UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND REGION
ONE CONGRESS STREET
BOSTON, MASSACHUSETTS 02114-2023

FACT SHEET

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

NPDES PERMIT NO.: NH0100871

PUBLIC NOTICE START/FINISH DATE: 10/25/07 -11/23/07

NAME AND MAILING ADDRESS OF APPLICANT:

Town of Exeter
Exeter Wastewater Treatment Plant
10 Front Street
Exeter, New Hampshire 03833-2792

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Town of Exeter
Exeter Wastewater Treatment Plant
13 Newfields Road
Exeter, New Hampshire 03833

RECEIVING WATER: Squamscott River (Hydrologic Unit Code: 01060003)

CLASSIFICATION: B

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

The above named applicant has applied to the U.S. Environmental Protection Agency (EPA) for reissuance of its NPDES permit to discharge treated effluent into the designated receiving water. The facility is engaged in the collection and treatment of domestic and industrial wastewaters. Secondary treatment is provided by three aerated lagoons. Prior to discharging to the Squamcott River through Outfall 001 the effluent is chlorinated and dechlorinated. The facility has a design flow of 3.0 mgd.

The previous permit was issued on July 5, 2000 and expired on September 25, 2005. The expired permit ("existing permit") has been administratively extended because the applicant filed a complete application for permit reissuance pursuant to 40 Code of Federal Regulations (C.F.R.) Section 122.6.

The location of the facility, outfalls, and the receiving waters are shown in Attachment A.

II. Description of Discharge.

A quantitative description of significant effluent parameters based on Discharge Monitoring Reports (DMRs) is shown in Attachment B. The data are from October 2000 through April 2006.

III. Limitations and Conditions.

Effluent limitations and monitoring requirements are found in PART I of the draft NPDES permit.

IV. Permit Basis and Explanation of Effluent Limitation Derivation.

a. General Regulatory Background

Congress enacted the Clean Water Act (CWA), "to restore and maintain the chemical physical, and biological integrity of the Nation's waters." CWA § 101(a). To achieve this objective, the CWA makes it unlawful for any person to discharge any pollutant into waters of the United States from any point source, except as authorized by specified permitting sections of the CWA, one of which is Section 402. See CWA §§ 301(a) and 402(a). Section 402 establishes one of the CWA's principal permitting programs, the National Pollutant Discharge Elimination System (NPDES). Under this section of the CWA, EPA may "issue a permit for the discharge of any pollutant, or combination of pollutants" in accordance with certain conditions. See CWA § 402(a). NPDES permits generally contain discharge limitations and establish related monitoring and reporting requirements. See CWA § 402(a)(1)-(2).

Section 301 of the CWA provides for two types of effluent limitations to be included in NPDES permits: "technology-based" limitations and "water quality-based" limitations. See CWA §§

301, 303, 304(b); 40 C.F.R. Parts 122, 125, 131. Technology-based limitations, generally developed on an industry-by-industry basis, reflect a specified level of pollutant reducing technology available and economically achievable for the type of facility being permitted. See CWA § 301(b). As a class, POTWs must meet performance based requirements based on available wastewater treatment technology. CWA § 301(b)(1)(B). The performance level for POTWs is referred to as "secondary treatment". Secondary treatment is comprised of technology-based requirements expressed in terms of BOD_5, TSS, and pH. 40 C.F.R. Part 133.

Water quality-based effluent limits are designed to ensure that state water quality standards are met regardless of the decision made with respect to technology and economics in establishing technology-based limitations. In particular, Section 301(b)(1)(C) requires achievement of, "any more stringent limitation, including those necessary to meet water quality standards…established pursuant to any State law or regulation…" See 40 C.F.R. §§ 122.4(d), 122.44(d)(1) (providing that a permit must contain effluent limits as necessary to protect State water quality standards, "including State narrative criteria for water quality")(emphasis added) and 122.45(d)(5) (providing in part that a permit incorporate any more stringent limits required by Section 301(b)(1)(C) of the CWA).

The CWA requires that States develop water quality standards for all water bodies within the State. CWA § 303. These standards have three parts: (1) one or more "designated uses" for each water body or water body segment in the state; (2) water quality "criteria" consisting of numerical concentration levels and/or narrative statements specifying the amounts of various pollutants that may be present in each water body without impairing the designated uses of that water body; and (3) an antidegradation provision, focused on protecting high quality waters and protecting and maintaining water quality necessary to protect existing uses. CWA § 303(c)(2)(a); 40 C.F.R. § 131.12. The limits and conditions of the permit reflect the goal of the CWA and EPA to achieve and then to maintain water quality standards.

The applicable New Hampshire water quality standards can be found in Surface Water Quality Regulations, Chapter Env-Ws 1700 et seq. See generally, Title 50, Water Management and Protection, Chapter 485A, Water Pollution and Waste Disposal Section 485-A. Hereinafter, New Hampshire's Surface Water Quality Regulations are referred to as the NH standards.

Receiving stream requirements are established according to numerical and narrative standards adopted under state law for each stream classification. When using chemical-specific numeric criteria from a State's water quality standards to develop permit limits, both the acute and chronic aquatic life criteria are used and expressed in terms of maximum allowable in stream pollutant concentrations. Acute aquatic life criteria are generally implemented through maximum daily limits and chronic aquatic life criteria are generally implemented through average monthly limits. When a State has not established a numeric water quality criterion for a specific pollutant that is present in the effluent in a concentration that causes or has a reasonable potential to cause a violation of narrative water quality standards, the permitting authority must establish effluent limits in one of three ways: based on a "calculated numeric criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable

narrative water quality criteria and fully protect the designated use"; on a "case-by-case basis" using CWA § 304(a) recommended water quality criteria, supplemented as necessary by other relevant information; or in certain circumstances, based on an "indicator parameter". 40 C.F.R. § 122.44(d)(1)(vi)(A-C).

