UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
ONE CONGRESS STREET
BOSTON, MASSACHUSETTS 02114-2023

FACT SHEET AND SUPPLEMENTAL INFORMATION

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT TO DISCHARGE WASTEWATER FROM POTABLE WATER TREATMENT FACILITIES TO CERTAIN WATERS OF THE COMMONWEALTH OF MASSACHUSETTS AND THE STATE OF NEW HAMPSHIRE

NPDES GENERAL PERMITS: MAG640000 AND NHG640000

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I. Coverage Under this Permit

A. Introduction

The Director of the Office of Ecosystem Protection, EPA-New England, is reissuing the general permits for discharges from potable water treatment facilities to certain waters of the Commonwealth of Massachusetts (including both Commonwealth and Indian country lands) and the State of New Hampshire. The general permit MAG640000 applies to discharges in Massachusetts while the general permit NHG640000 applies to discharges in New Hampshire. Collectively, in this fact sheet and in the general permit, the two permits are referred to, in the singular, as the PWTF GP. The PWTF GP will replace the previous PWTF GP that expired on November 15, 2005 (the "Expired" PWTF GP). Currently, there are approximately 74 facilities, including 65 in Massachusetts and 9 in New Hampshire, covered by the Expired PWTF GP.

EPA is proposing the following changes to the Expired PWTF GP:

- Including total residual chlorine limits if the facility discharges water which has been previously chlorinated or which contains residual chlorine;

- Including arsenic monitoring when the PWTF is providing treatment to remove arsenic from the raw water source, including groundwater sources;

- Adding requirements to develop and implement a Best Management Practices Plan (BMP Plan) for operation of the facility. This will assure that the management practices for controlling water pollution are formally considered and properly carried out. The BMP Plan includes language which ensures that pollutants contained in water additives are properly considered and that the discharge of aluminum is minimized if it is used as a coagulant in the water treatment process; and,

- Requiring that all applicants submit the results of at least five (5) samples of total recoverable aluminum with the Notice of Intent (NOI). Facilities that are unable to comply with the aluminum threshold, which is based on the state water quality criteria and the dilution afforded by the receiving water, are required to apply for an individual permit.

B. Coverage of General Permits

Section 301(a) of the Clean Water Act (CWA) provides that the discharge of pollutants is unlawful except in accordance with a National Pollutant Discharge Elimination System (NPDES) permit unless such a discharge is otherwise authorized by the CWA. Although such permits are generally issued to individual discharges, EPA's regulations authorize the issuance of "general permits" to categories of discharges (see 40 CFR Section 122.28). Violation of a condition of a general permit constitutes a violation of the CWA and subjects the discharger to the penalties in Section 309 of the CWA.

The Director of an NPDES permit program is authorized to issue a general permit if there are a number of point sources operating in a geographic area that:

- Involve the same or substantially similar types of operations;
- Discharge the same types of wastes;
- Require the same effluent limitations or operating conditions;
- Require the same or similar monitoring requirements; and
- In the opinion of the Director, are more appropriately controlled under a general permit than under individual permits.

Based on these factors, EPA believes that discharges from potable water treatment facilities (PWTFs) warrant coverage under a general permit. First, all point sources covered under this general permit are located in the same geographic area (i.e., Massachusetts or New Hampshire). These point sources are all generated by substantially similar operations, which involve the removal of solid particles and other pollutants from the source water and the disinfection of the clarified water prior to distribution for public consumption. The wastewater generated from these point sources is similar in composition (i.e., the main concerns are the impacts of solids which have been removed from the raw water and the potential toxic effects from chemicals which have been added during the treatment processes or removed from the raw water). The same or similar effluent limitations and monitoring requirements are required for these point sources. Finally, in the opinion of the Director, these point sources represent multiple facilities that would not be efficiently regulated under individual permits and therefore are more appropriately controlled under a general permit.

Based on the rationale described above, EPA first issued general permits for PWTFs in Massachusetts and New Hampshire on December 9, 1994. These permits were reissued on November 15, 2000, and those reissued general permits expired November 15, 2005. When reissued, the PWTF GP will enable facilities covered under the Expired PWTF GP to maintain compliance with the CWA and will provide an efficient method to extend environmental and regulatory controls to new permittees. Use of the PWTF GP will provide timely responses to the permitting needs of the potable water treatment industry; and will help reduce the current backlog of NPDES permit applications.

C. Eligibility

Under this general permit, owners and operators of PWTFs located in Massachusetts and New Hampshire which discharge wastewater from one or more of the treatment processes listed below are eligible to be covered by this permit. The treatment processes covered include:

- Clarification,
- Coagulation,
- Media Filtration,
- Membrane filtration (not including reverse osmosis), and
- Disinfection.

Discharges from other potable drinking water treatment processes may be included if they are reported in the NOI and attain the effluent limits and other conditions of this permit.

D. Exclusions

The following categories are excluded from coverage under the PWTF GP:

1. Discharges to Outstanding Resource Waters in New Hampshire as defined under Env-Wq 1708.05(a), unless allowed by the New Hampshire Department of Environmental Services (NHDES) under Env-Wq 1708.05(b).

2. Discharges to Class A waters in New Hampshire, in accordance with RSA 485A:8, I. and Env-Wq 1708.06. To determine if the proposed receiving water is a Class A waterbody and the applicability of this exclusion, contact the NHDES at the address listed in Part 5 of the PWTF GP.

3. Discharges to areas designated as containing threatened or endangered species or critical habitat of such species under the Endangered Species Act (ESA), unless the requirements specified in the general permit are fulfilled. See Part IV.C of this Fact Sheet and Appendices I and II of the PWTF GP for additional ESA information.

4. Discharges that contain pollutants which are included in the States' published 303(d) lists of "non-attainment" segments of receiving waters in the Commonwealth of Massachusetts and the State of New Hampshire, as defined by the CWA and approved by EPA, unless the discharge will not contribute to any non-attainment.

