

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

**FACT SHEET AND SUPPLEMENTAL INFORMATION**

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

**NPDES GENERAL PERMIT NOs.: MAG360000 AND NHG360000**

**I. Introduction**

The Director of the Office of Ecosystem Protection, EPA-New England, is issuing the general permit for hydroelectric generating facilities located in Massachusetts (including both Commonwealth and Indian Country lands) and New Hampshire, which discharge noncontact cooling and direct cooling water, equipment and floor drain water, equipment backwash water, and specific maintenance waters to certain waters of the States of Massachusetts and New Hampshire. The general permit does not regulate the river flow through the turbines or over the dam. This fact sheet provides the principal facts and the significant factual, legal, and policy questions considered in the development of the draft permit. This permit is organized as a single permit with the effluent limitations and specific conditions for facilities in Massachusetts and New Hampshire in Part I.A. and Part I.B., respectively. Additional State or Indian country land conditions are contained in Part I.J. In Part II are the Standard Conditions and in Part III are the Best Management Practices Plan applicable to each State.

**II. Coverage of General Permits**

Section 301(a) of the Clean Water Act (CWA or the Act) 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 Act. EPA's regulations authorize the issuance of "general permits" to one or more categories or subcategories of discharges (see 40 CFR 122.28 ). EPA may issue a single, general permit to a category of point sources located within the same geographic area whose discharges warrant similar pollution control measures.

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 (but is not limited to):

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

Authorization for coverage, under these general permits, requires prior submittal by the discharger of a written notice of intent containing certain facility information that is specified in the permits. Upon receipt of all required information, the permit issuing authority may allow or disallow coverage under these general permits. Violations of a condition of a general permit constitutes a violation of the Act and subjects the discharger to the penalties in Section 309 of the Act.

EPA is proposing these general permits because there are point source discharges from hydroelectric generating facilities with similar type of operations and discharges that require the same effluent limitations and monitoring requirements as described below. Hydroelectric generating facilities are classified by the Standard Industrial Classification (SIC) code number 4911 for the electric services industry which is comprised of establishments engaged in electric power generation, transmission, or distribution. Sources currently covered by an individual permit but meeting the criteria for coverage discussed in this general permit may request coverage by this general permit as described in 40 CFR 122.28(b)(3)(v) or they may request coverage once their existing individual permit expires.

A hydroelectric generating facility includes the generating station (station), dam(s), reservoir(s), canal system or tunnel system at certain facilities, and associated equipment and structures used in the generation of hydroelectric power. These facilities represent both river projects and pump storage projects. River projects include the following typical operating modes: run-of-river, essentially run-of-river, storage reservoir, and daily peaking. These projects are usually located on a river where there is a natural drop in the river channel, such as found at a falls or gorge, and an acceptable supply of water. These facilities rely on a large volume of water to generate electricity. A dam constructed at this location creates an impoundment or reservoir that can supply the water into a penstock directly to the turbines located in the powerhouse. The flow of water continuously turns the waterwheel turbines which spin the generators producing electricity. At some facilities, a canal system, diverts all or part of the river flow around the dam to the turbines in the powerhouse located downstream.

Pump storage projects include an upper man-made reservoir located at a high elevation above the river, usually on a mountain top, a lower reservoir located along the river, a hydroelectric generating station which is sited along the river's edge, and a tunnel system connecting the reservoirs and generating station. Water released from the upper reservoir flows in tunnels to generate electricity at the station before discharging to the lower reservoir. Surplus electricity, available at night, supplies the power to pump river water from the lower reservoir to fill the upper reservoir after which the generation cycle can begin. The pumps/turbines units are reversible units depending on the operating mode either to supply the reservoir or to generate electricity.

All hydroelectric generating facilities in Massachusetts and New Hampshire which discharge pollutants from the specified operations covered by the general permits are eligible for coverage under these permits. However; pump storage projects may be excluded from coverage, on a case by case basis, as explained in Part III below.

There are similar operations at hydroelectric generating facilities that produce similar discharges

from a combination of point sources. These general permits categorize the following similar operations contributing flow as: (1) equipment-related cooling water, (2) equipment and floor drain water, and (3) equipment and facility maintenance-related water. While each generating facility is unique in its location, physical layout, and operational pattern, all facilities contain one or more of the discharges mentioned in the following discussion. The effluent limitations proposed by the draft general permits are organized using these categories.

**Equipment-related cooling water:** The equipment-related cooling water operation utilizes river water and results in discharges, of noncontact cooling water and direct cooling water, to the river. Noncontact cooling water (NCCW) is “water used for cooling which does not come into direct contact with any raw material, intermediate product, waste product or finished product” as defined in the regulations at 40 CFR 401.11(n). The NCCW is used in cooling the turbine bearings, guide bearings, air compressor, generators, and at some stations, the power transformers. At the pump storage projects, NCCW is used in cooling additional equipment which includes the air compressors, air handlers, air conditioner, and rheostats. Direct cooling water is used to directly cool the bearings. A facility may direct certain equipment-related cooling waters to the equipment and floor drain water drainage system.

