UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND
1 CONGRESS STREET
SUITE 1100
BOSTON, MASSACHUSETTS 02203

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

NPDES PERMIT NO.: **MA0101061**

NAME AND ADDRESS OF APPLICANT:

Town of North Brookfield
Sewer Superintendent
59 East Brookfield Road
North Brookfield, MA 01535

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

North Brookfield Wastewater Treatment Facility
59 East Brookfield Road
North Brookfield, MA

RECEIVING WATER: **Forget-Me-Not Brook (a tributary of Dunn Brook, which flows to the Quabog River)**

CLASSIFICATION: **B: warm water fishery (Chicopee Watershed MA-36)**

I. Proposed Action, Type of Facility, and Discharge Location

The above named applicant has applied to the U.S. Environmental Protection Agency for the reissuance of its NPDES permit to discharge into Forget-Me- Not Brook, a tributary of Dunn Brook, which flows to the Quaboag River. The facility is engaged in the collection and treatment of municipal and commercial wastewater. Figure 1 shows the facility location.

Wastewater Treatment Facility, Sewerage Collection System and other Related Operational Information:

The wastewater collection and treatment system serves 2,800 residents in the community with the collection system primarily focused in the town center (Route 67 corridor). The system is a separate sewer system with no combined sewers. Wastewater is comprised of mostly domestic

sewage with some commercial sewage. The permit application does not report any significant industrial users discharging to the treatment plant.

Treatment Plant Process:

The treatment plant has a design flow of 0.76 MGD and consists of the following units:

* influent screens
* aerated grit chamber
* parallel rotating biological contactor units (RBCs)
* secondary clarification
* cloth filtration
* ultraviolet disinfection
* post aeration

Phosphorus removal is accomplished by chemical addition which is added prior to the secondary clarifier. Nitrification is accomplished biologically in the RBC units. The final effluent is discharged to Forget-Me- Not Brook.

The long term average flow at the facility is about 0.54 MGD (million gallons per day). Maximum daily flows during wet weather were: 2.11 MGD in 2005 and 1.375 MGD in 2004.

Waste sludge is pumped from the clarifiers' return sludge lines to an aerated sludge holding tank and then dewatered following chemical addition. The dried sludge is transported under contract with a private hauler for incineration. The annual volume of sludge is 40.5 dry-weight tons.

II. Description of Discharge

A quantitative description of the discharge, in terms of significant effluent parameters, may be found in Table 1 which summarizes effluent data from November 2003 to October 2005.

III. Permit Limitations and Conditions

The effluent limitations and monitoring requirements of the draft permit may be found in the draft NPDES permit.

IV. Permit Basis and Explanation of Effluent Limitation Derivation

Waterbody Classification and Usage:

Forget-Me-Not Brook is classified as Class B-warm water fisheries water body by the Massachusetts Department of Environmental Protection (MassDEP) in the Massachusetts Surface Water Quality Standards (314 CMR 4.00). Class B waters are designated as habitat for fish, other aquatic life, and wildlife and for primary and secondary contact recreation. Where designated Class B waters shall be suitable as a source of public water supply with appropriate treatment. They shall be suitable for

irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value.

Forget-Me-Not Brook, from the North Brookfield WWTP to the confluence with Dunn Brook (segment MA36-28-2002), is listed on the Massachusetts Year 2002 Integrated List of Waters as a Category 5 Water (Waters Requiring a TMDL). The pollutants identified as needing a TMDL include unknown toxicity, organic enrichment/low dissolved oxygen, taste, odor, and color.

Municipal Waste Water Treatment Facility [also referred to as "Publicly Owned Treatment Works" (POTW Discharges)] Regulatory Basis for Effluent Limits

EPA is required to consider technology and water quality requirements when developing permit effluent limits. Technology-based treatment requirements represent the minimum level of control that must be imposed under Sections 402 and 301(b) of the Clean Water Act (CWA) (see 40 CFR 125 Subpart A). For publicly owned treatment works, technology based requirements are effluent limitations based on secondary treatment as defined in 40 CFR Part 133.

