

PART I.K

**RESPONSE TO COMMENTS
NPDES GENERAL PERMITS**

NOS. MAG360000 (MASSACHUSETTS) AND NHG360000 (NEW HAMPSHIRE)

On November 28, 2003, the U.S. Environmental Protection Agency (“EPA” or “Region”) published a notice of availability in the Federal Register of a draft National Pollutant Discharge Elimination System (NPDES) general permit for specific discharges from eligible hydroelectric generating facilities in the States of Massachusetts and New Hampshire and Tribal Lands in the State of Massachusetts. The public comment period for the draft general permit originally expired on December 29, 2003, but was extended to January 16, 2004, in response to requests from owners/operators of facilities that are potentially eligible for permit coverage.

This permit authorizes the discharge of equipment cooling water, equipment and floor drain water, equipment backwash strainer water, and specific maintenance waters from the hydroelectric facility to certain classes of waters in Massachusetts and New Hampshire. During the public comment period, comments on the draft permit were submitted by five owners/operators of facilities potentially eligible for coverage under this general permit and by three hydroelectric power associations, whose membership includes owners/operators of facilities potentially eligible for coverage under this general permit. The following is a response to these comments, including identification and explanation of those provisions of the draft permit which have changed in the final permit.

Table of Contents

<u>Topics</u>	<u>Page</u>
List of Commenters	3
General Comments	4
Permit Issuance and Coverage	5
Discharge Classification and Commingling	9
Numeric Limitations	13
Equipment and Sump Dewatering	16
Flood/high Water Discharges	18
Internal Drainage Water	20
Oil and Grease	20
pH Range	25
Temperature	30
TSS	33
Monitoring Requirements	36
Representative Outfall	41
Concurrent Sampling	42
Monitoring Frequency	42
Narrative Limits	47
Trash Racks	47
BMP Plan	50
Exclusions	52
Additional General Permit Conditions	53
Other	55
Pumped Storage	56
Cost	57
Streamlined General Permit	59
Maine's Permit Program	62
Permit Exemptions	64
Dual Enforcement	66
Other Legal Requirements	66
Summary of Revisions to the Final Permit	94
EPA Review	96

List of Commenters

<u>Abbrev</u>	<u>Commenter</u>
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USGH	USGen New England, Inc., Hydro Generation
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NUS	Northeast Utilities System Company
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USG	USGen New England, Inc. (Subsidiary of National Energy & Gas Transmission, Inc.)
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NHUW	National Hydropower Association (NHA) and Utility Water Act Group (UWAG), joint comments
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GL	Great Lakes Hydro America, LLC
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GSHA	Granite State Hydropower Association
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ENL	Enel North America, Inc.
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General Comments

COMMENT NO. 1: The generating assets for Enel North America, Inc. (ENL) include 14 hydroelectric facilities located in New Hampshire and Massachusetts which would be directly impacted by the USEPA's proposed NPDES General Permits for Discharges from Hydroelectric Generating Facilities. The company is by nature attuned to operating its facilities in an environmentally responsible manner. We are gravely concerned over the substantial additional regulatory burden that the proposed General Permits would unnecessarily place on hydropower facilities, and the consequences that such over-regulation could have on hydroelectric generation in general.

(ENL 10)

We question what environmental benefits EPA expects to be realized from this general permit program. We note that EPA has failed to identify a specific problem which would justify such an increase in regulatory burden, or even that there is a general cause for concern. Simply put, the Permits merely state that hydropower facilities have various types of discharges and that all of these discharges need to be regulated, without consideration for the actual or potential impact these discharges may have on the downstream river.

For the record, this commenter mentions as a member of the Granite State Hydropower Association (GSHA), we fully support the comments submitted by this Association. GSHA comments exhaustively discuss many of our primary concerns with the proposed General Permits, and for the sake of brevity we will not repeat those concerns in any detail. For the purpose of this response to comments document, this statement provides ENL's support for the GSHA comments.

(ENL 7)

COMMENT NO. 2: A commenter supports efforts by EPA Region 1 and the states of Massachusetts and New Hampshire, to minimize impacts from hydroelectric facilities and respects their efforts to better understand these types of operations. However, the commenter is concerned that the proposed draft general permit is not the most appropriate mechanism to regulate these impacts and is overly burdensome when compared to the benign nature of these discharges and the potential environmental benefits from this level of regulation. The commenter respectfully offers comments in support of this position.

(NUS 19)

RESPONSE NOS. 1-2: The general permits are intended to cover point source discharges from a group of hydroelectric facilities in Massachusetts and New Hampshire with substantially similar operations. The discharges at these facilities include cooling water; equipment and floor drain water; and certain maintenance waters. The general permit provides efficient, updated permit coverage for as many as 33 hydroelectric generating facilities that are awaiting final permit decisions on complete permit applications or that are discharging under expired permits that have been administratively continued. As explained in the Fact Sheet, and herein, the

effluent limitations imposed in these permits are necessary to ensure compliance with the Clean Water Act (“CWA” or “Act”), including the technology and water quality-based requirements of section 301 of the Act. The permits’ monitoring requirements and reporting requirements will provide EPA with data to assess the ongoing impact of these discharges on the receiving waters and to determine the need for additional controls in future permitting cycles.

The Region has carefully considered the concerns raised in the public comment period and in response has modified certain requirements in the draft general permits, including the monitoring and reporting requirements.

Permit Issuance and Coverage

COMMENT NO. 3: We applaud EPA for providing a general permit covering specific types of discharges for hydroelectric facilities in New Hampshire. However, we reserve the right to argue that dams are not a point source thus eliminating the requirement for a NPDES Permit. (GL 1)

Under the EPA’s longstanding interpretation of the CWA, hydropower dams, generally, are not subject to the Act’s Section 402 National Pollution Discharge Elimination System (“NDPES”) program. In Section I of the Fact Sheet accompanying the general permits, EPA-Region 1 attests to this policy when it states “The general permit does not regulate the river flow through the turbines or over the dam.” The National Hydropower Association (NHA) and Utility Water Act Group (UWAG) have always strongly supported this policy, and both organizations continue to do so. (NHUW 25)

The general permits impose effluent limitations, monitoring requirements, and other conditions for specific discharges from hydropower facilities in Massachusetts and New Hampshire. The covered discharges include equipment cooling water, equipment and floor drain water, equipment maintenance-related water, equipment-related backwash water, and maintenance-related internal drainage water. NHA believes that the general permits requirements for some of these discharges are unnecessary, impractical, and in some cases, dangerous to implement, and should be eliminated. The particular effluent characteristics covered under the general permits include flow, pH, TSS, temperature, and oil and grease. NHA and UWAG believe a number of these requirements are unnecessary. (NHUW 29)

RESPONSE NO. 3: These general permits do not regulate dams as point sources. As indicated in the Fact Sheet (p.1), the general permits authorize discharges of equipment cooling waters, equipment and floor drain water, equipment backwash water, and specific maintenance waters, but does not regulate river flow through the turbines or over the dam. Each of these point source discharges must be authorized by an NPDES permit irrespective of whether the dam itself is a point source. *See National Wildlife Federation v. Gorsuch*, 693 F.2d 156, 165 n.22 (D.C. Cir. 1982) (pipes and spillways of dams are “point sources” under the Clean Water Act and therefore

subject to the Act discharge permit requirements).

Discharges of pollutants from point sources to waters of the United States require an NPDES permit under Section 402 of the CWA. NPDES permits are required to contain limitations and conditions necessary to ensure compliance with technology and water quality-based standards in accordance with Section 301 of the Act as explained in the Fact Sheet and as further explained below. The effluent limitations and conditions for pH, temperature, and oil and grease are necessary requirements under these general permits for the reasons explained in the Fact Sheet and sections pertaining to these parameters below. Requirements for the discharges of equipment-related backwash water, maintenance-related internal drainage water, and facility-maintenance related water during flood/high water events have been revised in the final permit as mentioned in Response Nos. 12-13, 14, and 59. The TSS monitoring and reporting requirements have been eliminated for the reasons discussed in Response No. 29. As explained in Response 39 below, the flow volume monitoring and reporting is in accordance with 40 C.F.R. §§ 122.44(i)(1)(ii) and 122.48.

COMMENT NO. 4: Northeast Utilities Service Company (NUSCO) is filing its comments on behalf of affiliated companies potentially affected by the Draft General Permit including Northeast Generation Company (NGC), Northeast Generation Services Company (NGS), and Public Service of New Hampshire (PSNH). These companies, respectively, own three hydroelectric generating facilities including the pumped storage facility in Massachusetts, operate the three Massachusetts facilities for NGC, and own and operate eight stations in New Hampshire. NUSCO requests that EPA allow currently permitted facilities the option to continue to be covered under an individual permit, including renewals thereof. As currently proposed, NUSCO notes that the scope and degree of permit terms and conditions will likely result in many facilities determining that an individual permit is more appropriate for their facility. Obviously, this is counter to the desired impact of a General Permit, but should EPA determine that significant revisions to the General Permit can or should not be made, as suggested by NUSCO and others, NUSCO maintains that facilities should have their choice of permitting options without any demonstration to EPA.
(NUS 29)

Because the provisions of the proposed permit are so onerous, many owners/operators of very small hydro facilities may elect to opt out of the general permit coverage and file individual permit applications according to the Granite State Hydropower Association. This is a practical effect of the proposed rule and permit requirements if implemented as proposed. The decision to opt out of the general permit coverage would result from determinations by individual owner/operators that an individual permit could be tailored to more closely match the facility's characteristics. The size and operating characteristics of each facility is used in this determination. Decisions by project owners and operators to file individual permit applications will further exacerbate what will already be an onerous paperwork burden for both the owners/operators and EPA, and the relevant State. This is exactly the opposite of what EPA and the two states intended when they issued the proposed rule and permit. The GSHA is a non-

profit association made up of owners and operators of 50 small scale hydroelectric projects located throughout the State of New Hampshire. Because its membership is large, GSHA has selected representative projects upon which to base its examples in these comments. If the EPA is interested, GSHA would be willing to supplement the information contained in these comments with a subsequent submission. A list of the GSHA member projects, the nominal capacity of each project and the river location of each project is attached to the comment as Exhibit A (Granite State Hydropower Association – Member Projects). The median size of the GSHA projects is 400kW. With the exception of one 10MW project, all of the GSHA projects are 5 MW or less.

(GSHA 2)

It is our understanding from discussions with EPA staff that the proposed General Permits arose from a desire to consolidate the reissuance of individual NPDES permits for several hydropower facilities. While we would generally support such efforts to streamline regulatory processes, we believe that taking such a “shotgun” approach in this case would be counterproductive. The General Permits, if approved, would in fact create the exact opposite effect from that desired. Instead of streamlining and simplifying the regulatory process for a limited number of facilities, the General Permits would create a substantial increase in regulatory burden for all facilities, the majority of which never before were considered to require any NPDES permit. This increased burden would apply not only to hydropower operators for collecting and filing monitoring data, but also to EPA and state regulatory staff for handling the data and monitoring compliance.

(ENL 12)

RESPONSE NO. 4: Any operator has the option of either seeking coverage under a general permit by submitting a Notice of Intent to EPA or simply continuing to be covered under an individual permit. See pp. 21-23 of Draft General Permit. Although the discharger is free to choose whether to apply for coverage under the General Permit, EPA does not believe that coverage should be automatic and believes that it is important to retain the discretion to require an individual permit. EPA’s ability to require an individual permit is necessary for it to account for the particularized circumstances set forth Section I.2 of the permit that would render General Permit coverage inappropriate. See 40 C.F.R. § 122.28(b)(vi)(3).

There are 27 facilities in Massachusetts and New Hampshire with expired individual permits that have been administratively continued and are eligible for coverage under this general permit. These expired permits will remain in effect until the owner/operator obtains general permit coverage or EPA makes a decision on the pertinent individual permit renewal application. Six New Hampshire facilities, with a pending individual permit application on file, are also eligible for general permit coverage. It is premature to determine the final individual permit actions at this time, because the development of individual permits are on a case-by-case basis. Any individual permit would be subject to the NPDES permit regulations mentioned in this document, including permit revisions in response to public comments as a result of the required public comment period. EPA does, however, anticipate that future individual permits issued to hydroelectric generating facilities will contain effluent limits, monitoring requirements, and other conditions that are at least as stringent as those in this final general permit.

EPA appreciates the commenter's offer to provide supplemental information regarding its members' projects. EPA has determined that the submitted information on the three selected projects is sufficiently representative. The Region has addressed many concerns raised in the public comment period by modifying requirements contained in the draft general permit. Regarding the commenter's concern with the substantial increase in regulatory burden for both owner/operators and EPA, the revisions to the monitoring and reporting requirements in the final general permits significantly reduce the burden for all parties (see Response Nos. 33, 35, 36-38) while at the same time ensure that the requirements of the CWA are met. In addition, coverage under a general permit has advantages over an individual permit. For example, general permit coverage will result in a reduced paperwork burden, simplified application requirements and greater predictability, as the terms and conditions are known in advance. EPA does not anticipate that individual permits will be less stringent than the general permits.

Federal regulations governing the administration of NPDES general permits provide EPA with the discretionary authority to "require any discharger authorized by a general permit to apply for and obtain an individual NPDES permit." See 40 C.F.R. § 122.28(b)(3)(i), (ii). The regulation also allows a discharger covered under the general permit to itself seek exclusion from coverage and to obtain an individual permit, but only after submitting an application setting forth the "reasons supporting the request." See 40 C.F.R. § 122.28(b)(3)(iii). The owner/operator must submit an individual permit application under 40 C.F.R. § 122.21 to EPA, within 90 days of the notice of final general permit issuance in the Federal Register. EPA will grant the request "if the reasons cited by the owner or operator are adequate to support the request." *Id.* The commenter does not state any rationale for departing from NPDES regulations and for allowing the owner/operator to choose between the two options as a matter of right. Retaining authority to determine whether an individual or general permit is appropriate and reasonable, as it will allow EPA to weigh relevant facts and circumstances of a particular discharge and its impact on the receiving water. The language in Part I.I.3.a of the final permit (concerning when an operator may request to be excluded from this general permit coverage) has been revised to reflect the general permit regulations discussed above and in the Fact Sheet under Section III, Exclusions.

As discussed below, the commenter's reference to the draft general permits as a "proposed rule" is incorrect. EPA has not proposed a rule within the meaning of the Administrative Procedure Act, 5 U.S.C. 553(b), but has instead issued draft general NPDES permits pursuant to a federal regulation, 40 C.F.R. § 122.28.

Discharge Classification and Commingling

COMMENT NO. 5: The Draft General Permit prescribes monthly monitoring requirements for a number of outfalls: equipment-related cooling water, equipment and floor drain water, and equipment-related backwash water. This delineation demonstrates that the agencies put forth a commendable effort to understand hydroelectric facility operations and the types of discharges from these facilities. However, in actual operation, these discharges are not so discrete. Based on the age of most hydroelectric facilities, discharges are often commingled and in most cases are inaccessible except at the ultimate point of discharge to the receiving waters. Monitoring at a facility's ultimate discharge point would capture any significant addition of pollutants.

Additionally, many of the discharges delineated in the Draft General Permit alone, add no or only insignificant amounts of contaminants to a facility's ultimate discharge. Region 1 acknowledged as much in describing the discharge of equipment and facility maintenance related-water in the supplemental information and fact sheet stating that "[t]he potential for oil and grease or other pollutants to be present in this discharge is **insignificant.**" [Emphasis added]

Agreeing with this assessment, NUSCO asserts that separately monitoring these types of discharges as delineated in the Draft General Permit is unnecessary.

Again, NUSCO is convinced that monitoring at a facility's ultimate discharge point would capture any significant addition of pollutants. The proposed system of distinguishing and categorizing such similar waste streams and assigning different requirements is far too complex.

Due to the generally benign nature of the discharges from hydroelectric facilities and the fact that all discharges are predominately river water, Region 1 should simply focus on establishing one set of monitoring requirements for final discharge locations.

(NUS 6, 7, 8)

COMMENT NO. 6: The Draft General Permit states that each outfall must be sampled but also states that "[i]f the discharge is commingled with another discharge prior to mixing with the receiving water, samples shall be taken before such commingling." NUSCO is concerned that this language will result in an unnecessarily large number of potential sample locations, many of which are inaccessible.

The vast majority of our facilities were designed and built in the early twentieth century, prior to environmental regulations addressing the commingling of discharges. Separating these discharges to provide for "up-the-pipe" sampling would in most cases require a re-engineering and re-construction of our facilities to separate discharges that together, already fall well within acceptable permit limits. Requiring a facility to sample each piece of equipment and each floor drain as individual contributing discharges would be particularly onerous. For example, attempting to sample leakage from a headcover seal would require an attempt at catching and scooping a couple of quarts of river water, from a very shallow layer, possibly a tablespoon at a time, before it escapes into an inaccessible part of the unit. Facilities with multiple units would be required to repeat this task for each headcover on a monthly basis. Such sampling would be time consuming and is unlikely to result in any quantifiable environmental benefit.

NUSCO believes that the focus of the Draft General Permit should be on the ultimate or “actual” point of discharge to the receiving waters, irrespective of commingling that occurs in the plant. To this end, we suggest requiring sampling only at the ultimate discharge point unless an exceedance occurs. If an exceedance occurs, a facility could be required to investigate the root cause of the exceedance, including sampling contributing sources before they are commingled. (NUS 11, 12, 13, 14)

These same sections of the General Permits also state “if the discharge is commingled with another discharge prior to mixing with the receiving water, samples shall be taken before such commingling.” It is not always possible to obtain samples prior to commingling due to facility design and inaccessibility of some discharge points. Also, the commingled discharge constitutes the actual discharge which would be subject to regulation and should be the discharge monitored, rather than the individual streams contributing to the commingled discharge. Therefore, US Gen New England, Inc. Hydro Generation (USGH) requests that these permits allow for commingled discharges, and that the language of this section be changed to read “samples shall be taken at a point prior to mixing with the receiving water.” (USGH 16)

NHA and UWAG are also concerned as to how many discharge points require sampling. The general permits require that each outfall must be sampled, but they also state that “If the discharge is commingled with another discharge prior to mixing with the receiving water, samples shall be taken before such commingling.” Again, not all facilities may be able to meet this requirement. Separating these discharges to provide for “up-the-pipe” sampling would, in most cases, require a re-engineering and reconstruction of the facility.

Also, the commingled discharge constitutes the actual discharge that is subject to the general permits and should be the discharge monitored, rather than the individual streams contributing to the commingled discharge.

As the ultimate purpose of the general permits is to protect the quality of the receiving waters, NHA and UWAG recommend that the focus of the general permits should be on the actual point of discharge, irrespective of commingling that may occur in the plant. The permit monitoring program should provide flexibility to determine the most appropriate and representative sampling point(s); for example, sampling in the sump rather than the discharge due to accessibility problems. (NHUW 12, 14, 15)

RESPONSE NOS. 5-6: The purpose behind sampling prior to the mixing of multiple waste streams is to allow EPA and the permittee to quickly identify and rectify the source of permit violations. The monitoring requirements for commingled waste streams were not intended to generate engineering burdens of the type described above. While pre-mix samples provide information to EPA and the permittee that can facilitate compliance with the general permit, EPA's primary concern is the nature and extent of pollutants at the point of discharge. EPA agrees that monitoring the commingled discharge prior to mixing with the receiving water will be sufficient. The permit has accordingly been revised to eliminate the "up-the-pipe" sampling requirements for commingled waste streams in Parts I.A.6 and B.6 and to add a revised set of effluent limitations in Parts I.A.5 and B.5 for those facilities where at least two discharge categories are combined in the final outfall that discharges to the receiving water. The effluent limits and monitoring requirements applicable to the combined discharge are those limits and requirements for each individual discharge category that forms the final discharge. The equipment-related cooling water operation has been removed from Parts I.A.2 and B.2 and instead addressed by this combined discharge category. Because operations at some facilities result in separate outfalls for discrete discharges, the permit retains the appropriate effluent limits and monitoring requirements for the associated discharge categories. The information required to complete the Notice of Intent in Part I.G.2 has been revised in the final permit to reflect these changes.

The commenter misquotes and mischaracterizes the language from the Fact Sheet regarding the potential for oil and grease in equipment and facility maintenance related water. The statement in the Fact Sheet did not characterize the level of oil and grease normally in the facility's discharge, much less the need for effluent limitations or monitoring conditions on such discharges. This language instead pertains to discharges from flood/high water collection devices during flood and high water events and to discharges of internal dam or headwall drainage. Because the potential for oil and grease discharges under these conditions was insignificant, EPA did not impose oil and grease effluent limitations and monitoring requirements to outfalls discharging flood waters and high waters (see superscripts 4 and 5 to Parts I.A.3 and B.3, respectively) and to outfalls discharging internal dam or headwall drainage (see Parts I.A.5.a and B.5.a).

COMMENT NO. 7: Finally, there is a very real and practical challenge to gathering some of the samples required by the Draft General Permit. For example, some discharges delineated in the Draft General Permit may require the drawdown or temporary halt to minimum flow releases. This activity in itself may cause harm to the environment and could pose a safety risk to those conducting the sampling. Therefore, NUSCO also suggests the addition of language to the Draft General Permit that allows for practical and safe sampling locations.

(NUS 16)

At many facilities there is no access to the "point" of the discharge, which is often a closed system in the tailrace or somewhere in the dam footings. Sampling these locations could require shutting off the flow to the tailrace, which could have enormous environmental consequences and would likely violate the Federal Energy Regulatory Commission (FERC) license terms and

conditions that require minimum flows in tailrace and bypass reach areas.
(NHUW 13)

RESPONSE NO. 7: The commenter suggests that EPA add language that allows for practical and safe sampling locations. EPA understands the need for the permittee to provide sampling locations that ensure employee safety. EPA, however, believes the permit already provides the permittee with flexibility in selecting the sampling location for a discharge. The monitoring conditions in Parts I.A.6 and B.6 of the draft and final permits specify a sampling location that provides for a representative analysis of the discharge rather than mandating a specific sampling location. Part II.C.1 of the permit, which is consistent with 40 C.F.R. § 122.41(j)(1), indicates samples and measurements shall be representative of the monitored activity.

Additionally, the revision to a quarterly monitoring frequency from a monthly frequency, as described in the Monitoring Requirements section of this document, provides the permittee with a longer time frame to plan, schedule, and obtain the desired sampling event at a safe sampling location. For instance, sampling of certain discharges should be planned to take advantage of any normally scheduled occurrence of an event such as the drawdown or halt to the minimum flow release. Moreover, effluent sampling can occur at the end-of-pipe or at a pre-established sampling port in the discharge pipe between the final treatment process and the end of-pipe. (A sampling port may allow for the installation of a pH/temperature probe to automate these two parameters and perhaps also flow, which may alleviate the commenter's safety concerns). The permittee is expected to make all reasonable attempts to obtain a sample during the quarterly sampling period.

In the event sampling is still not possible due to safety or accessibility issues, the permittee may elect to use certain No Data Indicator (NODI) codes when submitting the discharge monitoring results. However, any discharge that can not be sampled at least once a year is not eligible for permit coverage as mentioned in the discussion below. Information for these NODI codes is included in the annual NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs). These DMR instructions were revised in March 2007 to reflect the new Integrated Compliance Information System database that replaced the Permit Compliance System. The permittee is encouraged to review these DMR instructions including the applicability and the effect of using the NODI codes. As a convenience to the permittee, the Region's web site location for these Discharge Monitoring Report instructions is included in the final permit: <http://www.epa.gov/ne/enforcementandassistance/dmr.html>. An explanation should be provided for use of the NODI code with the appropriate DMR report. Based on the revisions to the monitoring requirements mentioned in this document, reference to the NODI Code E in the final permit is not necessary. The final permit (Parts I.A.1 to A.3, and A.5; and B.1 to B.3, and B.5) has been revised removing reference to this Code E and including the web site location for these DMR instructions.

A discharge that is authorized under this and all permits must be sampled at least once per year following the specified monitoring requirements. The NPDES permit regulations at 40 C.F.R. § 122.44(i) require monitoring for each pollutant limited in the permit and reporting the

monitoring data at least once a year. Any discharge that cannot be sampled in this manner will not be granted coverage under this permit unless the facility contains two or more outfalls with substantially identical discharges and these outfalls qualify for the representative outfall sampling provisions in Parts I.A.6 or B.6, and III.E. In this situation, the discharge from the representative outfall is sampled and the monitoring results submitted with the DMR will need to indicate the other outfalls with the discharges covered by these monitoring results as provided by Parts I.A.6 or B.6. The final permit has been revised to include this discharge authorization requirement in Part I.H.6 and to require pertinent sampling information in Part I.G for each discharge that is identified in the Notice of Intent.

If the permittee still finds it is difficult to comply with the monitoring requirements of the general permit because the plant configuration prevents easy access to a representative sampling point, it may be advantageous to seek an individual permit which can be crafted to fit the circumstances of a particular discharge. Noncompliance with the monitoring conditions of the individual permit may constitute cause for termination of the permit under 40 C.F.R. § 122.64(a)(1). However, even an individual permit requires some level of monitoring, sampling, and reporting for selected parameters. The monitoring frequency for any parameter in an individual permit will be at least as stringent as it is in this general permit.

Numeric Limitations

COMMENT NO. 8: USGH indicates that the Massachusetts general permit (MAG360000) would be available for seven of its facilities, including one pumped storage facility, on the Deerfield River. These seven facilities are currently operating under expired individual permits awaiting EPA's final permit decisions on the complete individual permit applications. The New Hampshire general permit (NHG360000) would be available for three USGH facilities on the Connecticut River which are also awaiting final permit decisions on the complete individual permit applications that were submitted to EPA in 1992, and then updated and resubmitted on April 18, 2001.

USGH appreciates EPA's diligent efforts in developing these General Permits and in attempting to clearly describe in the associated Fact Sheet the typical discharge flow types at hydroelectric generating facilities. However, it is apparent that our hydroelectric operations need to be further clarified, in light of the onerous proposed permit requirements for effluent limitation, monitoring and reporting.
(USGH 20)

As a result of recent FERC re-licensing and/or license amendments for USGH facilities, each subject facility and/or FERC project has requirements to provide round-the-clock guaranteed minimum flows in the subject rivers for purposes of maintaining fisheries habitat. Neither these minimum flows, nor as EPA notes in Section I of the Fact Sheet, hydroelectric generation or spill flows, are subject to NPDES permit requirements. The attached (to the comment) Table 1 (Facility NPDES discharge flow volume versus minimum flow and generation flow) summarizes the relationships between average generation flow, guaranteed minimum flow, and the total

discharge flow subject to proposed NPDES permit restrictions and/or effluent monitoring at our subject facilities. It should be noted that all station discharge flows including NPDES, generation, and minimum flows immediately mix together in the station outlet.

As Table 1 illustrates, the total maximum theoretical volume of water discharged from each facility and subject to the proposed NPDES requirements is a miniscule fraction of the total flow from the facility at any given time. Discharges range from one one-thousandth of a percent to less than 3 hundredths of a percent. Discharge flows are also a very small fraction of minimum flows, ranging from less than 5 hundredths of a percent to a maximum of about 4 percent. Therefore it is virtually impossible for the discharges subject to the proposed NPDES requirements to violate applicable water quality standards and these discharges should rightfully be considered de minimis discharges.