All statutory deadlines for meeting various treatment technology-based effluent limitations established pursuant to the CWA have expired. When technology-based effluent limits are included in a permit, compliance with those limitations is from the date the issued permit becomes effective. See 40 C.F.R. § 125.3(a)(1). Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA cannot be authorized by an NPDES permit. The regulations governing EPA's NPDES permit program are generally found in 40 C.F.R. Parts 122, 124, and 136.

b. Introduction

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 contribute to an excursion above any water quality standard, including narrative water quality criteria. See 40 C.F.R. 122.44(d)(1). An excursion occurs if the projected or actual in-stream concentration exceeds the applicable criterion.

A. Reasonable Potential

In determining reasonable potential, EPA considers: (1) existing controls on point and non-point sources of pollution; (2) pollutant concentration and variability in the effluent and receiving water as determined from permit applications, monthly discharge monitoring reports, and State and Federal water quality reports; (3) sensitivity of the species to toxicity testing; (4) statistical approach outlined in *Technical Support Document for Water Quality-based Toxics Controls*, March 1991, EPA/505/2-90-001 in Section 3; and where appropriate, (5) dilution of the effluent in the receiving water. In accordance with New Hampshire Standards (RSA 485-A:8VI, Env-Ws 1705.02), available dilution for rivers and streams is based on a known or estimated value of the lowest average flow which occurs for seven (7) consecutive days with a recurrence interval of once in ten (10) years (7Q10) for aquatic life and human health criteria for non-carcinogens, or the long-term harmonic mean flow for human health (carcinogens only) in the receiving water at the point just upstream of the outfall. Furthermore, 10 percent of the receiving water's assimilative capacity is held in reserve for future needs in accordance with New Hampshire's Surface Water Quality Regulations Env-Ws 1705.01.

B. Anti-backsliding

Section 402(o) of the CWA generally provides that the effluent limitations of a renewed, reissued, or modified permit must be at least as stringent as the comparable effluent limitations in the previous permit. Except under certain limited circumstances, "backsliding" from effluent limitations contained in previously issued permits is prohibited. EPA has also promulgated anti-

backsliding regulations which are found at 40 C.F.R. § 122.44(l).

C. State Certification

Section 401(a)(1) of the CWA requires all NPDES permit applicants to obtain a certification from the appropriate state agency stating that the permit will comply with all applicable federal effluent limitation and state water quality standards. See CWA § 401(a)(1). The regulatory provisions pertaining to state certification provide that EPA may not issue a permit until a certification is granted or waived by the state in which the discharge originates. 40 C.F.R. § 124.53(a). The regulations further provide that, "when certification is required…no final permit shall be issued…unless the final permit incorporated the requirements specified in the certification under § 124.53(e)." 40 C.F.R. § 124.55(a)(2). Section 124.53(e) in turn provides that the State certification shall include "any conditions more stringent than those in the draft permit which the State finds necessary" to assure compliance with, among other things, State water quality standards, see 40 C.F.R. 124.53(e)(2), and shall also include "[a] statement of the extent to which each condition of the draft permit can be made less stringent without violating the requirements of State law, including water quality standards," see 40 C.F.R. 124.53(e)(3).

However, when EPA reasonably believes that a State water quality standard requires a more stringent permit limitation than that reflected in a state certification, it has an independent duty under CWA §301(b)(1)(C) to include more stringent permit limitations. See 40 C.F.R. §§ 122.44(d)(1) and (5). It should be noted that under CWA § 401, EPA's duty to defer to considerations of State law is intended to prevent EPA from relaxing any requirements, limitations, or conditions imposed by State law. Therefore, "[a] State may not condition or deny a certification on the grounds that State law allows a less stringent permit condition." 40 C.F.R. § 124.55(c). In such an instance, the regulations provide that, "The Regional Administrator shall disregard any such certification conditions or denials as waivers of certification." Id. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 C.F.R. § 122.4(d) and 40 C.F.R. § 122.44(d).

c. Flow

The Exeter Wastewater Treatment Plant has a design flow of 3.0 mgd. This flow rate is used to calculate available dilution and mass limits for BOD_5 and TSS as discussed below. If the effluent flow rate exceeds 80 percent of the 3.0 mgd design flow (2.4 mgd) for a period of three (3) consecutive months then the permittee must notify EPA and the NHDES-WD and implement a program to maintain satisfactory treatment levels.

d. Conventional Pollutants

A. BOD_5 and TSS

Average monthly and average weekly concentration (i.e. mg/l) effluent limits in the draft permit for Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS) are based on

requirements of Section 301(b)(1)(B) of the CWA as defined in 40 C.F.R. §133.102. The average monthly, average weekly and maximum daily concentration limits for BOD_5 and TSS are the same as the limits in the existing permit, consistent with the anti-backsliding requirement found in 40 C.F.R. §122.44.

The draft permit also contains average monthly, average weekly, and maximum daily mass (i.e. lbs/day) for BOD_5 and TSS. Mass limits are incorporated into the permit based on 40 C.F.R. §122.45(f). These mass limits were calculated using the appropriate concentration limits and the design flow of the facility. Refer to Attachment C for the calculation of these limits.