EPA regulations require NPDES permits to contain effluent limits more stringent than technology-based limits where more stringent limits are necessary to maintain or achieve federal or state water quality standards.

Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limits based on water quality standards. The Massachusetts Surface Water Quality Standards (314 CMR 4.00) include requirements for the regulation and control of toxic constituents and also require that EPA criteria, established pursuant to Section 304(a) of the CWA, shall be used unless a site-specific criteria is established. The state will limit or prohibit discharge of pollutants to surface waters to assure that water quality of the receiving waters are protected and maintained, or attained.

The permit must limit any pollutant or pollutant parameter (conventional, non-conventional, toxic, and whole effluent toxicity) that is or may be discharged at a level that causes, or has reasonable potential to cause, or contributes to an excursion above any water quality criterion. An excursion occurs if the projected or actual in-stream concentrations exceed the applicable criterion. In determining reasonable potential, EPA considers existing controls on point and non-point sources of pollution, variability of the pollutant in the effluent, sensitivity of the species to toxicity and where appropriate, the dilution of the effluent in the receiving water.

A permit may not be renewed, reissued, or modified with less stringent limitations or conditions than those contained in the previous permit unless in compliance with the anti-backsliding requirements of the CWA. Anti-backsliding provisions are found in Section 402(o) of the CWA and 40 CFR 122.44(l) and require that limits in a reissued permit be at least as stringent as those in the previous permit, except under certain limited circumstances. Effluent limitations based on technology standards, water quality, and state certification requirements must all meet anti-backsliding provisions.

Dilution Factor:

The 7-day, 10-year low flow used in the draft permit is extrapolated from two U.S. Geological Survey gage stations in the area of Dunn Brook (which does not have a permanent flow gage station). The discharge is located 1.5 miles downstream of the headwaters of Forget-Me-Not Brook, which joins Dunn Brook about 0.3 miles downstream of the discharge. (see page 167 of Appendix 2 of the Massachusetts Year 2002 Integrated List of Waters) The total drainage area for the Dunn Brook watershed is about 6.35 square miles; the drainage area upstream of the discharge is about 1 square mile. Using a low-flow factor of 0.05 cfs/mi^2 yields a receiving water 7Q10 flow of about 0.05 cfs (0.032 MGD) and a dilution factor of 1.04. The dilution factor calculations are shown below:

Dilution factor (DF) = (Receiving water 7Q10 + discharge design flow)/ discharge design flow
DF = (0.032 MGD + 0.76 MGD)/ 0.76 MGD
DF = 0.792/0.76 = 1.04

The previous permit used a dilution factor of 1.00 in evaluating the effluent limits. The 4% difference between the previous dilution factor and the dilution factor calculated above is negligible. For the purpose of consistency from permit to permit, the previous dilution factor of 1.00 will also be used in this permit.

The effluent limits for the various parameters are discussed below:

Flow: The wastewater treatment plant design flow is 0.76 MGD. This flow has been retained as the annual average flow limit in the draft permit. The draft permit requires that the facility also report the monthly average and daily maximum flow each month.

BOD_5 and total suspended solids: The limits are based upon the previous permit. The loads vary according to seasons and are also expressed as a mass loading. The facility easily met the limits between November 2003 and October 2005, with monthly average BOD results ranging from 1.8 to 9.2 mg/l and TSS values 1.6 to13.8 mg/l.

pH: The limit is 6.5-8.3 SU based on Massachusetts Surface Water Quality Standards.

Minimum dissolved oxygen concentration: The limit is based upon the previous permit and is necessary to maintain an in-stream dissolved oxygen level above the Massachusetts Surface Water Quality Standards of 5.0 mg/l particularly during low flow periods.

Fecal coliform: The limit is based upon the previous permit and reflects the in-stream Class B standard. This is a seasonal limit.