**Equipment and floor drain water:** The equipment and floor drain water operation primarily represents the internal station drainage from the trench drains, floor drains, and station sumps. All or part of the internal station drainage is collected in the station sumps at some facilities. The equipment and floor drain water operation includes discharges from the following: floor drains, trench drains, oil/water separators, wheel pit drains or sumps, compressor blowdowns, turbine leakage, penstock housing leakage, packing boxes leakage, lower guide bearing drains and other bearing-related discharges (including bearing seal leakage, bearing water seal, and bearing lubrication water). Additional equipment waters are from various pit drains such as the gate stems, turbine access doors, and scroll case access doors. Miscellaneous drainage waters, that are collected in a sump, including ground water infiltration, surface water seepage, and tunnel pumpage are also in this category. The station drainage system may include treatment units such as oil/water separators, oil flotation wells, or station sumps with some functioning as oil/water separators. These discharges can be intermittent and seasonal and the outfalls in certain stations can be inaccessible for sampling purposes.

At some facilities, the equipment and floor drain water operation includes the discharge of NCCW and direct cooling water. A separate equipment operation is the strainer operation on the cooling water intake line. This operation produces backwash water discharges during cleaning of river debris and silt from the strainers’s screens.

**Equipment and facility maintenance-related water:** The equipment and facility maintenance-related water operation includes river water pumped from the facility during periods of equipment, station, and facility maintenance. During the equipment maintenance operation, discharges occur from the dewatering of equipment containing river water such as the turbine, penstock, and dewatering sumps. During flood and high water events, the station maintenance operation results in discharges of flood/high waters from flood water pumps and high water sump pumps. During these events, there may be discharges from miscellaneous flood/high water

collection devices such as floor drains, siphon hoses, and access manway areas. These maintenance-related discharges are intermittent and can occur seasonally. This facility maintenance operation is the collection of internal dam or headwall drainage and the direct discharge to the receiving water without an oil/water separator installed in the drainage collection system. The potential for oil and grease or other pollutants to be present in these discharges is insignificant.

### **III. Exclusions**

New discharges to Class A waters in Massachusetts, which are classified as Outstanding Resources Waters, are not eligible for general permit coverage. Discharges to Class A waters in New Hampshire are not eligible for general permit coverage because the New Hampshire statutes RSA 485-A:8,I do not allow discharges of any wastes into these waters.

These general permits are not available to the following sources and these discharges will need to obtain permit coverage by applying for an individual permit.

1. Facilities whose discharge(s) could cause or contribute to adverse water quality impacts;
2. Facilities whose discharge(s) may adversely affect threatened or endangered species or its critical habitat;
3. Facilities that are “New Source” dischargers as explained below; and
4. Facilities that the Director may require an individual permit based on consideration of the following factors:
  - a. Variability of the pollutants or pollutant parameters in the effluent (based on chemical-specific information and the type of treatment facility);
  - b. Receiving stream characteristics, including possible or known water quality impairment;
  - c. Recommendation from the state;
  - d. Other consideration (including but not limited to consultation with the state, a history of toxic impact or compliance problems at the facility) which the Director determines could cause or contribute to adverse water quality impacts; or
  - e. Streamflows are not maintained at levels to protect existing and designated uses as established in the state’s water quality standards.

EPA has determined that these general permits will not be available to “New Source” dischargers as defined in 40 CFR 122.2 due to the site specific nature of the environmental review required by the National Environmental Policy Act of 1969 (NEPA), 33 U.S.C. 4321 et seq. for those facilities. “New Sources” must comply with New Source Performance Standards (NSPS) and are subject to the NEPA Environmental Review Procedures in 40 CFR 6.600. Consequently EPA has determined that it would be more appropriate to address “New Sources” through the individual permit process.

Facilities operating as pump storage projects may be excluded from coverage under these general permits on a case-by-case basis. A state determination with EPA concurrence that the

discharge is consistent with the terms and conditions of the permits without violating surface water quality standards is required before coverage will be authorized.