The percent removal requirements for the existing permit were based upon 40 C.F.R. §133.105 (Treatment Equivalent to Secondary Treatment). Presently, the permittee is required to maintain 70% removal for BOD_5 and 65% for TSS. These limits have been carried forward to the draft permit.

B. pH

The pH limit range of 6.5 – 8.0 S.U. in the draft permit remain unchanged from the existing permit. Language under State Permit Conditions (PART I.D.1.a.) allows for a change in the pH limit under certain conditions. A change would be considered if the applicant can demonstrate to the satisfaction of NHDES-WD that the pH standard of the receiving water will be protected when the discharge is outside the permitted range, then the applicant or NHDES-WD may request (in writing) that the permit limits be modified by EPA to incorporate the results of the demonstration. Anticipating the situation where NHDES-WD grants a formal approval changing the pH limit to outside 6.5 to 8.0 Standard Units (S.U.), EPA has added a provision to the draft permit (see SPECIAL CONDITIONS section). That provision will allow EPA to modify the pH limit using a certified letter approach. This change will be allowed only if it is demonstrated that the revised pH limit range does not alter the naturally occurring receiving water pH. However, the pH limit range cannot be less restrictive than 6.0 to 9.0 S.U. found in the applicable National Effluent Limitation Guideline (Secondary Treatment Regulations in 40 C.F.R. Part 133) for the facility.

C. Bacteria

New Hampshire State statue N.H. RSA 485-A:8,V, specifies that the bacteria standard shall be "…as recommended under the National Shellfish Program Manual of Operation, United States Department of Food and Drug Administration." This standard applies to facilities which discharge to tidal waters used for growing or taking of shellfish for human consumption, and therefore applies to the Exeter Wastewater Treatment Plant. The recommended criteria for fecal coliform bacteria is 14 colonies per 100 milliliters. Additionally, not more than 10 percent of the collected samples shall exceed a most probable number (MPN) of 43 per 100 milliliters for a 5-tube decimal dilution test. The NHDES-WD has determined that the fecal coliform value of 14

colonies per 100 milliliters applies to NPDES permits as an average monthly limit and that the permits should also contain a condition to report maximum daily values. The report-only requirement is needed to monitor the variation in data to properly assess compliance with the requirement that not more that 10 percent of the samples exceed the MPN of 43. The average monthly limit is determined by calculating the geometric mean of the daily sample values.

N.H RSA 485-A:8,V also requires enterococci bacteria limits for discharges to "tidal waters utilized for swimming purposes." However, EPA is not requiring numerical enterococci bacteria limits in the permit. Rather, EPA is imposing a report only enterococci requirement. EPA believes this is appropriate because there are no readily apparent swimming areas in the area of the discharge. Collecting bacteria data from the treatments plant's effluent will allow EPA and NHDES-WD to evaluate potential enterococci impacts on the receiving water.

e. Non-Conventional and Toxic Pollutants

Water quality based limits for specific toxic pollutants were determined from numeric chemical specific criteria derived from extensive scientific studies. The EPA has summarized and published specific toxic pollutants and their associated toxicity criteria in *Quality Criteria for Water*, 1986, EPA440/5-86-001 as amended, commonly known as the federal "Gold Book". Each pollutant generally includes an acute aquatic life criteria to protect against short term effects, such as death, and a chronic aquatic life criteria to protect against long term effects, such as poor reproduction or impaired growth. New Hampshire adopted these "Gold Book" criteria, with certain exceptions, and included them as part of the State's Surface Water Quality Regulations adopted on December 10, 1999. EPA uses these pollutant specific criteria along with available dilution in the receiving water to determine a pollutant specific draft permit limit.

A. Available Dilution

In February of 2002, the Town of Exeter extended Outfall 001 to the middle of the Squamscott River. The end of the outfall extension consists of a 40 foot multiport diffuser consisting of eight ports. This project was completed on February 12, 2002. The NHDES-WD performed modeling

of the new outfall configuration using CORMIX-GI and determined the dilution factor to be 25.2. Water quality based limits for the existing permit and the draft permit have been calculated using this dilution factor.

B. Total Chlorine Residual

The New Hampshire water quality standards specify the chronic and acute aquatic-life criterion for chlorine at 0.011 mg/l and 0.019 mg/l, respectively, for freshwater; and 0.0075 mg/l and 0.013 mg/l, respectively, for marine water. The Exeter WWTP discharges to a tidal river, thus the marine standards apply. Based upon available dilution, applicable total residual chlorine

limits are a monthly average limit of 0.19 mg/l (0.0075 mg/l * 25.2) and a daily maximum limit of 0.33 mg/l (0.013 mg/l * 25.2).