Ammonia: The seasonal limits for May to October are based upon the current permit, and reflect a need to reduce the oxygen demanding component of the nitrogen cycle and also reflect the need to

reduce ammonia from a toxicity perspective. The permit contains a monthly average limit of 1.0 mg/l for ammonia-nitrogen for the period of May 1- October 31.

The limit for the months of November through April is based on toxicity. The determination of the ammonia in-stream criteria are dependent on pH and temperature (chronic only), and on whether there are sensitive fish species present. The chronic criteria was calculated using a pH of 7 and a temperature of 15 degrees Celsius, with early life stages present. The acute criteria is calculated using a pH of 7 with salmonids present. Limits are then calculated using the design flow and the critical 30-day, 10-year flow for period as recommended in the Federal register, Volume 64, No. 245 published on December 22,1999 of November to April.

The Quaboag and Spencer gages data indicates that the summer 30Q10 flow to 7Q10 flow ratio is on average 1.5 and that the winter period low flows are on average 2.5 average times the summer low flows. This would result in a winter 30Q10 flow of approximately 0.005 cfs * 1.5 * 2.5 = 0.19 cfs and a winter dilution factor of 1.2.

Total Ammonia, as N Limitations (November 1 - April 30):

Acute (Daily Maximum) Criteria = 24.1 mg/l (At pH 7.0)

(acute criteria * dilution factor) = Acute (Daily Maximum)
(24.1 mg/l * 1.2) = 24.1 mg/l

Because the calculated limit far exceeds the concentration of ammonia in the discharge, EPA determined that there was no reasonable potential for the discharge of ammonia to cause or contribute to an exceedance of the acute criteria and did not include an acute (maximum daily) limit in the permit.

Chronic (Monthly Average) Criteria = 5.4 mg/l (At pH 7.0 and 15° C)

(chronic criteria * dilution factor) = Chronic (Monthly Average)
(5.4 mg/l * 1.2) = 5.4 mg/l

It was determined that there was reasonable potential for the discharge to cause or contribute to an exceedance of the chronic criteria, so the chronic limit was include in the permit.

Total Nitrogen: It has been determined that excessive nitrogen loadings are causing significant water quality problems, including low dissolved oxygen, in Long Island Sound. As a result, the State of Connecticut has begun to impose nitrogen limitations on discharges to the Connecticut River and its tributaries. EPA believes there is a need to determine the loadings of nitrogen from similar sources in Massachusetts to determine their impact on the water quality in the Sound and to determine what limits, if any, should be imposed on discharges to the River and its tributaries in Massachusetts . Therefore, EPA has included quarterly monitoring for ammonia, nitrite and nitrate, and TKN in the draft permit. The information submitted by the permittee will help to establish a database of nitrogen loadings, which can be used to quantitatively assess the impact of loading and transport of nitrogen to Long Island Sound. The data will provide a basis for future decisions relating to nitrogen loadings to the Sound. No numerical limitations for these pollutants are established in the draft permit.

Phosphorus:

The Massachusetts Surface Water Quality Standards (314 CMR 4.00) do not contain numerical criteria for total phosphorus. The criteria for nutrients is found at 314 CMR 4.05(5)(c), which states that nutrients "shall not exceed the site specific limits necessary to control accelerated or cultural eutrophication". The Water Quality Standards also require that "any existing point source discharges containing nutrients in concentrations which encourage eutrophication or the growth of weeds or algae shall be provided with the highest and best practicable treatment to remove such nutrients (314 CMR 4.04). MassDEP has established that a monthly average total phosphorus limit of 0.2 mg/l represents highest and best practical treatment for POTWs.

EPA has produced several guidance documents which contain recommended total phosphorus criteria for receiving waters. The 1986 Quality Criteria of Water ("the Gold Book") recommends in-stream phosphorus concentrations of 0.05 mg/l in any stream entering a lake or reservoir, 0.1 mg/l for any stream not discharging directly to lakes or impoundments, and 0.025 mg/l within the lake or reservoir.