Therefore, USGH requests elimination of requirements limiting, monitoring and even reporting of flow and of any constituents of the industrial discharge flows from hydroelectric generating facilities, given the extremely small water volumes relative to unregulated flows from these facilities. USGH believes that these discharges are so small as to be completely insignificant to the overall water quality of the receiving water.
(USGH 1, 2)

Given that the discharges regulated under these Permits are generally miniscule compared to total river flow, it is highly unlikely that monitoring would reveal anything significant.
(ENL 9)

COMMENT NO. 9: Hydroelectric generation is a valuable, renewable resource that contributes to generation diversity in New England. Regulation of hydroelectric plants is undertaken by the FERC, pursuant to its broad regulatory authority under the Federal Power Act [Federal Power Act, 16 U.S.C. § 792, et seq]. [Note: The commenter's footnotes are shown within brackets.] As shown on Exhibit B (FERC Licensed Projects – New Hampshire, Exempted Projects – New Hampshire, FERC Licensed Projects – Massachusetts, FERC Exempted Projects – Massachusetts, last updated November 7, 2003) submitted by the Granite State Hydropower Association (GSHA), there are 146 projects in Massachusetts and New Hampshire that would be covered by this proposed rule. A vast majority of these projects are small; 128 of the 146 stations have an installed capacity of 5 megawatts (MW) or less. There are approximately 90 hydroelectric generating stations in New Hampshire and approximately 56 hydroelectric projects in Massachusetts that hold FERC hydroelectric licenses or exemptions. A comprehensive list of these projects is available on FERC's website (www.ferc.gov) and is attached to the comment for convenience as Exhibit B. [GSHA has included only those projects licensed or exempted in New Hampshire and Massachusetts.] FERC's site contains all licensed and exempted projects in the United States. It has been shown that 128 of these projects - 87% - have a capacity of 5 MW or less. The environmental impacts of these small projects are de minimis. To highlight the de minimis effect of the minor discharges that occur at these small projects, GSHA has selected and analyzed three member projects to illustrate 1) the different nature of design; 2) the type and quantity of discharges that these projects make; and 3) the extent of the environmental impact for

each project. The three selected GSHA projects: the Penacook Lower Falls project (PLF), a 4.11 MW facility located on the Contoocook River in Boscawen, New Hampshire; the Hoague Sprague project, a 1 MW facility located on the Contoocook River in Hopkinton, New Hampshire; and the Salmon Brook project, a 400 kilowatts (KW) facility located on the Salmon Brook River in Franklin, New Hampshire. These projects represent, the second largest GSHA project (4.11 MW), a GSHA project of approximately mean size (1 MW) and a median sized GSHA project (375 KW). Discharge and facility information including discharge type and volume, temperature rise, and turbine flow for each of these projects is shown in the attached to the comment Exhibits D (Penacook Lower Fall Project, FERC Project 3342), E (Hoague Sprague Project, FERC Project 4337) and F (Salmon Brook Project, FERC Project 7248).

In analyzing the information contained in Exhibits D through F, it is abundantly clear that the cooling water and other discharges from each of these plants (gallons per minute or GPM) is extremely small in absolute terms and the relative impact on overall river flow is infinitesimal, even at the lowest river flows at which these units can operate. Below certain river flow units are unable to run and are shutdown eliminating discharges during low flow conditions.

For example, with the respect to the PLF project (4.11 MW) shown on Exhibit D, plant discharges are no more than 2.5 GPM from its contact cooling water. All other discharges at this project are directed to the sump drain. Drain water is accumulated in the sump and discharged intermittently. When the sump is filled, the discharge pumps are activated to discharge at a rate of 200 GPM for about 10 minutes approximately every 16 hours. Even when the discharges are measured at the lowest operating flow, the discharges, represent but a fraction of a percent of river flow.

As seen in Exhibits E and F, the discharge quantities from smaller plants are even less in relative and absolute terms.
(GSHA 4)

COMMENT NO. 10: With this proposal, the EPA-Region 1 is establishing NPDES general permits, not for generation flows or spill, but for various potential equipment discharges that may mix with a facility's tailrace. NHA and UWAG believe that there exist powerful, sound arguments that the miniscule discharges of oil, heat and total suspended solids ("TSS") potentially resulting from the operation of a hydropower project should not be subject to the CWA's NPDES program. NHA and UWAG understand that others will provide these arguments in comments on the proposed general permits. So for purposes of addressing the proposal before us, NHA and UWAG will restrict the comments to the specifics of the general permits.

The NHA and UWAG believe the proposed permits, as written, contain overly burdensome, unnecessary and duplicative requirements. The discharges covered under the general permits are minute, in fact, and when compared to the exponentially larger volumes of water in which they mix. As such, these discharges are likely to have only an insignificant effect on the overall water quality of the receiving water.
(NHUW 1)

RESPONSE NOS. 8-10: Although the magnitude of the discharges eligible for NPDES permit coverage are small when compared to receiving water flow, and immediately mix in the station outlet with generation and minimum flows in the station outlet, this fact does not obviate the need for an NPDES permit to authorize the discharge. The CWA makes it unlawful for any person to discharge from any “point source” into the waters of the United States any "pollutant," including rock, sand, and dirt, except in compliance with, *inter alia*, an NPDES permit issued pursuant to section 402 of the CWA. The commenters above concede that the operation of the hydropower projects result in discharges of pollutants, including oil, heat and TSS. The magnitude of the discharges relative to receiving water flow also does not obviate the need for permit limits, which are applied on an end-of-pipe water quality basis without regard to dilution, or monitoring requirements. The effluent monitoring data collected under this general permit from these projects will provide information to determine the individual and cumulative impact of the discharges on water quality of the receiving waters, as well as permit compliance status.

The final permit provides a streamlined and simplified approach to providing permit coverage under the NPDES program. EPA does not believe these permits contain duplicative requirements as indicated by the commenters, and EPA is unable to provide meaningful analysis because further details have not been provided by the commenters.

Concerning the onerous proposed permit requirements for effluent limitation, monitoring and reporting, the responses to the specific comments submitted by the commenter are in the following sections of this document: Discharge Classification and Commingling, Numeric Limitations, Equipment and Sump Dewatering, Flood/High Water Discharges, Oil and Grease, pH Range, Temperature, TSS, Concurrent Sampling, Trash Racks, BMP Plan, and Cost.

De minimis discharges are discussed in Response No. 62.

Equipment and Sump Dewatering

COMMENT NO. 11: In Sections A.3 and B.3 of the draft General Permits, EPA proposes limits, monitoring and reporting for pH, oil/grease and flows discharged during “equipment dewatering and sump dewatering,” and during flood/high water events.

To clarify the dewatering operation, at USGH facilities only individual generator penstocks, waterwheels and draft tubes may be dewatered annually in order to safely conduct annual inspection and maintenance. The dewatering process is intended to empty the unit of water, to keep upstream river water from leaking into the unit and to keep downstream river water from backing up into the unit during high tailrace water elevation. The water that is emptied downstream from the turbine unit is the same upstream river water that is used for hydroelectric generation, and which is un-regulated under the NPDES program. No other operating equipment or sumps are dewatered for any purpose.

At most facilities, it would be impossible to obtain samples of this water as the leakage

discharges directly from submerged drains into the tailrace and is therefore inaccessible. However, at some facilities, leakage during dewatered conditions is pumped out through the sump and is therefore already regulated in Sections A.2 and B.2 of the General Permits. (USGH 13)

Another example of a discharge classification that should be eliminated from individual monitoring requirements is equipment and sump dewatering. Dewatering is intended to keep upstream river water from leaking into a unit and to keep downstream river water from backing up into the unit during high water events. Dewatering a turbine does not create a discharge that must be monitored since it is essentially the same upstream river water that is used for power generation. Similarly, sump dewatering should not be subject to separate monitoring requirements. At many facilities, it is impossible to obtain samples from dewatered sumps since these discharges are directed, through submerged drains, directly into the tailrace. (NUS 9, 10)

The dewatering process is intended to empty the turbine unit of water, to keep upstream river water from leaking into the unit, and to keep downstream river water from backing up into the unit during high tailrace water elevation. The water that is emptied downstream from the turbine unit is the same upstream river water that is used for hydroelectric generation, which, as already mentioned, is not subject to regulation under the NPDES program. Thus, dewatering a turbine does not create a discharge that needs to be or should be monitored.

Additionally, the permit would require monitoring of sump dewatering. At most facilities, it would be impossible to obtain samples of this water as the leakage discharges directly from submerged drains into the tailrace and is therefore inaccessible. (NHUW 3, 4)

RESPONSE NO. 11: The general permit is not intended to regulate unaltered generation flows through a turbine, but rather point source discharges related to a facility's maintenance and operation. Based on the commenters' explanation above, the dewatering process generally consists of water that would otherwise have passed through the turbines to generate hydroelectric power. EPA has revised the final permit (Parts I.A.3 and B.3) to eliminate effluent limitations and monitoring requirements during the equipment dewatering operation in most cases. However, because sumps are present at many hydroelectric facilities and some of these sumps function as oil/water separators, the effluent limitations and monitoring requirements for sump dewatering remain in Parts I.A.3 and B.3 to authorize this maintenance-related discharge with the once per year measurement frequency.

The permittee is expected to use reasonable methods and sampling techniques such as those mentioned in Response No. 7 to obtain a representative effluent sample during the planned maintenance event. In some cases, the permittee may elect to obtain the sample directly from the sump and to include an appropriate comment on the Discharge Monitoring Report. For those remaining situations when the once per year discharge sample cannot be obtained or when the representative outfall sampling provisions do not apply, general permit coverage for the

discharge will not be authorized as indicated in Response No. 7.

Flood/High Water Discharges

COMMENT NO. 12: With regard to discharges from emergency flood/high water devices as described in the General Permits Sections A.3 and B.3, these discharges would only be utilized during extreme high water conditions which by nature constitute a facility emergency. These devices would be used only in rare circumstances and for very short durations just sufficient to control the flooding emergency. In addition, these discharges would be very small in comparison to river flows that cause the flooding emergency.

The commenter indicates in all cases of these flood/highwater types of discharges, it would be virtually impossible to estimate flow volumes that are discharged as required under the General Permits.

In Section 2 on Page 4 of the Fact Sheet, EPA states that “the potential for oil and grease or other pollutants to be present in these discharges is insignificant.” Note 1 of General Permit Section A.3 and B.3 discusses the No Data Indicator Code E to use on Discharge Monitoring Reports (DMRs) that applies when a sampling point is inaccessible. In virtually all cases of discharge under this section of the General Permits, sampling points will be inaccessible, so that DMRs for these discharges would provide no actual sample information to EPA.

Therefore, USGH concurs with EPA that the potential for contamination of these discharges is insignificant. USGH further believes that requirements for monitoring and reporting for these discharges are without value and that sampling of these discharges would be virtually impossible to conduct reasonably or safely. Lastly, these “discharges” constitute natural un-altered river water just as the normal generation flows which are not regulated under the NPDES program. (USGH 14)

Additionally, it is virtually impossible to estimate the volume of the flow through these discharges during high water events. In most of these cases, a facility will decide to use the No Data Indicator Code on its Discharge Monitoring Reports (DMRs) that applies when a sampling point is inaccessible, providing no actual sample information to EPA. (NUS 26)

With regard to discharges from emergency flood/high water devices as described in the general permits, these discharges would be utilized only during extreme high water conditions, which by nature constitute a facility emergency. These devices are used in rare circumstances and for very short durations sufficient enough only to control the flooding emergency. In addition, these discharges would be very small in comparison to river flows that cause the flooding emergency. In all cases of these types of discharges, it would be virtually impossible to estimate volumes of flow through these discharges as required under the general permits.

In Section 2 on Page 4 of the Fact Sheet, EPA-Region 1 states that “the potential for oil and grease or other pollutants to be present in these discharges is insignificant.” Note 1 of general permits Sections A.3 and B.3 discusses the No Data Indicator Code E to use on Discharge Monitoring Reports (“DMRs”) that applies when a sampling point is inaccessible. In virtually all cases of discharge under this section of the general permits, sampling points will be inaccessible, so that DMRs for these discharges would provide no actual sample information to EPA-Region 1.
(NHUW 5)

COMMENT NO. 13: Several commenters raise concerns with employee safety during monitoring the discharges from emergency flood/high water devices since these devices are only utilized during facility emergencies. Sampling these discharges would be virtually impossible to conduct reasonably or safely during a potentially dangerous situation. If sampling is even possible, it would be extremely impractical and potentially dangerous to obtain the samples from this type of discharge because the facility may be flooded during these high water events, making the facility inaccessible. Commenters recommend removing requirements to monitor discharges from emergency flood/highwater devices.
(NUS 27, USGH 19, NHUW 6)

RESPONSE NOS. 12-13: During flood/high water events, the permit authorizes the discharge of facility maintenance-related water from flood water pumps, high water sump pumps, and miscellaneous flood/high water collection devices, including floor drains that discharge only during such events, siphon hoses, and access manway areas. These types of discharges are included on certain NPDES permit application forms submitted by hydroelectric facilities seeking individual permit coverage or reapplying for individual permit coverage. The final permit continues to authorize the flood and high water discharges during flood/high water events since the individual permit application forms for several hydroelectric facilities list outfalls with these types of discharges.

Since sampling discharges from emergency flood devices can be dangerous and impracticable, EPA agrees the monitoring and reporting requirements for the flood water discharges are inappropriate. The final permit has been revised to eliminate the effluent limitations and monitoring requirements for discharges of facility-maintenance related water during periods of flood/high water events in Parts I.A.3 and B.3. However, EPA has instituted a suite of BMP plan requirements in Part III to minimize the discharge of pollutants as a result of flood/high water events. The permittee is also required to report the date and approximate duration of these events with the DMR to provide documentation on the frequency of these events. The final permit has been revised to incorporate these changes in Parts I.A.4 and 5, B.4 and 5, I.D, I.G.2 and III. The extent of mixing that will occur between the overflow (flood waters) and operation discharges is a function of the flood water elevation (at the facility) and the facility’s location and design. Any facility with overflow/flood water discharges is required to implement specific procedures from the permit’s BMP Plan (Part III) to prevent pollutants (in the building) from entering the surrounding flood/high waters.

Internal Drainage Water

COMMENT NO. 14: Requirements for facility maintenance-related internal drain water, specifically internal dam drainage and other headwall drainage are proposed in Parts I.A.5 and B.5. Two commenters' understanding is that monitoring of internal dam drainage and other headwall drainage would also include monitoring of embankment drains and other relief drains. These commenters are concerned this monitoring may be logistically difficult to achieve and would place an unnecessary burden on project owners and operators. Therefore, the commenters recommend these requirements be eliminated.
(NHUW 7)

RESPONSE NO. 14: Some individual permit applications on file for these facilities identify internal dam and headwall drainage discharges, so they have been authorized in the draft permits. It is not EPA's intent to require monitoring of internal dam drainage and headwall drainage, embankment drains, other relief drains, and ground water drains because the purpose of this permit is to focus on discharges associated with the operation of hydroelectric generating facilities such as equipment cooling water, equipment and floor drain water, and specific maintenance waters. EPA is eliminating internal dam drainage and headwall drainage from the final permit because these types of drainages are not directly related to the operation of the hydroelectric generating facility. EPA is including an oil/water separator with the existing collection equipment for the miscellaneous infiltration and seepage waters because an oil/water separator may be located in the drainage system rather than a sump. The sump or oil/water separator may contain oil and grease resulting from the operation of the hydroelectric generating facility. These revisions are in Parts I.A.2 and A.5, I.B.2 and B.5, I.F.1, and I.G.2 of the final permits. Accordingly, if an oil/water separator or a sump is present in the drainage system directly associated with the operation of the hydroelectric facility, the discharge is required to be sampled under Parts I.A.2 and B.2 of the final permit. Please refer to Response No. 59 for additional information on the requirements for facility maintenance-related internal drainage water and the final permit revisions.

Oil and Grease

COMMENT NO. 15: Two commenters believe the oil and grease monitoring and reporting for applicable discharge streams at the hydroelectric facilities is redundant to the implementation of a sound BMP Plan. The first commenter mentions this monitoring and reporting is already adequately regulated under Oil Spill Prevention, Control and Countermeasure (SPCC) requirements. Therefore, in the absence of an unanticipated and accidental in-plant oil release that migrated to an NPDES discharge stream, there is no reason to believe that the discharge would contain oil/grease in concentrations producing a sheen under normal operating conditions. Fundamentally, any oil release from a NPDES effluent stream that resulted in a visible sheen would already constitute a "release" under SPCC regulations, and would thus be discovered, controlled, contained and reported to the National Response Center immediately.

The first commenter reviews the quarterly oil/grease monitoring data provided for five similar

Vermont hydroelectric generating facilities (attached to the comment, Table 2, Historical Oil/Grease Results from Sumps, Oil/Water Separators). These Vermont facilities are located on the Connecticut and Deerfield rivers where facilities eligible for general permit coverage are located. These data indicate that except in rare cases of laboratory contamination or sampling error the quarterly oil/grease data are consistently below the regulatory limit (20 mg/l in Vermont) and usually below the analytical detection limit of 5 mg/l.

Both commenters reference the fact sheet, (Section IV.C.2 on Page 11), where EPA states the general permit limitation of 15 mg/l is typically the concentration of oil that would be likely to create a visible sheen on water. These commenters mention that visual oil/grease sampling results have been obtained and reported on the monthly DMRs for the seven USGH facilities in Massachusetts with individual permits. In no case, over the last six years, has an oil sheen ever been observed in any of these samples, nor in the station tailraces at the time of sampling.

The second commenter, as part of the preceding fact sheet reference, mentions that EPA is proposing oil/grease (O&G) limits, monitoring, and reporting from applicable discharges. This commenter also references Attachment A to the comment (Historical Oil/Grease Results from Sumps, Oil/Water Separators) and the seven Massachusetts facilities with permits. The commenter states that the non-observed oil sheen, at these seven Massachusetts facilities, is in part a function of the management systems controls in place. The management system controls that are an integral part of our overall Environmental Management System (EMS) provide adequate demonstration of the minimal risk of routine oil and grease discharges from our facilities. Limits are not warranted for facilities with functional EMS programs in place. (USGH 4, 5, 6; USG 1, 5)

RESPONSE NO. 15: CWA section 301(a) provides that the discharge of a pollutant, such as oil and grease, to the waters of the United States is unlawful except in accordance with a NPDES permit. This requirement is independent of any SPCC requirements to which a facility may be subject. Hydroelectric generating facilities use oil/water separators or different sump devices as a treatment for the discharge of oil and grease from equipment, floor and trench drains, and sumps. Facilities with outfalls containing discharges from equipment and floor drain water and maintenance-related water include oil and grease effluent limits. EPA has set forth the water quality-based rationale for the oil and grease requirements in the general permits in the Fact Sheet.

As mentioned by the second commenter, the management systems controls in place at seven Massachusetts facilities with permits meet the 15 mg/l limit because an oil sheen has not been observed during the past oil and grease sampling. There are also existing technologies present at other types of facilities (oil terminals) with NPDES permits to protect against a visible oil sheen. The performance data at petroleum market terminals in Massachusetts support the achievement of the 15mg/l limit by proper operation of a correctly sized oil/water separator and implementation of best management practices. At steam electric power generating facilities, the effluent limit guidelines (40 C.F.R. Part 423.12) specify a technology-based average monthly oil and grease limit of 15 mg/l for low volume waste sources which include wastewater from floor

drains. Comparison of this technology and performance information is useful since oil/water separators are in place at several hydroelectric facilities.

EPA believes the quarterly monitoring and reporting requirements for oil and grease are reasonable. These requirements are imposed to support the oil and grease effluent limits as discussed in Response Nos. 32 and 35. The monitoring information will allow EPA to determine compliance with the oil and grease effluent limitations in the permit, as well as to gather data about the nature of such discharges in order to inform future permit limits.

The seven Massachusetts hydroelectric facilities with individual permits mentioned by the commenter are required to take a monthly grab sample. The permits provide that a grab sample must be taken and monitored for an oil sheen. If an oil sheen is present, the sample must then be analyzed for oil/grease, and any value exceeding 15 mg/l reported as an exceedance. Effluent testing only occurs if an oil sheen is noticed. The facilities have consistently reported that no oil sheens have been observed that would require analyzing the sample and comparing the results with the 15 mg/l limit in this situation. EPA attributes the lack of visible oil sheen to properly operating oil and grease treatment systems, including floor drains with oil sumps, station sump with oil flotation wells, station sump, and oil flotation sumps, and appropriate source controls implemented using BMP plans at these facilities.

An environmental management system (EMS) is a set of management processes and procedures that allows a company to integrate environmental considerations into daily decisions and practices. In its Position Statement on Environmental Management Systems (May 15, 2002), EPA stated that an EMS does not replace the need for regulatory and enforcement programs, but can complement them. Furthermore, EPA's Strategy for Determining the Role of Environmental Management Systems in Regulatory Programs (April 12, 2004) addresses the question of how to consider an EMS in the context of the federal regulatory structure, clarifying that EPA has no intention of mandating the use of an EMS in permits. EPA does support and promote the development of EMS that help an organization achieve its environmental obligations and broaden environmental performance goals.

The preceding comment mentions a reference to Attachment A (Historical Oil/Grease Results from Sumps, Oil/Water Separators) and the seven Massachusetts facilities with individual permits. However, Attachment A as submitted by the commenter only provides the results for the same five Vermont facilities that are also submitted as the Table 2 (Historical Oil/Grease Results from Sumps, Oil/Water Separators) contents by another commenter. This discussion responds to the Table 2 submission related to the quarterly oil/grease monitoring data.

COMMENT NO. 16: The commenter's facilities subject to this general permit are charter members of EPA's National Environmental Performance Track Program (Performance Track). These Performance Track facilities, who must maintain controls, procedures, and checks to minimize environmental risk, have adequate systems in place to manage the potential risk of an oil and grease discharge, including EMS. This system identifies environmental risks associated with our operations, and ensures that controls are in place to manage and minimize these risks. In

practice, this means that all risks, not just those covered by current regulations, are identified, evaluated, and managed based on their potential to cause harm. The risks this proposed rule seeks to address are well managed at the commenter's facilities, and it does not feel that additional regulation will add additional protection or provide benefit. The commenter believes that the Proposed NPDES General Permit offers a good opportunity to recognize the benefits promoted by EPA as part of Performance Track Membership, by offering alternatives for Performance Track Facilities. The commenter states that much of what has been proposed would increase oversight, operational costs, and transaction costs for our facilities (with no notable increase in environmental protection), which is exactly what Performance Track offers to decrease for participating facilities. Therefore, the commenter proposes that the oil and grease monitoring and reporting be eliminated for the Performance Track facilities subject to this proposed rule.

(USG 3, 4)

RESPONSE NO. 16: In a memorandum dated March 16, 2009, EPA Administrator Lisa P. Jackson stated that the National Environmental Performance Track Program has been halted. Since this Program has been halted, the associated Performance Track comments in this response to comments document are not applicable to the final general permits and to the coverage of any hydroelectric facility under these general permits. However, the Performance Track related comments and responses remain in this document to provide the relationship between the Performance Track Program previously in existence and the NPDES permit requirements. Other Performance Track comments are included in Comment Nos. 17, 25, 27, 28, and 32.

EPA does not have the authority to carve out Performance Track facilities from NPDES permitting requirements. Participation in the Performance Track Program does not supplant the obligation to comply with applicable NPDES permit requirements even if some program activities appear to overlap with permit requirements. By law, NPDES permits are required to contain effluent limits and conditions that will ensure compliance with technology and water quality-based standards. The fact that a Performance Track facility may be independently undertaking voluntary monitoring programs does not relieve EPA from imposing the monitoring requirements in the permit itself.

COMMENT NO. 17: EPA also proposes a Best Management Practices Plan (BMP) in addition to oil/grease limits, monitoring and reporting from applicable discharges. However, in Section IV.C.2 on Page 10 of the fact sheet, EPA states that oil/grease monitoring is intended "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." While the commenters concur that any BMP should be subject to verification, the commenter disagrees with EPA that mandating monthly oil/grease grab samples (for either visual or laboratory analysis) is the correct approach to accomplish this. A BMP Plan itself should contain appropriate procedures and controls to ensure that facility discharges are protected from contamination.

One commenter mentions their facilities are also subject to the SPCC regulations at 40 C.F.R. Parts 109, 110, and 112, as well as applicable state regulations. At these facilities, trench drain

systems, oil/water separators and sumps serving as oil/flotation wells have been specifically designed and operated to ensure that any oil released inside a facility would be contained within the trench, sump or oil/water separator. Virtually all oil-containing systems and equipment at the facilities are continuously monitored and would alarm facility operators immediately in the event of temperature increase, pressure change, or oil level change that might indicate an oil release. In this case, sump and oil/water separator pumps can be immediately shut down so that discharge of oil-contaminated water to the outside environment is extremely unlikely to occur. All facilities have robust inspection, training, emergency response and contingency procedures in place as described in facility SPCC plans (in addition to facility BMP Plans) to ensure that the potential for oil release from the facility is mitigated as much as feasibly possible.

Another commenter disagrees that the requirement for oil and grease sampling to validate the BMP plan is necessary, especially for a facility with an EMS in place. Based on these oil and grease monitoring comments, facilities recognized by EPA's National Environmental Performance Track Program, who maintain functioning EMS systems, have adequate systems in place to verify the functionality of the BMP plan without monitoring and reporting requirements.

The commenter describes the controls, procedures and checks associated with the EMS which generally mirror with the specifics of the SPCC plans outlined above. As a function of EMS, all facilities have robust inspection, training, emergency response, and contingency procedures in place as described in facility SPCC plans (in addition to facility BMP plans) to insure that the potential for oil and grease from the facility is mitigated as much as feasibly possible. (USGH 7, USG 2)

RESPONSE NO. 17: The development and implementation of a BMP Plan within 90 days following the active date of permit coverage is a condition in the permit. Permit coverage is available to any eligible hydroelectric facility regardless of the extent of the procedures in place within the BMP plan to prevent an oil and grease discharge. The BMP Plan should reflect the design and operational characteristics of each facility and is facility specific.

Using the oil and grease monitoring data to verify proper implementation of the BMP plan is secondary to assessing compliance with the effluent limitations as discussed above. Even so, EPA believes use of the oil and grease monitoring data to verify the successful implementation of the facility's BMP plan is valid and reasonable use of this information. These monitoring data will provide additional information to evaluate the components of the BMP plan including the inspections results and the preventive maintenance program. These data also provide an independent check to confirm the performance of the BMP plan from year to year.

The SPCC requirements referenced by the commenter are based on the Oil Pollution Prevention Program regulations at 40 C.F.R. Part 112, which is implemented under section 311 of the CWA. Each EPA program area must function within statutory limits and follow specific program regulations. The fact that a facility is subject to other state or federal legal requirements relating to a particular pollutant does not relieve EPA of its obligation to also address discharges of the pollutant to waters of the United States through an NPDES permit. Regulations governing

NPDES permits, including monitoring and reporting requirements, apply to these general permits. Monitoring and reporting for oil and grease is required under the NPDES permit program regulations because the general permit contains an effluent limit for this pollutant. *See* 40 C.F.R. §§ 122.44(i) and 122.48. The basis for the monitoring requirements is explained in more detail elsewhere in this document and in the Fact Sheet. The discussions in Response Nos. 15 and 32 indicate the role of EMS in the NPDES permitting process.

pH Range

COMMENT NO. 18: A commenter states the acceptable pH range at 6.5 to 8.3 or 6.5 to 8.5 Standard Units (S.U.) in the Massachusetts draft general permit depends on the receiving water class and questions the reasoning for the variation in range between different classes of waters. (NUS 20)

RESPONSE NO. 18: In Massachusetts, pH criteria vary with the receiving water class and this is reflected in the draft general permits. In accordance with section 301(b)(1)(C) of the CWA, a NPDES permit must contain limitations necessary to comply with and attain the state water quality standards. NPDES permit proceedings are not an appropriate forum to challenge the adequacy of the underlying state water quality standards.