The administrative aspects for general permits are given in 40 CFR 122.28(b) and provide for requesting and requiring an individual permit. Any owner or operator authorized by a general permit may request to be excluded from coverage of a general permit by applying for an individual permit. This request may be made by submitting a NPDES permit application, consisting of Forms 1 and 2C, together with reasons supporting the request to the Director within 90 days after these general permits are published in the Federal Register. The Director may also require any person authorized by a general permit to apply for and obtain an individual permit as provided by 40 CFR 122.28(b)(3). Additionally, any interested person may petition the Director to take this action. However, individual permits will not be issued for sources covered by these general permits unless it can be clearly demonstrated that inclusion under the general permit is inappropriate. The issuance of individual permits may be required when:

1. The discharger is not in compliance with the terms and conditions of the general permit;
2. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;
3. Effluent limitations guidelines are subsequently promulgated for the point sources covered by the general NPDES permit;
4. A Water Quality Management plan or Total Maximum Daily Load (TMDL) containing requirements applicable to such point sources is approved;
5. Circumstances have changed since the time of the request to be covered so that the discharger is no longer appropriately controlled under the general permit, or either a temporary or permanent reduction or elimination of the authorized discharge is necessary;
6. The discharge(s) is a significant contributor of pollution or in violation of State Water Quality Standards;
7. The discharge(s) adversely impacts any federal managed species for which Essential Fish Habitat has been designated; or
8. The discharge(s) is to an impaired water included on the CWA section 303(d) listing for the state and the pollutant/stressor causing the impairment according to the 303(d) listing, is a parameter that is limited in the general permit.

The applicability of the general permit is automatically terminated on the effective date of the individual permit in accordance with 40 CFR 122.28(b)(3)(iv).

#### **IV. Basis for General Permit and Other Permit Conditions**

##### **A. Statutory Requirements**

Section 301(a) of the Act, 33 U.S.C. 1311(a), makes it unlawful to discharge pollutants to waters of the United States without a permit. Section 402 of the Act, 33 U.S.C. 1342, authorizes EPA to issue NPDES permits allowing discharges that will meet certain requirements, including CWA sections 301, 304, and (33 U.S.C. 1331, 1314, and 1341). Those statutory provisions state that

NPDES permits must include effluent limitations requiring authorized discharges to: (1) meet standards reflecting specified levels of technology-based treatment requirements; (2) comply with State Water Quality Standards; and (3) comply with other state requirements adopted under authority retained by states under CWA Section 510, 33 U.S.C. 1370.

EPA is required to consider technology and water quality requirements when developing permit limits. 40 CFR Part 125 Subpart A sets the criteria and standards that EPA must use to determine which technology-based requirements, requirements under Section 301(b) of the Act and/or requirements established on a case-by-case basis under section 402(a)(1) of the Act, should be included in the permit.

In accordance with 40 CFR 122.44(k)4, Best Management Practices (BMPs) may be incorporated into a permit when necessary to carry out the purpose and intent of the CWA. Section 402(a)(1) allows EPA to impose nonquantitative permit requirements. Discharges authorized by this general permit are required to develop a BMP Plan specific to the individual facility. The objective of the BMP Plan is to eliminate or reduce the potential for a discharge of pollutants, to waters of the United States, resulting from certain operations at the hydroelectric generating facility.

## **B. Antidegradation Provisions**

The conditions of the general permits 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 4.04 Antidegradation Provisions and New Hampshire 50 RSA 485-A:8 and Surface Water Quality Regulations Chapter 1700, Part Env-Ws 1708.

These general permits do not apply to any discharge to any outstanding national resource water or the territorial seas. New or increased discharges to other waters may not be granted coverage if the discharge is shown to be inconsistent with the State's antidegradation policies. This determination shall be made in accordance with the appropriate State's Antidegradation implementation procedure. EPA will not authorize these discharges under either general permit until it receives a favorable antidegradation review and certification from the appropriate State.

New discharges to Class A waters in Massachusetts, which are classified as Outstanding Resources Waters, are not eligible for general permit coverage because the Massachusetts Water Quality Standards, CMR 4.04(3)b, prohibit discharges to these waters. However, the State's antidegradation policy could allow an existing discharge to a Class A water to qualify for permit coverage if the resulting antidegradation review is favorable.

## **C. Effluent Limitations**

EPA is required to consider technology and water quality-based requirements when developing permit limits. 40 CFR Part 125, Subpart A sets the criteria and standards that EPA must use to determine which technology-based requirements; requirements under Section 301(b) of the CWA and/or requirements established on a case-by-case basis under section 402(a)(1) of the CWA, should be included in the permits.

Under Section 301(b)(1)(C) of the CWA discharges are subject to effluent limitations based on water quality standards and to the conditions of State certification under Section 401 of the CWA. Receiving stream requirements are established according to numerical and narrative standards adopted under state and/or federal law for each stream-use classification. The CWA requires that EPA obtain State certification which states that all water quality standards will be satisfied. Regulations governing State certification are set forth in 40 CFR 124.53 and 124.55.

### **C.1. Technology Based Limitations**

The Clean Water Act requires that all discharges, at a minimum, must meet effluent limitations based on the technological capability of dischargers to control pollutants in their discharge. Section 301(b)(1)(A) of the CWA requires the application of Best Practicable Control Technology Currently Available (BPT) with the statutory deadline for compliance being July 1, 1977, unless otherwise authorized by the CWA. Section 301(b)(2) of the CWA requires the application of Best Conventional Control Technology (BCT) for conventional pollutants, and Best Available Technology Economically Achievable (BAT) for non-conventional and toxic pollutants. The compliance deadline for BCT and BAT is as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated and in no case later than March 31, 1989.