In December 2000, EPA released "Ecoregional Nutrient Criteria", which was established as part of an effort to reduce problems associated with excess nutrients in water bodies in specific areas of the country. The published criteria represent conditions in waters in each specific ecoregion which are minimally impacted by human activities, and thus representative of waters without cultural eutrophication. North Brookfield is within Ecoregion XIV, Eastern Coastal Plains. The total phosphorus criteria for this Ecoregion XIV is 24 ug/l (0.024 mg/l) and can be found in the *Ambient Water Quality Criteria Recommendations, Information Supporting the Development of State and Tribal Nutrient Criteria, Rivers and Streams in Ecoregion XIV*, (USEPA 2000).

More recently, Mitchell, Liebman, Ramseyer, and Card (in draft 2004), in conjunction with the New England States, developed potential nutrient criteria for rivers and streams in New England. Using several river examples representative of typical conditions for New England streams and rivers, they investigated several approaches for the development of river and stream nutrient criteria that would be dually protective of designated uses in both upstream reaches and downstream impoundments. Based on this investigation an instream total phosphorus concentration of 0.020 - 0.022 mg/l was identified as protective of designated uses for New England rivers and streams. The development of this New England-wide total phosphorus concentration was based on more recent data than the National Ecoregional nutrient criteria, and has been subject to quality assurance measures. Additionally, the development of the New England-wide concentration included reference conditions for waters presumed to be protective of designated uses.

There has been no assessment of the receiving water by MassDEP since the Chicopee Basin 1998 Water Quality Assessment Report, which reported that a Rapid Bioassessment Protocol (RBP) survey downstream of the treatment plant indicated moderate impairment of the benthic community, likely due to organic enrichment, and that approximately 40 percent of the reach was covered by algal growth.

The current permit contains a monthly average total phosphorus limit of 1 mg/l and a weekly average

limit of 1.5 mg/l. These limit are in effect for the months of May through October. Over the past two years the facility has consistently complied with these limits, reporting a range of monthly average concentrations from 0.13 mg/l to 0.6 mg/l and a range of maximum weekly average concentrations from 0.2 mg/l to 1.2 mg/l.

The current monthly average limit in the permit of 1.0 mg/l would be expected to significantly exceed the national guidance for in-stream phosphorus concentration due to the absence of any significant dilution under 7Q10 conditions. It is clear that the existing limits must be made more stringent to address the documented water quality problems in the receiving water. A monthly average total phosphorus limit of 0.2 mg/l has been established based on the "highest and best" practical treatment as defined by the MAWQS. This limit will be in effect seasonally, from April 1 to October 31. The application of the lower seasonal limit has been extended to the month of April in order to encompass the entire season when aquatic plant growth is active.

In addition to the seasonal total phosphorus limit of 0.2 mg/l, the permit contains a winter period total phosphorus limit of 1.0 mg/l for November through March. The winter period limitation on total phosphorus is necessary to ensure that the higher levels of phosphorus discharged in the winter period do not result in the accumulation of phosphorus in the downstream sediments. The limitation assumes that the vast majority of the phosphorus discharged will be in the dissolved fraction and that dissolved phosphorus will pass through the system and not accumulate in the sediments. A dissolved orthophosphorous monitoring requirement has been included to verify the dissolved fraction. If future evaluations indicate that phosphorus may be accumulating in downstream sediments, the winter period phosphorus limit may be reduced in future permit actions.

When MassDEP adopts numeric nutrient criteria, a TMDL is completed, or additional water quality information shows that the phosphorus limits are not stringent enough to meet water quality standards, more stringent limits may be imposed.

Copper: Analytical data submitted on the discharge monitoring reports (DMRs: see Table 1) indicates that the discharge will cause the in-stream copper level to be above the water quality standard as defined in EPA Quality Criteria for Water as adopted into the State Water Quality Standards. The limits for copper are based on the national recommended water quality criteria published in National Recommended Water Quality Criteria: 2002.