5. Discharges to a Publicly-Owned Treatment Works (POTW) which is permitted under Section 402 of the CWA (NPDES).

6. Discharges to Ocean Sanctuaries in Massachusetts, as defined at 302 CMR 5.00.

7. Discharges to territorial seas, as defined by Section 502 of the CWA.

8. Discharges which adversely affect properties listed or eligible for listing in the National Registry of Historic Places under the National Historic Preservation Act of 1966, 16 USC Sections 470 et seq. See Part IV.D. of this Fact Sheet and Appendix III of the PWTF GP for additional information.

9. Discharges which are inconsistent with the State Coastal Zone Management Program. See Part VII.B. of this Fact Sheet for additional information.

10. Any new or increased discharge which is inconsistent with the State Antidegradation Policy.

11. "New Source" dischargers, as defined in 40 CFR § 122.2.

12. Facilities which are designed to remove radium or other radioactive substances from raw water sources to comply with drinking water standards.

13. Discharges for which the Director makes a determination that an individual permit is required. See Part IV.E.1. of this Fact Sheet for additional information.

II. Permit Basis: Statutory and Regulatory Authority

A. Statutory Requirements

The Clean Water Act (CWA) prohibits the discharge of pollutants to waters of the United States without a NPDES permit, unless the discharge is otherwise authorized by the CWA. The NPDES permit is the mechanism used to implement technology and water quality-based effluent limitations and other requirements including monitoring and reporting. This PWTF GP was developed in accordance with various statutory and regulatory requirements established pursuant to the CWA and applicable State regulations.

During development of this draft general permit, EPA considered the most recent technology-based treatment requirements, water quality-based requirements, and all limitations and requirements in the Expired PWTF GP. The regulations governing the NPDES permit program are generally found at 40 CFR Parts 122, 124, 125, and 136. The general conditions of the PWTF GP are based on 40 CFR §122.41 and consist primarily of management requirements common to all permits. The effluent monitoring requirements have been established to yield data representative of the discharge under authority of Section 308(a) of the CWA in accordance with 40 CFR §122.41(j), §122.44(i) and §122.48.

B. Technology-based Effluent Limitations

Subpart A of 40 CFR §125 establishes criteria and standards for the imposition of technology-based treatment requirements in permits under Section 301(b) of the CWA, including the application of EPA promulgated effluent limitations and case-by-case determinations of effluent limitations under Section 402(a)(1) of the CWA.

Technology-based treatment requirements represent the minimum level of control that must be imposed under Sections 301(b) and 402 of the CWA (See 40 CFR §125 Subpart A) to meet best practicable control technology currently available (BPT) for conventional pollutants and some metals, best conventional control technology (BCT) for conventional pollutants, and best available technology economically achievable (BAT) for toxic and non-conventional pollutants. In general, technology-based effluent guidelines must be complied with as expeditiously as practicable but in no case later than three years after the date such limitations are established and in no case later than March 31, 1989 [See 40 CFR §125.3(a)(2)]. Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA can not be authorized by an NPDES permit.

EPA has not promulgated National Effluent Guidelines for those discharges authorized by the PWTF GP. In the absence of effluent guidelines for this industry, technology-based standards

are determined by the permit writer on a case-by-case basis, in accordance with the statutory factors specified in CWA §§ 301(b)(2) and 304(b). These site-specific, technology-based effluent limitations reflect the best professional judgment (BPJ) of the permit writer under 40 CFR 125.3(c)(2) taking into account the same statutory factors EPA would use in promulgating a national categorical rule, but considering unique factors relating to the applicant. NPDES permit writers can develop BPJ controls using one of two methods: (1) transferring limits from an existing source (e.g., from other existing effluent guidelines or a similar NPDES permit); or (2) deriving new limits.[1]

C. Water Quality Based Effluent Limitations

Water quality-based limitations are required in NPDES permits when EPA and the State determine that effluent limits more stringent than technology-based limits are necessary to maintain or achieve state or federal water quality standards (See Section 301(b)(1)(C) of the CWA). Water quality standards consist of three parts: 1) beneficial designated uses for a surface water body or a segment of a water body; 2) numeric and/or narrative water quality criteria sufficient to protect the assigned designated use(s) of the water body; and 3) antidegradation requirements to ensure that once a use is attained it will not be degraded. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 CFR §122.44(d).

The effluent limits established in the PWTF GP assure that the surface water quality standards of the receiving water are protected, maintained, and/or attained. For those discharges which are not granted coverage under this permit because the discharge contains pollutants in quantities which represent reasonable potential to cause or contribute to violations of water quality standards, the discharger must apply for an individual NPDES permit.

D. Antidegradation Provisions

The conditions of the PWTF GP reflect the goal of the CWA and EPA to achieve and maintain water quality standards. The environmental regulations pertaining to the State Antidegradation Policies which protect the State's surface waters from degradation of water quality are found in the following provisions: Massachusetts Water Quality Standards 314 CMR Section 4.04; and New Hampshire RSA 485-A:8, VI, and Env-Wq 1708.

As part of the Section 401 certification process, each state will make an antidegradation review of the PWTF GP before its final issuance and inform EPA of the results of the review. This antidegradation review will specifically consider those facilities covered under the Expired PWTF GP. In addition, the Commonwealth of Massachusetts and the State of New Hampshire will conduct antidegradation reviews for notices of intent which are filed under the PWTF GP for new or increased discharges from PWTFs. EPA will not authorize such new or increased discharges under the PWTF GP until it receives a favorable antidegradation review and certification from the appropriate state.

[1] U.S. EPA, 1996. "NPDES Permit Writer's Manual," Page 71, EPA-833-B-96-003, December 1996.

E. Monitoring and Reporting Requirements

Operators of facilities that discharge under the authority of the final PWTF GP will be required to submit, to both EPA and to the appropriate state authority, Discharge Monitoring Reports (DMRs) containing effluent data. The frequency of reporting is determined in accordance with each state's provisions as described in the PWTF GP.

The monitoring requirements have been established to yield data representative of the discharge under authority of Section 308(a) of the CWA and 40 CFR Sections 122.41(j), 122.44(i) and 122.48, and as certified by the State.

III. Effluent Limitations

This section includes the numeric technology-based and water-quality based limits for all discharges authorized in the PWTF GP, along with the non-numeric effluent limits and best management practices (BMPs) for PWTFs.