COMMENT NO. 19: One commenter indicates the pH range limitations of 6.5 to 8.0 S.U. for a hydroelectric generating facility located in New Hampshire are unnecessarily restrictive even though a permit condition allows requests for a range of 6.0 to 9.0. The pH limitations in the general permit should be more flexible and recommends a pH range of 6.0 to 8.5 with an option to increase the upper limit to 9.0. (GL 5)

COMMENT NO. 20: A commenter mentions that hydroelectric facilities with individual permits or FERC licenses have already proven the compatibility of their discharges with receiving waters. Instead of burdening these compliant operations with an overly restrictive pH range, the default range of 6.0 to 9.0 S.U. should be incorporated into the draft general permit for all classes. (NUS 22)

COMMENT NO. 21: According to a commenter, many discharges delineated in the draft general permit are essentially river water re-directed through the facility and back to the river. An obvious problem with this proposed pH range is that at certain times of the year, the pH of influent water fluctuates and may naturally be above or below these permit limits. The commenter suggests changing the acceptable pH range to the default of 6.0 to 9.0 S.U. and adding language such as “or not more than 1.0 standard units outside the background range.” This would allow the permittee, in cases where the natural pH of incoming water is outside the default range, to operate within permit limits while gathering and submitting data to adjust the pH range. (NUS 21)

COMMENT NO. 22: Two commenters mention all the discharge streams at USGH facilities are once-through waters unaltered from incoming river water and no discharge streams add any constituents to alter pH of the incoming river water. The commenters reference the pH data collected for the Deerfield River, upstream of the company's facilities. These background river pH levels are generally outside (lower than) state and federal water quality standards. The pH levels of the facility discharges consistently track incoming background water pH within a few tenths of a S.U. The pH data collected for the Connecticut River downstream of subject facilities demonstrates that pH consistently remains within the range of state and federal water quality standards and it is typically much higher (occasionally approaching the upper regulatory limit of 8.5 S.U. in Vermont) than Deerfield River pH values. In all cases, pH of the discharge waters is ultimately much more dependent upon background levels in the subject rivers than on any pH alteration theoretically caused by the discharge stream itself.

One commenter mentions that attached (to the comment) Table 3 (Historical Temperature and pH from select NPDES discharges) illustrates these points and summarizes quarterly temperature and pH values of some discharge points at two typical USGH facilities (regulated under Vermont's delegated NPDES program) on the Deerfield and Connecticut Rivers where facilities subject to these General Permits are also located. Attachment B, to the comment, (Historical Temperature and pH from select NPDES discharges) provides the same information and illustrates these same points according to the second commenter.

One commenter discusses the variation in background pH levels resulting from seasonal changes, precipitation amount and river flow including snowmelt and high water flows. Two commenters mention the pH data for the Connecticut River are typically much higher than that for the Deerfield River. These points are illustrated by the accompanying historical quarterly pH data summary for discharge points at two typical facilities in Vermont. These facilities are regulated under that state's delegated NPDES program. Facilities subject to these general permits are also located on the Connecticut and Deerfield Rivers.

One commenter, based on their preceding comments, requests elimination of pH limits, with the monitoring and reporting requirements, from the general permits since no constituents are added which alter pH, discharges are de minimis in volume and are subject to immediate mixing with exponentially larger non-regulated flow at the station outlet. The historical pH data indicate that discharge pH varies with incoming river pH levels such that discharge pH cannot affect the water quality of the receiving water. (USGH 9, 11; USG 7).

COMMENT NO. 23: Commenters indicate the Massachusetts general permit sets the acceptable pH value at 6.5 to 8.3 or 8.5 S.U. for inland waters (Class A and Class B) and coastal waters (Class SA and SB), respectively. For the most part, hydroelectric generating stations do not have the means to modify the influent water pH. Background pH levels vary seasonally and with the amount of river flow. In response to comments regarding some individual NPDES permits in Massachusetts, EPA-Region 1 indicated it agreed that hydroelectric stations use river

water and return it back to the river without the addition of any chemicals or significant heat. To provide for this situation, the commenters suggest additional language to the acceptable pH range such as “or not more than 1.0 unit outside the background range.” This would allow the permittee to operate within the boundaries of the permits recognizing that naturally occurring pH of the influent water changes over time.
(NHUW 9)

RESPONSE NOS. 19-23: EPA appreciates the submission of the pH monitoring data for the two hydroelectric facilities located in Vermont. These data were helpful to illustrate the Deerfield River’s background pH values in Vermont.

Because the effluent limitations for pH are applicable to the end of the pipe, there is no allowance for the mixing with the larger non-regulated flow at the station outlet. The numeric effluent limitations for pH are established using the pH criteria in the state water quality standards as discussed in this pH range section. The pH limits are State certification requirements and these limits do not include a designated mixing zone or a pH limit change using the results from an approved pH demonstration study. While the draft permits provided for a pH limit change and the pH demonstration study, these provisions are excluded from the final permits as explained below. The pH conditions in the final permits include a background or ambient upstream pH differential. The end of pipe pH measurements are required to demonstrate compliance with the specified pH limits or pH differentials.

As to the pH range limits, EPA agrees that discharges from these hydroelectric facilities are essentially unaltered river water because these facilities do not alter the influent water pH. The permit prohibits the addition of any chemical for any purpose to the discharges except for non-toxic neutralization chemicals, which require prior notification using the Notice of Intent procedure. (Each request for use of a non-toxic neutralization chemical will be reviewed to determine its impact on the discharge pH before authorizing permit coverage.) EPA may request additional information concerning the facility’s need to alter the discharge pH. With this in mind, EPA reviewed the pH range limits, including the pH demonstration study requirement, to consider the river’s background pH levels and the pH water quality criteria. Since the pH range limits are based on the criteria in each state’s water quality standards and are a state certification requirement, EPA reviewed the pH related comments and limits with the Massachusetts Department of Environmental Protection (MassDEP) staff and the New Hampshire Department of Environmental Services, Water Division (NHDES-WD) staff. EPA has revised the pH range requirements in the final general permits as explained below to include the background or upstream receiving water pH.

The pH range requirements including the background pH in the final permit for Massachusetts facilities are consistent with the Massachusetts water quality standards according to the MassDEP staff. EPA has included the following pH requirements in the Massachusetts permit as state certification requirements. For discharges to Class A and Class B waters, the pH range effluent limitations are within the specific range (6.5 - 8.3) or within 0.5 units of the background pH. For discharges to Class SA and Class SB waters, the pH range effluent limitations are within

the specific range (6.5 - 8.5) or within 0.2 units of the background pH. The background pH is the ambient receiving water representative of the upstream conditions. The background pH results are submitted with the DMR results.

The revised pH range requirements for New Hampshire facilities in the final permit consider the upstream receiving water's pH for purposes of compliance when the discharge pH and the upstream receiving water pH exceed the pH range (6.5 – 8.0). Provisions are included to demonstrate that the upstream receiving water's pH is not altered by the facility's discharge or activities. If the permittee's discharge is less than 6.5 S.U., compliance may be shown when the discharge pH either exceeds the upstream receiving water pH or it is within 0.5 S.U. lower than the upstream water pH. A similar provision applies when the discharge pH exceeds 8.0 S.U. These pH conditions require upstream receiving water monitoring and reporting. The NHDES has indicated that these pH requirements will meet state water quality standards. EPA has incorporated these pH effluent limitations into the New Hampshire general permit as state certification requirements.

The final permits have been revised to incorporate these revised pH requirements in Parts I.A.1 to A.3, and A.5; and Parts I.B.1 to B.3, B.5, and B.15. With these revisions to the final permit, Part I.A.15 has been revised and Parts I.A.16 and B.16 have been eliminated.

As to the earlier EPA-Region 1 decision for individual Massachusetts NPDES permits, a permittee is not entitled to receive the same permit conditions every five years. There is no grandfathering created by earlier permits. The appropriate permit conditions are imposed based on the best information reasonably available during the issuance process. Limits and conditions may, and often do, change from permit to permit. A facility with an expired individual permit seeking to obtain the reissuance of its individual permit will be issued an individual permit that is updated to require a minimum monitoring frequency for each pollutant discharge.

COMMENT NO. 24: One commenter mentions the grab samples for pH from background sources during winter months is restricted by limitations in meter accuracy at low water temperature, rendering pH results for comparison with NPDES discharge results meaningless. (USGH 10)

RESPONSE NO. 24: When using an approved electrometric method with a pH meter, the influence of water temperature is an interference and is not considered to restrict meter accuracy. Testing of all samples using the analytical methods found in 40 C.F.R. § 136 is a permit requirement (see Parts I.A.6 and B.6). One approved test method 4500-H⁺B, (Standard Methods for the Examination of Water and Wastewater, 19th edition) indicates that temperature interferes with pH measurements as a result of mechanical and chemical effects. The mechanical effects are caused by changes in electrode properties with increasing temperature. The electrodes take time to achieve thermal equilibrium with increasing temperature and this can cause long-term drift in pH. The chemical effects are caused by equilibrium changes. Hence, the standard pH buffers have a specified pH at indicated temperatures. This test method states, "Always report temperature at which pH is measured."

Samples should be analyzed for pH within 15 minutes or less of sample collection according to 40 C.F.R. § 136.3 Table II and preferably in the field at the time of sampling. The records of monitoring information maintained by the permittee should also include the temperature measurements taken at the time of the pH analyses. Measurements of pH using an approved analytical test method allows a comparison of the pH monitoring data for the background sources with the pH monitoring results for the discharges authorized under the general permit.

COMMENT NO. 25: In the interest of reducing the administrative burden on permittees to obtain representative data, a commenter offered to provide all pH monitoring data from those facilities where these data are currently collected to insure EPA has access to all these available data. The commenter encourages EPA not to place additional administrative burdens on Performance Track facilities for the purpose of obtaining representative data, when such data is already available through other sources.

(USG 8)

After reviewing these data on pH impacts of hydroelectric power operations on the Deerfield and Connecticut River, the commenter believes EPA will have the data necessary to demonstrate the lack of impact of their operations on pH of the receiving waters. Therefore, the commenter requests elimination of the monitoring and reporting requirements for pH from hydroelectric generation facilities that are participating in the Performance Track Program. If EPA still desires site specific data, the commenter proposes the following monitoring requirement to recognize the performance of the Performance Track facilities and to demonstrate the absence of impact on pH. For a period not to exceed one year, monitor the pH only at the incoming stream to the plant and at the tailrace to demonstrate the absence of impact on the receiving water's pH.

(USG 9)

Another commenter mentions monitoring of river pH levels is unnecessary because hydroelectric projects do not impact the pH of river flow nor do they have the capability to do so.

(GSHA 5)

RESPONSE NO. 25: EPA appreciates the commenter's offer to provide all the referenced pH monitoring data where these data are currently collected to insure EPA has all the available data. While the pH data available from the commenter provide some insight into the variation in pH levels for selected discharges, site specific pH measurements collected under these general permits are needed to ensure compliance with the pH limits and to ensure that the permits are sufficiently protective of the receiving waters. The pH monitoring frequency in the final permits have been revised, as mentioned in Response Nos. 32 and 35 below, to quarterly for all discharges except for the maintenance-related discharges, which remains at once per year. This revised sampling frequency provides the permittee with a reasonable sampling schedule and adequate time during the quarterly sampling period to schedule and to obtain the pH measurements.

With respect to the commenter's sampling proposal, monitoring the tailrace is not adequate since

this provides a sample of the entire river flow below the dam. For the purposes of the general permit, EPA is interested in an end-of-pipe sample of the discharge prior to mixing with the river.

The commenter's claim that hydroelectric facilities do not impact the pH of the river is based on the pH data collected at two typical USGH facilities regulated under Vermont's NPDES program. These data represent one hydropower station located on the Deerfield River in Vermont and one station with discharges to the Vermont portion of the Connecticut River. Without information indicating that such facilities are representative, EPA does not believe there is sufficient basis to broadly extend the commenter's claim to the 33 hydropower facilities in Massachusetts and New Hampshire that are discharging under an expired permit or awaiting a final permit decision on a complete permit application.

As discussed in Response No.16 above, EPA does not have the authority to exempt dischargers from NPDES permit requirements on the grounds that they are participating in the Performance Track Program.

Temperature

COMMENT NO. 26: Two commenters explain that while some cooling water discharges may slightly increase water temperature from that of the incoming river, the immediate mixing with exponentially larger volumes of generation waters renders overall discharge temperature unchanged. These commenters provide a summary of the historical quarterly temperature data for discharge points for two typical USGH hydroelectric facilities in Vermont (see Attachment B Historical Temperature and pH from select NPDES discharges, to this comment). These facilities are located on the Deerfield and Connecticut Rivers and are regulated under that State's federally approved NPDES program. Other facilities are located on the Massachusetts and New Hampshire portions of these rivers and are eligible for general permit coverage.

According to the first commenter, EPA is apparently aware of this discharge temperature situation because the draft general permits do not limit discharge temperature, yet still require temperature monitoring and reporting (see Parts I.A.1, A.2, B.1, and B.2). Therefore, the commenter requests elimination of the requirement to report discharge temperature values that are not subject to permit limitations, that constitute de minimis volumes, and that are immediately mixed with exponentially larger flow volumes at the facility outlet.

The second commenter states that, as part of its EMS, an automated system and temperature alarms are maintained on its equipment with detailed alarm response procedures. These alarms and controls ensure the equipment's temperature remains within key ranges thus limiting the heating factoring on the cooling water. At these standard conditions, its discharges do not result in increased water temperatures at the tailrace as evidenced by historical temperature data collected at several of our facilities in Vermont (Attachment B Historical Temperature and pH from select NPDES discharges).

Two other commenters believe the temperature variation caused by these discharges subject to the monthly temperature reporting (see Parts I.A.1, A.2, B.1, and B.2 for the effluent limitations and temperature requirements) will be minute, as the discharges are immediately mixed with exponentially larger volumes of water not subject to regulation by the permits. Additionally, EPA properly chose not to prescribe any permit limitations on temperature in the permitted discharges. Because the effect of the discharges on the receiving water is negligible and the discharges are not subject to limitation, the commenters suggest that EPA eliminate the temperature requirements.

Another commenter believes monitoring would not reveal anything significant and notes EPA acknowledges that the temperature of the cooling water is unlikely to be a concern even under 7Q10 conditions according to page 11 of the fact sheet. Nevertheless, EPA attempts to justify the collection of cooling water data for “representative monitoring data.” The commenter mentions it would make more sense if EPA were to first collect “representative monitoring data” data from representative stations under worst case conditions to determine whether such monitoring should be generally applied. Based on the commenter’s experience with monitoring under an individual permit, it is very likely that the representative data would confirm that typical hydropower cooling water discharges are ecologically insignificant.

The commenter, representing the owners and operators of 50 small scale hydroelectric projects in New Hampshire, indicates the summary information (see Comment No. 9) clearly indicates the cooling water discharges from these plants are extremely small and the relative impact on overall river flow is infinitesimal even at the lowest operational river flows. (USG 6, USGH 8, NHUW 8, ENL 8, GSHA 4a)

RESPONSE NO. 26: The CWA provides EPA with the authority to impose monitoring requirements in NPDES permits when required to assist in development of any effluent limit. See CWA §§ 308, 402. The temperature monitoring data will be used to determine if a temperature limit is necessary in a future NPDES permit decision. The temperature monitoring requirement is established for those outfalls with a noncontact cooling water or cooling water component. The Fact Sheet at p. 11 mentions EPA’s initial determination that the temperature of the cooling water is not a concern given the dilution provided by the receiving water, but also states that the permit requires temperature monitoring to verify this determination. This approach was followed because systematic temperature monitoring data for the noncontact cooling water or cooling water discharges were not available for facilities with NPDES permits in Massachusetts and New Hampshire. The temperature rise monitoring data collected at one New Hampshire hydroelectric facility for nine months, during two summers beginning in 1979, is not adequate to verify this determination. Facility specific temperature monitoring data collected during the general permit’s term for facilities in Massachusetts and New Hampshire are needed rather than relying on the temperature data available for the Vermont facilities. Without these temperature monitoring data, EPA is unable to determine the impact hydropower cooling water discharges have on water quality and whether they are in fact environmentally insignificant.

The Fact Sheet at p. 13 refers to establishing the monitoring requirements in this permit to yield data representative of the discharge under authority of section 308(a) of the CWA. The term “representative data” as used in the permit and Fact Sheet refers to the monitoring data that are representative of the discharge at each specific facility.

In reference to the comment on de minimis volumes, discharges constituting de minimis volumes are subject to the NPDES permit program regulations as explained in Response No. 62.

Please see Response Nos. 15 and 32 concerning the relationship between EMS and the NPDES permitting process.

COMMENT NO. 27: Upon request, a commenter offers to provide all temperature monitoring data from those facilities where these data are currently collected to insure EPA has access to all these available data. This offer is in interest of reducing the administrative burden this rule would place on permittees to obtain representative data. The commenter encourages EPA not to place additional administrative burdens on Performance Track facilities for the purpose of obtaining representative data, when such data is already available through other sources.
(USG 11)

RESPONSE NO. 27: The temperature monitoring requirement is needed to provide comprehensive temperature data for noncontact cooling water or direct cooling water discharges during the term of this general permit, as explained in Response No. 26. As used in the permit and Fact Sheet, the term “representative data” refers to the monitoring data that are representative of the discharge at each facility covered by the general permit. Data from a subset of facilities that currently collect temperature data would not achieve this objective. The monitoring frequency for temperature may be reduced under the specific conditions explained in Response No. 35.

COMMENT NO. 28: After reviewing these data on temperature impacts of hydroelectric power operations on the Deerfield and Connecticut Rivers, the commenter believes EPA will have the data necessary to demonstrate the lack of impact of our operations on temperature of the receiving waters. Therefore, the commenter requests elimination of the monitoring and reporting requirements for temperature from hydroelectric generation facilities that are participating in the Performance Track Program. If EPA still desires site specific data, we propose the following monitoring requirement to recognize the performance of the Performance Track facilities and to demonstrate the absence of impact on temperature. For a period not to exceed one year, monitor the temperature only at the incoming stream to the plant and at the tailrace to demonstrate the absence of impact on the receiving water's temperature.
(USG 10)

RESPONSE NO. 28: As explained in Response No. 26, the temperature monitoring and reporting requirements are imposed to collect temperature data for those outfalls discharging noncontact cooling water or direct cooling water. Data collected over the term of the permit will provide EPA with information to confirm its preliminary determination regarding the impacts of

cooling water discharges on the receiving waters. Monitoring the tailrace is not adequate since this provides the river temperature after some degree of mixing occurs with the cooling water discharge. EPA requires end-of-pipe temperature values of the discharge prior to mixing with the river to perform a temperature increase calculation at low flow conditions in the receiving water and to determine the cooling water impact on the receiving water. The temperature monitoring frequency may be reduced under the specific conditions mentioned in Response No. 35.

TSS

COMMENT NO. 29: The draft general permits include monitoring and reporting requirements for TSS (total suspended solids) from equipment-related backwash water in Parts I.A.4 and B.4. Three commenters (USGH, NHA, and UWAG) initially commented, in an essentially similar form, on the TSS requirements for the operation of the strainer screens on the intake water line during the public comment period. USGH provided the following revised comment on June 30, 2004 after EPA's requested clarification regarding operation of the backwash strainer. This commenter also submitted technical information on the backwash strainer consisting of two strainer diagrams with a strainer operation description (Backwash Strainer Information, June 14, 2004, 3 pages).

USGH provides this information to clarify the equipment-related backwash water discharge from the company's facilities, backwash strainers operate on the inlet or upstream side of the facility cooling water supply water line. The incoming water is piped from the station's penstock and it flows horizontally through a basket-type device containing 1/8 inch screening (the backwash strainer). As the flow slows through the screen, naturally occurring debris, leaves, and sediment tend to settle out and a rotating arm on the inside of the basket periodically cleans the screen's surface. Most of the incoming natural debris collects in the bottom of the basket which is manually cleaned out on a periodic basis. Some water, some suspended solids, and small sized debris flows through the bottom of the screen and is either continually or periodically discharged (depending on the facility design) out of the bottom of the basket. This water discharges through the permitted backwash strainer discharge point.

The outflow (screened water) from the strainer flows horizontally out of the strainer and into the cooling water system and it is used as the non-contact cooling water for the turbine-related bearings. The purpose of this operation is to ensure that naturally occurring river sediment and suspended particles are not introduced into the equipment cooling water lines which could damage the cooling water piping and the equipment being cooled. Backwash strainer water thus contains only naturally occurring TSS.

The draft permits do not limit TSS in backwash discharges, yet still require TSS to be sampled for laboratory analysis and reported (Parts I.A.4 and B.4). Therefore, the commenters request elimination of the requirement to monitor and report backwash strainer discharge TSS values that are not subject to permit limits and that contain only naturally occurring constituents. (USGH 12)

The NHA and UWAG provided the following comment. In Sections A.4 and B.4, the general permits require monthly monitoring of TSS for equipment-related backwash water. As with temperature, the general permits do not limit backwash discharges, yet they still require TSS to be sampled for laboratory analysis and reported. Backwash strainers operate on the inlet (upstream) side of a facility supply water line from the river. Water is “pulsed” under pressure back through the inlet screens in order to remove naturally occurring debris, leaves and sediment from the inlet before the incoming supply water encounters any facility equipment and causes damage. Hence, backwash strainer water contains naturally occurring TSS that has accumulated on the supply intake screens. For this reason, and since TSS is not subject to permit limitation, NHA and UWAG recommend that this requirement be eliminated. (NHUW 10)

RESPONSE NO. 29: To clarify the initial comment, EPA discussed the operation of the backwash strainer during phone conversations with the commenter (USGH) initially on May 11 and later on June 14 and 30, 2004. In addition to providing the backwash strainer diagrams with the technical information and submitting a revised comment, the commenter indicates the cooling water intake, at three stations, is located at the turbine in an area of low water velocity. Thus, the solids in the river water have settled out leaving the cooling water source with less TSS than the river water. In preparing this response, EPA used the new information in the revised comment to consider the actual backwash strainer operation and discharge. EPA believes further response concerning outdated information in the initial comments is not necessary.

The backwash strainer equipment and operation described in the revised comment and additional technical information indicates this strainer operation does not compare to the more typical filter backwash operation that results in a discharge by pumping a volume of water in a reverse direction through the filter media to remove the captured debris and sediment. Thus, this typical filter backwash discharge contains all the debris and sediment that was captured on and in the filter media.

The Fact Sheet mentions the effluent limitations and monthly monitoring requirements for the discharges of equipment-related backwash water from the strainer screens on pages 9 and 13. The effluent characteristic for this backwash discharge are TSS, flow, and pH.

Based on the new information on the operation of the backwash strainer equipment on the cooling water intake line and the available TSS data, EPA believes the TSS monitoring and reporting requirements for the outfalls discharging equipment-related backwash strainer water (previously identified as equipment-related backwash water) are not necessary for the following reasons.

The backwash strainer operation results in a discharge with a small TSS concentration as reported on the NPDES permit applications (Form 2C) for six hydroelectric facilities that discharge to the Deerfield River. The backwash strainer water discharges, for these six

facilities, all contain TSS concentrations at < 5 mg/l.

Manually removing the natural debris collected in the bottom strainer (basket) reduces the TSS concentrations prior to discharge of the backwash strainer water.

The backwash strainer contains 1/8 inch screening. A filter media that would capture any suspended solids and increase the TSS concentration in the discharge of the backwash water is not part of the backwash strainer equipment.

This discharge of backwash strainer water is present at six hydroelectric facilities according to the outfall description details provided on the NPDES permit applications. The TSS parameter has been eliminated from consideration for the backwash strainer discharge because in the situation described, the backwash strainer water is other than filter backwash that would require a technology based TSS limit determination based on 40 C.F.R. § 125.3(g). The BMP Plan has been revised to require inspection and maintenance procedures with record keeping for the backwash strainer (Part III.D.5) because proper operation of the backwash strainer is necessary to continue the existing low TSS concentrations in the discharge.

The pH and flow effluent limits and monitoring requirements are no longer necessary for this discharge that results from the intake of river water. The flow monitoring and reporting requirement is not necessary with these permit revisions and has been eliminated. The category description for this discharge in the final permits have been revised from 'equipment-related backwash water' to 'equipment-related backwash strainer water' to clarify the backwash strainer operation. The final permit has been revised to authorize the discharge of equipment-related backwash strainer water from the operation of the backwash strainer on the cooling water intake line (see revised Parts I.A.4, A.5, B.4, and B.5) without the effluent limitations and monitoring requirements for the case specific reasons stated in this response.

The description of the hydroelectric facility discharges (Part I.F.1) and the Notice of Intent information (Part I.G.2) have been revised to reflect this revision for the backwash strainer water and other revisions mentioned in this document.

COMMENT NO. 30: The draft general permit requires monitoring of equipment-related backwash water for Total Suspended Solids (TSS) without limits on this parameter. Backwash water contains naturally occurring solids that accumulate on intake screens prior to the water entering the facility since these screens are located on the upstream side of the plant. Any TSS present, in a discharge of facility backwash water, is naturally occurring and not a contaminant that results from plant operations. Additionally, the backwash flushing activity itself is so varied that it is impossible to gather consistent, repetitive results. Since no two flushing events are the same, trying to compare monitoring results from one event to the next is meaningless. For these reasons, the commenter contends that TSS from backwash events is not an appropriate parameter that should be regulated under this permit.

(NUS 23)

RESPONSE NO. 30: The draft permit requirement in question is specific to the discharge of backwash water from the operation of the backwash strainer on the intake water line. The flushing activity occurring at the intake screens is a different operation from the backwash strainer operation. Hence, the draft permit requirement is not applicable to the flushing activity occurring at the intake screens prior to the water entering the facility. In addition, the TSS monitoring requirement has been deleted from the final permit as discussed in the preceding response.

COMMENT NO. 31: Another commenter does not believe that filter backwash water can be regulated by this permit because the filtered material originates in the river and returns to the river without leaving the water.
(ENL 6)

RESPONSE NO. 31: For the reasons set forth above (see Response No. 29), the effluent limits and monitoring requirements related to filter backwash water have been deleted in the final permit.

Monitoring Requirements

COMMENT NO. 32: Representative data from our facilities already establish compliance with the discharge limits proposed in the draft general permit according to the commenter. For example, summary analyses submitted as part of the NPDES renewals in March of 2000 for 8 discharges at Northfield Mountain and Cabot Station consistently averaged 6.8 to 7.4 for pH and under 0.5 mg/l for oil & grease.

Based on a review of similar data in 1996 from Northfield Mountain and two other hydroelectric stations in Massachusetts, Region 1 agreed to eliminate monthly and quarterly monitoring and reporting requirements from individual NPDES permits in favor of a BMP-related annual self-certification report according to this commenter. In making this decision to reduce the frequency of monitoring, Region 1 reasoned that most discharges that affect water quality are ancillary to the direct process of generating electricity at a hydroelectric station and result mostly from oil spills, equipment leaks, and improper waste storage. The Agency further reasoned that requiring the submittal of monthly DMRs would not necessarily reflect a discharge problem that would be best revealed by timely BMPs (e.g., inspections and testing of plant equipment and systems).

Similarly, Region 1 should revise the draft general permit to rely on a largely BMP-based program with reduced sampling requirements. If EPA determines it necessary to regulate discharges from hydroelectric facilities, NUSCO suggests that there are better ways to achieve the desired results than the permit as drafted. NUSCO recommends that the Draft General Permit be revised to rely on a BMP-based program with semi-annual sampling requirements. Semi-annual sampling could be required during periods of low flow (i.e., summer and winter) when the aquatic environment experiences the most stress. Semi-annual sampling would also allow the agencies to gather the background data necessary to assess whether a more extensive sampling program is truly warranted. Additionally, semi-annual sampling would also be

consistent with similar general permits for hydroelectric facilities adopted by other states, such as North Carolina and Alabama.

This commenter proposes including a provision in the general permit allowing facilities to suspend or further reduce sampling once discharges consistently test below acceptable permit limits. This would reward facilities that have a vibrant system in place, such as an ISO 14001 compliant EMS, to prevent contamination of discharges.

Two other commenters report the EPA-Region 1 decision above to eliminate monthly and quarterly monitoring and reporting requirements in draft NPDES individual permits for some facilities in Massachusetts in the response to comments. An annual self-certification report based on a BMP Plan replaced the monitoring requirements. These two commenters also mention the discharges that affect water quality at a hydroelectric station discussed above. Therefore, requiring submittal of DMRs on specific dates would not necessarily reflect a discharge problem that would be best revealed by timely BMPs (e.g., inspections and testing of plant equipment and systems). In its response to comments on the individual permits, EPA reasoned that pollution prevention rather than wastewater treatment was of primary importance and that within the NPDES program, BMPs are inherently pollution prevention practices.