The average of recent whole effluent toxicity test effluent hardness values, 50 mg/l, was used to calculate the criteria and the dilution factor of 1 is used to calculate the limits.

Water Quality Criteria for hardness-dependent metals:

Acute criteria (dissolved) = $\exp\{ m_a [\ln(\text{hardness})] + b_a \}$ (CF)
m_a = pollutant specific coefficient
b_a = pollutant specific coefficient
h = hardness
ln = natural logarithm
CF = pollutant specific conversion factor used to convert total recoverable to dissolved metal

Calculation of acute limit for copper:

m_a = 0.9422 b_a = -1.700 CF = 0.960 h = 50

Acute criteria (dissolved) = exp {0.9422 [ln (50)] + -1.700} * (0.960) = 6.99 ug/l

Effluent limitation for dissolved copper = 1(dilution factor) * 6.99 ug/l = 6.99 ug/l
Effluent limitation for total recoverable copper = 6.99/0.96 = 7.3 ug/l[1]

The maximum daily water quality based limitation for total recoverable copper is 7.3 ug/l

Chronic criteria (dissolved) = exp{ m_c [ln(hardness)] + b_c } (CF)
m_c = pollutant specific coefficient
b_c = pollutant specific coefficient
h = hardness
ln = natural logarithm
CF = pollutant specific conversion factor used to convert total recoverable to dissolved metal

Calculation of chronic limit for copper:

m_c = 0.8545 b_c = -1.702 CF = 0.960 h = 50

Chronic criteria (dissolved) = exp {0.8545 [ln (50)] + -1.702} * (0.960) = 4.95 ug/l
Effluent limitation for dissolved copper = 1(dilution factor) * 4.95 ug/l = 4.95 ug/l
Effluent limitation for total recoverable copper = 4.95/0.96 = 5.2 ug/l

The monthly average water quality based limitation for total recoverable copper is 5.2 ug/l.

Zinc: Analytical data submitted with toxicity test results indicates that the discharge will cause the in-stream zinc level to be above the water quality standard as defined in EPA Quality Criteria for Water as adopted into the State Water Quality Standards. The limits for zinc are based on the national recommended water quality criteria published in National Recommended Water Quality Criteria: 2002, at a hardness of 50 mg/l and a dilution factor of 1.

A hardness of 50 mg/l was used to calculate the criteria. This value is the average of recent whole effluent toxicity test effluent hardness values.

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[1]The conversion factor is used to determine total recoverable metal. EPA Metal Translator Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion (EPA-823-B-96-007) is used as the basis for using the criteria conversion factor. National guidance requires that permit limits be based on total recoverable metals and not dissolved criteria. The translator reflects how a discharge partitions between the particulate and dissolved phases after mixing with the receiving water. In the absence of site specific data on how a particular discharge partitions in the receiving water, a default assumption is equivalent to the criteria conversion factor used in accordance with the Translator Guidance.

Water Quality Criteria for hardness-dependent metals:

Acute criteria (dissolved) = exp{ m_a [ln(hardness)] + b_a } (CF)
m_a = pollutant specific coefficient
b_a = pollutant specific coefficient
h = hardness
ln = natural logarithm
CF = pollutant specific conversion factor used to convert total recoverable to dissolved metal

Calculation of acute limit for zinc:

m_a = 0.8473 b_a = 0.884 CF = 0.978 h = 50

Acute criteria (dissolved) = exp {0.8473 [ln (50)] + 0.884} * (0.978) = 65.13 ug/l

Effluent limitation for dissolved zinc = 1(dilution factor) * 65.13 ug/l = 65.13 ug/l
Effluent limitation for total recoverable zinc = 65.13 / 0.978 = 66.6 ug/l

The maximum daily water quality based limitation for total recoverable zinc is 66.6 ug/l.