A. Flow

Monthly average and daily maximum flow limits for each facility will be the values reported by the facility on the Notice of Intent (NOI) up to a maximum of one-million gallons per day. EPA believes that PWTFs will rarely exceed this discharge flow. If there is a case where this maximum flow is exceeded, such as a PWTF for a large metropolitan area, an individual permit will be required.

B. Total Suspended Solids (TSS)

The PWTF GP contains monthly average and maximum daily total suspended solids (TSS) limitations of 30 mg/l and 50 mg/l, respectively, as continued from the Expired PWTF GP in accordance with anti-backsliding requirements found in 40 CFR Section 122.44(1). These limitations were established using best professional judgment (BPJ) pursuant to Section 402(a)(1) of the CWA. The limits are based upon the TSS concentrations estimated to be achievable by using sedimentation basins/tanks/ponds to treat filter backwash and other wastewaters from PWTFs. The limits are also sufficiently stringent to achieve the water quality standards of Massachusetts and New Hampshire. Coverage under the PWTF GP will not be granted for any discharges which EPA or the applicable State believes a more stringent water quality-based TSS limit is needed.

C. pH

The effluent limits for pH in the Draft Permit are established to be consistent with water quality standards in New Hampshire and Massachusetts. Additionally, these limits are continued from the Expired PWTF GP. Based on water-quality standards, the Draft Permit contains the following limits for the indicated waterbody classifications.

Massachusetts Class A and B: 6.5 – 8.3 standard units
Massachusetts Class SA and SB: 6.5 – 8.5 standard units
New Hampshire Class B: 6.5 – 8.0 standard units

EPA, with State approval, may expand the pH range to the federal standard of 6.0-9.0 standard units, where the more restrictive pH limits cannot be consistently achieved by the treatment facility, and where receiving water quality and dilution characteristics allow state water quality standards to be achieved (see Parts 1.3.3 and 2.3.3 of the General Permit.) Sources of data that could be used to justify a change in the pH range limit include, but are not limited to, sampling results from the discharge, sampling results from the ambient receiving water, and dilution and/or mixing zone calculations. Chemicals may be used for pH neutralization, provided that EPA and the appropriate state are notified of its use in either the NOI or in a subsequent communication.

D. Total Residual Chlorine (TRC)

New limits are proposed for total residual chlorine (TRC) in situations where discharges contain water which has been previously chlorinated or which contain residual chlorine. Potable water sources typically are chlorinated to minimize or eliminate pathogens. 40 CFR Part 141.72 requires that a public water system's residual disinfectant concentration in the water entering the distribution system cannot be less than 0.2 mg/l for more than 4 hours. It is common for the final treated water containing residual disinfectant to be used for filter backwashing. Therefore, the wastewater discharges from PWTFs have the potential to exceed water quality standards for TRC, as explained below.

The State of New Hampshire's water quality standards for chlorine, found at Chapter 1700, Surface Water Quality Regulations, Part Env-Wq 1703.21, are the same as the recommended federal water quality criteria. The Commonwealth of Massachusetts' surface water quality standards require the use of federal water quality criteria where a specific pollutant could reasonably be expected to adversely effect existing or designated uses (314 CMR 4.05 (5)(e)). The Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters, dated February 23, 1990, states that waters shall be protected from unnecessary discharges of excess chlorine.

The Draft Permit contains water quality-based daily maximum and monthly average TRC limits, up to a maximum of 1.0 mg/l. Water quality-based effluent limits are based on the appropriate state water quality criteria, which are listed below:

- Freshwater acute = 19 ug/l (0.019 mg/l); use for daily maximum
- Freshwater chronic = 11 ug/l (0.011 mg/l); use for average monthly
- Marine acute = 13 ug/l (0.013 mg/l); use for daily maximum
- Marine chronic = 7.5 ug/l (0.0075 mg/l); use for average monthly

The daily maximum and monthly average concentrations allowed in the effluent are calculated using the appropriate water-quality criterion and the available dilution (see Part III.I of the Fact Sheet) in the receiving water using the following equation:

Effluent Limit = (Dilution Factor) x (Water-Quality Criterion)

The daily maximum limit is calculated using a dilution factor based on the daily maximum flow limit while the monthly average limit is calculated using a dilution factor based on the monthly average flow limit. For discharges to freshwater streams, the dilution factor is determined using the 7Q10 of the receiving water and appropriate discharge rate from the facility (see Appendix VI.) For discharges to freshwater lakes and reservoirs and to marine waters, the permittee may provide to EPA in the NOI a study or calculations in support of the applicable dilution factor. EPA will provide the permittee with the appropriately determined limits when notified of permit coverage.

If the receiving water provides no available dilution, the acute and chronic criteria listed above are applied as the daily maximum and monthly average limits, respectively. EPA notes that, for practical purposes, it may be necessary in some cases to use the current laboratory analytical minimum level for the TRC test, which may be as high as 20 ug/l, when determining compliance with the permit limits, as provided in the PWTF GP.

E. Aluminum

The Draft Permit contains monthly monitoring requirements for total recoverable aluminum as well as best management practices (BMPs) to minimize the discharge of aluminum (see Part III.H.) if it is used as a coagulant in the water treatment process. Aluminum-based coagulants, such as alum and poly-aluminum chloride are commonly used in coagulation and clarification to remove solid particles from raw water sources at PWTFs. Due to filter backwashing following the coagulation/clarification processes, there is potential for elevated levels of aluminum in the discharges.

Based on monitoring for aluminum under the expired PWTF GP, it has been verified that such elevated levels of aluminum sometimes occur at PWTFs. As a new permit requirement, all facilities must submit in the NOI at least five (5) sampling results, taken within the last six months, for total recoverable aluminum (see Part 4.4.5 of the General Permit.) EPA and the appropriate state will compare these results with federal and state water quality criteria, considering the dilution afforded by the receiving water. If these results demonstrate the potential for a water quality violation, EPA will require the facility to apply for an individual permit. Additionally, if the monthly monitoring results for a facility covered under the PWTF GP demonstrate the potential for a water quality violation, EPA will require that facility to apply for an individual permit.