C. Ammonia Nitrogen as N

The existing permit based the ammonia limitations on New Hampshire standards found at Env-Ws 1703.26 through 1703.31. The salt water ammonia criteria are a function of temperature, pH, and salinity. Based upon data from the Jackson Estuarine Laboratory, values of 20^{o} C, 8.0 S.U., and 15 g/kg and 5^{o} C, 8.0 S.U., and 10 g/kg were used for the summer and winter periods, respectively. Based upon this information, the acute and chronic ammonia criteria (in terms of NH_3 per liter) for the summer period are 6.6 and 0.99 mg/l and for the winter period are 19 and 2.9 mg/l. In order to convert the ammonia criteria (in terms of NH_3 per liter) to ammonia nitrogen as N criteria, the ammonia criteria is multiplied by 0.822. Based upon a dilution of 25.2 applicable permit limits would be:

Summer Chronic => (25.2)*(0.99 mg/l)*(0.822) = 20.5 mg/l

Summer Acute => (25.2)*(6.6 mg/l)*(0.822) = 136.7 mg/l

Winter Chronic => (25.2)*(2.9 mg/l)*(0.822) = 60.1 mg/l

Winter Acute => (25.2)*(19 mg/l)*(0.822) = 393.6 mg/l

Consistent with the existing permit, the draft permit contains a monthly average summer limit of 20.5 mg/l and a reporting requirement for the summer daily maximum, winter monthly average, and winter daily maximum.

f. Whole Effluent Toxicity

EPA's **Technical Support Document for Water Quality Based Toxics Control,** EPA/505/2-90-001, March 1991, recommends using an "integrated strategy" containing both pollutant (chemical) specific approaches and whole effluent (biological) toxicity approaches to control toxic pollutants in effluent discharges from entering waters of the U.S.. EPA-New England adopted this "integrated strategy" on July 1, 1991, for used in permit development and issuance. These approaches are designed to protect aquatic life and human health. Pollutant specific approaches such as those in the Gold Book and State Regulations address individual chemicals, whereas whole effluent toxicity (WET) approaches evaluate interactions between pollutants thus rendering and "overall" or "aggregate" toxicity assessment of the effluent. Furthermore, WET measures the "additive" and/or "antagonistic" effects of individual chemical pollutants which pollutant specific approaches do not, thus the need for both approaches. In addition, the presence of an unknown toxic pollutant can be discovered and addressed through this process.

Section 101(a)(3) of the CWA specifically prohibits the discharge of toxic pollutants in toxic amounts and New Hampshire law states that, "all waters shall be free from toxic substances or

chemical constituents in concentrations or combination that injure or are inimical to plants, animals, humans, or aquatic life; ....” (NH RSA 485-A:8, VI and the NH Code of Administrative Rules, PART Env-Ws 1703.21). The federal NPDES regulations at 40 CFR §122.44(d)(1)(v) require whole effluent toxicity limits in a permit when a discharge has a “reasonable potential” to cause or contribute to an excursion above the State’s narrative criteria for toxicity. Inclusion of the whole effluent toxicity limit in the draft permit will demonstrate the compliance with narrative water quality criteria of “no toxics in toxics amounts” found in both the CWA and State of New Hampshire regulations.

The previous permit (effective date April 1, 2001) required toxicity testing four times a year with an LC50 limit of 100%. The required test species are mysid shrimp (*Mysidopsis bahia*) and inland silverside (*Menidia beryllina*). On August 23, 2002, the Town requested a reduction in toxicity test frequency to two per year because the Town had four consecutive test results in compliance with the permit limits. In a letter dated September 11, 2003, EPA reduced the toxicity testing frequency to two per year. Testing is required for the calendar quarters ending March 31st and September 30th. The existing toxicity testing requirement has been carried forward to the current draft permit.

Toxicity testing frequency may be reduced, to not less than once per year, after the completion of a minimum of the most recent four successive toxicity tests of effluent, all of which must be valid tests and demonstrate compliance with the permit limits for whole effluent toxicity. Any requests for toxicity testing frequency reduction must be made to EPA-New England in writing. If toxicity persists in the effluent, monitoring frequency and testing requirements may be increased. The permit may also be modified, or alternatively revoked and reissued, to incorporate additional toxicity testing requirements or chemical specific limits. These actions will occur if the Regional Administrator determines the NH standards are not adequately enforced and users of the receiving water are not adequately protected during the remaining life of the permit. Results of these toxicity tests are considered “new information not available at the permit development”, therefore, the permitting authority is allowed to use said information to modify and issued permit under authority in 40 C.F.R. §122.62(a)(2).

g. Combined Sewer Overflows (CSOs)

One CSO remains active (Outfall 003). The location of this CSO discharge into Clemson Pond is shown on Attachment A. The previous permit established CSO Outfall 003 (discharge to Clemson Pond) and eliminated Outfall 002 (outlet from Clemson Pond). This change was made because it was determined that Clemson Pond should be classified as a “Water of the United States”. The draft permit carries forward this determination and authorizes discharges from CSO Outfall 003 into Clemson Pond under certain conditions. The permit also includes a condition to monitor the CSO flow into Clemson Pond and at the outlet of Clemson Pond once per quarter for the first year of the permit. Parameters to be sampled include Fecal Coliform Bacteria, Enterococci Bacteria, salinity, and temperature. This monitoring is necessary to ensure that designated used of the receiving waters are maintained. If the monitoring data reveals the need to add additional limits or conditions, the permit may be modified or alternatively revoked and

reissued.

The following discussion explains the final EPA National CSO Policy, published in April 19, 1994 in the Federal Register (59 FR 18688). Specific requirements in the draft permit include: dry-weather overflow prohibition, nine minimum controls, and documentation of the implementation of these nine minimum controls, and compliance with water quality standards.

General

CSOs are discharges from a combined storm water and wastewater sewer system into a receiving water without first going to the headworks of a publicly owned treatment works (POTW). CSOs occur when the flow in the combined sewer system exceeds interceptor or regulator capacity. CSOs are distinguished from bypasses which are "intentional diversions of waste streams from any portion of a treatment facility" (40 C.F.R. §122.41(m)).