EPA has not promulgated National Effluent Guidelines for either hydroelectric generating stations or for noncontact cooling water discharges. The NPDES General Permits for Non-Contact Cooling Water Discharges in Massachusetts, MAG250000 and New Hampshire, NHG250000 (FR Vol. 65, No. 80, pg 24195), reissued by EPA-New England on April 25, 2000, cover facilities discharging noncontact cooling water without regard to industrial category. This draft general permit applies to a specific industry (Hydroelectric Generating Facilities) and includes noncontact cooling water discharges and other discharges typically associated with this industry. Therefore, qualified applicants should apply for coverage under this permit rather than the noncontact cooling water permit.

EPA believes that the limits established in the general permit are sufficient to satisfy BAT/BCT described in section 304(b) of the CWA. As provided under Section 402(a)(1) of the CWA, EPA is proposing to issue this permit using utilizing best professional judgement (BPJ) to meet the above stated criteria for BAT/BCT.

## **C.2. Water Quality Based 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 ACT. A water-quality standard consists of three elements: (1) beneficial designated use(s) for a water body or a segment of a water body; (2) a numeric or narrative water-quality criteria sufficient to protect the assigned designated use(s); and (3) an antidegradation requirement to ensure that once a use is attained, it will not be eroded. Receiving stream requirements are established according to numerical and narrative standards adopted under state law and/or federal law for each stream use classification. Section 401 of the CWA requires that EPA obtain State certification which ensures that all water quality standards and other appropriate requirements of state law will be satisfied. Regulations governing State certification are set forth in 40 CFR 124.53 and 124.55.

The water quality based effluent limitations proposed for the discharges authorized by these general permits are pH, oil and grease, temperature, and toxics and are identified and developed as explained below. These limits are applicable to all the outfalls in each state unless otherwise indicated.

Additional water quality based limits are not being imposed based on the finding that the discharges eligible for coverage under these permits do not contain additional pollutants in amounts which would have the reasonable potential to cause or contribute to violations of the applicable state water quality standards. If, using available information or information submitted in the Notice of Intent, it is determined by EPA or the applicable State that this determination is not correct, the discharger will not be granted coverage under the applicable general permit. For those discharges which are not granted coverage under this permit because the discharge contains pollutants in quantities which represent a reasonable potential to cause or contribute to violations of water quality standards, the discharger must apply for an individual NPDES permit.

The specific discharges authorized by these general permits are grouped into five discharge categories consistent with the operations contributing flow to the outfall. All five discharge categories may not exist at each facility. Each discharge component is not present at every facility.

1. Discharges of noncontact cooling water and direct cooling water from the equipment cooling water systems. The effluent limitations are pH Range and the monitoring requirements include flow and temperature.
2. Discharges of equipment and floor drain water from the trench drains, floor drains, station sumps, wheel pit drains or sumps, compressor blowdowns, turbine leakage, penstock housing leakage, packing boxes leakage, lower guide bearing drains and other bearing-related discharges (including bearing seal leakage, bearing water seal, and bearing lubrication water), various pit drains (gate stem, turbine access door, and scroll case access door), miscellaneous drainage waters (such as: ground water infiltration,

surface water seepage, and tunnel pumpage) that are collected in a sump. Discharges of equipment-related cooling water at certain facilities. The effluent limitations are oil and grease, and pH Range and the monitoring requirements include flow and temperature.

3. Discharges from equipment dewatering, sump dewatering, flood water pumps, high water sump pumps, and miscellaneous flood/high water collection devices (including floor drains, siphon hoses, and access manway areas). The effluent limitations are oil and grease, and pH Range and the monitoring requirements include flow.
4. Discharges of equipment-related backwash water from the strainer screens. The effluent limitations are pH Range and the monitoring requirements include flow and TSS.
5. Discharges from the collection of internal dam drainage and collection of headwall drainage. The effluent limitations are pH Range and the monitoring requirements include flow.

## pH

The pH limitations proposed in the draft permits are identical for all the discharge categories, are based on the state water quality standards applicable to the receiving water classification, and are a state certification requirement. The pH water quality criteria for dischargers in Massachusetts and in New Hampshire are found in 314 CMR 4.05(3) and (4), and in Env-Ws 1703.18, respectively. Therefore, in addition to the antibrackish requirements for those Massachusetts facilities with an individual NPDES permit, the pH limitations are based on State certification requirements under section 401(d) of the CWA, 40 CFR 124.53 and 124.55.