F. Arsenic

A new monitoring requirement is proposed for the toxicant, arsenic, in situations where the PWTF treats the raw water source to remove arsenic. Treatment to remove arsenic is carried out at PWTFs if arsenic is present at high levels in the raw source water, including groundwater sources. This monitoring requirement is intended to assess whether arsenic is present at levels of concern in the discharges from those facilities.

G. Whole Effluent Toxicity Testing (LC-50 and C-NOEC)

Both Massachusetts and New Hampshire have narrative criteria in their water quality regulations (See Massachusetts 314 CMR 4.05(5)(e) and New Hampshire Part Env- Ws 1703.21) that prohibit toxic discharges in toxic amounts. Excepting chemicals used for pH neutralization and/or dechlorination, the PWTF GP prohibits the addition of toxic materials or chemicals to the discharges and prohibits the discharge of pollutants in amounts that would be toxic to aquatic life. If the States and/or EPA suspect that a discharge has a reasonable potential to cause or contribute to an excursion above the State's narrative criterion for toxicity, they may request that Whole Effluent Toxicity (WET) tests of the water to be discharged be required, as authorized at 40 CFR Section 122.44(d)(1)(v). Potential toxicants that may originate from PWTFs include aluminum and other components of coagulants and flocculants used in water treatment processes, other toxicants removed from the raw water, and water additives such as disinfectants.

H. Best Management Practices

The Draft Permit contains new requirements for the permittee to develop, implement, and maintain a Best Management Practices (BMP) Plan for wastewater discharges from the PWTF. The purpose of the BMP Plan is to prevent or minimize the concentration of pollutants (biological, chemical and physical) in the wastewater discharged to surface waters. The new BMP Plan will ensure that not only is the drinking water produced by PWTFs safe for human consumption, but also that the wastewater produced by PWTFs is protective of the quality of the receiving water.

The BMP Plan includes specific language requiring the implementation of an aluminum minimization program. At a minimum, this program must include the procedures used for the removal of sludge and the procedures used to minimize the discharge of aluminum to surface waters, while maintaining compliance with the Safe Drinking Water Act (SDWA) requirements, including 40 CFR 141.135, for removal of contaminants during treatment of raw water for drinking. Based on aluminum sampling results, additional best management practices include an evaluation of using non-aluminum based coagulants, a description of alternate procedures or improvements to increase the efficiency of solids and/or aluminum removal, and a consideration of the design standards used for devices that treat residuals. The design standards for lagoons, for example, require the device to include[2, 3]:

1. a location free from flooding,
2. where necessary, dikes, deflecting gutters or other means of diverting surface water so that it does not flow into the lagoon,
3. a minimum usable depth of five feet,

[2] Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, Recommended Standards for Water Works – Policies for the Review and Approval of Plans and Specifications for Public Water Supplies. <available on-line at http://www.10statesstandards.com/waterstandards.html#9.4>

[3] The Commonwealth of Massachusetts Department of Environmental Protection Bureau of Resource Protection Drinking Water Program, Guidelines and Policies for Public Water Supplies. <available on-line at http://www.mass.gov/dep/water/laws/policies.htm#dwguid>

4. adequate freeboard of at least two feet,
5. an adjustable decanting device,
6. an effluent sampling point, and
7. a minimum of two cells, each with appropriate inlet/outlet structures to facilitate independent filling/dewatering operations.

The aluminum minimization program should list any of the required design standards that are already incorporated into the design of the PWTF. If the implementation of any of the standards is impracticable, the BMP plan should provide an evaluation and explanation to support this determination. Explanations may include space restrictions, retrofitting requirements, and/or lack of necessity due to low concentrations of aluminum or alternate, equally-adequate, design measures.

I. Dilution Factors and Mixing Zones

The available dilution at a specified critical drought flow condition in the receiving water and the treatment plant's design flow are used in computing the dilution factor. For Massachusetts, the regulations for calculating dilution factors and mixing zones are located at 314 CMR 4.03 and in the Massachusetts Water Quality Standards Implementation Policy for Mixing Zones. For New Hampshire, these regulations are located at Env-Wq 1705 and Env –Wq 1707. In all cases, mixing zones in Massachusetts must meet the criteria at 314 CMR 4.03(2) and mixing zones in New Hampshire must meet the minimum criteria presented in Env-Wq 1707.02.

The specified critical drought flow condition for fresh water streams, in both Massachusetts and New Hampshire, is the 7Q10 low flow. The requirement to use this flow as a basis for calculating dilution factors is found at 314 CMR 4.03(3)(a) in the Massachusetts water quality standards and at Env-Wq 1705.02(d) in the New Hampshire water quality standards. For Massachusetts waters that are regulated by dams or similar structures and for tidal waters in New Hampshire, the specified critical drought flow is equivalent to the conditions that result in a dilution that is exceeded 99% of the time. These requirements are found at see 314 CMR 4.03(3)(b) in the Massachusetts water quality standards the at Env-Wq 1705.02(c) in the New Hampshire water quality standards. For marine waters in Massachusetts, existing uses are to be protected and the selected hydrologic condition is not to interfere with the attainment of designated uses (See 314 CMR 4.03(3)(c)). Additionally, MassDEP is developing an interpretation of its mixing zone regulations relevant to lakes and reservoirs. Massachusetts permittees who discharge to these types of waterbodies should contact MassDEP at the address listed in Appendix VI of the PWTF GP for additional information.

The equations used to calculate the dilution factors are provided in Appendix VII of the PWTF GP. The state permitting authority must be contacted at the address listed in Appendix VI of the PWTF GP to determine the 7Q10 flow and dilution factor (or other appropriate hydrologic condition, or to request consideration of diffuser dilution) for the facility prior to completing the NOI requirements for the PWTF GP.

IV. Application Requirements and Notice of Intent

A. Notice Prior to Discharge

1. Notice of Intent (NOI) Information

To obtain coverage under the PWTF GP, owners or operators of facilities whose discharge or discharges are identified in Part I.C. of this Fact Sheet are required to submit notices of intent (NOI) to EPA and the appropriate state at the addresses listed in Part 5 of the PWTF GP. Submission of a complete and accurate NOI eliminates the need to apply for an individual permit for a regulated discharge, unless EPA specifically notifies the owner or operator that an individual permit application must be submitted. The NOI consists of either the suggested NOI form in Appendix IV of the PWTF GP or another form of official correspondence containing all of the information required in Appendix IV of the PWTF GP.