The two commenters strongly recommend suspending sampling and instead relying on BMPs. If EPA-Region 1 does not adopt this recommendation, at a minimum, it should reduce the proposed sampling burden by adopting a number of relief mechanisms. These should at least include adding “same as” language to allow one sample to represent up to five similar discharges, and instituting semi-annual or quarterly sampling in lieu of monthly sampling, and allowing for less frequent sampling after a number of consecutive successful samples (i.e., less than 50 percent of proscribed limits), and allowing for less frequent sampling from companies participating in environmentally accredited programs, such as the EPA’s National Environmental Performance Track.

(NUS 2, 18; NHUW 16)

RESPONSE NO. 32: The monitoring frequency in the final permits have been revised to quarterly as explained in this Monitoring Requirements section. The quarterly sampling frequency for pH range, temperature, oil and grease, and flow is necessary to provide data typical of the seasonal variability in the operation of the hydroelectric facility and in river flows. The flow monitoring will provide a baseline to compare the sampling results at a given outfall, allow a calculation of dilution provided by the receiving water, and document the variability in discharge magnitude over the permit term. The quarterly sampling frequency will provide data over the course of a facility’s operating year and a complete streamflow cycle for the receiving water rather than the semi-annual sampling frequency. The monitoring requirements will commence with the first full quarter following notification of permit coverage (active date of permit coverage) as indicated in the revised Parts I.A.6 and B.6. Therefore, the two requirements for the first DMR report in Part I.E have been deleted.

The semi-annual frequency suggested by one commenter will not provide sufficient monitoring

data to measure the data variability during the year. As mentioned, quarterly monitoring will provide EPA with data to determine if there is a meaningful seasonal variation in the discharges.

A monitoring regime that would increase or decrease in frequency based on performance would be difficult to administer and may be better suited to an individual rather than general permit. With this said, the final permits have been revised to consider a reduction in the monitoring frequency as mentioned below and in Response No. 35.

Relying on only a BMP plan is not acceptable because EPA needs to obtain monitoring data, especially for temperature, to assess the impacts of the cooling water discharges on the receiving waters and to determine compliance with the oil and grease limits.

The role of EMS in permits is provided in Response No. 15. The monitoring and reporting requirements in this general permit apply to specific categories of discharges at all eligible hydroelectric facilities. Under applicable NPDES regulations, EPA does not have the authority to allow a discharger to forego enforceable permit requirements on the grounds that the entity has an EMS or participates in the Performance Track program.

A representative outfall sampling requirement is included in the final permit as described in the representative outfall section in this document.

Strict consistency with the sampling frequencies in other general permits for hydroelectric facilities adopted by other states is not required. The approach taken in the case of the Massachusetts permits cited above would not be appropriate here given EPA's desire to obtain additional effluent data to inform its future permitting decisions regarding the many facilities eligible for coverage under the general permit and to determine compliance with the general permit's effluent limits. The North Carolina and Alabama permits are both reissued General Permits, so there was an opportunity to determine the adequacy of the monitoring frequency using the available data. In this case, EPA does not have monitoring data available for such a determination. The five Vermont hydro facilities referenced by two commenters to provide effluent sampling data (oil/grease, pH, and temperature) monitor once per quarter under the relevant individual Vermont NPDES permits.

The commenters suggest EPA should revise the draft general permit to reflect the 1996 individual permitting approach with largely a BMP based program and reduced sampling requirements and with an annual self certification report based on the BMP plan to replace the monitoring requirements. At a minimum, there should be a reduction in the proposed sampling burden.

The development of the 1996 final individual permits for Northfield Mountain and Cabot Station is summarized below. In 1997, EPA revised the method to impose effluent requirements in seven individual Massachusetts hydroelectric facility permits. In 1998, the individual permit for Cobble Mountain Station was issued with site effluent limits to protect the receiving water that serves as a drinking water supply source. The following discussion omits the Cobble Mountain permit with limits not typically imposed in the other individual permits. The permitting

approaches for the 1996 and 1997 individual permits are provided below.

1996 Permits: The final 1996 permit decisions for the Northfield Mountain and Cabot Station facilities include a joint response to comments document summarizing EPA's responses to the public comments received on the draft permits and explains provisions which have been changed in the final permit. This response document mentions the draft permits were prepared to reflect EPA's and the State's focus on pollution prevention versus wastewater treatment. This document notes EPA's and the State's belief that the permits' BMP Plans provide useful and cost effective measures to prevent pollution from sources ancillary to generating electricity. The response document also indicates that EPA inadvertently specified the following monitoring frequencies in the draft permits. The final Northfield Mountain permit was revised to eliminate the following outfall 001 requirements: the pH semiannual grab sample requirement within the narrative pH provision and the oil and grease quarterly monitoring requirements. The final Cabot Station permit was revised to eliminate the following outfall 004 requirements: the oil and grease maximum daily limit at 15 mg/l and the quarterly monitoring frequency. According to the response to comments document, the monitoring and reporting requirements in the final permits were revised to further clarify that the permittee's reporting requirements (annual report) in conjunction with the best management practices are the water-quality based effluent limits.

The 1996 Northfield Mountain final permit authorizes discharges of floor and associated drain water from outfall 001 and discharges of non-contact cooling water and others types of equipment cooling waters from outfall 002. The flow and oil/grease effluent limitations for these two outfalls do not include numeric values and do not explicitly specify a monitoring frequency. However, a narrative permit provision for outfall 001 requires a visual inspection of the station sump for the presence of an oil sheen, at least quarterly. Oil and grease monitoring and reporting requirements are imposed if an oil sheen occurs. The pH requirements for these outfalls are in a separate permit provision stating the pH range of 6.5 – 8.3 SU with reference to the 0.5 SU outside the background range. The representative sample is defined as a grab sample at the point of discharge without a monitoring frequency.

The 1996 Cabot Station final permit authorizes discharges for seven outfalls; two outfalls contain effluent limitations for oil/grease and flow without specific numeric limits and monitoring requirements and without a permit provision for a visual inspection of an oil sheen. The pH requirements for each discharge exclude monitoring requirements and are in separate permit provision stating the pH range of 6.5 – 8.3 SU with reference to the 0.5 SU outside the background range. The representative grab sample is not mentioned.

The 1996 permitting approach includes two options each with BMP plan requirements. The first option is the Northfield Mountain approach using a quarterly (or more frequent) oil/grease monitoring with a testing and reporting requirement that is contingent upon an observed oil sheen, and using unspecified limits and monitoring requirements for flow and the narrative pH range limit. The second option is the Cabot Station approach with unspecified limits and monitoring requirements for effluent parameters including flow, oil/grease, and the narrative pH range limit. These two individual Massachusetts permits include a visual inspection for an oil

sheen at specific outfalls and rely on a BMP plan. Eight other permits in 1996 follow the Cabot Station option with unspecified limits and monitoring requirements for parameters including flow, oil/grease, temperature, and the narrative pH range limit.

1997 Permits: In 1997, EPA revised the imposition of oil/grease effluent limits and monitoring requirements, and pH provisions in the individual permits issued to seven Massachusetts hydroelectric facilities that discharge to the Deerfield River. At six facilities, the average monthly oil/grease limits and monitoring requirements specify: collecting a grab sample and monitoring for a noticeable oil sheen. If an oil sheen is noticed, the oil/grease content of the grab sample is determined and oil/grease values greater than 15 mg/l reported as a permit exceedance. At the remaining facility, the maximum daily oil/grease limit is 15 mg/l and the twice per month monitoring requirements specify a visual sample. An associated permit provision to the effluent limits requires the collection of a grab sample if an oil sheen is noticeable and provides the preceding testing and reporting requirements. In these seven permits, the pH provision indicates the pH is within 0.5 SU of the background range.

General Permit: In these general permits, imposition of the effluent limits and monitoring requirements differ from the individual permitting approach taken in 1996 or in 1997 because the requirements in these individual permits are not entirely consistent with the regulations establishing monitoring and reporting conditions in permits, see 40 C.F.R. §§122.44(i) and 122.48. These regulations provide that permits shall establish monitoring requirements for all limited pollutants, monitor effluent volume, and report the data at least once per year and specify the required monitoring frequency to provide representative data. EPA notes the 1996 permitting approach was revised during the 1997 issuance of the seven individual permits for Massachusetts hydroelectric facilities.

The 1997 permitting approach is not appropriate for these general permits because the permittee's expectation for oil/grease compliance monitoring is uncertain and needs to be more explicit in this general permit that will provide coverage to multiple facilities in Massachusetts and New Hampshire. The 1997 permits include an implied oil/grease limit at 15 mg/l that relies on facility staff to initially visually evaluate the presence of an oil sheen. This initial evaluation does not provide a consistent and common measurement standard across all facilities in comparison with the oil/grease monitoring requirements following the approved analytical testing procedures for NPDES permits in 40 C.F.R. § 136.

The general permit specifies numeric oil/grease and pH effluent limits that require monitoring and reporting requirements including flow volume in accordance with the cited regulations. The temperature monitoring is required to provide temperature data to inform future permit decisions concerning the need to establish temperature limits at specific outfalls. EPA did not rely on a strictly BMP plan approach as in the 1996 and 1997 permits because monitoring and reporting requirements are needed to support the imposition of the effluent limits for flow, oil/grease, temperature, and pH range and to determine compliance with these limits.

It would be premature to further reduce monitoring frequencies to less frequent than the

specified frequencies during the term of the final general permits until the permittee submits 10 valid effluent samples and receives notification from EPA as explained in Response No. 35. The quarterly monitoring frequencies in the final permits will provide data to evaluate and review to inform decision making during the next round of permitting. Given the concerns of some commenters regarding the difficulty of obtaining samples and the possibility that the permittees will only be able to obtain a percentage of the required samples, EPA does not believe that any further reduction in monitoring frequency would be consistent with its objective of generating a representative set of effluent data for this category of discharges.

Representative Outfall

COMMENT NO. 33: Where multiple discharges of the same type (for example, equipment and floor drain water) are present at a facility, the general permit should allow for representative sampling of one outfall rather than each outfall. The commenter notes EPA included a representative sampling provision in the Storm Water General Permits. Another commenter mentions other environmental permits contain language that incorporates “same as” or “substantially similar to” language in the permit. Incorporating similar language in the draft general permit would allow facilities to sample a representative number of similar discharges instead of every discharge. This would ease the burden on facilities and still protect the environment.

(NUS 15, GL 6)

RESPONSE NO. 33: In the situations described, EPA agrees the general permit should include a representative outfall or discharge provision since a generating station typically includes multiple turbine units with identical discharges from multiple outfalls. The final general permit has been revised to include a representative outfall requirement (see Parts I.A.6 and I.B.6) for sampling purposes. In order to accommodate this permit revision, the BMP plan was also revised to incorporate a requirement to document and describe the group of representative outfalls, in Parts I.D and III.E.

Concurrent Sampling

COMMENT NO. 34: Three commenters are concerned that weather conditions, flow volumes or equipment operation may prevent obtaining concurrent samples for all regulated constituents of a discharge stream as required by Parts I.A.6 and B.6 of the draft permit. The commenters propose requiring concurrent sampling where feasible.

(USGH 15, NHUW 11)

RESPONSE NO. 34: The draft permits required concurrent sampling of an outfall to facilitate comparing all the monthly sampling results over the permit term and to allow the efficient collection of effluent samples at each outfall. Based on the revision of the sampling frequency from monthly to quarterly and the need to consider the three sampling variables raised by the commenter, concurrent sampling is appropriate where feasible. EPA agrees with the commenters’ proposal. The final permit has been revised to include concurrent sampling of an

outfall, where feasible.

Monitoring Frequency

COMMENT NO. 35: The required monitoring frequency is unnecessary for these facilities and it should be reduced to no more than once per quarter according to a commenter.
(GL 4)

RESPONSE NO. 35: Monitoring frequency in this document also refers to the “Measurement Frequency” within the effluent limitations and monitoring requirements Parts of the final permits. The draft general permit included a monthly monitoring frequency for all discharges except for the equipment-related maintenance water and maintenance-related internal drainage water which were monitored annually. EPA anticipated that certain outfalls, at various times of the year, would be either inaccessible for sampling or would contain no discharge. The appropriate no data indicator codes referenced with the effluent limitations and monitoring conditions reflected this situation. Over the permit term, monitoring data would be available at an actual frequency less than monthly, on the average.

According to the NPDES Permit Writer’s Manual (U.S EPA NPDES Permit Writer’s Manual, December 1996, EPA-833-B-003, p 119), the monitoring frequency is determined on a case-by-case basis at a frequency to avoid needless or burdensome monitoring and to detect most noncompliance events. A monitoring frequency is established after the permit writer estimates the variability of the pollutant concentration by reviewing effluent data for the facility, or for similar dischargers if these data are not available.

The revision from a monthly to a quarterly monitoring frequency in the final permit is explained in this Monitoring Requirements section. This quarterly monitoring frequency provides adequate data to characterize each outfall without establishing overly burdensome monitoring. The limited amount of effluent data collected at the 19 Massachusetts facilities and eight New Hampshire facilities with individual permits prevent a meaningful data review. Effluent data for similar discharges are available from the five Vermont facilities previously mentioned in Comment No. 15. However, sample data from only five facilities is not adequate to proceed with a monitoring frequency review for the purposes of this general permit. While the quarterly monitoring frequency in the final permit accords with the frequency in these Vermont permits, the final permit monitoring frequency is established as explained in this response.

In consideration of all the monitoring frequency-related comments, EPA re-evaluated the need for a monthly sampling frequency and determined a less frequent monitoring frequency will still provide adequate pollutant monitoring data, approximately 10 to 20 data values over the term of the general permit for later analysis. The monthly monitoring frequency in the final permit has been revised to not more frequent than once per quarter as suggested by the commenter. Since 10 pollutant samples will suffice, the final permit is revised to provide a reduction in the monitoring frequency to not less than once per year following a written notification from EPA. After obtaining 10 valid pollutant samples for the outfall, indicating compliance with the

pertinent permit limits, the permittee may submit a written request to EPA for a review of the pollutant monitoring data and a reduction in the monitoring frequency. In the case of water quality-based limits, EPA will formally notify the permittee if the monitoring frequency is reduced after reviewing the monitoring data results and other pertinent information to make a reasonable potential determination, in accordance with 40 C.F.R. § 122.44(d)(1), that these data show the discharge has no reasonable potential to cause or contribute to water quality standards violations. The permittee is required to continue testing at the specified monitoring frequency until written notice is received from EPA. The final permit has been revised to incorporate this monitoring frequency adjustment in a new Part I.H.5.

COMMENT NO. 36: One commenter, representing 50 member small scale hydroelectric projects in New Hampshire, indicates these projects do not now monitor the subject discharges nor do most projects have the instrumentation and sampling capability to conduct such monitoring. It is technically infeasible to monitor equipment and floor drains, and backwash water discharges in many hydroelectric plants because the drain discharge is incorporated within power house walls and discharge directly into the river at the plant outfall. It is also technically infeasible to monitor water discharges from water cooled bearings since they discharge directly into the turbine flow inside the turbine.

This commenter has shown in other comments that the environmental impact of its small plants is de minimis. The proposed permit would require these 50 small plants and the many other small plants in Massachusetts and New Hampshire to generate a massive amount of data and to incur substantial recurring costs with no apparent benefit to the environment. Importantly, there is little or no potential use for the reams of data the two states and EPA would receive. The commenter respectfully suggests eliminating the proposed monitoring and reporting program for these reasons.

(GSHA 7)

Like the GSHA, we are concerned about the impact these General Permits would have on the viability of smaller hydroelectric facilities. We find the Permits' monitoring requirements to be excessive, onerous and unjustified, and would only result in a substantial expenditure of labor and paperwork which many operators of smaller facilities are ill-equipped to handle. As is discussed in the GSHA's comments, such an increase in regulatory burden could force some smaller facilities to shut down, with their generation capacity likely replaced by non-renewable, fossil fuel based capacity. Consequently, such unnecessary over-regulation could be seen to fly in the face of EPA's self-stated mission: The mission of the U.S. Environmental Protection Agency is to protect human health and to safeguard the natural environment--**air**, water, and land--upon which life depends (emphasis added) [[Note: The commenter's footnotes are shown within brackets. Mission Statement from USEPA web site:

<http://www.epa.gov/history/org/origins/mission.htm>]

(ENL 11)

COMMENT NO. 37: Three commenters indicate the draft general permit delineates five types of discharges that must be sampled, many on a monthly basis and provide the following

comments. If these discharges also must be sampled prior to commingling, this could result in a large number of samples (possibly thirty or more samples per station, per month according to one commenter) at each station. With unmanned stations located at distant locations, obtaining monthly samples at each facility would present a substantial challenge due to extreme weather conditions, sampling holding time, and lab accessibility. Two commenters also mention unmanned stations at distant locations are becoming more common.

Factoring in the historically minimal and benign nature of these discharges, one commenter recommends moving to a semi-annual sample frequency. Two commenters believe monthly sampling is not needed and there are limited benefits, if any, associated with the extensive sampling scheme proposed in the general permits. Many of the activities proposed to be regulated under the general permits, especially maintenance activities, are periodic in nature and may occur only once or twice a year. Proposing monthly monitoring of discharges that may only occur annually or semi-annually is wasteful and unnecessary.
(NUS 17, NHUW 17)

COMMENT NO. 38: The NPDES monitoring program was designed to maintain adequate assurances that point source discharges from regulated facilities, with complex operations and potentially significant discharges, remained within permitted levels. In contrast to industrial-type operations, hydroelectric facilities are fairly straightforward, benign operations that have little or no adverse impacts on receiving waters. In recognition of the unique character of hydroelectric facilities, NUSCO offers the following comments on the monitoring requirements delineated in the Draft General Permit. (Note, these comments are in the Monitoring Requirements section.)
(NUS 5)

RESPONSE NO. 36-38: Revisions to the final permits, explained elsewhere in this document, include eliminating the commingling sampling requirement, reducing the monitoring frequency to once per quarter (and in the case of maintenance-related discharges, retaining the once per year frequency), allowing representative outfall sampling, including a provision for a monitoring frequency reduction under specific conditions, and eliminating monitoring for the following discharges: facility maintenance-related water during flood/high water events, equipment-related backwash strainer water, and facility maintenance-related internal drainage water. These revisions are discussed in the following sections of this document: discharge classification and commingling, monitoring requirements including monitoring frequency and representative outfall, flood/high water discharges, TSS, internal drainage water, and permit exemptions.

Revisions to the monitoring frequencies to quarterly for most discharges provide additional time for these projects, including those that are unmanned, to make the necessary arrangements to obtain the monitoring and sampling capability such that the samples for laboratory analysis do not exceed the sampling holding times. Information is provided in Response No. 7 to obtain effluent samples at a representative sampling location. As discussed in Response No. 7, the general permits provide the appropriate provisions when the sampling point at a facility is inaccessible due to safety or accessibility issues and restricts permit coverage to a discharge that

can be sampled at least once a year or sampled using the representative outfall sampling provisions in Parts I.A.6 or B.6. Additionally, these monitoring revisions are conducive to sampling discharges that are periodic in nature. Monitoring the equipment dewatering operation for maintenance has been eliminated for the reasons discussed in the Equipment and Sump Dewatering section of this document. These changes significantly reduce the recurring monitoring and reporting burden and the associated amount of data generated.

EPA disagrees with the commenters' suggestion that the data generated will have no environmental benefit. These data will be used to assist in determining the environmental impact of the hydroelectric facilities including small plants on the receiving waters, to assess compliance with the effluent limitations and to prepare and evaluate requirements for a reissuance of these general permits. The monitoring program in this permit has therefore been retained in a revised format.

Dischargers from small plants discharging irregularly or in de minimis amounts are not exempt from the NPDES permit program. See Response No. 62.

Further responses to cost-related comments are in the Cost section below.

The NPDES permit monitoring program for these general permits reflects the type of operations and associated discharges as described in Part I.F.1, Description of the Hydroelectric Generating Facility Discharges. This monitoring program is designed to provide EPA with data to assess the ongoing impact of these discharges on the receiving waters. The commenter provided specific comments on the following monitoring requirements in the draft general permits: discharge classifications, sampling locations, frequency of monitoring, and monitoring parameters for pH and TSS. Explanations for these monitoring requirements are provided in the following sections of this document: discharge classification and commingling, equipment and sump dewatering, representative outfall, monitoring frequency, monitoring requirements, pH range, and TSS.

The commenter's concerns with the excessive and onerous monitoring requirements, increase in regulatory burden/unnecessary over-regulation have been addressed by the revisions to the monitoring requirements referenced in this response. The effluent limits and monitoring requirements are imposed in accordance with EPA's authority pursuant to Section 402 of the Clean Water Act (see Response No. 39). The effluent characteristics for pH, temperature, and oil and grease are necessary requirements as explained in the following sections of this document: pH, temperature, and oil and grease. Flow monitoring is required by the NPDES permit regulations at 40 C.F.R. § 122.44(i)(1)(ii) (see Response No.39).

COMMENT NO. 39: According to the commenter, monitoring and reporting for flow, pH, TSS, and oil and grease, under the proposed permit, should not be required for a small hydro facility with a capacity of 5 megawatts or less because these four parameters are water quality related parameters. Monitoring in the permit should be required if such monitoring requirement is in the facility's 401 Certificate.
(GSHA 18)

RESPONSE NO. 39: Please see below for the role of CWA § 401 in the NPDES permitting process. Regardless of Section 401 Certification, it is appropriate for EPA to impose monitoring and reporting requirements in an NPDES permit under Sections 301, 308 and 402 of the Clean Water Act and NPDES program regulations. Under the CWA, discharges of pollutants from point sources to waters of the United States require a NPDES permit under Section 402. In accordance with Section 301 of the Act, NPDES permits are required to contain limitations and conditions necessary to ensure compliance with applicable technology and water quality-based standards. Under section 402, the EPA has broad powers to impose NPDES permit conditions, "to assure compliance with "effluent limitations required by the CWA, including authority to "prescribe conditions for [NPDES] permits . . . including conditions on data and information collection. . . ." See *Montgomery Environmental Coalition v. Costle*, 207 U.S. App. D.C. 233, 646 F.2d 568, 586-87 (D.C.Cir.1980); *United States Steel Corp. v. Train*, 556 F.2d 822, 844 (7th Cir. 1977). Similarly, Section 308 of the CWA grants EPA authority to require NPDES permittees to monitor "at such locations [and] at such intervals" as he shall prescribe, "whenever [it is] required to carry out the objective of [the Act]." Under section 308(a), the EPA has authority to monitor waste streams "at such locations" necessary to "determin[e] whether any person is in violation of [an] effluent limitation." *Texas Municipal Power Agency v. Administrator of United States Environmental Protection Agency*, 836 F.2d 1482, 1489 (5th Cir. 1988). "As section 308(a) makes clear, EPA policing of effluent limitations is instrumental to its achievement." *Id.*

The monitoring and reporting requirements in this case are intended to assess compliance and gather information and as such fall well within EPA's statutory authority. Indeed, certain of the monitoring requirements are addressed specifically by EPA regulations. For example, flow monitoring and reporting requirements are set forth at 40 C.F.R. § 122.44(i)(1)(ii), which requires monitoring of the volume of effluent discharged from each outfall, and § 122.48, which provides authority to require reporting of such results. The basis for monitoring and reporting requirements for pH and oil and grease are explained above in the respective pH and Oil and Grease Sections. As explained in the TSS Section of this document, the monitoring and reporting requirement for TSS have been eliminated from the final permit.

Narrative Limits

Trash Racks

COMMENT NO. 40: Comments on the requirements in the draft permit (Parts I.A.7 and B.7) to remove all solid materials from the trash racks for land disposal can be grouped into four issues: feasibility and safety, permit scope, FERC license conflict, and cost. Solid materials, which are also referred to as "debris, man-made debris, non-naturally occurring materials, or trash," in the comment and response, exclude naturally occurring materials.

Feasibility and safety: At one company's facilities, all reasonable attempts are made to remove non-natural materials from the trash racks. Maintenance activities mandated by the BMPs at

another company's facilities provide for the removal of man-made materials from the trash racks. At both company's facilities, it is not always feasible or even possible to completely remove these materials because employee safety, high water flow, or a particular facility's design impact this removal effort. Since some facilities are designed to sluice river debris through bypass gates around the facility, the removal of the man-made debris is very difficult if not impossible. Many small hydroelectric projects do not have trash removal equipment, and instead these projects sluice trash that accumulates on their intake screens through bypass gates around the project. Other small projects only remove the trash when the flow into the facility is impeded, typically during or following high flow periods. Two commenters request using language in these requirements indicating the solid material will be removed "where reasonable and feasible." In the absence of trash handling facilities, the commenter indicates it is neither feasible nor safe to remove and separate materials from the trash racks. The removal of debris may, under some circumstances, place employee safety at risk.

Permit scope: Provisions Regarding the Disposal of Collected Trash and Debris in the Trash racks is Improper. A commenter states none of the man-made materials that lodge on project trash racks are generated by hydroelectric operations. The man-made materials consist of refuse dumped into the river (or carried by run-off) by other uses upstream of the hydroelectric facility. Another commenter mentions the trash that originates upstream and is not "added" by the dam is not covered by section 402 of the CWA (NPDES permit program). The proposed permit would require that hydroelectric facilities remove all "solid materials except for naturally occurring materials" from trash racks for land disposal. Because these non-naturally occurring materials are added to the water by an upstream activity and not by the hydroelectric facility, EPA or the states do not have the authority under the CWA to require removal and land disposal of this man-made material according to one commenter. Additionally, these proposed permit conditions are not permissible under the CWA. The commenter recognizes the unsightliness of river-borne trash but does not believe a regulatory agency has the authority to require a dam operator to act as the public river trash collector.

The general permit's potentially most burdensome condition, according to one commenter, would require that all man made materials be removed from trash racks and disposed of appropriately. This provision would appear to preclude the possibility of sluicing trash around the generating station because the man-made material would need to be removed from the water and any "natural" debris manually separated. The sluicing trash operation is the standard practice for handling debris at most hydropower facilities.

FERC license conflict: Commenters believe the removal of solid materials from the trash racks is another permit requirement that is unnecessary and duplicative. Trash rack debris management is regulated when necessary by FERC through the licensing process and is often addressed under a project's section 401 certification. Including this requirement in the general permits creates the possibility that inconsistencies will develop with FERC license requirements. Because trash rack debris management is already adequately regulated, the commenters recommend EPA-Region 1 delete this requirement. Another commenter indicates the permit requirements would conflict with the hydro license and exemption provisions governing the

operation and maintenance of project trash racks. If the trash handling requirement is adopted in its proposed form, this requirement would result in impermissible modifications to project licenses and operations.

Cost: The commenter indicates imposition of a condition to remove all man-made materials from trash racks is not cost justified and could have a devastating effect on many hydroelectric projects represented by the commenter. At many plants, it is too labor and cost intensive to separate the man-made materials from the naturally occurring debris. Capital expenditures to add equipment such as trash rakes would easily exceed an estimated \$100,000 which is significant to the small project owners according to a commenter. This amount is an estimate, based in part on the characteristics of the three representative projects (second largest, approximately mean size, and median size) utilized elsewhere in these comments. Many of the hydro projects represented by the commenter would be seriously impacted by the significant operating and capital cost of the proposed trash handling requirement would impose. This cost alone could put some small hydroelectric owners out of business. Because these requirements are not within EPA's authority to impose under section 402 of the CWA, these requirements must be eliminated. If these requirements were under EPA's authority to impose, these requirements still must be eliminated because the costs would outweigh any benefits. (NUS 25, 28; USGH 17; GSHA 8, 9, 10, 11, 12, 13, 14, 15, 16; NHUW 18, 19; ENL 4, 5)

RESPONSE NO. 40: Please see preceding response regarding EPA's authority to impose conditions pursuant to Section 402. Trash racks capture solid materials including naturally occurring materials and prevent these materials that are present in the river from entering the penstock including the water intake system for cooling water. Man-made debris that accumulates on the trash racks and is removed from the water (river) by the owner/operator is the responsibility of the owner/operator to properly dispose of in accordance with the appropriate state's solid waste regulations. The intent of this permit condition is to prevent the reentry of any solid materials that are physically or mechanically removed from the existing trash racks to the receiving water. This condition is fully consistent with the need for the facility to properly maintain and operate the facility, which is required by NPDES standard conditions. The requirement that the permittee implement BMPs related to trash removal is rationally related to the objectives of the CWA, which is to restore and maintain the chemical, physical and biological integrity of the Nation's waters.