Flows in combined sewers can be classified into two categories: wet-weather flow and dry-weather flow. Wet-weather flow is a combination of domestic and industrial sewage, infiltration from groundwater, and storm water flow including snow melt. Dry-weather flow is a combined sewer that results from domestic sewage, groundwater infiltration, and industrial wastes, with no contribution from storm water runoff or storm water induced infiltration. Dry-weather overflows from CSOs are illegal. They must be reported immediately to EPA and eliminated as expeditiously as possible.

The objectives of the National CSO Control Policy are to: (1) Ensure that if the CSO discharges occur, they are only as a result of wet-weather, (2) Bring all wet-weather CSO discharge points into compliance with the technology-based requirements of the CWA and applicable Federal and State water quality standards, and (3) Minimize water quality, aquatic biota, and human health impacts from wet-weather flows.

Effluent Standards

CSOs are point sources subject to both water quality-based and technology-based NPDES permit requirements. However, they are not subject to secondary treatment regulations. Section 301(b)(1)(C) of the CWA of 1977 mandates compliance with Federal and State water quality standards by July 1, 1977. Technology-based permit limits must be established for BPT, BCT, and BAT based on BPJ in accordance with Section 301(b) and Section 402(a) of the Water Quality Act Amendments of 1987.

Conditions for Discharge

The draft permit prohibits dry-weather discharges from CSO outfalls. During wet-weather, the discharges must not cause violations of Federal and State water quality standards. Dry-weather discharges must be reported immediately to EPA and the NHDES-WD. Wet-weather discharges must be monitored and reported as specified in the permit.

Nine Minimum Controls (NMC)

The permittee must comply with BPJ-derived BCT/BAT controls, which at a minimum include the following: (1) Proper operation and maintenance of the sewer system and outfalls; (2) Maximum use of the collection systems for storage; (3) Review of pretreatment programs to assure CSO impacts are minimized; (4) Maximization of flow to the POTW for treatment; (5) Prohibition of dry-weather flows; (6) Control of solid and floatable materials in the discharge; (7) Pollution prevention programs which focus on contaminant reduction activities; (8) Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts; and (9) Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

Documentation

Exeter prepared a report in April, 1997 documenting compliance with the nine minimum controls. The permit requires this report to be updated to reflect updates to the system and any changes (if applicable) to the nine minimum controls. Approvable documentation must demonstrate implementation of the nine minimum controls, including schedules for completing minor construction activities. This documentation must include a detailed analysis of specific activities the permittee has undertaken and will undertake to implement the nine minimum controls and additional controls beyond the nine minimum controls the permittee can feasibly implement. The specific activities included in the documentation must include minimum requirements set forth in Part I.F.1. of the draft permit and additional activities the permittee can feasibly undertake. This documentation will constitute the specific activities and levels of control required under this permit along with any revisions that may be required.

Documentation may include operation and maintenance plans, revised sewer use ordinances for industrial users, sewer system inspection reports, infiltration/inflow studies, pollution prevention programs, public notification plans and facility plans for maximizing the capacities of the existing collection system, as well as contracts and schedules for minor construction programs for improving the existing systems operation. This documentation shall also include information which indicates the degree to which the controls achieve compliance with water quality standards.

h. Industrial Users

The permittee is presently not required to administer a pretreatment program based on the authority granted under 40 C.F.R. §122.44(j), 40 C.F.R. §403 and Section 307 of the CWA. However, the draft permit contains conditions which are necessary to allow EPA and NHDES-WD to ensure that pollutants from industrial users will not pass through the facility and cause water quality standards violations and/or sludge use and disposal difficulties or cause interference with the operation of the treatment facility.

The permittee is required to notify EPA and NHDES-WD whenever a process wastewater discharge to the facility from a primary industrial category (see 40 C.F.R. §122 Appendix A for list) is planned or if there is any substantial change in the volume or character of pollutants being discharged into the facility by a source that was discharging at the time of issuance of the permit. The permit also contains the requirements to: 1) report to EPA and NHDES-WD the name(s) of all industrial users subject to Categorical Pretreatment Standards (see 40 C.F.R. §403 Appendix C as amended) pursuant to 40 C.F.R. §403.6 and 40 C.F.R. Chapter I, Subchapter N (Parts 405-415, 417-436, 439-440, 443, 446-447, 454-455, 457-461, 463-469, and 471 as amended) and/or New Hampshire Pretreatment Standards (ENV-Ws 904) who commence discharge to the POTW after the effective date of the finally issued permit; and 2) submit two EPA and NHDES-WD copies of Baseline Monitoring Reports and other pretreatment reports submitted by industrial users.

i. Operation and Maintenance

Regulations regarding proper operation and maintenance are found at 40 C.F.R. § 122.41(e). These regulations require, "that the permittee shall at all times operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit." The treatment plant and the collection system are included in the definition "facilities and systems of treatment and control" and are therefore subject to proper operation and maintenance requirements.

Similarly, a permittee has a "duty to mitigate" pursuant to 40 C.F.R. § 122.41(d), which requires the permittee to "take all reasonable steps to minimize or prevent any discharge in violations of the permit which has a reasonable likelihood of adversely affecting human health or the environment."