2. NOI Timeframes

a. *Proposed New Discharges:* Facilities which were not covered under the Expired PWTF GP (which expired on November 15, 2005), and that are seeking coverage under the new PWTF GP, must submit an NOI to EPA and the appropriate state, post-marked at least 60 days prior to the commencement of discharge. In the case of a proposed new discharge to New Hampshire waters, additional lead time may be necessary (contact the NHDES at the address listed in Part 5 of the PWTF GP to determine whether additional lead time is necessary).

b. *Existing Permitted Discharges:* Facilities which were covered under the Expired PWTF GP, (which expired on November 15, 2005), and that wish to seek coverage under the new PWTF GP, must submit an NOI to EPA and the respective State within 90 days after the effective date of the PWTF GP. For enforcement purposes, facilities which fail to submit an NOI within 90 days after the effective date of the PWTF GP for a discharge covered under the Expired PWTF GP will be considered to be discharging without a permit. An NOI is not required if the permittee submits a notice of termination (NOT), as set forth in Part V.A. of this Fact Sheet before the 90 day time frame expires.

B. Essential Fish Habitat

Background: Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 USC Sections 1801 et seq. (1998)), EPA is required to consult with NOAA Fisheries Service if EPA's actions or proposed actions that it funds, permits or undertakes, "may adversely impact any essential fish habitat." 16 USC Section 1855(b). The amendments broadly define "essential fish habitat" (EFH) as "waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity." 16 USC Section 1802(10). Adverse impact means any impact which reduces the quality and/or quantity of EFH 50 CFR Section 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.

An EFH designation is only available where a Federal Fisheries Management Plan exists (see 16 U.S.C. Section 1855(b)(1)(A)). EFH designations for New England were approved by the US Department of Commerce on March 3, 1999. In a letter to EPA-New England dated October 10, 2000, NOAA Fisheries Service agreed that for NPDES permit actions, EFH notification for purposes of consultation can be accomplished in the EFH section of the permit's Fact Sheet or Federal Register Notice.

Proposed Action: EPA is reissuing the National Pollutant Discharge Elimination System (NPDES) general permit for potable water treatment facilities (PWTF). The PWTF GP provides coverage to facilities located in Massachusetts and New Hampshire whose discharge consists of wastewaters described in Part I.C. of this Fact Sheet. Please refer to Part I.A. of this Fact Sheet for a more detailed explanation of the proposed changes to the Expired PWTF GP.

Resources: EPA's EFH assessment considers all 40 federally managed species with designated EFH in the coastal and inland waters of Massachusetts and New Hampshire. The following is a list of the EFH species and applicable lifestage(s) for the area that includes Massachusetts, New Hampshire and the adjacent marine waters:

Species	Eggs	Larvae	Juveniles	Adults
Atlantic Salmon (*Salmo salar*)			X	X
Atlantic Cod (*Gadus morhua*)	X	X	X	X
Haddock (*Melanogrammus aeglefinus*)	X	X	X	X
pollock (*Pollachius virens*)	X	X	X	X
whiting (*Merluccius bilinearis*)	X	X	X	X
offshore hake (*Merluccius albidus*)				
red hake (*Urophycis chuss*)	X	X	X	X
white hake (*Urophycis tenuis*)	X	X	X	X
redfish (*Sebastes fasciatus*)	n/a	X	X	X
witch flounder (*Glyptocephalus cynoglossus*)	X	X		
winter flounder (*Pleuronectes americanus*)	X	X	X	X
yellowtail flounder (*Pleuronectes ferruginea*)	X	X	X	X
windowpane flounder (*Scopthalmus aquosus*)	X	X	X	X
American plaice (*Hippoglossoides platessoides*)	X	X	X	X
ocean pout (*Macrozoarces americanus*)	X	X	X	X

Atlantic halibut (*Hippoglossus hippoglossus*)	X	X	X	X
Atlantic sea scallop (*Placopecten magellanicus*)	X	X	X	X
Atlantic sea herring (*Clupea harengus*)	X	X	X	X
monkfish (*Lophius americanus*)	X	X	X	X
bluefish (*Pomatomis saltatrix*)			X	X
long finned squid (*Loligo pealei*)	n/a	n/a	X	X
short finned squid (*Illex illecebrosus*)	n/a	n/a	X	X
Atlantic butterfish (*Peprilus triacanthus*)	X	X	X	X
Atlantic mackerel (*Scomber scombrus*)	X	X	X	X
summer flounder (*Paralicthys dentatus*)	X	X	X	X
scup (*Stenotomus chrysops*)	n/a	n/a	X	X
black sea bass (*Centropristus striata*)	n/a	X	X	X
surf clam (*Spisula solidissima*)	n/a	n/a	X	X
ocean quahog (*Artica islandica*)	n/a	n/a		
spiny dogfish (*Squalus acanthias*)	n/a	n/a	X	X
tilefish (*Lopholatilus chamaeleonticeps*)				
king mackerel (*Scomberomorus cavalla*)	X	X	X	X
Spanish mackerel (*Scomberomorus maculatus*)	X	X	X	X
cobia (*Rachycentron canadum*)	X	X	X	X
sand tiger shark (*Odontaspis taurus*)		X		
blue shark (*Prionace glauca*)		X		X
dusky shark (*Charcharinus obscurus*)			X	
shortfin mako shark (*Isurus oxyrhyncus*)			X	
sandbar shark (*Charcharinus plumbeus*)			X	X
bluefin tuna (*Thunnus thynnus*)			X	X

Source: NOAA Fisheries Services http://www.nero.noaa.gov

EPA has identified 74 likely candidates for coverage under the PWTF GP, including 65 in Massachusetts and 9 in New Hampshire. Although the PWTF GP is available to additional facilities, this assessment considers these 74 representative facilities, all of which were covered under the Expired PWTF GP.

None of the potential applicants discharge into marine waters; however, one (at Newburyport) discharges to somewhat saline waters of the lower Merrimack River in Massachusetts.