This requirement is water-quality based, and EPA is not required to undertake a formal cost benefit analysis prior to imposing it.

These comments indicate practices to remove man-made debris from the trash racks differ among the various facilities due to the facility design including size and location, and construction date of the dam. Some facilities sluice the debris around the dam, some use existing BMPs, and others remove the debris on an as needed basis. With the variety of debris removal practices in place and the need for facility specific removal practices, EPA believes facility specific procedures are appropriate to allow efficient and effective removal and disposal of the debris. Since best management practices are well-suited to develop the facility specific debris

removal practices, the BMP Plan has been revised to include the development and implementation of these procedures with inspection, maintenance, and record keeping requirements in Parts I.D and III.D.4. The use of facility specific debris removal procedures, in the form of BMPs, will allow the permittee to avoid any potential inconsistencies with FERC license requirements.

EPA agrees with the need to safely and reasonably remove the man-made debris. Since the permittee is ultimately responsible for safety at the hydroelectric facility, the BMP Plans should incorporate safety issues associated with the removal of the man-made debris. As requested by the commenters, EPA has added a provision that requires trash removal activities under the general permit to be conducted to the extent “reasonable and feasible.” Based on the commenter’s comment, it appears that certain facilities may be subject to and have to comply with more categorical trash removal obligations under FERC licensing or state solid waste requirements in any case.

Using BMPs in the revised permit condition, as mentioned above, provides the opportunity to minimize any labor and cost associated with handling the man-made materials. The permittee should be aware that installation of trash rakes or any other equipment to comply with this permit condition is not a permit requirement. A facility presently designed to sluice the river debris around the generating station or dam satisfies the trash removal condition. This permit condition does not apply to the removal of naturally occurring materials from the trash racks.

The final permit conditions (see Parts I.A.7 and I.B.7) have been revised to utilize facility specific procedures in the form of BMPs and to clarify that the installation of equipment is not required. These conditions have also been revised to clarify that the trash removal requirement applies to trash racks as well as functionally similar devices, including intake screens, since trash accumulates on the intake screens at many small hydro projects according to a commenter. The BMP Plan (see Part III.D.4) includes the development and implementation of procedures to remove the solid materials and the disposal of solid waste following each state’s regulations.

BMP Plan

COMMENT NO. 41: Development and implementation of a Best Management Practices (BMP) plan and the annual certification of the BMP plan’s implementation are a requirement in the proposed general permit. We believe the BMP plan requirements are excessive and unnecessary and should be removed from the permit.
(GL 3)

RESPONSE NO. 41: It is unclear what specific aspects of the BMP plan the commenter finds to be excessive or unnecessary, particularly since the BMP plan will be prepared by the permittee to reflect the circumstances of their facility. With the reduction in the monitoring frequencies explained elsewhere in this document, implementation of the BMP plan becomes an essential component of these general permits. For example, the preventative maintenance program and inspections components of the BMP plan will prevent equipment breakdowns or

failures and poor material management practices resulting in the discharge of pollutants to the river.

EPA believes the annual BMP certification provides the most efficient method to submit the reporting documentation that the facility is in compliance with the BMP plan. Submitting documentation less frequently will not provide EPA with adequate and timely information regarding compliance.

COMMENT NO. 42: The commenter, an ISO 14001-certified company, has been recognized for a strong commitment to the environment including continual improvement of the environmental management system (EMS) it has implemented to minimize and/or eliminate adverse environmental impacts from its operations. The company is also committed to the development and implementation of vigorous best management practices (BMPs) to ensure that its hydroelectric facilities are operated in an environmentally-responsible manner. The commenter requests that EPA appropriately recognize the role of the Environmental Management System EMS, BMPs and other similar environmental efforts in a regulatory mechanism such as the draft general permit.
(NUS 1)

RESPONSE NO. 42: EPA considers the development and implementation of a facility specific BMP plan to be an important component of this general permit as discussed in this BMP Plan Section of the document. With the reduction in the measurement frequency requirements in the final permit to quarterly, the role of the BMP plan becomes more important. EPA appreciates the company's commitment to the environment and to the development and implementation of BMPs ensuring its hydroelectric facilities are operated in an environmentally-responsible manner. Please see the discussion in Response Nos. 15 and 32 with respect to the role of EMS in the NPDES permitting process.

COMMENT NO. 43: The commenter, referencing their more detailed discussion on oil and grease monitoring requirements further believes that development and implementation of a robust BMP Plan is an appropriate and adequately protective alternative to monitoring and reporting of discharge flows and potential constituents.
(USGH 3)

RESPONSE NO. 43: The BMP plan is not designed to detect the presence of a parameter in the discharge and to determine its magnitude. For the reasons explained in the Fact Sheet and herein, EPA has determined limits on oil and grease and pH, and monitoring requirements on flow and temperature to be reasonable and necessary.

The regulations establishing monitoring and reporting conditions in permits (see 40 C.F.R. §§ 122.44(i) and 122.48) require monitoring and reporting for flow and other pollutants limited by the permit. These regulations provide that permits shall establish monitoring requirements for all limited pollutants, monitor effluent volume, and report the data at least once per year and specify the required monitoring frequency to provide representative data.

COMMENT NO. 44: Because existing hydroelectric facilities with a capacity of 5 megawatts or less have a de minimis impact on water quality, no additional BMP plan should be required. However, if EPA deems a BMP is necessary, the commenter states compliance may be acceptable so long as this BMP plan does not conflict with any mandatory term and condition of a FERC license or exemption.
(GSHA 19)

RESPONSE NO. 44: The preventative maintenance program and inspections components of the BMP plan provide a means for each facility to implement site specific plans to prevent or minimize the discharge of pollutants to the receiving water, which is an important objective given that hydroelectric facilities are located directly on or adjacent to the receiving waters. The BMP plan provides the permittee with flexibility to devise the necessary procedures and plans to meet the plan objectives. In this situation, the permittee will have flexibility to develop the BMP plan with the specific details for the facility to ensure conflict is avoided with any mandatory term and condition of a FERC license or exemption. The BMP plan requirement is flexible and appears fully capable of being consistent with FERC license and exemption requirements. In any case, the commenter has not cited any particular inherent source or instance of conflict between the two regulatory schemes, or why these putative conflicts would necessarily occur in light of the flexible nature of the general permits' BMP provisions.

Exclusions

COMMENT NO. 45: The draft permit excludes coverage for discharges to Class A waters and to impaired waters that are not attaining water quality standards for a pollutant that is limited in the permit. The commenter believes these two exclusions are unnecessary because discharges from a hydroelectric facility have a minor impact on the receiving waters.
(GL 2)

RESPONSE NO. 45: The permit must exclude coverage for discharges to Class A waters because the New Hampshire statutes RSA 485-A:8,I prohibit the discharge of any wastes to Class A waters. New Hampshire statutes define waste as industrial waste which includes any liquid, gaseous or solid substance resulting from any process of industry (see RSA 485-A:2).

EPA has determined that is not appropriate under 40 C.F.R. § 122.28(a)(3) to allow facilities discharging into impaired waters to be covered by this general permit. The development of the necessary water quality-based effluent limitations for discharges to impaired waters is complex and site-specific. Thus it stands to reason that a source discharging to such waters should be required to obtain a permit containing specific water quality-based limits. EPA has revised the final permit to make two exceptions to this exclusion from coverage under this general permit (see Part I.F.3.a). First, the exclusion does not apply to facilities discharging to waters impaired due to oil and grease, because the oil and grease limits in the permit are the same as the applicable ambient water quality criteria. The Massachusetts water quality standards contain narrative water quality criteria for oil and grease in Class B waters and Class SB waters at 314

CMR §§ 4.05(3)(b)(7) and 4.05(4)(b)(7), respectively. The Massachusetts standards also contain narrative criteria for oil and grease in Class A waters and Class SA waters at 314 CMR §§ 4.05(3)(a)(7) and 4.05(4)(a)(7), respectively. The oil and grease criterion for Class B waters in the New Hampshire water quality standards is Env-Wq 1703.09(b). The oil and grease water quality criteria are 15 mg/l to prevent a visible oil sheen in Class B or SB waters and 0.0 mg/l to prevent a discharge of oil and grease in Class A or SA waters as explained in the Fact Sheet. This is appropriate because a discharge of oil and grease at a level equal to or less than the applicable water quality criteria does not have reasonable potential to cause or contribute to a violation of those criteria.

Second, the exclusion does not apply to facilities discharging to waters impaired due to pH. This is appropriate in Massachusetts because the pH range limits are consistent with the state water-quality standards according to the MassDEP and are state certification requirements in the permit. This is also appropriate in New Hampshire because the pH range limits for the discharge consider the upstream ambient pH value and include the range of 6.5 to 8.0 standards units equal to the ambient water-quality criterion. The NHDES has indicated that the pH of the discharge outside this range will meet state water quality standards if the upstream ambient pH in the receiving water is outside this range and it is not altered by the facility's discharge or activities. Provisions are included to demonstrate that the facility's discharge does not alter the ambient upstream receiving water pH. EPA has incorporated these pH effluent limitations into the New Hampshire general permit as state certification requirements.

Additional General Permit Conditions

COMMENT NO. 46: The "Fact Sheet and Supplemental Information" document accompanying the draft general permit explains that a hydroelectric licensee will not be eligible for general permit coverage under a variety of circumstances including if "[s]treamflows are not maintained at levels to protect existing or designated uses as established in the state's water quality standards." (Fact Sheet, Sec. III, p. 4). The Clean Water Act Section 402 NPDES permit program authorizes EPA and States with delegated NPDES authority to regulate the discharge of pollutants, not streamflows. As EPA itself states, "The general permit does not regulate river flow through the turbines or over the dam." (Fact Sheet, Sec. I, p. 1) Therefore, streamflow issues may not be addressed in the NPDES permitting process and cannot be used as a rationale for excluding a licensee from eligibility from general NPDES permit coverage. (NHUW 21)

These commenters are also concerned that by advancing the adequacy of streamflows as a reason to require an individual permit, EPA is seeking to do indirectly what it cannot do directly, which is regulate streamflows under Section 402. To the extent the CWA provides any authority to require certain streamflows at a hydroelectric project necessary to protect existing or designated uses such authority occurs under Section 401 of the CWA, not Section 402. In *PUD No. 1 of Jefferson County v. Washington Department of Ecology*, 511 U.S. 700 (1994) the Supreme Court held that a State could impose conditions on a proposed FERC-licensed hydroelectric project to require compliance with applicable water quality standards including the qualitative portions of such standards relating to existing and designated uses.

Any effort by EPA or a State to directly or indirectly regulate streamflows under Section 402 would also conflict with FERC's comprehensive licensing authority under the Federal Power Act. *First Iowa Hydroelectric Cooperative v. Federal Power Commission*, 328 U.S. 152 (1946). The Supreme Court specifically held that it was unlawful for a State to attempt to impose streamflow requirements that interfered with the requirements of a previously issued FERC hydroelectric project license. *California v. FERC*, 495 U.S. 490 (1990). Similarly, neither EPA nor a State with delegated authority may regulate streamflows under Section 402 of the CWA. Finally, Section 6 of the Federal Power Act provides that a hydroelectric license "may be altered or surrendered only upon mutual agreement between the licensee and the Commission after thirty days' public notice." 16 U.S.C. § 799. Therefore, neither EPA nor a State may indirectly modify the terms of an existing license relating to streamflows through an NPDES permitting process. The proposal for a general NPDES permit should be modified accordingly. (NHUW 22)

RESPONSE NO. 46: The general permit does not directly or indirectly regulate the river's flow through the turbines or over the dam. The exclusion cited by the commenter is not an attempt by EPA to exercise authority over stream flows. The purpose of the above exclusion is not to address low stream flow, but to account for water quality impairments resulting from low stream flow. Under the Clean Water Act, EPA is independently obligated to impose limits that will ensure compliance with water quality standards and result in the achievement of designated uses. The exclusion is simply intended to require issuance of an individual permit that can be tailored to address the impact of pollutant discharges on receiving waters with limited stream flow. Even in such a permit, EPA would not regulate flow, but rather impose reasonable limits and conditions on the pollutants discharged by the facility in light of receiving water conditions.

COMMENT NO. 47: Two commenters mention EPA should not bar a licensee from eligibility for general NPDES permit coverage due to "[r]eceiving stream characteristics, including possible or known water quality impairment" or a "[r]ecommendation from a State." see fact sheet, Section III, pg. 4. These factors are extremely vague and would permit EPA to deny general permit eligibility in an arbitrary and capricious manner. For example, if a receiving stream is water quality impaired due to factors unrelated to the project's discharge of pollutants that EPA seeks to regulate under Section 402, then there is no basis for refusing to make the general permit applicable to such discharge. Eligibility for the general permit should only be denied based on specific and unique facts regarding the point source discharge of pollutants that EPA seeks to regulate under the NPDES program that indicate that the provisions of the general permit are not adequate. (NHUW 23)

RESPONSE NO. 47: NPDES regulations provide EPA with discretion to determine whether an individual permit is required for a particular discharge. 40 C.F.R. § 122.28(b)(3)(i) and (ii). As noted by the commenters, the Fact Sheet mentions two factors that could exclude a facility from general permit coverage. These factors concern the receiving stream characteristics, including possible or known water quality impairment and a state recommendation. EPA does not regard

the phrasing of the condition as vague, as it appries an individual of the specific criteria used to determine coverage. The example given by the commenter does not alter EPA's view. Receiving water quality, whatever the source of impairment, is important for EPA to account for when determining whether a general permit or individual permit tailored to site specific conditions would be appropriate. Given EPA's statutory mandate to ensure compliance with water quality standards, EPA believes the discretion committed to the Agency by this provision is reasonable and appropriate.

The draft permits contain certain exclusions to general permit coverage in Part I.F.3. One exclusion concerns discharges to impaired waters that require a TMDL according to the state's CWA section 303(d) list. The final permits have been clarified to indicate this exclusion applies to any facility discharging to an impaired water where the discharge causes or contributes to the impairment. The final permits have also been revised to indicate the exclusion for impaired waters does not apply to waters impaired by oil and grease and pH as explained in Response No. 45.

A State's recommendation to exclude a facility from general permit coverage is an appropriate and reasonable factor to consider when assessing the eligibility or screening process to provide general permit coverage under this permit. It helps to ensure each facility is covered by the permit that is deemed most appropriate by EPA and the State and also avoids confusion in the federal and state permitting processes. The States are involved in the final permit issuance process including the subsequent State issuance/adoption process. The final Massachusetts permit is issued jointly by EPA and the Massachusetts Department of Environmental Protection and the Massachusetts permit is also a State Discharge Permit. In New Hampshire, the New Hampshire Department of Environmental Services, Water Division may adopt the New Hampshire permit as a State permit after final permit issuance. Following final permit issuance, EPA will work cooperatively with the States to ensure the appropriate facilities receive permit coverage and to ensure water quality standards of the receiving waters are not violated. EPA and Massachusetts or New Hampshire, as appropriate, will review the facility's application information as well as other information on file prior to authorizing permit coverage. Notwithstanding the above, it is the desire of both EPA and the respective state agency to provide coverage to all eligible facilities under the finally issued General Permit. The final permit has been revised to include a state recommendation as another consideration to exclude a facility from general permit coverage because an individual NPDES permit may be required by the Director (see Part I.F.3). Although this exclusion was mentioned in the Fact Sheet as noted by the commenter, EPA had inadvertently omitted it from the draft permit.

Other

COMMENT NO. 48: Because a fee is not mentioned to submit an application for the general permit, we request that the amount of the fee, if any, is clarified in advance.
(GL 7)

RESPONSE NO. 48: A permit application fee is mentioned where one is applicable as in the

case of facilities located in Massachusetts (see Part I.H.2.a). The State of Massachusetts requires a permit application fee to file the State Application Form for permit coverage.

At this time, EPA does not have a general permit fee. There is no fee associated with filing the Notice of Intent with New Hampshire.

Pumped Storage

COMMENT NO. 49: Clarification on the potential exclusion of pumped storage facilities from general permit coverage is requested by three commenters. Two of these commenters maintain water utilized in the operation of a pumped storage facility is indistinguishable from water passing through a conventional hydroelectric facility. In 1996, EPA Region 1 agreed with this assessment during the final issuance of the individual NPDES permit for the Northfield Mountain pumped storage facility. The pH monitoring requirements were made consistent with those pH requirements for a conventional hydroelectric station as explained in the response to comments document for this individual permit.

These commenters also indicate the discharge sampling data, with the individual NPDES permit reapplication submitted in 2000 for this facility, prove the discharges were consistently within the pH limit range and below the detection limit for oil and grease in the expired permit. These levels are also lower than the thresholds proposed in the draft general permit. Given the discharge history at the Northfield facility, the commenters are concerned that EPA is making an unfair and unnecessary distinction between pumped storage and conventional hydroelectric facilities.

(NUS 24, NHUW 20)

RESPONSE NO. 49: Following submission of the Notice of Intent (NOI) from the hydroelectric facilities, EPA envisions a simplified review process preceding the decision to authorize general permit coverage. This review process also includes results from a review by the appropriate MassDEP and NHDES-WD staff. While the outcome of this review process for any specific facility is unknown at this time, it is expected that the eligible facilities will promptly receive general permit coverage. The permit simply acknowledges that the pumped storage facilities will require an additional review as discussed below.

EPA notes the difference between conventional hydroelectric and pumped storage facilities is the volume of process water discharged to the receiving waters by the pumped storage facilities. There are two pumped storage facilities in Massachusetts eligible for coverage under this general permit; namely the Bear Swamp Station and the Northfield Mountain Station. These facilities became operational in the early 1970s and the discharges averaged 3.11 and 0.72 mgd from the station sump, respectively, according to the individual permit reapplication forms. The maximum station sump discharge is 0.72 mgd at the conventional hydroelectric facilities in Massachusetts and New Hampshire. These discharge data are obtained from a review of the individual NPDES permit application forms for 33 hydroelectric facilities.

EPA is concerned that the two pumped storage facilities may not be eligible for coverage under the Massachusetts general permit given the large discharges to the riverine impoundments in the Deerfield and Connecticut Rivers. Statements in the Fact Sheet and the permit condition (Part I.H.1) acknowledge that these pumped storage projects require additional review before general permit coverage can be evaluated. Before authorizing general permit coverage, EPA needs assurance that the process water discharges at the pumped storage projects are consistent with the terms and conditions of the general permit without violating applicable State surface water quality standards for the receiving waters. Thus, individual permits may be necessary for these pumped storage facilities.

The discharge history at the Northfield Pumped Storage Facility pertains to the effluent limitations, monitoring requirements, and other conditions in the expired individual NPDES permit number MA0035530. The discharges from this facility need to be evaluated under the terms and conditions of the general permit to determine if this pumped storage is eligible for coverage as explained above. The available monitoring and sampling data will be included in the review following an NOI submission for this facility.

EPA reviewed the response to comments document that was prepared for the NPDES permit issued to the Northfield Mountain Station on September 30, 1996. The draft permit contained a narrative pH condition indicating the pH range limits with the monitoring requirement specified as a grab sample to be obtained semiannually for outfall 001 and as a grab sample without the sampling frequency mentioned for outfall 002. The permittee commented on the omission of the pH monitoring frequency for the grab sample at outfall 002. The response indicated EPA inadvertently specified the monitoring frequencies in the draft permit and these reporting requirements have been eliminated in the final individual permit

EPA does not agree with the commenter's conclusion that revision in the pH monitoring requirements indicated there is no distinction between the water utilized for operation of a pumped storage and conventional hydroelectric facility. The revision in pH monitoring requirements is simply based on the decision mentioned above to not require pH monitoring requirements in these final individual 1996 permits. The general permit is not bound by the terms of these expired individual permits.

Cost

COMMENT NO. 50: Clearly, the de minimis effects of these projects do not justify the significant financial impact on small hydroelectric owners, the ruin that would occur to some of them and the inundation of EPA by volumes of paper. As previously mentioned, there are 146 hydroelectric projects in Massachusetts and New Hampshire that would be covered by this proposed rule. Compliance with this rule would require project owners to purchase outside laboratory analysis services and in many cases make extensive modifications to facilities. Given the short comment period, the commenter has not been able to obtain a specific cost estimate of permit compliance from each owner for each project, but it is estimated the sampling and laboratory services would cost at least \$10,000 per year per project. Capital expenditures to add

facilities such as trash rakes are estimated to easily exceed \$100,000. [This figure is an estimate, based, in part, on the characteristics of the representative projects utilized in these comments.] These costs are significant for small project owners. As an example, a 400 kilowatt hydroelectric facility (median size of the 50 projects represented by the commenter) only can produce approximately 1,600,000 kilowatt-hours per year. Even if power sold at \$10/megawatt-hours total, about twice the cost of power today, annual revenues would be only \$160,000. The effect of compliance on smaller projects would be even more extreme. The cost of compliance would represent a material increase in annual operating costs and the cost of facility modifications would be unaffordable in some cases. If required to comply with these requirements, some small project owners will likely be forced to cease operation of their projects. Elimination of hydroelectric projects further erodes the availability of clean and renewable resources requiring New England to increase reliance on fossil fuels. (GSHA 6, 21)

RESPONSE NO. 50: Please see Response No. 62 regarding de minimis discharges.

The final permits incorporate several revisions to the monitoring requirements such as eliminating the commingling sampling requirement, reducing the monitoring frequency to once per quarter (and in the case of maintenance-related discharges, retaining the once per year frequency), or less, allowing representative outfall sampling, including a provision to reduce the monitoring frequency under certain conditions, and eliminating monitoring for certain discharges. These revisions, which are mentioned elsewhere in this document, result in significant reductions in the monitoring/sampling program costs to all projects including those less than 5 megawatts and also reduce the volumes of paperwork submitted to EPA. The monitoring requirements are specific to the discharge categories present at the project and not specific to the project size. As previously mentioned (see Response No. 40), the final permit does not require the installation of trash rakes or other equipment to remove the solid materials from the trash racks or intake screens (see Parts I.A.7 and B.7). Additional responses concerning costs related to trash racks, including the addition of trash rakes, are provided in the Trash Racks section of this document. Because other types of facility modifications are not identified by the commenter, EPA is unable to provide further response.

The cost impact to smaller projects is significantly reduced with these revisions to the monitoring requirements and with the addition of language to eliminate installing trash rack related equipment. In addition, this commenter mentions in a separate comment that the small projects do not operate during low flow conditions. Since many of the smaller projects are likely to cease discharging during the summer sampling period, the cost impact to these projects is further reduced.

In general, the commenter should note that cost considerations or technological feasibility are not permissible factors in setting water quality based effluent limits. *United States Steel Corp. v. Train*, 556 F.2d 822, 838 (7th Cir. 1977); *see also, In re City of Moscow*, 10 E.A.D. 135, 168 (EAB 2001).

The commenter states that there are 146 projects in Massachusetts and New Hampshire potentially eligible for coverage under this proposed general permit. This exceeds those currently covered under individual permits or with pending applications. The commenter may wish to advise the many facilities that have not yet applied for NPDES coverage that they should apply, as many are today discharging without permit coverage.

COMMENT NO. 51: A commenter is concerned about the added cost to implement this permit at subject facilities. We have estimated that compliance with this permit would require an additional one person-week per month, and cost in excess of \$50,000 annually. (USGH 18)

RESPONSE NO. 51: Ten of the commenter's facilities are eligible for permit coverage. The compliance cost associated with the final permits have been significantly reduced with the revision in the frequency of monitoring and reporting, including a monitoring frequency reduction provision, and the inclusion of a representative sampling provision for identical discharges from multiple outfalls. We anticipate the expected aggregate compliance cost, under an individual NPDES Permit issued for these facilities would be similar to or greater than that under the general permits. As mentioned in the preceding response, cost considerations are not a permissible factor in setting water-quality based effluent limits.

Streamlined General Permit

COMMENT NO. 52: If it is determined, notwithstanding the clear precedent in support of FERC's comprehensive licensing authority that separate NPDES permit coverage is required, a commenter requests that EPA and the two states issue a streamlined general permit for hydroelectric generating facilities with a generating capacity of 5 megawatts or less. The size limit is justified by the de minimis effect of discharges from these small plants. This size limit would significantly reduce the burden on both EPA and the hydroelectric owners as a result of implementation of the rule. (GSHA 1)

RESPONSE NO. 52: Coverage under these general permits is available to specific discharges from all eligible hydroelectric generating facilities in Massachusetts and New Hampshire without regard to the generating capacity of the particular facility. As mentioned, one objective of the general permits is to gather effluent monitoring data from facilities regardless of size, which will be useful to the Agency in future permitting cycles. The commenter does not cite any specific rationale with supporting monitoring data for its conclusion that facilities with a generating capacity of 5 megawatts or less discharge in "de minimis" amounts; and therefore require a separate general permit. The relevance of the de minimis discharge issue to this permitting action is discussed in Response No. 62.

The commenter should note that the revisions to the draft permits in response to comments, especially revisions to the effluent limitations and monitoring requirements, significantly reduce the burdens to small hydroelectric owners/operators, while at the same time ensure that

applicable Clean Water Act requirements are met.

COMMENT NO. 53: EPA-Region 1 should reflect this small potential for environmental harm and great potential for inefficient and duplicative regulation, by imposing a far less burdensome regulatory regime than proposed in the general permits. The two commenters state EPA-Region 1 should issue instead of the proposed permits either a simple rule or general permit authorizing the minor discharges covered by the proposed permits as not presenting significant environmental concerns. The rule or permit could require project owners and operators “to continue using BMPs to minimize the levels of such discharges and to manage them responsibly.”
(NHUW 2)

The burdens on both small hydroelectric owners/operators and on EPA and state agencies significantly outweigh any benefits that accrue from compliance with this proposed rule. EPA should abandon its proposed rule in this proceeding and, instead, rely on environmental measures in place at each hydroelectric station to ensure compliance with CWA requirements. In the alternative, should the EPA believe that an additional level of regulatory oversight is required, it should, in place of these rules and permits, develop a streamlined General Permit applicable to projects with a capacity of 5 MW or less.
(GSHA 32)

RESPONSE NO. 53: EPA agrees with the need to use BMPs. The general permits reflect this fact. However, any action taken by EPA to authorize the discharges at issue must comply with the mandates of the Clean Water Act. EPA has outlined the basis for effluent limitations and monitoring conditions in the Fact Sheet and elsewhere in this responsiveness summary. The use of BMPs alone would not be sufficient to ensure that the requirements of the CWA are met and would not provide EPA with data that will allow it to assess the ongoing impacts of the discharges at issue here on the receiving waters.

The final general permit reduces the permitting burden for hydroelectric project owners by providing a streamlined approach to obtain permit coverage under the NPDES program. Revisions to the monitoring frequencies mentioned in Response Nos. 35, 36-38 reduce the recurring monitoring and reporting burden.

EPA disagrees that the statutes and regulations applicable to the discharges are duplicative and inefficient. Please see Response Nos. 63-65 for the explanation of compliance with multiple federal statutes including the CWA. The benefits of these permits are outlined in Response Nos. 1-2 and 36-38.

The commenter identifies the environmental measures currently in place as the provisions in the hydroelectric station’s Section 401 water quality certificate. For the reasons mentioned in Response Nos. 66-68 a Section 401 certificate does not provide an alternative to compliance with the requirements under Sections 401 and 301 of the Clean Water Act.

COMMENT NO. 54: The commenter indicates the variety and size of the facilities varies, and it would be difficult to design a one size fits all permit. Hydroelectric facilities, with a capacity of 5 megawatts or less, are not designed from a cookie cutter mold, but vary with river size and site conditions. The cost impact will be disproportionately felt by certain small project owners. An alternative to blanket application of the proposed permit and related requirements is a scheme where a general permit could be designed for small projects.
(GSHA 3)

RESPONSE NO. 54: The final general permits authorize discharges from a hydroelectric facility regardless of the facility size. For the reasons explained in the Fact Sheet, EPA believes a general permit covering hydropower facilities of varying sizes is appropriate. Even so, the permit contains features, such as BMP plans, which allow facilities to tailor pollution controls to their actual operations.