Chronic criteria (dissolved) = exp{ m_c [ln(hardness)] + b_c } (CF)
m_c = pollutant specific coefficient
b_c = pollutant specific coefficient
h = hardness
ln = natural logarithm
CF = pollutant specific conversion factor used to convert total recoverable to dissolved metal

Calculation of chronic limit for zinc:

m_c = 0.8473 b_c = 0.884 CF = 0.986 h = 50

Chronic criteria (dissolved) = exp {0.8473 [ln (50)] + 0.884} * (0.986) = 65.66 ug/l
Effluent limitation for dissolved zinc = 1(dilution factor)* 65.66 ug/l = 65.66 ug/l
Effluent limitation for total recoverable zinc = 65.66/ 0.978 = 66.6 ug/l
The monthly average water quality based limitation for total recoverable zinc is 66.6 ug/l.

***Aluminum*:** Recent Discharge Monitoring Reports indicate that the discharge of aluminum has the reasonable potential to cause or contribute to exceedances of water quality criteria, as defined in EPA Quality Criteria for Water as adopted into the State Water Quality Standards. The limits for aluminum

are based on the national recommended water quality criteria published in National Recommended Water Quality Criteria: 2002, and a dilution factor of 1.

Aluminum:

Acute (Daily Maximum) Criteria = 750 ug/l

(acute criteria * dilution factor) = Acute (Daily Maximum)
(750 ug/l * 1) = 750 ug/l = 0.75 mg/l

Chronic (Monthly Average) Criteria = 87 ug/l

(chronic criteria * dilution factor) = Chronic (Monthly Average)
(87 ug/l * 1) = 87 ug/l = 0.087 mg/l

Whole Effluent Toxicity Testing

Under Section 301(b)(1) of the CWA, discharges are subject to effluent limitations based on water quality standards. The State 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)(l) 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 3.14 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).

National studies conducted by the EPA have demonstrated that domestic sources contribute toxic constituents to POTWs as well as those which may be contributed from industrial users. These pollutants include metals, chlorinated solvents, aromatic hydrocarbons and other constituents.

As a result, EPA New England and the MassDEP have developed toxicity control policies. These policies require wastewater treatment facilities to perform toxicity bioassays on their effluent. Discharges having a dilution of less than 10:1 require acute and chronic toxicity limits and testing four times per year.

The principal advantages of biological techniques are: (1) the effects of complex discharges of many known and unknown constituents can be measured only by biological analysis; (2) bioavailability of pollutants after discharge is measured by toxicity testing including any synergistic effect of pollutants; and (3) pollutants for which there are inadequate analytical methods or criteria can be addressed. Therefore, toxicity testing is being used in connection with pollutant-specific control procedures to control the discharge of toxic pollutants.

The current permit requires toxicity testing for two species, the daphnid (*Ceriodaphnia dubia*) and the
fathead minnow (*Pimephales promelas*) four times per year. Tests are required to be conducted the second week in February, May, August and November using the protocol in Toxicity Testing attachment. Based on the WET test results submitted by the permittee, the requirement for testing the

fathead minnow has been eliminated. The draft permit still requires quarterly WET testing of the daphnid (*Ceriodaphnia dubia*), the more sensitive species.

The Chronic - No Observed Effect Concentration (C-NOEC) limitation of 100 % in the draft permit prohibits chronic adverse effects (e.g., on survival, growth, or reproduction) when aquatic organisms are exposed to the POTW discharge at the calculated available dilution. The limit is determined based upon no dilution available at critical low flow periods (see Table 2 for the flow information).

Chlorine:

The permit does not contain a limit for chlorine due to the fact that disinfection is accomplished with ultraviolet light. The draft permit prohibits the use of chlorine.

Monitoring: The effluent monitoring requirements have been specified in accordance with 40 CFR 122.41(j), 122.44(i) and 122.48 to yield data representative of the discharge.

V. Infiltration/Inflow

The draft permit includes requirements for the permittee to control infiltration and inflow (I/I). Infiltration/inflow is extraneous water entering the wastewater collection system through a variety of sources. The permittee shall develop an I/I removal program commensurate with the severity of the I/I in the collection system. Where portions of the collection system have little I/I, the control program will logically be scaled down.