Regarding freshwater, the Merrimack and Connecticut Rivers, and certain tributaries to these rivers are designated EFH for Atlantic salmon (*Salmo salar*). There are a number of facilities located within the Connecticut and Merrimack River basins with PWTF discharges, including eleven facilities covered under the Expired PWTF GP that discharge directly into the Connecticut or Merrimack Rivers.

Analysis of Effects: As described above, the PWTF GP covers a variety of potential discharges which could occur anywhere in Massachusetts and New Hampshire, except into those waters excluded in Part I.D of this Fact Sheet. EPA has identified the following potential sources of impact to aquatic species associated with discharges from PWTFs:

(a) Effluent Toxicity: Certain chemicals used in potable water treatment processes have the potential to cause toxicity in the receiving water. In particular, disinfection (by addition of chemicals designed to kill pathogens) has potential for the toxic agent to be present in the discharges. The disinfection is commonly done by chlorination. Therefore, the PWTF GP establishes monitoring and limits for Total Residual Chlorine (TRC) in cases where wastewater has previously been chlorinated or which may contain TRC. The TRC limits are based on the states' water quality standards to protect against toxicity to aquatic species.

Coagulation, using aluminum-based coagulants, is commonly carried out at PWTFs and results in the presence in of aluminum in wastewater discharges. Based on the potential toxicity of aluminum towards aquatic life, the PWTF GP requires the permittee to monitor for total recoverable aluminum and to implement a Best Management Practices Plan, which includes requirements to minimize the discharge of aluminum where it is used as a coagulant in the water treatment process. In cases where EPA determines that there is a reasonable potential for aluminum in the discharge to violate WQS, an individual permit will be required.

Additionally, the PWTF GP requires monitoring for arsenic when the PWTF is providing treatment to remove arsenic from the raw water source.

The PWTF GP prohibits the discharge of pollutants in amounts that would be toxic to aquatic life. It prohibits any discharge that violates State or Federal water quality standards. Finally, it prohibits the discharge of any water treatment additives without notification of the regulatory agencies. Examples of water treatment additives that potentially could be found within discharged wastewater include chemicals used for coagulation, pH neutralization, dechlorination, control of biological growth, and control of corrosion and scale in water pipes.

(b) Discharge of Solids: Solids are commonly removed from raw source water at PWTFs. These have the potential to settle and cover bottom habitat areas or cause turbidity in the receiving waters if discharged at high levels. The PWTF GP contains effluent limits for total suspended solids that can be achieved by well-operated wastewater treatment facilities. Additionally, the permit contains narrative prohibitions on the discharge of settleable solids and unacceptable turbidity or color in the receiving water.

EPA's Opinion of Potential Impacts: EPA believes that the discharges authorized under the PWTF GP will have minimal adverse effects to EFH for a number of reasons, including:

- This is a re-issuance of an existing permit;
- The effluent limitations established in the PWTF GP ensure protection of aquatic life and maintenance of the receiving water as an aquatic habitat;
- The proposed limits and coverage requirements for the PWTF GP are sufficiently stringent to assure that state and federal water quality standards will be met;
- The PWTF GP specifically excludes coverage to facilities whose discharge may adversely affect threatened or endangered species or their habitat; and
- The PWTF GP includes new water quality-based limits for total residual chlorine; new monitoring requirements for arsenic; new monitoring requirements for aluminum; and new requirements to design, implement, and maintain a Best Management Practices Plan, which will require facilities to minimize the discharge of aluminum where it is used as a coagulant in the water treatment process.

EPA concludes that the effluent limitations, conditions, and monitoring requirements contained in the PWTF GP minimize adverse effects to aquatic organisms, including EFH species, as well as their habitat and forage species. As part of this permitting action, EPA is contacting NOAA Fisheries under Section 305(b)(2) of the Magnuson-Stevens Act regarding this assessment and requests any additional recommendations that NOAA Fisheries may have to protect EFH.

Proposed Mitigation: Mitigation for unavoidable impacts associated with re-issuance of the PWTF GP is not warranted at this time because it is EPA's opinion that impacts will be negligible if the PWTF GP conditions are followed. If adverse impacts to EFH do occur, either as a result of non-compliance or from unanticipated effects from this activity, authorization to discharge under the PWTF GP can be revoked.

C. Endangered Species

The Endangered Species Act (ESA) of 1973 requires federal agencies such as EPA to ensure, in consultation with the U.S. Fish and Wildlife Service (FWS) and the National Oceanic & Atmospheric Administration Fisheries Service (NOAA Fisheries), also known collectively as "the Services", that any actions authorized, funded, or carried out by the EPA (e.g., EPA issued NPDES permits authorizing discharges to waters of the United States) are not likely to jeopardize the continued existence of any Federally-listed endangered or threatened species or adversely modify or destroy critical habitat of such species (see 16 U.S.C. 1536(a)(2), 50 CFR Section 402 and 40 CFR Section 122.49(c)).

Section 7 Consultations

Section 7 of the ESA provides for formal and informal consultation with the Services. For NPDES permits issued in Massachusetts and New Hampshire where EPA is the permit issuing agency, draft NPDES permits and Fact Sheets are routinely submitted to the Services for informal consultation prior to issuance. EPA is coordinating with the Services through the Draft PWTF GP and Fact Sheet during the public comment period. Based on EPA's working

experience with the Services on numerous prior permits and identification of certain endangered species, general geographic areas of concern in the States and the potentially affected waters, including critical habitats, EPA has prepared this PWTF GP to insure adequate protection of listed threatened or endangered species or the critical habitat of such species protected under the ESA.

The discharges authorized under the PWTF GP are described in Part I.C. of this Fact Sheet. The PWTF GP specifically excludes coverage to facilities whose discharge(s) are likely to jeopardize the continued existence of listed threatened or endangered species or the critical habitat of such species. The PWTF GP limits are sufficiently stringent to assure that water quality standards protect both aquatic life and human health. The effluent limitations established in the PWTF GP ensure protection of aquatic life and maintenance of the receiving water as an aquatic habitat. Further, the PWTF GP requires the permittee to develop best management practices and requires that individual permits be issued if actual environmental conditions (including the preservation of endangered species) are not adequately covered by the PWTF GP. The requirements in the PWTF GP are consistent with information previously provided by the Services to EPA during the development of other recently issued general permits. Therefore, EPA finds that adoption of the PWTF GP is not likely to adversely affect any threatened or endangered species or its critical habitat.