EPA disagrees with the assertion that purported disproportionate economic impacts resulting from the general permits on these facilities justify a separate or weaker permit. Factually, evidence of disproportionate cost being born by facilities less than 5 megawatts has not been established, and it is unclear from the comment why this would necessarily be the result. Even if true, the fact would not be legally relevant with respect to whether the water quality-based requirements in the general permits are necessary. With this said, EPA believes the revisions to the final permits as discussed elsewhere in this section significantly reduce the cost impact to smaller projects.

COMMENT NO. 55: A commenter provides specific elements to include in a streamlined general permit (Small Hydro general permit) consisting of streamlined notification requirements and narrative permit conditions. This streamlined general permit should only include these elements if EPA imposes general permit requirements on hydroelectric generating projects with a generating capacity of 5 megawatts or less. The notification requirements mentioned are similar to those in Parts I.G.2 and I.1 of the draft permit. Omissions include the flow rate for outfalls discharging less than 10,000 gpd and the outfall information providing the operations contributing flow and the treatment received by the discharge.

The narrative permit conditions consist of the following requirements: comply with all 401 certificate requirements and maintain a copy of the 401 certificate at the project location; comply with state water quality standards and other state requirements adopted under authority retained by the states under CWA section 510.33, 13 U.S.C. § 1370; and submission of the preceding NOI information upon reissuance of the Small Hydro general permit as required under the reissued general permit. Such NOI would not contain requirements to consult with NMFS or USFWS. The proposed Permit has many deficiencies and must be modified. If EPA requires an NPDES permit but does not issue a de minimis Small Hydro general permit as recommended above, the proposed permit must be modified to correct significant deficiencies.
(GSHA 17)

RESPONSE NO. 55: EPA is issuing the final general permit to provide permit coverage for all

eligible hydroelectric facilities in Massachusetts and New Hampshire. The commenter has not provided any persuasive rationale for issuing a separate general permit for smaller facilities. EPA disagrees with the premise that these smaller facilities discharge pollutants that are per se less detrimental to the receiving waters merely because of their size. For the reasons stated in the Fact Sheet and above, EPA has determined the effluent limitations and monitoring requirements (including flow) in the general permits are required by law and are reasonable.

The commenter invites EPA, as permit issuer, to essentially rely in whole on the 401 certification process and water quality standards to supply the terms and conditions of the permit. The suggested permitting scheme would not be adequate under the CWA, as it essentially ignores the federal regulations governing the NPDES permitting program, including those implementing sections 301 and 402. EPA believes that it is entirely adequate to issue the general permits according to existing statutory and regulatory mandates.

Maine's Permit Program

COMMENT NO. 56: A commenter believes the hydropower discharge permitting program implemented in 1998 by the Maine Department of Environmental Protection (MEDEP) provides a fair and reasonable regulatory model EPA should emulate. The MEDEP program focuses on those hydropower facilities having discharges which could possibly impact downstream water quality in contrast to the general permit's "shotgun approach." Key elements of this program include: reviewing the status of all hydroelectric facilities to determine the presence of cooling water discharges, reviewing the adequacy of protective measures against oil and grease contaminating the discharges, permitting of all non-contact cooling water discharges with monitoring only necessary for facilities discharging to Class A or potentially sensitive waters, and permitting of miscellaneous leakage and lubrication waters when BMPs are not implemented. Attached to the comment is the MEDEP Waste Discharge Program Guidance in a two page memorandum Re: Hydropower Discharges, dated 05/28/98, that explains the MEDEP's position on licensing discharges from hydropower facilities. This memorandum states "in all but a few cases, the impact of [non-contact cooling water] thermal discharge on the ambient temperature of the receiving water will be negligible, both because of the small volume of cooling water in comparison to total stream flow and because of the limited amount of heat actually being discharged." The memorandum further states that "after investigation, the DEP has determined that, due to physical constraints, monitoring of these cooling water discharges prior to mixing with the receiving water is often difficult if not impossible, and that this monitoring is of limited value."

(ENL 1)

RESPONSE NO. 56: EPA appreciates the information and data from 1998 and 1999 on Maine's hydropower discharge permitting program. This information pertains to the issuance of Maine Waste Discharge Licenses for discharges from the hydroelectric generating facilities. These Maine licenses were issued pursuant to the provisions of Maine's statutes rather than the provisions of the Federal Clean Water Act, since EPA was the NPDES permit issuing authority during this time period. EPA must follow the regulations governing the NPDES program and

Section 402 of the CWA in permitting the discharges at hydroelectric facilities in Massachusetts and New Hampshire.

With regard to the monitoring aspects of the Maine hydropower permit program, NPDES permit regulations at 40 C.F.R. § 122.44(i) require monitoring for each pollutant limited in the permit and reporting the monitoring data at least once a year. EPA is also interested in obtaining monitoring data for the various types of discharges at hydroelectric facilities in Massachusetts and New Hampshire, which are not currently available, to inform future permitting decisions. This would not be accomplished by the Maine scheme.

COMMENT NO. 57: The commenter requests EPA to take special note of the results of the MEDEP's initial assessment of projects as discussed in the memorandum (MEDEP memorandum Re: Report on Wastewater Discharge Licensing to Hydro Project/Owner, dated March 17, 1999, 2 pages, 1 enclosure 3 pages, attached to the comment). Of the 85 hydropower projects surveyed, only 38 were found to have non-contact cooling water discharges. More significantly, MEDEP's analysis indicated that under worst case conditions, these discharges would raise the water temperature of the receiving water by 0.01 to 0.001 °F -i.e., far less than the measuring accuracy of a standard thermometer, and at biologically and ecologically insignificant levels. Wisely, and with EPA approval, the MEDEP eliminated all monitoring requirements for these discharges. I urge you contact Mr. Dana Murch of the MEDEP to obtain additional details regarding Maine's hydropower discharge permitting program.
(ENL 2)

RESPONSE NO. 57: For the group of 27 hydroelectric facilities in Massachusetts and New Hampshire with individual NPDES permits, cooling water temperature measurements are collected and reported at one facility to meet the permit requirements. Thus, a temperature data base for hydroelectric facilities in Massachusetts and New Hampshire is not available for a similar assessment and analysis. Temperature monitoring for the cooling water discharges in the general permits will provide data in support of EPA's initial determination that temperature limits are not necessary for the cooling water discharges. During a subsequent permit issuance, the need to obtain additional temperature data or to establish temperature limits will be evaluated to ensure the temperature criteria of the receiving waters are not exceeded. If 10 valid temperature measurements are submitted to EPA during the permit term, EPA will review these data to determine if the temperature monitoring frequency can be reduced as indicated in Response No. 35.

The commenter does not provide a reference to EPA's approval document, in 1999 or earlier, that is specific to eliminating a temperature monitoring requirement. Any such EPA approval at that time would have been specific to a MEDEP determination under the State's licensing program. This approval would not necessarily be applicable to permitting decisions under Maine's NPDES Permit program that was authorized at a later time (January 12, 2001).

COMMENT NO. 58: The commenter believes a more simplified and streamlined approach to hydropower discharge permitting and monitoring, which specifically targets those facilities with

an identified need for regulation, would serve the greatest interest of all parties involved. This approach would better serve EPA's mission of protecting water and air resources of the United States.

(ENL 3)

RESPONSE NO. 58: The final permit has been revised according to the discussion in this document and provides a streamlined and simplified approach to providing permit coverage within the regulations and constraints of the NPDES program. As mentioned, a main driver behind the hydropower permit is to obtain information about effluent discharges from hydropower facilities in order to improve the basis for permitting in the future. Facilities with an identified need for further regulation may require an individual NPDES permit. Issuance of these permits, with subsequent coverage for many of the facilities in the permit universe, will also ease the resource burden because resources will be targeted to other more complex permits now backlogged.

Permit Exemptions

COMMENT NO. 59: The commenter states releases of small quantities of oil, heat and total suspended solids which typically result from the operation of hydroelectric facilities are worthy of exemption from regulation pursuant to the National Pollutant Discharge Elimination System ("NPDES") under section 402 of the Clean Water Act ("CWA"). The NPDES permitting process was primarily designed by Congress to address major point sources of pollutants, such as factories and sewage treatment plants, which were having an adverse effect on water quality. Hydroelectric generating facilities do not resemble these types of operations. They are, in large part, benign operations that add no or only negligible amounts of pollutants to receiving waters. For example, under this permit internal drainage water, like dam leakage, is a regulated discharge. This is the equivalent of regulating every drain to every retaining wall. The commenter requests that EPA consider whether mechanisms other than permitting such releases as point source discharges under the NPDES Program cannot provide an equivalent level of protection without the unnecessary burden.

This commenter mentions that exempting these discharges should not be confused with abandoning them because they are of the strong opinion that the environment should and could be protected by requiring robust BMPs. It is felt that this is a much better way of effectively addressing the minor discharge from these facilities.

(NUS 3, 4)

RESPONSE NO. 59: Please see Response No. 62 regarding EPA's authority to exempt de minimis discharges.

The final general permits have been designed to reflect the fact that hydroelectric generating facilities discharge relatively small amounts of pollutants to the receiving waters. If a facility discharges pollutants in significant amounts, an individual permit will likely be required.

EPA agrees with requiring BMPs to control discharges from these hydroelectric facilities and has determined that monitoring requirements for the discharges are also important as explained elsewhere in this document.

This permit is not structured to regulate every drain in every retaining wall as suggested by the commenter. The intent and effect of this permit is to authorize specific discharges associated with the operation of hydroelectric generating facilities, including equipment cooling water, equipment and floor drain water, and specific maintenance waters. EPA is eliminating the discharge of internal dam drainage and headwall drainage from authorization under these permits for the reasons explained in Response No. 14. Similarly, the discharges from ground water drains included with the equipment and floor drain water (see Parts I.A.2 and B.2) have been eliminated. The final permits have been revised to update Parts I.A.5 and B.5, to remove ground water drain in Parts I.A.2 and B.2, and to eliminate these types of discharges from Parts I.F.1 and I.G.2. If an oil/water separator or a sump is present in the drainage system associated with the operation of the hydroelectric facility, the discharge will be sampled under Parts I.A.2 and B.2 as explained in Response No. 14.

COMMENT NO. 60: If this rule is implemented as proposed, EPA will be inundated with permit applications and data that will not advance the Agency's goals but will bury EPA at a time when resources are tight and the need to implement new programs for large projects is great according to the commenter. Most of the hydroelectric projects are in Massachusetts and New Hampshire and are very small and pose no risk to water resources.
(GSHA 20)

RESPONSE NO. 60: EPA is issuing final general permits pursuant to 40 C.F.R. Parts 122 and 124 and is not proposing a rule. With the revisions to the final permits outlined in this responsiveness summary, EPA expects hydroelectric facilities will submit applications for coverage under the general permits. The notification requirements for these general permits allow EPA and the states to efficiently process these applications and provide coverage rather than developing and issuing individual permits. Thus, the general permits give EPA the ability to devote resources to other program areas as necessary. Submission of monitoring data no more frequently than quarterly will substantially reduce data processing time while still providing EPA with adequate data to inform future permitting decisions.

In the absence of adequate effluent monitoring data, it is premature to state that most of the smaller hydroelectric projects in Massachusetts and New Hampshire pose no risk to water resources. The effluent monitoring data collected under these general permits from these projects will provide valuable information to more accurately determine the actual impact of the discharges on instream water quality.

Dual Enforcement

COMMENT NO. 61: Two commenters indicate the general permits provide the EPA-Region 1 and the States of Massachusetts and New Hampshire the individual right to enforce the terms

and conditions of the respective permit. Each of the enforcing authorities has the power to modify, suspend or revoke the permits, with such action effective only with respect to the particular enforcing agency.

The Supreme Court has ruled that dual regulatory regimes with dual final authority are unworkable. *First Iowa Hydroelectric Cooperative v. Federal Power Commission*, 328 U.S. 152 (1946). The two commenters are concerned that this enforcement scheme has the potential to result in a single NPDES permit with two different standards, one state and one federal. Combined with the additional potential problem of resolving conflicts between NPDES permit requirements and FERC license requirements, this situation would surely cause confusion for owners and operators and result in added compliance costs. At a minimum, therefore, EPA-Region 1 should defer to state enforcement of the general permit. (NHUW 24)

RESPONSE NO. 61: NPDES permits are issued by EPA or by a state agency subject to EPA review in those jurisdictions in which EPA has authorized a state agency to administer the NPDES program. *See* CWA § 402(a)-(d). Neither the Commonwealth of Massachusetts nor the State of New Hampshire has obtained such authorization, and as a result, the Region is issuing the general permits at issue here. Although the Region administers the NPDES program in Massachusetts and New Hampshire, these two states maintain separate, independent permitting authority over surface water discharges pursuant to their respective water pollution control statutes. *See* Mass. Gen. Laws Ann. Ch. 21 § 43 and RSA Chapter 485-A. MassDEP will concurrently issue a state permit under separate state authority. The NPDES general permit for New Hampshire facilities will also be issued by EPA. Following permit issuance, the NHDES-WD may adopt the New Hampshire general permit as a state permit.

Under this scheme, there is no prospect of a single NPDES permit with two different standards. There is, however, the prospect of two permits in each state, one issued pursuant to federal law and the other issued pursuant to state law. EPA, Massachusetts and New Hampshire will each retain final enforcement authority over their respective permits. EPA does not believe this scenario can fairly be characterized as a dual regulatory regime with dual final authority of the type described in *First Iowa*. EPA does not have authority to enforce the terms of the state permit. The state likewise does not have the authority to enforce the terms of the federal permit.

Other Legal Requirements

COMMENT NO. 62: NUSCO believes that EPA has full authority to exclude discharges from hydroelectric facilities from the scope of the Draft General Permit. These facilities are good candidates to be exempted from NPDES permitting requirements due to their minimal environmental impacts. (NUS 2)

Exemption for Minor Releases

EPA has the authority to categorically exempt such discharges from the NPDES permit program due to their “de minimis” nature when the burdens of such regulation would “yield a gain of trivial or no value.” (See the discussion of *Alabama Power Company v. Costle* in Appendix A - Appendix consists of 7 pages included with the comments.) NUSCO believes that the available data and operational experience at numerous hydroelectric facilities following enactment of the CWA compel the conclusion that subjecting such minor releases to the full requirements of the NPDES Permit Program would satisfy this criterion. For example, data indicate that the release of oil and grease at Northeast Generating Company’s (NGC) Northfield Station is less than 0.5 mg/l and that such releases do not adversely affect water quality. However, under the terms of the proposed Permit, NGC would be required to take monthly samples even though values less than 5.0 mg/l (10 times higher) would be reported as zero. In these circumstances the burden of monitoring and reporting in accordance with the proposed Permit would “yield a gain of trivial or no value.” For these reasons, EPA should adopt a generic, regulatory exemption for small discharges from hydroelectric facilities which do not pose a threat to water quality, allowing BMPs instead to address any potential pollution posed. (See Appendix A for a more thorough discussion of NUSCO’s legal position on these issues.)

Exempting these discharges should not be confused with abandoning them. NUSCO is of the strong opinion that the environment should and could be protected by requiring robust BMPs. It is felt that this is much better way of effectively addressing the minor discharge from these facilities.

EPA Should Adopt An Administrative Exemption For Minor Releases From Hydroelectric Projects [Note: The commenter’s footnotes are shown within brackets.]

Assuming that the foregoing releases are point source “discharges” within the meaning of the CWA, EPA has the authority to categorically exempt such discharges from the NPDES permit program due to their “de minimis” nature. In *Alabama Power Company v. Costle*, [636 F.2d 323 (D.C. Cir. 1979)] the court addressed EPA’s authority to provide for such exemptions in the context of the Clean Air Act Amendments:

Categorical exemptions may also be permissible as an exercise of agency power, inherent in most statutory schemes, to overlook circumstances that in context may fairly be considered de minimis. It is commonplace, of course, that the law does not concern itself with trifling matters, and this principle has often found application in the administrative context. Courts should be reluctant to apply the literal terms of a statute to mandate pointless expenditures of effort. As we wrote in *District of Columbia v. Orleans*, 132 U.S.App.D.C. 139, 141, 406 F.2d 957, 959 (1968), “(t)he ‘de minimis’ doctrine that was developed to prevent trivial items from draining the time of the courts has room for sound application to administration by the Government of its regulatory programs . . .” The ability, which we describe here, to exempt de minimis situations from a statutory command is not an ability to depart from the statute, but rather a tool to be used in implementing the legislative design. [*Id.* at 360 (footnotes omitted)]

Determination of when matters are truly de minimis naturally will turn on the assessment of the particular circumstances, and the agency will bear the burden of making the required showing. But we think most regulatory statutes, including the Clean Air Act, permit such agency showings in appropriate cases.

In this respect, the principle is a cousin of the doctrine that, notwithstanding the “plain meaning” of a statute, a court must look beyond the words to the purpose of the act where its literal terms lead to “absurd or futile results.” *United States v. American Trucking Ass’ns*, 310 U.S. 534, 543, 60 S.Ct. 1059, 1063, 84 L.Ed. 1345 (1939); *District of Columbia v. Orleans*, 132 U.S.App.D.C. 139, 141, 406 F.2d 957, 959 (1968). [*Id.*, n.89]

...

Unless Congress has been extraordinarily rigid, there is likely a basis for an implication of de minimis authority to provide exemption when the burdens of regulation yield a gain of trivial or no value. That implied authority is not available for a situation where the regulatory function does provide benefits, in the sense of furthering the regulatory objectives, but the agency concludes that the acknowledged benefits are exceeded by the costs. For such a situation any implied authority to make cost-benefit decisions must be based not on a general doctrine but on a fair reading of the specific statute, its aims and legislative history. [*Id.* at 360-61. See also *Permian Basin Rate Cases*, 399 U.S. 747 (1968) (affirming Federal Power Commission authority to grant exemption to producers from the requirement under the Natural Gas Act to make quality adjustments in prices based upon a finding that the consequences for consumer prices would be de minimis.)]

The legislative history of the CWA confirms that Congress was not “extraordinarily rigid” and that it granted discretion and flexibility to EPA in implementing the CWA:

In the administration of the Act, EPA will be required to establish numerous guidelines, standards and limitations.... [T]he Act provides Congressional guidance to the Administrator in as much detail as could be contrived. Virtually every action required of the Administrator by the Act, however, involves some degree of agency discretion, judgments involving a complex balancing of factors that include technological considerations, economic considerations, and others. [S.Rep. No. 1236, 92d Cong., 2d Sess. 149 (1972), 1972 Leg.Hist. 281, 332, U.S.Code Cong. & Ad.News 3776, 3826]

Accordingly, in the context of the CWA, there is a basis for implied “de minimis” authority to grant exemptions from the NPDES program when the burdens of such regulation would “yield a gain of trivial or no value.” NUSCO believes that the available data and operational experience at numerous hydroelectric facilities following enactment of the CWA compel the conclusion that

subjecting such minor releases to the full requirements of the NPDES Permit Program would satisfy this criterion. As referred earlier in these comments, the discharges from NUSCO's facilities are quite small. For example, NGC's data indicate that the release of oil and grease at NUSCO's Northfield Mountain is less than 0.5 mg/l and that such releases do not adversely affect water quality. However, under the terms of the Draft General Permit, NGC would be required to take monthly samples but values less than 5.0 mg/l would be reported as zero. In these circumstances the burden of monitoring and reporting in accordance with the Draft General Permit would "yield a gain of trivial or no value." This pattern may well be repeated for each of the approximately 150 FERC jurisdictional facilities in Massachusetts and New Hampshire, as well as numerous additional facilities not within FERC's jurisdiction. For these reasons, EPA should adopt a generic, regulatory exemption for small releases from hydroelectric facilities which do not pose a threat to water quality.

As a condition of eligibility for such an exemption, NUSCO suggests the implementation of a Spill Prevention Control and Countermeasures ("SPCC") plan and/or best management practices ("BMPs") to minimize such releases and appropriate monitoring and reporting. The BMPs should contain a monitoring program whereby the facility owner would propose a sampling program that would generate the important analytical data. For example, the owner might be required to write a BMP that would include the semi-annual testing of each accessible outfall in the project. In this manner, the owner can plan out a manageable testing protocol and EPA would generate sufficient and suitable data upon which to evaluate eligibility criteria for the exemption.

[NOTE: The commenter expanded on the above arguments in an accompanying Appendix A consisting of 7 pages, the relevant portion of which follows.]

Insignificant Releases From Hydroelectric Projects Should Not Be Subject to Burdensome NPDES Permit Program Requirements.

The releases of small quantities of oil, heat and total suspended solids which typically result from the operation of hydroelectric projects are not the type of "discharges" Congress intended to regulate through the national pollutant discharge elimination system ("NPDES") under section 402 of the Clean Water Act ("CWA"). Rather, the NPDES permitting process was designed by Congress to address major point sources of pollutants, such as factories and sewage treatment plants, which were having an adverse effect on water quality, and to require additional control technology and treatment:

Throughout its consideration of the Act, Congress' focus was on traditional industrial and municipal wastes; it never considered how to regulate facilities such as dams which indirectly cause pollutants to enter navigable upstream water and then convey these polluted waters downstream. Congress did consider downstream water changes caused by dams such as saltwater intrusion, *see* § 304(f)(2)(E), 33 U.S.C. § 1314(f)(2)(E), but had no occasion to consider whether NPDES permits were desirable for dams because downstream changes

are not amenable to the technological controls required for point sources.
[*National Wildlife Federation v. Gorsuch*, 693 F.2d 156, 175 (D.C. Cir. 1982)]

Thus, in *National Wildlife Federation v. Gorsuch*, 693 F.2d 156 (D.C. Cir 1982), the court determined that dams and reservoirs, including hydroelectric facilities, are not considered point sources subject to the NPDES program and that the water quality impacts of these facilities should instead be addressed under the non-point source provisions of the CWA. Subsequently, in *National Wildlife Federation v. Consumers Power Company*, 862 F.2d 580 (6th Cir. 1988), the court held that an NPDES permit was not required for the operation of the pumps and turbines at a hydroelectric pumped storage project, because the pumping of water to the upper reservoir and its subsequent release through the turbines to the lower reservoir did not constitute a discharge of a pollutant by a point source.

The only remaining issue is whether the incidental release of very small quantities of oil and heat which are very unlikely to cause any impairment of water quality, should nevertheless be subject to the full requirements of the NPDES permit program. In the decades following the Gorsuch decision, EPA's and the various states' responses to this issue have been inconsistent. At least one EPA Region and several states determined that NPDES permits are not required for such releases. However, several other states with delegated NPDES authority issued permits under the program. These inconsistencies may be due to the fact that decades of hydroelectric operating experience have shown that these releases are insignificant and thus do not warrant burdensome monitoring and reporting requirements or substantial regulatory oversight. In view of these circumstances, EPA should reconsider whether regulating such releases as point source discharges under the NPDES Program is necessary or consistent with the intent of Congress in adopting section 402 of the CWA. For the reasons set forth herein, NUSCO respectfully submits that alternative processes are readily available to ensure that these releases remain within acceptably low limits.

(NUS 31)

RESPONSE NO. 62: The General Permits do not regulate river flow through the turbines or over the dam, but limit its coverage to separate point source discharges of noncontact cooling and direct cooling water, equipment and floor drain water, and specific maintenance-related waters. The point source discharges resulting from these activities, other than certain types of facility maintenance waters, contain added pollutants (for instance, oil and heat, as the commenter observes). As such, the reach of the permit is consistent with both *National Wildlife Federation v. Consumers Power Co.*, 862 F.2d 580, 584 (6th Cir. 1988) (“discharge” as used in the definition of “point source” required a facility must add pollutants “from the outside world” to navigable waters) and *National Wildlife Federation v. Gorsuch*, 693 F.2d 156, 165, n.22 (D.C. Cir. 1982) (pipes and spillways of dams are “point sources” under the CWA, and therefore subject to the Act discharge permit requirements).

As the commenter rightly notes, “[T]he ability...to exempt de minimis situations from a statutory command is not an ability to depart from the statute, but rather a tool to be used in implementing the legislative design.” *Alabama Power Co. v. Costle*, 636 F.2d 323, 360 (D.C.

Cir. 1979). In light of the explicit statutory design, as well as the legislative history of the CWA, EPA does not believe that application of a de minimis exemption to the hydroelectric facility discharges proposed to be covered by the Draft General Permit would be appropriate or permissible.

The stated goal of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters . . ." and "that the discharge of pollutants into the navigable waters be eliminated by 1985." See CWA § 101(a)(1). This objective is implemented in part through CWA § 301(a), which states, "Except as in compliance with this section and sections 302, 306, 307, 318, 402, and 404 of this Act, the discharge of any pollutant by any person shall be unlawful." CWA § 301(a)'s general proscription against point source pollution is "self-executing." See *Consumers Power Co.*, 862 F.2d at 582, citing *United States v. Frezzo Brothers, Inc.*, 602 F.2d 1123, 1127 (3rd Cir. 1979), cert. denied, 444 U.S. 1074, 100 S. Ct. 1020, 62 L. Ed. 2d 756 (1980). The CWA thus sets forth a total prohibition on the discharge of pollutants, except pursuant to specific authorization. *Natural Res. Def. Council, Inc. v. Costle*, 568 F.2d 1369, 1375 (D.C. Cir. 1977).

The NPDES permitting regime is the primary exception to the prohibition against point source pollutant discharges imposed by the CWA. See CWA §§ 402(a), 301(a). "The legislative history makes clear that Congress intended the NPDES permit to be the only means by which a discharger from a point source may escape the total prohibition of [§] 301(a)." *NRDC v. Costle*, 568 F.2d at 1374.¹ In its discretion, EPA may exempt a specific pollutant discharge from § 301(a)'s general prohibition by issuing an NPDES permit. *Consumers Power*, 862 F.2d at 583. Alternatively, the agency may choose not to issue such a permit, leaving the discharge unlawful under § 301(a). *Id.* Consistent with the plain language of the CWA, Congress intended the statute to lead to the long-term elimination of pollutants in the nation's waterways. *NRDC v. Costle*, 568 F.2d at 1373. The availability of NPDES permits is not a recognition of "any inherent rights to use the nation's waterways for the purpose of disposing of wastes," but instead a recognition that in the short term "pollution continues because of technological limits." *Id.* at 1375.

The commenters' assertion that Congress intended to limit the reach of the NPDES program to municipal wastewater treatment plants and industrial dischargers lacks foundation. The CWA prohibits the discharge of any pollutant from a *point source* into waters of the United States, except as authorized by permit, including an NPDES permit issued under CWA § 402. The language of the Act in no way limits its application according to size (*i.e.*, major) or source (*i.e.*, "traditional industrial and municipal wastes"). When the legislative history identifies these major sources of water pollution to be addressed by the NPDES program, it does so by way of illustration, not limitation, as reflected by Senator Montoya's comments on the original Senate bill:

¹ While EPA has determined that certain types of discharges do not require a NPDES permit, see 40 C.F.R. § 122.3, the de minimis discharges of the type at issue here are not included among them.

Your committee has placed before you a tough bill. This body and this Nation would not have it be otherwise. Our legislation contains an important principle of psychology: Men seldom draw the best from themselves unless pressed by circumstances and deadlines. This bill contains deadlines and it imposes rather tough standards on industry, municipalities, *and all other sources of pollution*. Only under such conditions are we likely to press the technological threshold of invention into new and imaginative developments that will allow us to meet the objectives stated in our bill. [emphasis added]

117 Cong. Rec. 38808 (1971), reprinted in 2 Environmental Policy Div., Congressional Reference Serv., A Legislative History of the Water Pollution Control Act Amendments of 1972, at 1278 (Senate Public Works Comm. Print 1973).