General requirements for proper operation and maintenance, and mitigation have been included in Part II of the permit. Specific permit conditions have also been included in Part I.B., I.C., and I.D. of the draft permit. These requirements include mapping of the wastewater collection system, reporting of unauthorized discharges including SSOs, maintaining an adequate maintenance staff, performing preventative maintenance, controlling inflow and infiltration to the extent necessary to prevent SSOs and I/I related effluent violations at the wastewater treatment plant, and maintaining alternate power where necessary.

j. Sludge

Section 405(d) of the CWA requires that EPA develop technical standards regulating the use and disposal of sewage sludge. These regulations were signed on November 25, 1992, published in the Federal Register on February 19, 1993, and became effective on March 22, 1993. Domestic sludge which is land applied, disposed of in a surface disposal unit, or fired in a sewage sludge incinerator are subject to Part 503 technical standards. Part 503 regulations have a self implementing provision, however, the CWA requires implementation through permits.

Domestic sludge which is disposed of in a municipal solid waste landfill is in compliance with Part 503 regulations provided that the sludge meets the quality criteria of the landfill and the landfill meets the requirements of 40 C.F.R. Part 258.

The draft permit requires that sewage sludge use and disposal practices meet Section 405(d) Technical Standards of the CWA. In addition, the EPA Region I – NPDES Permit Sludge Compliance Guidance document dated November 4, 1999 is included with the draft permit for use by the permittee in determining their appropriate sludge conditions for their chosen method of sludge disposal. The permittee is required to submit to EPA and to NHDES-WD annually, by February 19th, the various sludge reporting requirements as specified in the guidance document for the chosen method of sludge disposal.

Sludge generated by the Exeter Wastewater Treatment Plant is placed in an on-site sludge storage lagoon.

k. Essential Fish Habitat and Endangered Species

A. Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104267), established a new requirement to describe and identify (designate) "essential fish habitat" (EFH) in each federal fishery management plan. Only species managed under a federal fishery management plan are covered. Fishery Management Councils determine which area will be designated as EFH. The Councils have prepared written descriptions and maps of EFH, and include them in fishery management plans or their amendments. EFH designations for New England were approved by the Secretary of Commerce on March 3, 1999.

The 1996 Sustainable Fisheries Act broadly defined EFH as "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Waters include aquatic areas and their associated physical, chemical, and biological properties. Substrate includes sediment, hard bottom, and structures underlying the waters. Necessary means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem. Spawning, breeding, feeding, or growth to maturity covers all habitat types utilized by a species throughout its life cycle. Adversely affect means any impact which reduces the quality and/or quantity of EFH. Adverse impacts may include direct (i.e. contamination, physical disruption), indirect (i.e. loss of prey), site specific or habitat wide impacts including individual, cumulative, or synergistic consequences of actions.

According to the Guide to Essential Fish Habitat Designations in the Northeastern United States; Volume I: Maine and New Hampshire, March 1999, Great Bay, into which the Squamscott River flows, has been designated as EFH for the species listed in Attachment D.

EPA has concluded that the limits and conditions contained in this draft permit minimize adverse effects to EFH for the following reasons:

- The permit requires twice per year toxicity testing using mysid shrimp and inland silversides to ensure that the discharge does not present toxicity problems;
- The permit prohibits the discharge to cause a violation of state water quality standards;
- The permit contains water quality base limits for ammonia and total residual chlorine.

EPA believes the draft permit adequately protects EFH and therefore additional mitigation is not warranted. NMFS will be notified and an EFH consultation will be reinitiated if adverse impacts to EFH are detected as a result of this permit action or if new information is received that changes the basis for these conclusions.

B. Endangered Species

The Endangered Species Act (16 U.S.C. 1451 et seq), Section 7, requires the EPA to ensure, in consultation with the U.S. Fish and Wildlife Service (USFWS) and/or NMFS, as appropriate, that any action authorized by EPA is not likely to jeopardize the continued existence of any endangered or threatened species, or adversely affect its critical habitat**.**

EPA believes that the authorized discharge from this facility is not likely to adversely affect and federally listed species or their habitats. EPA is informally consulting with USFWS and NMFS to confirm this determination.

V. Antidegradation.

This draft permit is being reissued with limitations that are the same as those in the existing permit. There is no change in the outfall locations. Since the State of New Hampshire has indication there will be no lowering of water quality and no loss of existing uses, no additional antidegradation review is needed.

VI. State Certification Requirements.

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving water(s) either certifies that the effluent limitations and/or conditions contained in the permit are stringent enough to assure, among other things, that the discharge will not cause the receiving water to violation NH standards or waives its right to certify as set forth in 40 C.F.R. §124.53.

Upon public noticing of the draft permit, EPA is formally requesting that the State's certifying authority make a written determination concerning certification. The State will be deemed to have waived its right to certify unless certification is received within 60 days of receipt of this request.

The NHDES-WD, Wastewater Engineering Bureau is the certifying authority. EPA has discussed this draft permit with the staff of the Wastewater Engineering Bureau and expects that the draft permit will be certified. Regulations governing state certification are set forth in 40 C.F.R. §§ 124.53 and 124.55.

The State's certification should include the specific conditions necessary to assure compliance with applicable provisions of the CWA, Sections 208(e), 301, 302, 303, 306, and 307 and with appropriate requirements of State law. In addition, the State should provide a statement of the extent to which each condition of the draft permit can be made less stringent without violating the requirements of State law. Since the State's certification is provided prior to permit issuance, any failure by the State to provide this statement waives the State's right to certify or object to any less stringent condition. These less stringent conditions may be established by EPA during the permit issuance process based on information received following the public notice of the draft permit. If the State believes that any conditions more stringent than those contained in the draft permit are necessary to meet the requirements of either the CWA or State law, the State should include such conditions and, in each case, cite the CWA or State law reference upon which that condition is based. Failure to provide such a citation waives the right to certify as to that condition.