In Massachusetts, the pH limitations for discharges are a specific numeric range according to the receiving water classification. Additionally, there is no change allowed from background conditions that would impair any use assigned to the specific Class. The State of Massachusetts may consider a change in the pH limits upon receipt of a written request for a change in the applicable pH range with supporting information. The information is to demonstrate that the naturally occurring receiving water pH will not be significantly altered if discharges to the receiving water from the specified outfall are within a specific numeric pH range. This request may accompany the Notice of Intent submission or may occur with a written request for a permit modification before the permit expiration date. Written concurrence applicable to a specific outfall from the Massachusetts Department of Environmental Protection (MA DEP) is necessary in either situation for EPA to incorporate the pH demonstration results in the appropriate document.

EPA included a provision in the Massachusetts draft permit (see Part I.A.15) assuming that the MA DEP grants a formal approval to change the permitted pH limit range. This provision will either allow EPA to advise the facility of the change in the pH limit range(s) with the general permit coverage notification or to modify the pH limit range using a certified letter in response to the permittee's request. This pH change will be allowed when it can be demonstrated that the revised pH limit range does not alter the naturally occurring receiving water pH as provided by the requirements in the Massachusetts state permit conditions (see Part I.A.16.a). Additional permit conditions common to each State are explained at the end of this section.

In New Hampshire, the pH limitations for dischargers to Class B waters are 6.5 to 8.0 Standard

Units (S.U.) or as naturally occurs in the receiving water. The State of New Hampshire may consider a change in the pH limits if the permittee can demonstrate to the satisfaction of the New Hampshire Department of Environmental Services, Water Division (NHDES-WD) that the in-stream pH criteria will be protected when the pH of the discharge is outside the pH limit range in this permit. Upon receiving concurrence from the NHDES, the applicant or NHDES-WD may submit a written request that the pH limits be modified by EPA to incorporate the results of the demonstration.

Anticipating the situation where the NHDES-WD grants a formal approval, changing the pH limit(s) to outside the range of 6.5 to 8.0 S.U. for dischargers, EPA has included a provision in the New Hampshire draft permit (see Part I.B.15) allowing EPA to modify the pH limit(s) using a certified letter. This pH change will be allowed when it can be demonstrated that the revised pH limit range does not alter the naturally occurring receiving water pH as provided by the requirements in the New Hampshire State Permit Conditions (see Part I.B.16.a). Additional permit conditions common to each State are explained below.

In Massachusetts and New Hampshire, the pH limit range cannot be less restrictive than found in the applicable National Effluent Limitation Guideline for the facility or to a default range of 6.0 to 9.0 S.U. in the situation of no applicable guideline, whichever is more stringent. If the State approves results from a pH demonstration study, this permit's pH limit range can be relaxed in accordance with 40 CFR 122.44(1)(2)(i)(B) because it will be based on new information that was not available at the time of permit issuance. This new information includes results from the pH demonstration study that justifies the application of a less stringent pH effluent limitation. EPA anticipates that the limit determined from the demonstration study, as approved by the MA DEP or the NHDES-WD, will satisfy all effluent requirements for this discharge category and will comply with the Massachusetts Water Quality Standards or the New Hampshire Water Quality Standards, respectively.

#### Oil and Grease

Oil and grease limits are proposed in these draft general permits because a gravity oil/water separator is a common treatment for equipment, sump, and floor drain related discharges at hydroelectric generating facilities. The oil and grease limits are applicable to outfalls with discharges resulting from the equipment and floor drain water and the equipment and station maintenance-related water operations. These oil/water separators use the force of gravity to separate the lower density oils as a layer on top of the oil/water interface and the heavier particulate matter (sludge) as a layer on the bottom of the oil/water separator. The design of oil/water separators is based on the following parameters: water flow rate, density of oil to be separated, desired oil removal capacity, and operating temperature range. Monitoring for oil and grease is required in the pertinent outfalls in addition to the Best Management Practices Plan requirements in paragraph D of this section, to provide representative data on the variability of this pollutant in the effluent and to provide the permittee with operational data to measure the success of this Plan.

The oil and grease limits are derived from the narrative water quality criteria in the state water quality standards (see 314 CMR 4.05(3) and (4) in Massachusetts, and Env-Ws 1703.03(c)(1)b

and 1703.09 in New Hampshire). For discharges to Class B and SB waters in Massachusetts, the narratives indicate no oil and grease that produces a visible film on the surface of the receiving water. For discharges to Class B waters in New Hampshire, the narrative indicates that the waters are free from floating visible substances and contain no oil or grease in concentrations that impair any existing or designated uses. The Region interprets these narrative criteria as prohibiting a discharge to these waters that would cause an oil sheen. EPA has established average monthly oil and grease limitations of 15 mg/l for these draft permits based on the Region's long standing use of the 15 mg/l standard to represent the concentration at which a visible oil sheen is likely to occur. This limit will ensure the narrative water quality standards for oil and grease in both States are protected. The Region believes that this limit is a reasonable standard and has previously imposed maximum daily oil and grease limits of 15 mg/l in permits at facilities (such as oil terminals) that have a reasonable potential for oil and grease discharge. The technology-based guideline for oil and grease for Steam Electric Power Generating Point Sources (40 CFR Part 423) are limited at 15 and 20 mg/l for average monthly and maximum daily values, respectively. Certain individual permits for hydroelectric facilities located on the Deerfield River in Massachusetts use the 15 mg/l value to indicate the presence of an oil sheen.