Infiltration is groundwater that enters the collection system though physical defects such as cracked pipes, or deteriorated joints. Inflow is extraneous flow entering the collection system through point sources such as roof leaders, yard and area drains, sump pumps, manhole covers, tide gates, and cross connections from storm water systems.

Significant I/I in a collection system may displace sanitary flow reducing the capacity and the efficiency of the treatment works and may cause bypasses to secondary treatment. It greatly increases the potential for sanitary sewer overflows (SSO) in separate systems, and combined sewer overflows in combined systems.

The permit standard conditions for 'Proper Operation and Maintenance' are found at 40 CFR §122.41(e). These require proper operation and maintenance of permitted wastewater systems and related facilities to achieve permit conditions. Similarly, the permittee has a 'duty to mitigate' as stated in 40 CFR §122.41 (d). This requires the permittee to take all reasonable steps to minimize or prevent any discharge in violation of the permit which has a reasonable likelihood of adversely effecting human health or the environment. EPA and MassDEP maintain that an I/I removal program is an integral component to insuring permit compliance under both of these provisions.

The MassDEP has stated that inclusion of the I/I conditions in the draft permit shall be a standard State Certification requirement under Section 401 of the Clean Water Act and 40 CFR §124.55(b).

VI. Sludge Information and Requirements

Section 405(d) of the Clean Water Act requires that sludge conditions be included in all POTW permits. The North Brookfield Wastewater Treatment Facility has its sludge hauled off-site for treatment. The facility produces 40.5 dry metric tons of sludge per year which is taken for incineration under contract with a private sludge treatment firm. Sludge requirements for the facility are outlined in the permit. The EPA Region I NPDES Permit Sludge Compliance Guidance is transmitted to the permittee with the draft permit. If the ultimate sludge disposal method changes, the permit requirements pertaining to sludge monitoring and other conditions would change accordingly.

VII. Unauthorized Discharges

The permittee is not authorized to discharge wastewater from any pump station emergency overflow. Overflows must be reported in accordance with reporting requirements found in Section D.1.e. of Part II of the permit (24-hour reporting). If a discharge does occur, the permittee must notify the EPA, the MassDEP, and others, as appropriate (i.e. local Public Health Department), both orally and in writing as specified in the draft permit.

VIII. Essential Fish Habitat Determination (EFH):

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et seq. (1998)), EPA is required to consult with the National Marine Fisheries Services (NMFS) if EPA's action or proposed actions that it funds, permits, or undertakes, may adversely impact any essential fish habitat as: waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (16 U.S.C. § 1802 (10)). Adversely impact means any impact which reduces the quality and/or quantity of EFH (50 C.F.R. § 600.910 (a)). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g. loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

Essential fish habitat is only designated for species for which federal fisheries management plans exist (16 U.S.C. § 1855(b) (1) (A)). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999.

Forget-Me-Not Brook is not covered by the EFH designation for riverine systems and thus EPA and MassDEP have determined that a formal EFH consultation with NMFS is not required.

IX. State Certification Requirements

The staff of the Massachusetts Department of Environmental Protection has reviewed the draft permit. EPA has requested permit certification by the State and expects that the draft permit will be certified.

X. Comment Period, and Procedures for Final Decisions

All persons, including applicants, who believe, any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the U.S. EPA, Massachusetts Office of Ecosystem

Protection (CMP), One Congress Street-Suite 1100 Boston, Massachusetts 02114-2023. Any person, prior to such date, may submit a request in writing for a public hearing to consider the draft permit to EPA and the State Agency. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit, the Regional Administrator significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice.

XI. EPA and MassDEP Contacts

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from:

Mark Malone
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1 Congress Street
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Telephone: 617-918-1619

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Linda M. Murphy, Director
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U.S. Environmental Protection Agency