Reviews and appeals of limitations and conditions attributable to State Certification shall be made through the applicable procedures of the State and may not be made through the applicable procedures set forth in 40 C.F.R. Part 124.

VII. Comment Period, Hearing Requests, 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:

Dan Arsenault
U.S. Environmental Protection Agency
One Congress Street
Suite 1100 (Mail Code CMP)
Boston, Massachusetts 02114-2023
Telephone: (617) 918-1562
Fax: (617) 918-1505

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 issue proposed to be raised at the hearing. A public hearing may be held after at least thirty (30) 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 will respond to all 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 applicable), 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. Within 30 days following the notice of the final permit decision, any interested person may submit a request for a formal hearing to reconsider or contest the final decision. Requests for a formal hearing must satisfy the requirement of 40 C.F.R. §124.74.

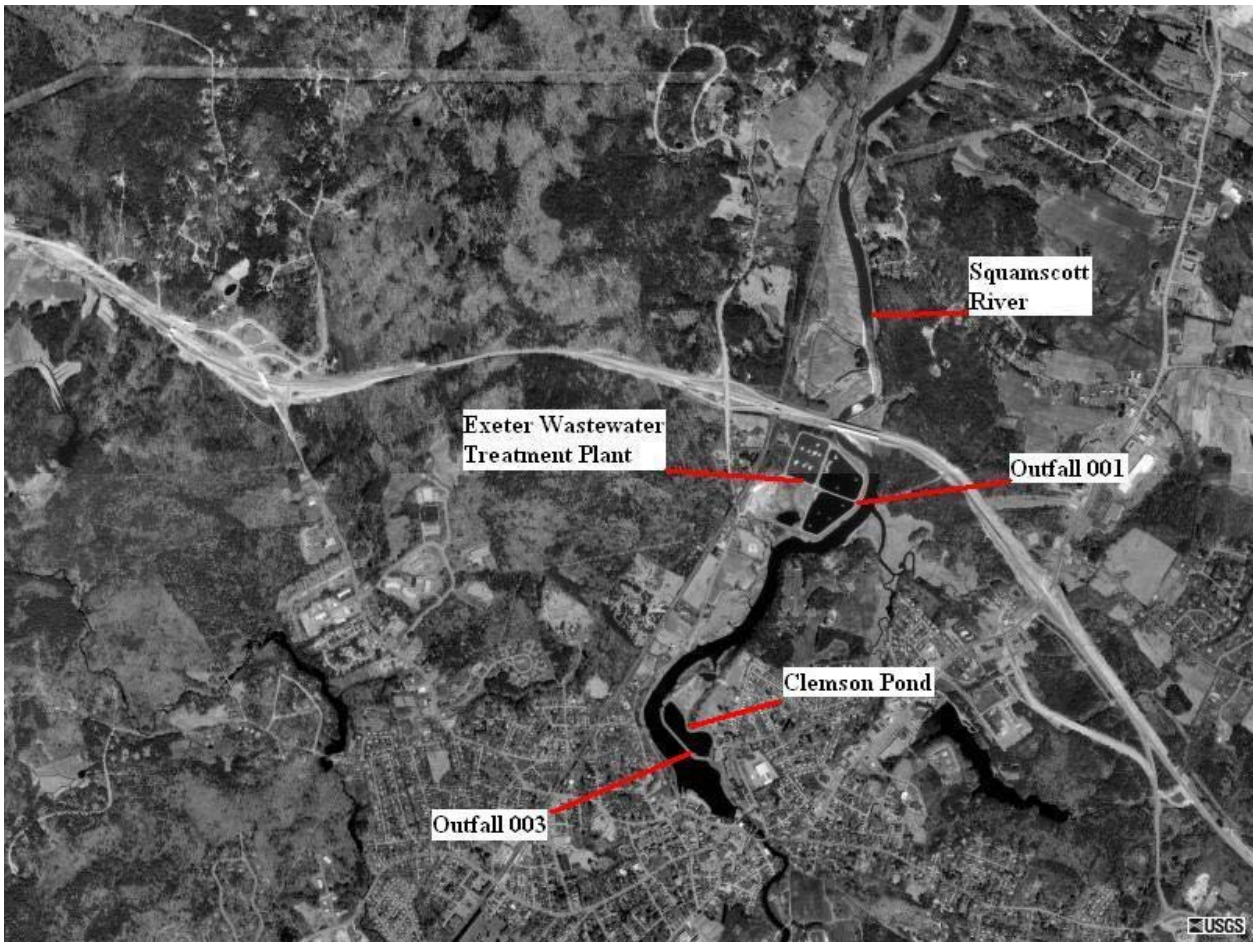
Information concerning the draft permit may be obtained between the hours of 9:00 am and 5:00 pm, Monday through Friday, excluding holidays.

_____
Date

Stephen S. Perkins, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

ATTACHMENT A

EXETER WASTEWATER TREATMENT PLANT LOCATION



* Aerial photo obtained from www.terraserver.microsoft.com. Photo taken April 11, 1998.