In Massachusetts, the narrative oil and grease water quality criteria for discharges to Class A and SA waters states that these waters are free from oil and grease. EPA interprets this narrative to represent the absence of oil and grease in the respective receiving waters. In this situation, EPA is establishing the Oil and Grease effluent limit at zero to reflect the absence of oil and grease in the receiving waters and to comply with the states' water quality standards. Because the zero limit is below the analytical detection limit for this pollutant, the Region is following guidance set forth in Technical Support Document for Water Quality-based Toxics Control, March 1991, EPA/505/2-90-001, pages 111-112 which recommends "... that the compliance level be defined in the permit as the minimum level (ML)." The minimum level of detection for Oil and Grease reference in the specified the test method 1664 is 5.0 mg/L. Therefore, the limit at which compliance/noncompliance determinations will be based is the ML. For this permit, the ML for Oil and Grease is defined as 5.0 mg/L.

#### Temperature

For equipment-related cooling using NCCW, the pressure on the water side of the heat exchanger is greater than the oil-side pressure, by design. If an equipment failure occurs, water will contaminate the oil versus oil being discharged to the receiving water. The only pollutant associated with these discharges is small amounts of heat (thermal energy). Temperature of the cooling water discharges is not expected to be a concern given the dilution provided by the receiving water at the 7Q10 low flow. Temperature monitoring requirements are included to verify this determination for those outfalls with a NCCW or cooling water component to provide representative monitoring data.

#### Toxics

The States of Massachusetts and New Hampshire have narrative criteria in their water quality standards (see Massachusetts 314 CMR 4.05(5)(e); and New Hampshire Env-Ws 1703.21) that prohibit toxic discharges in toxic amounts. The draft general permits do not allow for the addition of materials or chemicals in amounts which would produce a toxic effect to any aquatic

life.

The use of water treatment additives at hydroelectric generating facilities is limited by the permits. Non-toxic water treatment additives do not exhibit any residual toxic effect on the receiving waters. The use of these non-toxic water treatment additives, which are chemicals used in cooling water systems primarily to control corrosion or prevent deposition of scale forming materials, are allowed after receiving review and authorization by the respective State. Non-toxic water treatment additives and any other chemical additives to the cooling water systems are to be listed in the Notice of Intent letter. Each identified chemical will be reviewed by the appropriate State to determine its acceptability. Additives used to control biological growth in such cooling systems are prohibited due to their inherent toxicity to aquatic life.

Noncontact cooling water discharges do not contain or come in contact with raw materials, intermediate products, finished products, or process wastes. Therefore, it is assumed that these discharges do not contain toxic or hazardous pollutants or oil and grease. Nevertheless, toxic effects may still occur as a result of toxic source water or due to dissolution of the piping in cooling water systems. Any cooling water discharge (noncontact or direct) which would violate water quality criteria established for toxic and hazardous pollutants would not qualify for this general permit and an individual permit would be required.

#### **D. Best Management Practices Plan**

The development and implementation of a Best Management Practices (BMP) Plan is a requirement in the proposed general permit. The goal of the BMP Plan is to eliminate or reduce the potential for a discharge of pollutants to waters of the United States. In the event the potential cannot be eliminated, the permittee should select BMPs to reduce or eliminate the pollutant loading to the receiving water. The BMP Plan requirements direct the permittee to review the physical equipment, the operational procedures, and the operator training at the facility. The objective of this review is to protect waters of the United States by eliminating or minimizing the potential discharge of any pollutants.

The BMP Plan is prepared and implemented by the permittee to eliminate or reduce the pollutants in the discharges associated with work-related operations at the hydroelectric generating facility and to assure compliance with the terms and conditions of this permit. The discharges comprise equipment and floor drain-related water, equipment and facility maintenance-related water, and facility maintenance-related internal drainage water. These operations include material storage, site runoff, in-facility transfer, process and material handling, loading and unloading operations, and accidental spillage. Because many of the sumps and pits at these facilities include one or more oil/water separators as the treatment process, proper operation and maintenance of the oil/water separator(s), are requirements of the Plan.

