commenter is correct to imply that EPA-New England should have indicated in the Fact Sheet of Pittsfield’s draft permit that the gaging station had been discontinued since 1970. For the record, the 7Q10 value (4.53 cfs) cited for this gage is for the climatic water years 1920 through 1970 which the Agency believes is more than sufficient time to establish a valid 7Q10 value at this gaging station, thus the oversight in noting it was discontinued. Furthermore, the Agency believes that this value is still the best value currently available to use in estimating 7Q10 flow at Pittsfield’s outfall. Also, implicit in that belief, is the assumption that any changes that have occurred in the various hydrologic regimes controlling streamflow above the gage between 1970 and now have not material affected the 7Q10 flow.

The commenter is advised that EPA’s spelling of the word “gaged” is appropriate for that’s how the U.S. Geological Survey (USGS) spells that word when referencing their streamflow sites. Please see the USGS Web site and their annual data publications such as Water Resources Data for New Hampshire and Vermont, Water Year 2001 for additional clarification.

However, having said all that, the State is in the process of reevaluation whether or not it is preferable to use a regression equation such as one based on percent stratified drift and drainage area in situations where the gage has been discontinued for a number of years as in this case. It is likely at next permit reissuance some other method of determining the 7Q10 may be employed, such as the Dingman Equation (a regression equation using drainage area, mean basin elevation and ratio of stratified drift to total drainage area), but for now the 7Q10 flow value used in the draft permit represents the “best information currently available” for determining a 7Q10 flow value at Pittsfield’s outfall. It is unlikely this gaging station will be reactivated and/or relocated given budgetary constraints facing the various Federal, State and Local Agencies that would likely contribute to those efforts. Any new gage would require at least 10 years of continuous flow record before a 7Q10 value could be derived that the State, EPA and permittee would have confidence in. This gage, while discontinued, does have a long period of record (42 years of continuous flow) that encompasses regulation by the dam on the Lower Suncook Pond and the hydroelectric facility just

above the POTW's outfall. The only other choice is to apply various regression equations, such as the Dingman Equation, which have their own inherent errors. At the present, the Agency's position is to use current or discontinued gaging-station data when available on the receiving water in question over regression estimates unless there is compelling evidence to the contrary.

The Agency also believes it's improper to use a single measured value of streamflow to imply that the 7Q10 flow is in error without first placing that value in its proper statistical context/perspective (equivalent statistic). Specifically, the commenter is asking the Agency to compare a single value collected during one day to which no recurrence interval has been assigned against the lowest averaged value over 7 consecutive days (in a year) to which a 10 year recurrence value has been assigned. In addition, it is typical, for example, that the lowest one day averaged low flow over an entire day at the 10 year recurrence interval (1Q10) is considerably lower than the lowest seven day averaged low flow over seven consecutive days at that same recurrence interval (7Q10). In fact, for this gaging station the 1Q10 flow is 2.88 cfs, whereas, the 7Q10 flow is 4.53 cfs.

Accordingly, the commenter's request to develop a new 7Q10 flow value is denied.

Other Additions to Issued Permit as Compared to Draft Permit

EPA-New England is adding a public notification requirement to permits to protect public and private drinking-water systems from withdrawing potentially contaminated river water via surface water intake structures including infiltration galleries in the event a bypass or upset occurs at an upstream wastewater treatment system. This notification requirement is a reminder to the permittee of their public notification requirements under New Hampshire Statutes RSA Title 50 Chapter 485-A:13,I(c). This added permit condition is not considered a new requirement by the Agency. Accordingly, the following notification requirement, shown in italics below, has been taken verbatim from the New Hampshire Statutes RSA Title 50 Chapter 485-A:13,I(c) and inserted in the permit under **PART 1.C. SPECIAL CONDITIONS, Notification Requirements to Public and Private Water Systems Drawing Water From the Suncook and Merrimack Rivers in the Event of a Bypass or Upset at the Treatment Works** of page 8 of 11 and interpreted as described below.

“Any person responsible for a bypass or upset at a wastewater facility shall give immediate notice of the bypass or upset to all public or privately owned water systems drawing water from the same receiving water and located within 20 miles downstream of the point of discharge. The permittee shall maintain a list of persons, and their telephone numbers, who are to be notified immediately by telephone. In addition, written notification, which shall be postmarked within 3 days of the bypass or upset, shall be sent to such persons.”

For the purpose of this permit, EPA-New England is interpreting the italicized phrase “water systems drawing water from the same receiving water and located within 20 miles downstream of the point of discharge” to mean “located within 20 **river** miles downstream of the point of discharge regardless of whether or not it is on the same receiving water or on the stream to which the receiving water discharges” which for Pittsfield's POTW means any intake structure on the

Suncook River downstream of the POTW including a portion of the Merrimack River downstream of where the Suncook empties into that river.