The commenter points to no evidence in the text or legislative history of the CWA or the statute's implementing regulations that Congress meant to exclude the types of discharges at issue here from NPDES permitting based on the quantity of pollutants or the cost of compliance measured against environmental gain.² *See contra*, CWA 301(a) (prohibiting “the discharge of any pollutant” unless in compliance with CWA); 40 C.F.R. § 122.2 (defining “discharge of pollutant” as “[a]ny addition of any ‘pollutant’ or combination of pollutants to ‘waters of the United States’ from any ‘point source’”); 40 C.F.R. § 122.21 (imposing duty to apply for NPDES permit on “[a]ny person who discharges or proposes to discharge pollutants”). In light of this statutory and regulatory language, courts have routinely rejected attempts to exempt pollutant discharges from NPDES permitting requirements based on application of the de minimis doctrine. *See, e.g., See Natural Resources Defense Council, Inc. v. Costle*, 568 F.2d at 1369, 1377 (D.C. Cir. 1977) (once Congress has delineated an area that requires permits, EPA is not free to create exemptions); *Natural Resources Defense Council, Inc. v. United States EPA*, 966 F.2d 1292, 1306 (9th Cir. 1992) (rejecting application of de minimis exemption for certain construction activity of less than five acres based, *inter alia*, on lack of data demonstrating de

² The commenters rely on *Alabama Power* to support their argument that the high cost of compliance with the CWA and the putatively small or trivial environmental gain justify an exemption from NPDES permitting requirements. However, the court in *Alabama Power* addressed—and dismissed—this very approach as it examined the application of the de minimis exemption in the Clean Air Act. *Alabama Power* adopted the view that the implied authority to make cost-benefit decisions must derive from statute:

That implied authority is not available for a situation where the regulatory function does provide benefits, in the sense of furthering the regulatory objectives, but the agency concludes that the acknowledged benefits are exceeded by the costs. For such a situation any implied authority to make cost-benefit decisions must be based not on a general doctrine but on a fair reading of the specific statute, its aims and legislative history.

636 F.2d 323, 361. The court found that a specific portion of the statute permitted a narrow exemption for air quality review of modifications, but found no basis to exclude BACT review for new sources. *Id.*; *see also, Natural Resources Defense Council, Inc. v. EPA*, 966 F.2d 1292, 1306 (9th Cir. 1992) (“We question [the] applicability [of the de minimis doctrine] in a situation...where the gains from application of the statute are being weighed against administrative burdens to the regulated community”).

minimis effect.); *Student Public Interest Research Group, Inc. v. AT & T Bell Laboratories*, 617 F. Supp. 1190, 1206 (declining to apply the de minimis doctrine because “to do so would be inconsistent with the evident intent of Congress to penalize ‘any’ discharge of pollutants in violation of permit limitations. 33 U.S.C. §§ 1311(a), 1319(d)”; *Natural Resources Defense Council, Inc. v. Outboard Marine Corp.*, 692 F. Supp. 801, 815 (noting that environmental group “could maintain a claim for even minor or infrequent violations of the CWA”); *see also Northwest Envtl. Advocates v. EPA*, 537 F.3d 1006 (9th Cir. 2008) (holding that EPA acted *ultra vires* in promulgating incidental vessel discharge exemption). Therefore, even releases into waters of the United States of “small quantities of oil, heat and total suspended solids” or “negligible amounts of pollutants” cited by the commenter require an NPDES permit. (Note that as discussed in Response No. 29 the total suspended solids (TSS) parameter has been eliminated from these permits).

COMMENT NO. 63: NUSCO has concerns about the potential conflict between the Federal Energy Regulatory Commission (FERC) licensing process and this Draft General Permit. Given the comprehensive nature of the Federal Power Act (FPA) licensing process, there is a significant potential for conflict between the conditions of an NPDES permit and FERC license. For example, it appears that the Draft General Permit would be subject to renewal and that facilities would be subject to section 401 certification from a state and/or consultation with the National Marine Fisheries Service (“NMFS”) and/or the Fish and Wildlife Service pursuant to the Endangered Species Act *every five years*. Under the FPA, however, the minimum term of a license is *30 years* and a license may be altered only upon mutual agreement of FERC and the licensee. Thus, under the FERC process, a hydroelectric facility is not subject to the risk of new conditions being imposed as a result of repeated certifications and/or consultations at such frequent intervals.

One of the important goals of the FPA licensing process is to enable a licensee to determine if continued operation of a facility and the expenditure of funds for any required improvements are economical and whether a license for the project should be sought or renewed. The Draft General Permit would contravene this important goal and could result in regionally important and strategic facilities being subjected to repeated changes to regulatory requirements that ultimately render a project uneconomical. This may occur even after a facility has committed significant resources to improve environmental conditions in reliance upon a long-term license issued by FERC. Such a result would conflict with the primary purpose of the FPA to attract and protect private investment in hydroelectric developments. (See the enclosed Appendix A consisting of 7 pages for a more thorough discussion of NUSCO’s legal position on these issues.)

(NUS 33)

The requirements contained in the general permits may duplicate or even conflict with Federal Energy Regulatory Commission requirements contained in a project’s license. Under the FPA, FERC is the paramount licensing authority for hydropower projects. Many of the issues covered in the proposed general permits – trash rack debris disposal, Endangered Species Act (ESA)

consultation, minimum flow requirements – are addressed by FERC with strong input from other federal and state agencies (including state water quality and federal and state fish and game agencies) during the licensing process. Any substantial change to a licensed project would require an application for amendment of the license and prior FERC approval before it could be implemented under the FPA. Over the years, much work has been done to reduce the complexity of the licensing process. NHA and UWAG wish to avoid any situation that may cause the process to become more duplicative, inefficient, and time consuming.
(NHUW 26)

COMMENT NO. 64: The proposed permit would conflict with FERC’s comprehensive licensing authority under the Federal Power Act. [Note: the commenter’s footnotes are shown within brackets.]

The Supreme Court’s seminal decision in *First Iowa Hydroelectric Cooperative v. Federal Power Commission* [328 U.S. 152 (1946)] clearly grants FERC comprehensive licensing authority over hydroelectric projects. More than 40 years later, the Supreme Court upheld *First Iowa* in *California v. FERC*, [495 U.S. 490 (1990)] in which the Court affirmed FERC’s jurisdiction to set minimum flow requirements in a license:

By directing FERC [in the Electric Consumers Protection Act of 1986] to consider the recommendations of state wildlife and other regulatory agencies while providing FERC with final authority to establish license conditions (including those with terms inconsistent with the States’ recommendations), Congress has amended the FPA to elaborate and reaffirm *First Iowa*’s understanding that the FPA establishes a broad and paramount federal regulatory role. [*Id.* at 499 (*citing* sections 10(a)(1)-(3) and 10(j)(1)-(2) of the FPA)]
...

Allowing California to impose significantly higher minimum stream flow requirements would disturb and conflict with the balance embodied in that considered federal agency determination. FERC has indicated that the California requirements interfere with its comprehensive planning authority, and we agree that allowing California to impose the challenged requirements would be contrary to congressional intent regarding the Commission’s licensing authority and would “constitute a veto of the project that was approved and licensed by FERC.” [*Id.* at 506 (*citing California ex rel. State Water Resources Control Board v. FERC*, 877 F.2d 743, 749 (9th Cir. 1989))]

Moreover, in *Jefferson County* the Court reasoned that Washington State’s authority to impose minimum stream flow requirements in a section 401 certification did not conflict with FERC’s comprehensive licensing authority in that case because FERC had “not yet acted on [Jefferson County’s] license application,” whereas in *California*, FERC had already issued the license. [511 U.S. at 722] Therefore, any conflict between Washington State’s certification and FERC’s licensing authority was “hypothetical, [and the Court was] unwilling to read implied limitations

into § 401.” [*Id.* at 723] Thus, the potential for an impermissible veto of a project due to a conflict between FERC’s paramount licensing authority under the FPA and the exercise of authority under the CWA remains a valid concern.

Given the comprehensive nature of the FPA licensing process, there is a significant potential for conflict between the conditions of an NPDES permit and a FERC license. For example, it appears that the proposed General Permit would be subject to renewal and to section 401 certification from a state and/or consultation with the National Marine Fisheries Service (“NMFS”) and/or the Fish and Wildlife Service pursuant to the Endangered Species Act *every five years*. Under the FPA, however, the minimum term of a license is *30 years* and a license may be altered only upon mutual agreement of FERC and the licensee. Thus, a hydroelectric facility is not subject to the risk of new conditions being imposed as a result of repeated certifications and/or consultations at such frequent intervals. One of the important goals of the FPA licensing process is to enable a licensee to determine if continued operation of a facility and the expenditure of funds for any required improvements make economic sense and whether a license for the facility should be sought or renewed. EPA’s proposed General Permit could result in regionally important and strategic facilities being subjected to extensive consultation and potential improvements or changes that render a facility uneconomic shortly after significant expenditures to improve environmental conditions have been made in reliance upon a long-term license issued by FERC. Such a result would conflict with the primary purpose of the FPA to attract and protect private investment in hydroelectric developments.

In addition, many licensed facilities already have a section 401 certification from the state and have completed consultation with NMFS. Requiring another certification every five years would consume state and federal resources without providing a corresponding environmental benefit. It would also disrupt the exercise of FERC’s comprehensive licensing authority, which typically involves several years of analysis prior to the issuance of a license. This analysis comprises a comprehensive regulatory investigation and the balancing of interests including, but not limited to, federal and state economic, cultural, recreational, irrigation, environmental, and fish and wildlife concerns. Implementation of the CWA is but one of the many interests that must be considered under the FPA to determine what kind of project best serves the public interest.

EPA contemplates that the Draft General Permit would be renewed every five years subject to section 401 certification but does not address the scope of such certification. Consistent with *Gorsuch* and *Consumers Power*, the EPA Fact Sheet states that the Draft General Permit does not regulate the river flow through the turbines or over the dam. However, a state might argue that it could regulate any aspect of the project based on *Jefferson County*’s holding that if there is one discharge in connection with the federally-authorized activity, a state can impose conditions on the “activity as a whole,” to comply with state water quality standards.

Furthermore, any substantial change to a licensed project would require an application for amendment of the license and prior FERC approval before it could be implemented under the FPA. FERC’s review could trigger the need for comprehensive analyses under the FPA and NEPA and further consultations under the ESA and other statutes. It is unclear how long such a

proceeding would take and whether compliance with the Draft General Permit would be stayed pending receipt of FERC approval under the FPA. It is also unclear what the consequences would be if FERC did not approve the proposed license amendment.

The Supreme Court has ruled that dual regulatory regimes with dual final authority are unworkable, and these examples demonstrate how EPA's proposed regime could not work within the licensing framework established by the FPA. As discussed above, the need to subject hydroelectric facilities to the full requirements of the NPDES Program is questionable, and there are other approaches available to ensure that the relevant releases will remain at insignificant levels while avoiding the issues outlined above. Accordingly, NUSCO respectfully urges EPA to reconsider the need for its proposal and to proceed with an evaluation of the administrative exemption and other alternatives outlined above. Such an approach would achieve EPA's goals under the CWA to protect water quality while avoiding the potential for duplication and conflict with FERC's paramount licensing authority under the FPA.

(NUS 34)

NHA and UWAG submit that the requirement for individual consultation with the National Marine Fisheries Service ("NMFS") for certain waters in Massachusetts is unnecessary and ill-advised. [Note: the commenter's footnotes are shown within brackets.] The proposed general permit for Massachusetts requires operators to consult with NMFS in order to obtain coverage under the general permit if they discharge to the Merrimack and Connecticut rivers in Massachusetts. Coverage by the general permit will be denied unless the individual consultation results in either a no jeopardy opinion or a finding that the discharger is not likely to adversely affect the shortnose sturgeon or critical habitat. Thus, in addition to the ESA consultation that will take place for the general permit itself when renewed every five years, operators will be required to perform individual consultations as well to qualify for coverage under the general permit.

NHA and UWAG believe this requirement is unnecessary, burdensome for operators and duplicative. Individual dams are covered by FERC licenses, which fully address the requirements of the ESA. Requiring a virtually identical consultation every five years when an NOI has to be resubmitted would needlessly duplicate the work performed by FERC and federal and state natural resource agencies and create the possibility of inconsistencies between the requirements contained in the FERC license and the consultations required for the NOI.

Under the FPA, the minimum term of a license is 30 years and a license may be altered only upon mutual agreement of FERC and the licensee. Thus, a hydropower project is not subject to the risk of new conditions being imposed as a result of repeated certifications and/or consultations at such frequent intervals. One of the important goals of the FPA licensing process is to enable a licensee to determine if continued operation of a project and the expenditure of funds for any required improvements make economic sense and whether a license for the project should be sought or renewed. EPA's proposed general permit could result in these regionally important and strategic facilities being subjected to never-ending consultation and potential changes that render a project uneconomic shortly after significant expenditures to improve

environmental conditions have been made in reliance upon a long-term license issued by FERC. Such a result would conflict with the primary purpose of the FPA to attract and protect private investment in hydroelectric developments.

In addition, many licensed projects already have a Clean Water Act Section 401 certification from the state that addresses the discharge of oil from a project, have fish and wildlife conditions recommended by state and federal agencies included in their license, and have undergone ESA consultation with NMFS as well as the Fish and Wildlife Service. Therefore, requiring that Section 7 consultation occur every five years would consume private and public resources without providing a corresponding environmental benefit. It would also disrupt the exercise of FERC's comprehensive licensing authority, which typically involves several years of analysis prior to the issuance of a license. This analysis comprises a comprehensive regulatory investigation and the balancing of interests including, but not limited to, federal and state economic, cultural, recreational, irrigation, environmental, water quality, and fish and wildlife concerns. Implementation of the CWA is but one of the many interests that must be considered under the FPA to determine what kind of project best serves the public interest.

Furthermore, the permissible scope of the ESA consultation with NMFS is also a potential issue. The EPA Fact Sheet states that NMFS provided only a conditional concurrence: "The NMFS previously informed EPA that the shortnose sturgeon (*Acipenser brevirostrum*) is an endangered species inhabiting certain reaches of the Merrimack and Connecticut Rivers in Massachusetts. ... NMFS 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 draft permits designate the operators of these facilities as non-federal representatives to allow informal consultation or preparation of a biological assessment ("BA").

Under applicable ESA regulations, the contents of a biological assessment are at the discretion of NMFS and will depend on the nature of the federal action [50 C.F.R. § 402.12 (2003)]. However, these regulations also indicate that a BA may include an analysis of the effect of the action on the species and habitat, including consideration of cumulative effects and an analysis of alternative actions. "Cumulative effects" are those effects of future state or private activities that are reasonably certain to occur within the action area of the federal action subject to consultation [Id. § 402.02]. The "effects of the action" include direct and indirect effects of the action together with the effects of other activities which are interrelated or interdependent with that action [Id]. Thus, it is unclear whether the scope of the consultation would be limited to the effect of issuing the proposed general permit on shortnose sturgeon, an issue that is already addressed through EPA-Region 1's consultation with NMFS, or whether NMFS would request additional analyses or conditions related to other project activities – the extent of the potential further consultation is simply far too open-ended.

Again, NHA and UWAG state that the discharges covered by the permit are minor and will likely have a very small impact on the environment. Using these minor, benign discharges as the rationale for subjecting hydroelectric facilities to what could amount to a "mini-relicensing"

process every five years that includes Section 7 consultation is simply inappropriate and is completely counter to the purpose of the Federal Power Act. Such a process would be a significant waste of resources. Moreover, it could, over time, threaten the viability of a significant portion of the nation's hydroelectric resource base. Therefore, NHA and UWAG recommend that EPA-Region 1 delete the ESA consultation requirement for individual NOIs, relying instead on the consultation already undertaken on the general permits. (NHUW 27)

COMMENT NO. 65: Moreover, as currently drafted, EPA would add another, duplicative and burdensome layer of regulation upon hydroelectric projects, a vast majority of which are small and whose water discharges, as will be shown, have a de minimis effect on waterways. Each project would have significant compliance responsibilities and would inundate EPA with information, none of which would enhance the goals of EPA. The burden of compliance on small project owners should not be understated. Many of these owners own a single project and do not have administrative staff and who may simply not be able to afford to comply with the permit obligations. In fact, some of these project owners may have to cease operations. EPA should, therefore, abandon this endeavor and, instead, rely on existing and future 401 certificates for carrying out its responsibilities under the Clean Water Act.

Compliance with the proposed permits would impermissibly infringe on FERC's comprehensive authority under the Federal Power Act. [Note: The commenter's footnotes are shown within brackets.] The Supreme Court has on many occasions affirmed that the FERC has ultimate authority over hydroelectric licensing. [See, e.g., *First Iowa*; *California v. FERC*.] The FERC is charged with balancing environmental and non-environmental factors in determining whether or not to issue a license or exemption. In *California v. FERC*, the Supreme Court upheld the sanctity of FERC's comprehensive licensing authority from attempts by a state agency to impose more stringent minimum flow requirements than those contained in the already-issued license for the project. The Court stated:

[a]llowing California to impose significantly higher minimum stream flow requirements would disturb and conflict with the balance embodied in that considered federal agency determination. FERC has indicated that the California requirements interfere with its comprehensive planning authority, and we agree that allowing California to impose the challenged requirements would be contrary to congressional intent regarding the Commission's licensing authority and would "constitute a veto of the project that was approved and licensed by FERC." [*California v. FERC*, 110 S. Ct. 2033.]

The analysis that the FERC undertakes is time consuming and extensive. The trade off is that a licensee is granted a license for a set term of 30 to 50 years. During the license term, the licensee must comply with all terms and conditions of the license. Once a license is issued, there is relative certainty that additional burdens will not be imposed on the licensee and that, if the licensee accepts the license, it will have made a decision, based on the facts existing at the time of license, that it can operate its project and obtain a return on its investment, pay its debts, etc. It is this certainty that allows projects to be financed and constructed. Consulted state and

federal agencies understand that the terms and conditions proposed during the license process will be in place for the license term. Thus, this framework establishes the bounds by which all parties participate in the licensing process. Any requirement that places the risk of future consultation and imposition of additional obligations on a licensee upsets this certainty and the foundation upon which the licensing process is based.

Under EPA's proposal, not only is the NPDES permit subsumed in the 401 certificate, other conditions would conflict with the license or exemption in violation of precedent. As noted above, the Supreme Court in *California v. FERC* held that a state-mandated requirement may not conflict with a license condition. Any new requirement imposed on a licensee via this proposed process could conflict impermissibly with the license. Of course, any condition relating to matters that are the subject of this proposal contained in a license must be complied with for the term of the license.

For example, the proposed general permit may require the NPDES permittee to obtain successive 401 certificates at the expiration of the NPDES permit period. This would conflict with the license and exemptions already issued. Once a 401 certificate is issued and a hydro license is issued containing the terms and conditions of the 401 certificate, there is no requirement to obtain a new 401 certificate during the license term, unless the licensee or exemptee proposes to change the project and that change would have an adverse impact on water quality. [See 18 C.F.R. § 4.38(f)(7)(iii); *Marysville Hydro Partners*, 63 FERC ¶J 61,271 (1993).] A requirement to obtain a new 401 certificate every five years would clearly conflict with the licensing authority of FERC. Any NPDES permit obligations that were different than those in the FERC license or exemption would place a licensee or exemptee in the untenable position of having to choose between complying with an order from EPA and violating its FERC license or violating an EPA order and complying with its FERC license. This is just the situation the Supreme Court in *California v. FERC* protected against. [*California v. FERC*, 110 S. Ct. at 2033.]

The proposed permit obligation would contain consultation requirements that are in conflict with the FERC's exclusive jurisdiction over hydroelectric projects. For example, the proposed permit would require consultation with the National Marine Fisheries Service and/or U.S. Fish and Wildlife Service under the Endangered Species Act every five years. The Proposed Permit contains no limitations on the scope of future NMFS review. As such, the NMFS would have the right to impose new operating conditions beyond the scope of the CWA on projects already licensed by the FERC. The FERC's license process already has required significant consultation with these agencies at the time of licensing. Comments were received by all interested state and federal agencies during the extensive license and exemption processes. Those comments were incorporated into the binding terms and conditions of the license and exemptions now held by the subject hydroelectric projects. Any requirement that additional consultations occur under a different regulatory scheme would conflict with those already in the license process and, again, place the licensee and exemptee into a position of open ended regulatory jurisdiction that is inconsistent with the Federal Power Act, Supreme Court and FERC precedent. [Often, FERC issues a license or exemption that contains ongoing monitoring and reporting requirements which require consultation with FWS and NMFS. However, all plans are submitted to and

approved by FERC under its statutory authority.]

Finally it bears mentioning that, during the licensing process, it is GSHA's understanding that the only water quality/wastewater permitting requirement the EPA imposed (or needed to impose) at that time on any of its member projects was that the project Owner/Operator obtain a 401 certificate for each project. To the best of GSHA's knowledge, the EPA did not require any of the GSHA member projects to obtain separate NPDES permits as part of that review process. Accordingly, GSHA member projects have operated in the good faith belief and continue to be of the opinion that their 401 certificates in combination with their FERC licenses or exemptions (where licenses were required and exemptions, when 401 certificates are required) contained all required water quality and wastewater discharge related provisions, such that separate NPDES permits were not required. This interpretation is consistent with the effect of FERC regulation over hydroelectric power under the Federal Power Act. Imposition of additional conditions such as those described in the Proposed Permit would impermissibly infringe on FERC's licensing authority and impose conditions that conflict with hydro licenses in violation of the Federal Power Act, Supreme Court precedent and Commission precedent.
(GSHA 22)

RESPONSE NOS. 63-65: The commenters overstate the extent to which FERC eclipses other relevant Congressional proscriptions or precludes application of other statutes. "The Federal Power Act is not immune from effects of other subsequent acts of Congress." *Appalachian Power Co. v. United States*, 221 Ct. Cl. 398, 607 F.2d 935, 941 (1979), *cert. denied*, 446 U.S. 935, 100 S. Ct. 2151, 64 L.Ed.2d 787 (1980). An operator of a hydroelectric plant with a point source discharge of equipment cooling water, equipment and floor drain water, equipment backwash strainer water, or specific maintenance waters is legally subject to both the Federal Power Act and the Clean Water Act. Contrary to the view advocated by the commenters, where two statutes are "capable of co-existence, it is the duty of the courts, absent a clearly expressed congressional intention to the contrary, to regard each as effective" *See Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 1018, 104 S. Ct. 2862, 2881, 81 L. Ed. 2d 815, 842 (1984) (internal citations omitted). Although "the FPA represents a congressional intention to establish 'a broad federal role in the development and licensing of hydroelectric power,'" the CWA "has diminished [the FPA's] preemptive reach by expressly requiring the Commission to incorporate into its licenses state-imposed water quality conditions." *Am. Rivers, Inc. v. FERC*, 129 F.3d 99, 111 (2d Cir. 1997) (quoting *California v. FERC*, 495 U.S. 490, 496, 109 L. Ed. 2d 474, 110 S. Ct. 2024 (1990)).

To be sure, as the commenters have pointed out, compliance can be complex where an activity encompasses multiple federal statutes. The Federal Power Act (FPA) authorizes FERC to issue licenses "for the purpose of constructing, operating, and maintaining dams, water conduits, reservoirs, power houses, transmission lines, or other project works necessary or convenient...for the development, transmission, and utilization of power across, along, from, or in any of the streams or other bodies of water over which Congress has jurisdiction" under the Commerce Clause. 16 U.S.C. § 797(e). These hydroelectric licenses contain conditions that FERC deems necessary to improve and utilize the nation's waterways in general and water-power development

in particular. *Id.* § 803(a). Upon “mutual agreement” between the Commission and a licensee, FERC may amend such licenses, which are issued “for a period not exceeding fifty years.” *Id.* § 799.

At the same time, when a pollutant is discharged into U.S. waters from a point source, the discharger must first obtain authorization under the Clean Water Act. The CWA makes it unlawful for any person to discharge from any “point source” into the waters of the United States any “pollutant,” except in compliance with, *inter alia*, an NPDES permit issued by EPA or an authorized state, pursuant to section 402, 33 U.S.C. § 1342. *See* CWA §§ 101(a)(1), 301, 33 U.S.C. §§ 1251(a)(1), 1311. The commenter cites to a variety of possible conflicts that will be engendered by the combination of FERC licensing, Clean Water Act permitting, the 401 certification process and/or consultation with other federal agencies, but these are purely hypothetical and speculative. They are not necessary (nor do they appear to be likely) outcomes of the interaction between the state and federal agencies under applicable statutes and regulations.

It is incorrect that application of Section 401 certification requirements pursuant to the Clean Water Act would constitute “an impermissible veto” of a project within the meaning of *First Iowa* and *FERC v. California*. Both of these cases are inapposite. *California v. FERC* did not address the issue of a state exercising its authority over a federally licensed hydroelectric project through Section 401 of the Clean Water Act, but instead through a California state regulation. Similarly, in *First Iowa*, the Court sustained FPC's jurisdiction against a state regulation, holding that the federal power preempted conflicting state policy. Instead, *American Rivers v. FERC*, 129 F.3d at 111, is more squarely on point and underscores the soundness of EPA's position on this issue. In that case, the court held that, “The Commission's concern that states will hold the Commission hostage through the § 401 process is misplaced because states' authority under § 401 is circumscribed in notable respects,” specifically “applicants for state certification may challenge in courts of appropriate jurisdiction any state-imposed condition that exceeds a state's authority under § 401,” and “the Commission may protect its mandate by refusing to issue a license which, as conditioned, conflicts with the FPA.”

The commenter's concerns about the consultative process between EPA and its sister federal agencies is similarly misplaced. The commenter correctly points out that the General Permit would be subject to renewal after five years, which would entail an additional Section 401 certification from a state and consultation with the National Marine Fisheries Service (“NMFS”) and the Fish and Wildlife Service pursuant to the Endangered Species Act. These consultations are in accordance with longstanding Agency regulations. *See* 40 C.F.R. §§ 122.49 (“Considerations under Federal law”) and 124.59 (“Conditions requested by the Corp of Engineers and other government agencies”). The commenter is incorrect in stating that there are “no limitations on the scope of future NMFS review” and that the requirement results in “open ended regulatory jurisdiction.” This concern is both hyperbolic as well as speculative. The consultation is limited to determining whether “any action authorized by EPA” is “likely to jeopardize the continued existence of any endangered species or adversely affect its critical habitat.” *See* 40 C.F.R. § 122.49(c). The “action” subject to NMFS consultation under the

NPDES permit is the authorization of specific equipment-related and maintenance waters from point sources at the hydroelectric facilities eligible for coverage under the general permit. Contrary to the commenter's claim, this condition is by its terms self-limiting and does not open the door to an open-ended consultation on the overall impacts of the hydroelectric facilities' operations.

The final permits have been revised to clarify the ESA consultation process by eliminating the designation of operators as non-Federal representatives for purposes of informal consultation or biological assessment as follows. EPA will initiate the informal ESA consultation process upon receipt of the Notice of Intent from a hydroelectric generating facility, with discharges to the Connecticut or Merrimack River in Massachusetts. NMFS will either indicate whether the hydroelectric facility's discharges require additional effluent limitations or permit requirements to protect the shortnose sturgeon or its critical habitat. A facility that requires additional effluent limitations or permit requirements is not eligible for general permit coverage and it will receive notification to apply for an individual NPDES permit. This is because the category of sources regulated under the hydroelectric general permit require the same effluent limitations and the same or similar monitoring under 40 C.F.R. § 122.28(a)(2). All other facilities will receive further final review and processing by EPA and MassDEP for general permit coverage.

Commenters indicate hydroelectric facilities have completed the ESA Section 7 consultation during their FERC licensing process. EPA will consider a hydroelectric facility's previous consultation with NMFS under the following conditions: 1) the consultation covered the discharges to be authorized under the general permit; 2) no significant changes in these discharges have occurred since the previous consultation; and 3) this consultation resulted in either a no jeopardy opinion or a written concurrence by NMFS with a finding that the discharges are not likely to adversely affect the currently listed endangered or threatened species or critical habitat. The final permits have been revised to include the preceding provisions and the revisions in the consultation process in Part I.G.