An integral part of the BMP plan is scheduled inspection requirements to protect the outfalls that discharge equipment and floor drain-related water, equipment and facility maintenance-related water, and facility maintenance-related internal drainage water discharges from accidental spills. Frequent maintenance inspections and preventative maintenance plans are effective techniques to

identify and eliminate internal drainage system problems before a problematic discharge to the receiving waters(s) occurs. The inspection component of this Plan supplements the effluent monitoring requirements and provides a visual type of monitoring condition on those occasions when the outfall is inaccessible for sampling at certain facilities. Monitoring data collected for these outfalls will provide data to assure compliance with the effluent limitations and to allow the permittee to measure the actual performance of the BMPs, and to determine adjustments for the BMPs, if necessary.

The draft general permit conditions to develop and implement the BMP Plan are provided in Part I.D and the detailed components and contents of the BMP Plan are in Part III. The BMP Plan becomes an enforceable element of the permit no later than 90 days following the active date of permit coverage. Consequently, the BMP Plan is as enforceable as any effluent limits on the discharges. The BMP Plan and general permits contain specific deadlines for preparation and compliance, signature and Plan review conditions, and an annual reporting requirement.

#### **E. Disposal of Collected Trash and Debris**

Man made and natural debris accumulates on the trash racks at the water intakes located at the dam or the canal inlet. As part of regular maintenance, this debris is removed by the permittee to insure proper water flow for the turbines. The permit requires that all solid man made materials be removed from the trash racks for land disposal.

#### **F. Monitoring and Reporting Requirements**

Effluent limitations and monitoring requirements which are included in the general permit describe the requirements to be imposed on the facilities to be covered. Facilities covered by the final general permit will be required to submit, to the EPA New England Region, Massachusetts Department of Environmental Protection, and the New Hampshire Department of Environmental Services, a Discharge Monitoring Report (DMR) containing the effluent data. The frequency of reporting is determined in accordance with each state's provisions (see individual State permits).

The monitoring requirements have been established to yield data representative of the discharge under authority of Section 308(a) of the Act and 40 CFR 122.41(j), 122.44(i) and 122.48, and as certified by the State. The measurement frequency is established at once per month for discharges of equipment-related cooling water, equipment and floor drain water, and equipment-related backwash water to provide representative data on the monthly variability of each parameter. The measurement frequency is established at once per year for discharges of equipment and station maintenance-related water and facility maintenance-related internal drainage water to provide representative data for these outfalls. Because these maintenance-related discharges are intermittent and the outfalls inaccessible at times for sampling at certain facilities, this frequency provides representative monitoring data.

For those instances when there is no discharge from an outfall the No Data Indicator Code (NODI) of C is to be reported on the DMR. Similarly, the NODI code of E is reported when the sampling point location for an outfall is inaccessible. The listing of available No Data Indicator

Codes is provided in NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs), Report Year 2003, Attachment E. This document is the annual Discharge Monitoring Report Instructions and it is available at the web site <http://www.epa.gov/region01/compliance/enfdmr.html>. The measurement frequency for flow is identical to frequency established for the other parameters being monitored at each outfall.

Samples for an individual outfall including flow are to be taken concurrently. The sampling location is selected to provide a representative analysis of the discharge. If a discharge is combined or commingled with another discharge prior to mixing with the receiving water, representative samples are taken before the commingling occurs in the drainage system.

### **G. Endangered Species**

The process of issuing general permits requires consultations with both the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) under Section 7 of the Endangered Species Act of 1973 (ESA). EPA began consultations with the USFWS and NMFS during preparation of these draft permits.

These general permits specifically exclude coverage to facilities whose discharge(s) may adversely affect threatened or endangered species or its critical habitat. The proposed permit limits are sufficiently stringent to assure that water quality standards for both aquatic life protection and human health protection will be met. The effluent limitations established in these permits ensure protection of aquatic life and maintenance of the receiving water as an aquatic habitat. Therefore, the Region finds that adoption of these final permits are unlikely to adversely affect any threatened or endangered species or its critical habitat. Prior to the public notice period, EPA obtained written concurrence from the U.S. Fish and Wildlife Service that issuance of this general permit is not likely to adversely affect threatened and endangered species for which the U.S. Fish and Wildlife Service has jurisdiction. The National Marine Fisheries Service provided the conditional concurrence indicated below.

The NMFS previously informed EPA that the shortnose sturgeon (*Acipenser brevirostrum*) is an endangered specie inhabiting certain reaches of the Merrimack and Connecticut Rivers in Massachusetts. The shortnose sturgeon are only know to occur below the Essex Dam on the Merrimack River because this dam, which is located in Lawrence, Massachusetts, forms an upstream passage barrier for the shortnose sturgeon. The National Marine Fisheries Service determined, if operators consult with NMFS prior to their facility receiving general permit coverage, the issuance of this general permit is not likely to adversely affect endangered or threatened species under the jurisdiction of NMFS. Accordingly, the permit requires facilities discharging to these Rivers in Massachusetts to consult with NMFS in order to complete the NOI filing. General permit coverage is only available if the consultation results in either a no jeopardy opinion or a finding that the dischargers are not likely to adversely affect the shortnose sturgeon or critical habitat. The draft permit designates the operators of these facilities as non-Federal representatives to allow informal consultation or preparation of a biological assessment. These facilities are encouraged to begin the consultation process as early in the process as possible. Facilities seeking coverage under the Massachusetts permit are to provide a

certification with the NOI submission indicating the consultation resulted in either a no jeopardy opinion or a finding that the discharges are not likely to adversely affect the shortnose sturgeon or critical habitat. NMFS can be contacted at the following address: National Marine Fisheries Service, Northeast Region, Attn: Endangered Species Coordinator, Protected Resources Division, One Blackburn Drive, Gloucester, MA 01930