In addition to EPA's coordination with the Services for the issuance of the PWTF GP, an optional type of informal consultation consists of the designation of a non-Federal representative (NFR) to determine whether a Federal action is likely to have an adverse effect on listed species or critical habitat. The ESA regulations provide for permit applicants, where designated, to carry out informal consultations as an NFR, which enables them to work directly with the Services (See 50 CFR 402.08). EPA is hereby designating applicants for the PWTF GP as NFR's for the purposes of carrying out informal consultation. Therefore, EPA expects that the applicants will contact the Services, if necessary, to determine eligibility for coverage under the PWTF GP.

Prior to submitting the NOI, applicants must review and meet at least one of the six criteria presented in Appendix I (Endangered Species Act Requirements) of the PWTF GP. Additionally, Appendix II contains a list of locations in Massachusetts and New Hampshire where endangered or threatened species have been identified. Applicants with discharges to those locations and who do not meet Criterion B, C, or F from Appendix I, may need to contact the Services, at least thirty (30) days prior to submitting the NOI, to be eligible for coverage under the PWTF GP.

NOAA Fisheries has specifically requested that it review and comment on all discharges that are to areas where the federally-listed endangered shortnose sturgeon (*Acipenser brevirostrum*) is present. These areas include certain sections of the Merrimack and Connecticut Rivers in Massachusetts, including: the Merrimack River, from the Essex Dam in Lawrence, Massachusetts to the mouth of the Merrimack River (Essex County); and the Connecticut River, from the Massachusetts border with Connecticut to Turners Falls, Massachusetts (Hampshire, Hampden, and Franklin Counties). When discharge activities occur along these waterways, coverage under the PWTF GP is available only if the applicant contacts the Services to determine (1) if listed species are present in the vicinity of the project area; and, (2) whether the

applicant's discharges and discharge related activities are likely to affect listed species and/or critical habitats. Coverage under the PWTF GP is available only if the applicant determines that there are no species present in the action area or the applicant receives written concurrences from the Services that the applicant's discharges are not likely to affect listed species.

Applicants must indicate in the space provided on the NOI form, or on an equivalent form, used for applying for coverage (see Appendix IV of the PWTF GP) which criteria they meet from Appendix I and if they contacted the Services as a NFR. A copy of any communication with the Services must be submitted with the NOI, as directed. Applicants who cannot certify compliance with the ESA requirements on the NOI form must contact EPA to determine if eligibility for an individual NPDES permit is possible or to discuss other possible options for the proposed discharge.

Services Contact Information

US Fish and Wildlife Service
New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
Phone: (603) 223-2541

National Marine Fisheries Service
Northeast Regional Office
Protected Resources Division
55 Great Republic Drive
Gloucester, MA 01930-2298
Phone: (978) 281-9116

D. Historic Preservation

Facilities which adversely affect properties listed or eligible for listing in the National Registry of Historic Places under the National Historic Preservation Act of 1966, 16 USC Sections 470 et seq. are not authorized to discharge under the PWTF GP. Applicants must determine whether their discharge(s) have the potential to affect a property that is either listed or eligible for listing on the National Register of Historic Places. Applicants must comply with applicable State, Tribal and local laws concerning the protection of historic properties and places and applicants are required to coordinate with the State Historic Preservation Officer (SHPO) and/or Tribal Historic Preservation Officer (THPO) and others regarding effects of their discharge(s) on historic properties. Electronic listings of National and State Registers of Historic Places are maintained by the National Park Service (http://www.nps.gov), the Massachusetts Historical Commission (www.state.ma.us/sec/mhc) and the New Hampshire Historical Commission (www.state.nh.us/nhdhr). For additional information regarding the requirements pertaining to historic places, see Appendix III of the PWTF GP.

Addresses for the Massachusetts SHPO and THPO are:

Massachusetts (SHPO)
Massachusetts Historical Commission
220 Morrissey Blvd.
Boston, MA 02125
Phone: (617) 727-8470

Tribal Historic Preservation Officer
Wampanoag Tribe of Gay Head (Aquinnah)
20 Black Brook Road
Aquinnah, MA 02535-9701
Phone: (508) 645-9265

The address for the New Hampshire SHPO is:

NH Division of Historical Resources
State Historic Preservation Office
Attention: Review and Compliance
19 Pillsbury Street
Concord, NH 03301-3570
Phone: (603) 271-3558

E. Requiring Coverage Under an Individual Permit or Other General Permit

1. When the Director May Require Application for an Individual NPDES Permit

The PWTF GP provides that, for any applicant, EPA may require an individual permit or recommend coverage under a separate general permit according to 40 CFR Section 122.28(b)(3). These regulations also provide that any interested party may petition EPA to take such an action. The issuance of the individual permit or other general permit would be in accordance with 40 CFR Part 124 and would provide for public comment and appeal of any final permit decision. Circumstances under which the Director may require an individual permit are described in 40 CFR Section 122.28(b)(3)(i)(A-G).

The Director may require any person authorized by this permit to apply for and obtain an individual NPDES permit. Instances where an individual permit may be required include the following:

a. A determination under 40 CFR 122.28(b)(3);
b. The discharge(s) is a significant contributor of pollution or is in violation of State Water Quality Standards for the receiving water;
c. The discharger is not in compliance with the conditions of the PWTF GP;
d. A change has occurred in the availability of the demonstrated technology or practices for the control or abatement of pollutants applicable to the point source(s);
e. Effluent limitation guidelines are promulgated for the point source(s) covered by the PWTF GP;
f. A Water Quality Management Plan or Total Maximum Daily Load containing requirements applicable to such point source(s) is approved and inconsistent with the PWTF GP or with the conditions of EPA's authorization to discharge;
g. The point source(s) covered by the PWTF GP no longer:
    i. Involves the same or substantially similar types of operations;
    ii. Discharges the same types of wastes;
    iii. Requires the same effluent limitations or operating conditions;
    iv. Requires the same or similar monitoring; and/or,
h. In the opinion of the Director, the discharge is more appropriately controlled under an individual or alternate general permit.