ATTACHMENT B

SUMMARY OF EFFLUENT CHARACTERISTICS AT OUTFALL 001

The following effluent characteristics were derived from analysis of discharge monitoring data collected from Outfall 001 from October 2000 through April 2006. All data taken from the monthly Discharge Monitoring Reports as retrieved from EPA's Permit Compliance System (PCS) data base. These effluent values characterize the treated wastewater discharged from this facility.

Effluent Parameter	**Average of Monthly Averages**	**Range of Monthly Averages**	**Maximum of Daily Maximums[1]**
Effluent Flow (mgd)	2.0	0.9 – 3.5	7.7, 5.9, 5.1
BOD_5 (mg/l)	10	3 - 23	43, 28, 25
BOD_5 (lb/day)	181	22 - 499	1434, 1083, 841
TSS (mg/l)	15	4 - 29	38, 36, 32
TSS (lb/day)	264	30 - 777	951, 921, 841
pH (standard units)[2]	---	6.5 – 7.9	---
Fecal coliform (colonies/100ml)	1.6	0 - 8	41, 43, 32
Total Residual Chlorine (mg/l)	0.006	0 – 0.024	0.055, 0.045, 0.035
BOD_5 Removal (percent)	92	78 – 97	78, 82, 83[3]
TSS Removal (percent)	89	75 – 97	75, 78, 80[3]
LC50 (percent effluent) *Mysidopsis bahia*	---	---	64.5, 74.7, >100[3]
LC50 (percent effluent) *Menidia beryllina*	---	---	>100[3]
Ammonia Nitrogen as Nitrogen (mg/l) (May through October)	7.42	0.1 – 19.5	24, 21, 20
Ammonia Nitrogen as Nitrogen (mg/l) (November through April)	15.64	1.8 - 28	34, 32, 30
Total Recoverable Cadmium (mg/l)	---	---	0.008, 0.005, 0.002
Total Recoverable Chromium (mg/l)	---	---	0.008, 0.004, 0.003
Total Recoverable Copper (mg/l)	---	---	0.01, 0.013, 0.012
Total Recoverable Nickel (mg/l)	---	---	0.008, 0.006, 0.005
Total Recoverable Lead (mg/l)	---	---	0.055, 0.021, 0.013
Total Recoverable Zinc (mg/l)	---	---	0.084, 0.0775, 0.076

1. More than one value represents the second and third highest values.
2. Numbers listed are the minimum and maximum daily readings.
3. Number listed represent lowest values reported.

ATTACHMENT C

BOD_5 AND TSS EFFLUENT MASS LIMIT CALCULATIONS

Concentration Limits for BOD_5 and TSS: Monthly Average = 30 mg/l
Weekly Average = 45 mg/l
Daily Maximum = 50 mg/l

Plant Design Flow = 3.0 mgd = 3,000,000 gal/d

Average Monthly Mass Limit:

(30 mg/liter)(3,000,000 gal/d)(1 gram/1000 mg)(1 lb/ 454 gram)(3.785 liter/gal) = 751 lb/d

Average Weekly Mass Limit:

(45 mg/liter)(3,000,000 gal/d)(1 gram/1000 mg)(1 lb/ 454 gram)(3.785 liter/gal) = 1,126 lb/d

Maximum Daily Limit:

(50 mg/liter)(3,000,000 gal/d)(1 gram/1000 mg)(1 lb/ 454 gram)(3.785 liter/gal) = 1,251 lb/d

ATTACHMENT D

EFH DESIGNATIONS FOR GREAT BAY

Species	Eggs	Larvae	Juveniles	Adults	Spawning Adults
Atlantic salmon (*Salmo salar*)			F,M		
Atlantic cod (*Gadus morhua*)	S	S			
haddock (*Meanogrammus aeglefinus*)	S	S			
pollack (*Pollachius virens*)	S	S	S		
red hake (*Urophycis chuss*)			S	S	
white hake (*Urophycis tenuis*)	S		S	S	
redfish (*Sebastes fasciatus*)	n/a				
winter flounder (*Pleuronectes americanus*)	M,S	M,S	M,S	M,S	M,S
yellowtail flounder (*Pleuronectes ferruginea*)	S	S			
windowpane flounder (*Scopthalmus aquosus*)	S	S	S	S	S
Atlantic halibut (*Hippoglossus hippoglossus*)	S	S	S	S	S
Atlantic sea scallop (*Placopecten magellanicus*)			S	S	
Atlantic sea herring (*Clupea harengus*)		M,S	M,S		
bluefish (*Pomatomus saltatrix*)			M,S	M,S	
long finned squid (*Loligo pealei*)	n/a	n/a			
short finned squid (*Illex illecebrosus*)	n/a	n/a			
Atlantic mackerel (*Scomber scombrus*)	M,S	M,S	S		
surf clam (*Spisula solidissima*)	n/a	n/a			
ocean quahog (*Artica islandica*)	n/a	n/a			
spiny dogfish (*Squalus acanthias*)	n/a	n/a			

S = The EFH designation for this species includes the seawater salinity zone of the bay (salinity > or = 25.0 $^{o}/_{oo}$).

M = The EFH designation for this species includes the mixing water/brackish salinity zone of this bay (0.5 $^{o}/_{oo}$ < salinity < 25.0 $^{o}/_{oo}$).

F = The EFH designation for this species includes the tidal freshwater salinity zone of this bay or estuary (0.0 $^{o}/_{oo}$ < or = salinity < or = 0.5 $^{o}/_{oo}$)

n/a = The species does not have this lifestage in its life history or has not EFH designated for this lifestage.