#### **H. Standard Permit Condition**

Permit conditions applicable to all NPDES Permits are established in 40 CFR 122.41. Part II of the permit includes these conditions.

#### **I. State (401) Certification**

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. The section 401 certification process is underway in both states. In addition, EPA and the Commonwealth of Massachusetts jointly issue the final permit.

#### **J. The Coastal Zone Management Act**

The Coastal Zone Management Act (CZMA), 16 U.S.C. 1451 *et seq.*, and its implementing regulations [15 CFR Part 930] require that any federally licensed activity affecting the coastal zone with an approved Coastal Zone Management Program (CZMP) be determined to be consistent with the CZMP. In the case of general permits, EPA has the responsibility for making the consistency certification and submitting it to the state for concurrence. EPA has requested the Executive Office of Environmental Affairs, MCZM, 251 Causeway Street, Suite 900, Boston, MA 02114; and the Office of State Planning, New Hampshire Coastal Program, 152 Court Street, Suite 1, Portsmouth, NH 03801 to provide a consistency concurrence that the proposed general permit is consistent with the MA and NH Coastal Zone Management Program, respectively.

#### **K. Environmental Impact Statement Requirements**

The general permits do not authorize discharges from any new sources as defined under 40 CFR 122.2. Therefore, the National Environmental Policy Act, 33 U.S.C. 4321 *et seq.*, does not apply to the issuance of these general NPDES permits.

#### **L. National Historic Preservation Act of 1966, 16 USC SS470 *et seq.***

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 SS470 *et seq.* are not authorized to discharge under this permit.

## **M. Essential Fish Habitat**

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

Essential Fish Habitat is only designated for fish species for which federal Fisheries Management Plans exist. 16 U.S.C. Sect. 1855(b)(1)(A). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999.

The proposed limits for these general permits are sufficiently stringent to assure that state water quality standards will be met. The effluent limitations established in these permits ensure protection of aquatic life and maintenance of the receiving water as an aquatic habitat. The Region finds that adoption of the proposed permit is unlikely to adversely affect any fish or shellfish currently listed with a Fisheries Management Plan or its critical habitat. EPA will seek written concurrence from the NMFS on this determination.

## **V. Comment Period, Hearing Requests, and Procedures for Final Decisions.**

All persons, including operators of hydroelectric generating facilities who believe any condition of the draft general 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: Mr. Roger A. Janson, Director NPDES Permits Program, Office of Ecosystem Protection, U.S. Environmental Protection Agency, 1 Congress Street, Suite 1100 (CPE), Boston, Massachusetts 02114-2023. Any person, prior to such date, may submit a request in writing for a public hearing to consider the draft general permit to EPA and the State Agency. Such requests shall state the nature of the issue proposed to be raised in 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 regarding a final decision on the draft general permit, the Regional Administrator will respond to all significant comments and make these responses available to the public at EPA's Boston Office and available at the EPA-Region 1 web site <http://www.epa.gov/ne/npdes/>.

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

## **VI. Other Legal Requirements**

### **A. Executive Order 12866**

EPA has determined that these general permits are not a “significant regulatory action” under the terms of Executive Order 12866 and is therefore not subject to OMB review.

### **B. Paperwork Reduction Act**

The information collection requirements of these permits were previously approved by the Office of Management and Budget under the provisions of the Paperwork Reduction Act. 44 U.S.C.3501 et seq., and assigned OMB control number 2040-0086 (NPDES permit application) and 2040-0004 ( Discharge Monitoring Reports).

### **C. Regulatory Flexibility Act**

The Regulatory Flexibility Act (RFA), 5 U.S.C. 601 et seq., requires that EPA prepare a regulatory flexibility analysis for rules subject to the requirements of 5 U.S. C. 553(b) that have a significant impact on a substantial number of small entities. The permits issued today, however, are not a “rule” subject to the requirements of 5 U.S.C. 553(b) and are therefore not subject to the Regulatory Flexibility Act.

### **D. 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 permits issued today, however, are not a “rule” subject to the RFA and are therefore not subject to the requirements of UMRA.

November 13, 2003  
Date

Robert W. Varney  
Regional Administrator