If the Director requires an individual permit, the permittee will be notified in writing that an individual permit is required, and will be given a brief explanation of the reasons for this

decision. When an individual NPDES permit is issued to an operator otherwise subject to the PWTF GP, the applicability of the PWTF GP to that owner or operator is automatically terminated on the effective date of the individual permit (see 40 CFR §122.28(b)(3)(iv)).

2. When an Individual NPDES Permit may be Requested

Any operator may request to be excluded from the coverage of the PWTF GP by applying for an individual permit. When an individual NPDES permit is issued to an operator otherwise subject to the PWTF GP, the applicability of the PWTF GP to that owner or operator is automatically terminated on the effective date of the individual permit (see 40 CFR §122.28(b)(3)(iv)).

F. EPA Determination of Coverage

Any applicant may request to be included under this general permit but the final authority for determination of coverage rests with the EPA. Coverage under the PWTF GP will not be effective until EPA and the appropriate State have reviewed the NOI, made a determination that coverage under the PWTF GP is authorized, and provided the operator with written notification of authorization. The effective date of coverage will be the date of signature of the authorization letter by the EPA. Any applicant who is denied coverage or who fails to submit to EPA and the appropriate State an NOI and/or fails to receive written notification of permit coverage from EPA is not authorized to discharge to receiving waters under the PWTF GP.

V. Administrative Requirements

A. Termination of Coverage

Permittees shall notify EPA and the appropriate State agency in writing of the termination of the discharge(s) authorized under this general permit. The Notice of Termination (NOT) may be completed using either the suggested form provided by EPA (found in Appendix V of the PWTF GP), or any other form of official correspondence that incorporates all of the information required in Appendix V of the PWTF GP. NOT forms and attachments must be submitted to EPA and the appropriate State agency at the addresses listed in Appendix VI of the PWTF GP. The NOT must include:

1) The name of the facility and street address of the facility for which the notification is submitted;
2) The name, address and telephone number of the operator addressed by the NOT;
3) The NPDES permit number assigned;
4) The basis for submission of the NOT, including: an indication that the discharge has been permanently terminated and the reason for the termination; and
5) A certification statement signed and dated by an authorized representative according to 40 CFR 122.22 (see Appendix V of the PWTF GP).

The NOT must be completed and submitted within 30 days of the permanent cessation of the discharge(s) authorized under the PWTF GP.

B. Continuation of the Expired General Permit

If the PWTF GP is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedure Act (5 U.S.C. 558(c)) and 40 CFR §122. 6 and remain in force and effect for discharges that were covered prior to expiration. After the expiration date of the PWTF GP, EPA cannot provide written authorization of coverage for new projects who submit an NOI to EPA until a replacement permit is issued. Any permittee who was granted permit coverage prior to the expiration date will automatically remain covered by the continued permit until the earliest of:

a. Your authorization for coverage under a reissued permit or a replacement of this permit following your timely and appropriate submittal of a complete NOI requesting authorization to discharge under the new permit and compliance with the requirements of the new permit; or
b. Your submittal of a Notice of Termination; or
c. Issuance or denial of an individual permit for the facility's discharges; or
d. A formal permit decision by EPA not to reissue this general permit, at which time EPA will identify a reasonable time period for covered dischargers to seek coverage under an alternative general permit or an individual permit. Coverage under this permit will cease at the end of this time period.

VI. Standard Permit Conditions

Permittees must meet the standard permit requirements of 40 CFR Sections 122.41 and 122.42, as applicable to their discharge activities. Specific language concerning these requirements is provided in Part 8 and elsewhere in the PWTF GP.

VII. Other Legal Requirements

A. Section 401 Certifications

Section 401 of the CWA provides that no Federal license or permit, including NPDES permits, to conduct any activity that may result in any discharge into navigable waters shall be granted until the State in which the discharge originates certifies that the discharge will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA. EPA will request that the Commonwealth of Massachusetts and the State of New Hampshire conduct Section 401 reviews and issue State certifications. In addition, EPA and the Commonwealth of Massachusetts will jointly issue the final PWTF GP.

B. The Coastal Zone Management Act

The Coastal Zone Management Act (CZMA), 16 U.S.C. Sections 1451 et seq., and its implementing regulations [15 CFR Part 930] require that any federally licensed activity affecting a State's coastal zone be consistent with the enforceable policies of approved state management programs. In the case of general permits, EPA has the responsibility for making the consistency certification and submitting it to the State for concurrence. EPA is in the process of seeking the state consistency certifications for the PWTF GP from the Executive Office of Environmental

Affairs, Massachusetts CZM, 251 Causeway Street, Suite 800, Boston, MA 02114; and the Federal Consistency Officer, New Hampshire Coastal Program, 50 International Drive, Suite 200, Portsmouth, NH 03801.

C. Environmental Impact Statement Requirements

The PWTF GP does not authorize discharges from any new sources as defined under 40 CFR Section 122.2. Therefore, the National Environmental Policy Act, 33 U.S.C. Sections 4321 et seq., does not apply to the issuance of the PWTF GP.

D. Section 404 Dredge and Fill Operations

The PWTF GP does not constitute authorization under 33 USC Section 1344 (Section 404 of the Clean Water Act) of any stream dredging or filling operations.

E. Executive Order 12866

EPA has determined that the PWTF GP is not a "significant regulatory action" under the terms of Executive Order 12866, and it is therefore not subject to Office of Management and Budget (OMB) review.

F. Paperwork Reduction Act

The information collection requirements of the PWTF GP were previously approved by the OMB under the provisions of the Paperwork Reduction Act, 44 USC 3501 *et seq.* and assigned OMB control number 2040-0086 (NPDES permit application) and 2040-0004 (Discharge Monitoring Reports).

G. Unfunded Mandates Reform Act

Section 201 of the Unfunded Mandates Reform Act (UMRA), Public Law 104-4, generally requires Federal agencies to assess the effects of their "regulatory actions" (defined to be the same as "rules" subject to the RFA) on tribal, state and local governments and the private sector. The PWTF GP, however, is not a "rule" subject to the RFA and is therefore not subject to the requirements of UMRA.

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