This consultation process with the National Marine Fisheries Service (NMFS) is not as intense or detailed as portrayed by the commenters. The environmental benefits derived from this ESA consultation process are the continued protection of the endangered shortnose sturgeon and its critical habitat. One commenter (NHUW) referenced NMFS's conditional concurrence discussion in the Fact Sheet. This conditional concurrence pertains to the ESA consultation process for permit coverage in the draft permit that has been revised in the final permit as explained above.

A CWA Section 401 certificate does not replace EPA's duties under Sections 402 and 301 of the CWA as discussed in Response Nos. 66-68. Regarding the commenter's statement that the discharges covered by the permit are minor and will likely have a very small impact on the environment, an NPDES permit is required for minor or de minimis discharges as explained in Response No. 62. The effluent monitoring data that are collected under this general permit will provide information to determine the individual and cumulative impact of the discharges on water quality of the receiving waters, as well as permit compliance status.

The commenter (GSHA) mentions an earlier water quality/wastewater permitting requirement EPA imposed during the licensing process. Nevertheless, NPDES permits are specifically required under Sections 301 and 402 of the CWA for the discharge of pollutants (see Response Nos. 66-68). In Massachusetts and New Hampshire, 33 hydroelectric generating facilities have previously applied to EPA for individual permit coverage. The GSHA member projects should apply for coverage under the final general permits because individual permits will not be less stringent than the general permits.

COMMENT NO. 66: NPDES Permit Unnecessary for Facilities with Section 401 Certification.

An applicant for a FERC license to authorize the construction or operation of a hydroelectric project under the FPA, which may result in “any discharge” into navigable waters, must provide FERC with a certification from the State that any such discharge will comply with applicable provisions of the CWA. Such authority is routinely exercised by state agencies when an existing project is relicensed by FERC, and the conditions of such certification must be included in the FERC license. For example, it is common for states to include in the section 401 certification a requirement that the licensee develop and implement an operations and maintenance plan to preserve water quality and protect fisheries.

In several recent cases, either FERC or the state has required licensees to adopt various “best management practices” to address issues similar to those addressed by the proposed General Permit. (See, *Public Utility District #1 of Chelan County*, 105 FERC P61,132 (2003), *Woods Lake Hydro*, 102 FERC P62,120 (2003)). Thus, each state has adequate authority under the CWA to include conditions related to these releases to protect water quality.

(NUS 36)

Many licensed projects already have a section 401 certification from the state and have completed consultation with NMFS. Requiring another certification every five years would unnecessarily consume state and federal resources without providing a corresponding environmental benefit. Therefore, EPA should reconsider the need for an NPDES Permit at any project which has already received a certification under section 401 of the CWA.

(NUS 37)

COMMENT NO. 67: An NPDES Permit is Unnecessary Where the State Has Issued a Section 401 Certification for the Project.

As mentioned in the preceding comment the applicant for a FERC license under the Federal Power Act must provide FERC with a certification from the State that any such discharge will comply with applicable provisions of the CWA. In *PUD No. 1 of Jefferson County v. Washington Department of Ecology*, 511 U.S. 700 (1994), the Supreme Court held that under such authority a State can impose conditions on a FERC-licensed project to require compliance with applicable water quality standards.

Such authority is routinely exercised by state agencies when an existing project is relicensed by FERC, and the conditions of such certification must be included in the FERC license. For example, it is common for states to include in the section 401 certifications a requirement that the licensee develop and implement an operation and maintenance to preserve water quality and protect fisheries. In several recent cases either the FERC or the state has required licensees to adopt various “best management practices” to address issues similar to those addressed by the proposed General Permit. *See, Public Utility District #1 of Chelan County*, 105 FERC P61,132 (2003), *Woods Lake Hydro*, 102 FERC P62,120 (203). Thus, each state has adequate authority under the CWA to include conditions related to these releases to protect water quality. Therefore, EPA should reconsider the need for an NPDES Permit at any project which has already received a certification under section 401 of the CWA.
(NUS 35)

COMMENT NO. 68: Granite State Hydropower Association (GSHA) hereby files its Comments in Opposition to the draft permits for specific discharges. GSHA objects to the proposal because it seeks to impose additional burdens on small hydroelectric owners and operators who have complied with Federal Energy Regulatory Commission (“FERC”) hydroelectric licensing or exemption requirements, including proper consultation and compliance with state and federal water quality standards and essentially the same requirements that govern NPDES permits through their Clean Water Act (“CWA”) Section 401 [33 U.S.C. § 1341] certificates.
(GSHA 31)

As will be described in more detail below, FERC’s comprehensive licensing scheme requires, as mandatory terms and conditions of hydroelectric licenses and exemptions, compliance with water quality standards. This compliance is accomplished through issuance of Clean Water Act Section 401 water quality certificates (“401 certificates”) and through conditioning authority of federal agencies such as U.S. Fish and Wildlife Service. The regulatory scheme is complete and comprehensive. In fact, 401 certificates incorporate specifically, Clean Water Act Sections 301, 302, 303, 306 and 307. Thus, the hydroelectric licenses and exemptions already cover virtually the same CWA requirements as contained in standalone NPDES permits issued under the CWA and any new permit is simply not required.
(GSHA 23)

A. FERC’s Licensing Authority is Comprehensive and Obviates the Need for a NPDES Permit

The FERC has comprehensive licensing authority over hydroelectric projects pursuant to the Federal Power Act. [See, *First Iowa Hydro-electric Cooperative v. FPC*, 328 U.S. 152, 66 S. Ct. 906 (1946); *California v. FERC*, 110 S.Ct. 2024 (1990) (“*California v. FERC*”).] It exercises this comprehensive authority through the issuance of licenses and exemptions. In order to obtain a license or an exemption, the applicant must consult with various interested state and federal agencies and obtain a CWA Section 401 Water Quality Certificate. [See 18 C.F.R. Part 4 (licenses and exemptions) and Part 16 (subsequent and re-licenses). There may be instances for exempted projects where the appropriate consulted agency does not require a 401 certificate.] If

the issuing agency does not issue a 401 certificate within one year of an application, the requirement is deemed waived. The process of obtaining a license often takes many years. There are stringent consultation requirements that require the applicant to work with, seek the approval of, and obtain detailed recommendations on project operations, including measures to mitigate any effects of project operations on the environment. The terms and conditions of the CWA Section 401 Water Quality Certificate become mandatory terms and conditions of the license. [CWA § 401(a) and (d) together mandate the minimum contents of a 401 certificate and the fact that conditions imposed by the certificate become “a condition on any other federal license or permit subject to the provisions of this (CWA) section.” Under the comprehensive federal hydroelectric licensing scheme, certain federal agencies have conditioning authority over, for example, construction and operation of fishways (FPA Section 18).]

1. The 401 Certificate Held by Hydroelectric Owners Obviates the Need for a NPDES Permit

The state’s (or EPA’s, as applicable) conditioning authority under CWA Section 401 is broad a - certification may impose limitations in operations to comply with CWA Sections 301, 302, 303, 306 and 307. CWA Section 401 certificates included as part of hydroelectric licenses and exemptions are comprehensive and contain virtually all of the substantive requirements that the CWA mandates be included in CWA Section 402 NPDES permits. To illustrate the comprehensive nature of the 401 certificates, copies of 401 certificates for representative members of GSHA are attached to the comment as Exhibit C. (The 401 certificates for the following projects are provided: Rolfe Canal, FERC 3240, February 16, 1983; Penacook Lower Falls, FERC 3342, April 7, 1981; and Penacook Upper Falls, FERC 6689, May 6, 1983.) [The 401 certificates attached as Exhibit C reference environmental submissions in the license or exemption process. As part of the license and exemption application, the license or exemption applicant is required to submit extensive information and the results of consultations with environmental agencies. Out of this consultation come terms and conditions for operation of the project. Often these conditions are summarized in the environmental assessment or environmental impact statement prepared pursuant to NEPA.]

For example, like 401 certificates, CWA Section 402 NPDES Permits must include provisions designed to ensure compliance with CWA Sections 301, 302, 306 and 307. The only two sections not specifically mandated to be addressed in 401 certificates are Section 308 (Inspections, Monitoring and Entry) and Section 403 (Ocean Discharge Criteria). Clearly, Ocean Discharge criteria are not an issue for hydroelectric facilities. With respect to CWA Section 308-related issues, FERC’s oversight responsibilities and powers under the Federal Power Act are comprehensive. In addition to monitoring and compliance-related matters imposed on licensees and exemptees by EPA or its designee during the comprehensive licensing process, FERC imposes additional monitoring and reporting obligations. FERC also routinely inspects projects and prepares detailed operational reports on a licensee’s compliance with license terms and conditions. A facility’s compliance with its license and exemption obligations is relevant not only to ensure that a project is safely operated and operated consistent with the public interest, but a project’s compliance history affects the ability of a licensee to obtain a new license upon license expiration. Compliance history is also a factor considered by FERC in license and

exemption transfer applications. Clearly, the 401 certificates issued to hydroelectric facilities obviate the need for a separate NPDES permit.
(GSHA 24)

NHA member organizations have data showing compliance with state water quality standards due to information acquired during the FERC licensing process. The data show that sample results are well below the discharge limitations proposed in the general permits.
(NHUW 28)

RESPONSE NOS. 66-68: A Section 401, certification in combination with requirements imposed through a FERC license, does not obviate or supplant EPA's duties under Sections 402 and 301 of the Clean Water Act. Such an approach would be, "completely at odds with the plain language of § 301," as explained in *Monongahela Power Co. v. Marsh*, 257 U.S. App. D.C. 345 (D.C. Cir. 1987):

[Section 301]...expressly describes the contours of permissible discharges: "Except as in compliance with this section and sections 1312, 1316, 1317, 1328, 1342, and 1344 of this title, the discharge of any pollutant by any person shall be unlawful." 33 U.S.C. § 1311(a) (1982). Section 301 thus does not tolerate attempted avoidance of its ban through an application of § 401, which is omitted from § 301's enumeration of statutory sections. Furthermore, the legislative history of § 401 reveals that the quoted provision was intended merely to assure that "any water quality requirements established under State law, more stringent than those requirements established under [the Clean Water Act], also shall through certification become conditions of any Federal license or permit." S. Rep. No. 92-414, 92d Cong., 1st Sess. 69 (1971). This history indicates no more than that state standards of water quality were to be preserved under the Clean Water Act, see *EPA v. State Water Resources Control Bd.*, 426 U.S. 200, 219, 96 S. Ct. 2022, 2031, 48 L. Ed. 2d 578, 591 (1976); *United States Steel Corp. v. Train*, 556 F.2d 822, 830 (7th Cir. 1977), and supports no suggestion that § 401 was intended in any way to supplant the need for obtaining a [Clean Water Act] permit.

Thus, Section 401 of the Clean Water Act does not provide an alternative to the statutory scheme for gaining an exemption from Section 301's ban on discharges of pollutants into navigable waters and the resulting need for a Section 402 permit to authorize such discharges.

The commenters' proposed scheme also raises practical problems. As the commenters state, "there may be instances for exempted projects where the appropriate consulted agency does not require a 401 certificate. If the issuing agency does not issue a 401 certificate within one year of an application, the requirement is deemed waived." These scenarios would appear to run counter to the argument that Section 401 combined with conditions imposed through a FERC license would be an adequate proxy for Section 402 authority. There is no basis for presuming that existing certifications, which may have been issued decades ago, are still adequate. The CWA and regulations instead contemplate an ongoing process for ensuring compliance with standards. In the case of dischargers that do not yet have an NPDES permit, the existing certification would

not necessarily have even addressed the discharge of pollutants.

Regarding the data acquired during the FERC licensing process, these data do not replace the need to establish effluent monitoring requirements under the applicable NPDES regulations. See 40 C.F.R. §§ 122.44(i) and 122.48.

COMMENT NO. 69: The permissible scope of the ESA consultation with NMFS is also a potential issue. The EPA Fact Sheet states that NMFS provided only a conditional concurrence: “The NMFS previously informed EPA that the shortnose sturgeon (*Acipenser brevirostrum*) is an endangered species inhabiting certain reaches of the Merrimack and Connecticut Rivers in Massachusetts. ... NMFS 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 draft permit designates the operators of these facilities as non-federal representatives to allow informal consultation or preparation of a biological assessment. Under applicable ESA regulations the contents of a biological assessment are at the discretion of NMFS and will depend on the nature of the federal action. [50 C.F.R. § 402.12 (2003)] However, these regulations also indicate that a BA may include an analysis of the effect of the action on the species and habitat, including consideration of cumulative effects and an analysis of alternative actions. “Cumulative effects” are those effects of future state or private activities that are reasonably certain to occur within the action area of the federal action subject to consultation. [Id. § 402.02] The “effects of the action” include direct and indirect effects of the action together with the effects of other activities which are interrelated or interdependent with that action. Thus, it is unclear whether the scope of the consultation would be limited to the effect of issuing the Draft General Permit on listed species, or whether NMFS would request additional analyses or conditions related to other facility activities.

(NUS 32)

RESPONSE NO. 69: EPA’s consultation with the NMFS and the resulting imposition of specified permit conditions is in accordance with the NPDES Permit Program regulations. See 40 C.F.R. §§ 122.49 (“Considerations under Federal law”) and 124.59 (“Conditions requested by the Corp of Engineers and other government agencies”). The consultation process has been revised as indicated in Response Nos. 63-65.

COMMENT NO. 70: The Effect of this Rule is Far Reaching - Compliance May Force Some Hydroelectric Projects to Cease Generation, thus Removing Energy from New England Markets. GSHA has shown that the proposed permit and requirements would impermissibly infringe on FERC’s exclusive jurisdiction over hydroelectric projects. The CWA Section 401 certificates are sufficient to ensure compliance with NPDES-related issues. Required compliance with this rule would burden substantially not only small hydroelectric project owners but will burden EPA - all for no identifiable benefits.

In sum, GSHA respectfully requests that the EPA and the States withdraw the proposed rule and proposed permit in recognition that hydroelectric projects with effective CWA Section 401

certificates and FERC Licenses and or documented exemptions from FERC Licenses have de facto NPDES permits.
(GSHA 25)

RESPONSE NO. 70: EPA is proceeding with the final issuance of a general permit and is not issuing a final rule as discussed in Response Nos. 4 and 60. Please refer to Response Nos. 63-65 for information on FERC's jurisdiction over hydroelectric projects and EPA's authority to issue NPDES permits to hydroelectric projects. The relationship between the existing Section 401 certificates, and FERC Licenses or documented exemptions for these projects; and NPDES permits is explained in Response Nos. 66-68. Revisions to the monitoring requirements including frequency significantly reduce the recurring monitoring and reporting burden on all hydroelectric projects as explained in Response Nos. 35, 36-38. Any burden on EPA is also reduced. The benefits of this permit are mentioned in Response Nos. 1-2 and 36-38. The final general permits reduce the permitting burden for hydroelectric project owners and for EPA by providing a streamlined approach to obtain permit coverage.

COMMENT NO. 71: The proposed rule is overly burdensome, not cost effective and not in compliance with the many initiatives enacted by Congress to reduce burdens on business and reduce paperwork.

EPA states in its "Fact Sheet" that: (1) the information collection requirements for the proposed permit are not a "significant regulatory action" under the terms of executive Order 12866 and not, therefore subject to OMB review; (2) the information collection requirements of these permits were previously approved by the OMB under the Paperwork Reduction Act; (3) the permits issued are not a "rule" so that the Regulatory Flexibility Act is not applicable to EPA's proposed action; and (4) the EPA's actions do not fall within the purview of the Unfunded Mandates Reform Act. By imposing this rule and proposed permit on small hydroelectric owners when such requirements have not been imposed previously, EPA is ignoring the letter and spirit of these Acts.

First, GSHA members have obtained hydroelectric licenses and exemptions under the comprehensive regulatory oversight of the FERC with input from state and federal agencies. During these consultations, to GSHA members' knowledge, the need for NPDES permits was never made known to the licensees and exemptees in the context of the licensing process. These small hydroelectric owners do not have these permits and any requirement to obtain and comply with one is clearly a "significant regulatory action" triggering required compliance with Executive Order 12866.
(GSHA 26)

RESPONSE NO. 71: Under Executive Order 12866 (58 FR 51735 (October 4, 1993)) the Agency must determine whether the regulatory action is "significant" and therefore subject to OMB review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may: (1) Have an annual effect on the economy of \$ 100 million or more or adversely affect in a material way the economy, a

sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities; (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order. The permitting action at issue here clearly does not meet any of these criteria. As such, EPA determined that this general permit is not a “significant regulatory action” under the terms of Executive Order 12866 and is therefore not subject to OMB review. (OMB, moreover, has in the past exempted review of NPDES general permits under the terms of Executive Order 12866.)

COMMENT NO. 72: Second, because these permits have not been required in the past on hydroelectric licensees and exemptees, GSHA does not believe that whatever Paperwork Reduction Act authorizations in place for the program in general would cover this significant expansion of the program to 146 hydroelectric projects in Massachusetts and New Hampshire. As indicated throughout these comments, the financial effect of these new burdens is significant and may cause some of these project owners to cease project operations. The sheer amount of paper that will be generated over the coming years appears to serve little or no purpose, especially in light of the de minimis environmental effect of the small hydroelectric projects. As noted above, there are 146 projects in New Hampshire and Massachusetts, 128 of which have a capacity of 5 MW or less. Compliance with this rule will result in massive increases in paper work prepared by owners and submitted to EPA. Thus, the proposed permit, in its present form, cannot possibly be consistent with the Paperwork Reduction Act. (GSHA 27)

RESPONSE NO. 72: The information required under the permit is reasonably necessary for EPA to carry out the purposes of the Clean Water Act and the NPDES permitting program, *i.e.*, to identify facilities that require permits, to assess compliance with permit limits, to evaluate water quality, etc. The Office of Management and Budget has provided EPA with sufficient authorizations under the Paperwork Reduction Act (PRA) to cover the information collection requirements of this general permit as a result of previous submissions made for the NPDES permit program, in which EPA outlined the need for the information collection under the Clean Water Act.

The commenter has not stated the specific manner in which the issuance of the general permit will violate the PRA. In EPA’s view, the purported “massive” increase in paperwork resulting from the general permit is significantly overstated, even without the reductions in the monitoring and reporting frequency made in the final general permit. The “increase” in paperwork must also be viewed in light of the fact that many of the 146 facilities, most of which it is assumed have some discharge, have chosen to never file for any NPDES permit coverage in the past, and have thus been discharging without permits for many years.

COMMENT NO. 73: Third, GSHA disputes that this proposed permit proceeding is not a “rule” that would invoke EPA’s obligation to examine the effect of this proposal on small

businesses. Small hydroelectric owners are the essence of a small business. They survive on small margins and rely on the elements (rain, snow, snowmelt, etc) for their livelihood. Significant cost increases such as those that would result from imposition of this rule are intolerable.
(GSHA 28)

RESPONSE NO. 73: The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rule making requirements under the Administrative Procedures Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

Issuance of an NPDES general permit is not subject to rulemaking requirements, under APA § 553 or any other law, and is thus not subject to the RFA requirements. The APA defines two broad, mutually exclusive categories of agency action: "rules" and "orders." The APA's definition of "rule" encompasses "an agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy or describing the organization, procedure, or practice requirements of an agency[.]" APA § 551(4). The statute's definition of "order" is residual: "a final disposition...of an agency in a matter other than rule making but including licensing." APA § 551(6) (emphasis added). The APA defines "license" to "include...an agency permit[.]" APA § 551(8). The APA thus categorizes a permit as an order, which by the APA's definition is not a rule. Section 553 of the APA establishes "rule making" requirements. The APA defines "rule making" as "the agency process for formulating, amending, or repealing a rule." APA § 551(5). By its terms, section 553 applies only to "rules" and not also to "orders," which include permits. Therefore, issuance of an NPDES general permit is not subject to rulemaking requirements under the Clean Water Act. When EPA publishes a notice to solicit public comment on draft general permits, it does so pursuant to CWA section 402(a) to provide "an opportunity for a hearing." Additionally, no requests for the Region to conduct a public hearing(s) were received during the public comment period.

The legal question of whether a general permit (as opposed to an individual permit) qualifies as a "rule" or as an "adjudication" under the Administrative Procedure Act (APA) has been the subject of periodic litigation. In a recent case, the court held that the CWA section 404 Nationwide general permit before the court did qualify as a "rule" and therefore that the issuance of the general permit needed to comply with the applicable legal requirements for the issuance of a "rule." *National Ass'n of Home Builders v. U.S. Army Corps of Engineers*, 417 F.3d 1272, 1284–85 (DC Cir. 2005) (Army Corps general permits under section 404 of the Clean Water Act are rules under the APA and the Regulatory Flexibility Act).

As EPA stated in 1998, "the Agency recognizes that the question of the applicability of the APA, and thus the RFA, to the issuance of a general permit is a difficult one, given the fact that a large number of dischargers may choose to use the general permit." 63 FR 36489, 36497 (July 6, 1998). At that time, EPA "reviewed its previous NPDES general permitting actions and related

statements in the Federal Register or elsewhere,” and stated that “[t]his review suggests that the Agency has generally treated NPDES general permits effectively as rules, though at times it has given contrary indications as to whether these actions are rules or permits.” *Id.* at 36496. Based on EPA’s further legal analysis of the issue, the Agency “concluded, as set forth in the proposal, that NPDES general permits are permits [i.e., adjudications] under the APA and thus not subject to APA rulemaking requirements or the RFA.” *Id.* Accordingly, the Agency stated that “the APA’s rulemaking requirements are inapplicable to issuance of such permits,” and thus “NPDES permitting is not subject to the requirement to publish a general notice of proposed rulemaking under the APA or any other law * * * [and] it is not subject to the RFA.” *Id.* at 36497.

Still, EPA has concluded under the RFA that there will not be a significant economic impact on a substantial number of small entities as a result of these general permits. The general permits will affect a relatively small number of dischargers. Based on the number of hydroelectric projects (compiled from the issued licenses and exemptions listings on the FERC web site, February 2008) with either a FERC license, exemption, or individual NPDES permit number, there could be as many 61 and 91 projects in Massachusetts and New Hampshire, respectively, eligible for general permit coverage.³ In contrast, a nationwide permit may impact thousands of permittees. Moreover, the general permits are relatively minimal (*e.g.*, quarterly monitoring in the case of most parameters) and are not expected to entail substantial cost. In any case similar conditions would most likely be imposed were the Agency issuing individual permits.

COMMENT NO. 74: Finally, because the action taken by EPA in this proposed permit process is a rule, it is subject to the Unfunded Mandates Reform Act. Simple analysis of the effects of this rule on small hydroelectric owners and operators is significant and EPA should quantify this effect under this Act. Any quantification will show that the costs of the rule clearly outweigh any benefits (of which GSHA believes there are none). (GSHA 29)

In conclusion, GSHA has persuasively shown that EPA’s proposed rule would conflict impermissibly with FERC’s comprehensive licensing authority under the Federal Power Act and its initiative should be withdrawn or rescinded. In the event EPA does not rescind or withdraw its proposal, EPA must implement a general permit requirement for small hydroelectric projects with capacity of 5 MW or less. This would substantially alleviate the burden imposed on small hydroelectric owners and on EPA who would otherwise be faced with a barrage of paper and materials associated with these projects. Finally, EPA must comply with all federal Acts that are

3 Subsequent to the public notice of the draft general permits for hydroelectric generating facilities in Massachusetts and New Hampshire, the Agency has amended its process for conducting general permit tiering and Regulatory Flexibility Act (RFA) analysis. Following discussions with OMB, it was agreed that EPA may conclude that an action affecting fewer than 100 small entities does not have a significant economic impact on a substantial number of small entities. On October 15, 2007, EPA’s Regulatory Policy Officer approved the categorical commencement of general permits affecting 100 small entities or fewer than 100 total entities. EPA’s current guidance is entitled Final Guidance for EPA Rulewriters: Regulatory Flexibility Act as Amended by the Small Business Regulatory Enforcement and Fairness Act and was issued in November 2006.

intended to ensure that small businesses are not burdened by unnecessary regulation and unfunded mandates.
(GSHA 30)

RESPONSE NO. 74: Section 201 of the Unfunded Mandates Reform Act of 1995 (“UMRA”) 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. As discussed in Section VI.C of the draft general permit (“Regulatory Flexibility Act”) and above, NPDES general permits are not “rules” within the meaning of UMRA. Thus, the UMRA is inapplicable to this permitting action.

Please refer to Response Nos. 63-65 for the details on FERC’s comprehensive licensing authority and EPA’s authority under the CWA to issue NPDES permit. The Region has addressed the commenter’s concerns with the draft general permits’ requirements on small hydroelectric projects by revising specific requirements as explained in this document. These permit revisions will reduce the burden on all hydroelectric owners and on EPA. Coverage under these general permits are available to specific discharges from all eligible hydroelectric generating facilities in Massachusetts and New Hampshire without regard to the generating capacity of the particular facility. EPA is complying with the applicable Federal Acts as indicated above and in the preceding responses.

COMMENT NO. 75: As the general permits will have potential significant repercussions for hydropower project operators in the region, we ask EPA-Region 1 to carefully consider the recommendations contained in this filing. NHA and UWAG strongly believe hydro projects and healthy rivers can co-exist and that hydropower operators are good stewards of the water resource. With these recommendations, we believe EPA-Region 1 can achieve necessary environmental protection, while also reducing unnecessary and duplicative administrative burdens.
(NHUW 30)

RESPONSE NO. 75: EPA has carefully considered the recommendations and comments submitted by all the commenters including those by the NHA and UWAG during the preparation of the final permits for issuance. EPA believes the revisions to the final permits as discussed in this document reduce the unnecessary and duplicative administrative burdens and at the same time are consistent with EPA’s obligations under the CWA and NPDES permit program regulations.

Summary of Revisions to the Final General Permits

This summary identifies the significant revisions to the final permits. The response to comments document provides a detailed discussion and explanation for these revisions. Other revisions are mentioned in the following EPA Review section.

1. The “up-the-pipe” sampling requirements for commingled waste streams are eliminated in Parts I.A.6 and B.6. The final permit includes an updated set of effluent limitations in new Parts I.A.5 and B.5 for those facilities where at least two discharge categories are combined in the final outfall pipe. The equipment-related cooling water operation formerly in Parts I.A.2 and B.2 has been included with combined discharge category. The Notice of Intent information in Part I.G.2 has been updated to reflect these changes.
2. The web link for the annual Discharge Monitoring Report Instructions is added to Parts I.A.1 to 3, and A.5; and B.1 to 3, and B.5. Use of the No Data Indicator Code E has been eliminated in the permit. The final permit includes a new requirement (Part I.H.6) restricting general permit coverage to a discharge that can be monitored at least once a year or monitored using the representative outfall sampling requirements. The Notice of Intent information in Part I.G.2 has been updated with the pertinent sampling frequency information for each identified discharge.
3. The effluent limitations and monitoring requirements (Parts I.A.3 and B.3) during the equipment dewatering operation are eliminated in most cases.
4. The effluent limitations and monitoring requirements for discharges of facility-maintenance related water during periods of flood/high water events in Parts I.A.3 and B.3 are replaced with the new conditions in Parts I.A.4 and 5, and B.4 and 5. The BMP plan conditions in Parts I.D and III include requirements for specific discharges during flood/high water events.
5. The effluent limitations and monitoring requirements for facility maintenance-related internal drainage water (internal dam drainage and headwall drainage) in Parts I.A.5.a and B.5.a and the conditions in Parts I.A.5.b and B.5.b have been eliminated. The discharges from ground water drains have been removed from Parts I.A.2 and B.2. Parts I.F.1, and I.G.2 have been updated to reflect these changes.
6. The pH effluent limits in Parts I.A.1 to A.3, and A.5; Parts I.B.1 to B.3, B.5; and the provision for the written request for a pH limit range change with the pH demonstration study in Part I.B.15 have been revised to consider the background or upstream receiving water pH under specific conditions. The provision for the written request for a pH limit range change with the pH demonstration study in Part I.A.15 has been eliminated. Parts A.16 and B.16 are deleted.
7. The final permit eliminates the effluent limitations and monitoring requirements for

discharges of equipment-related backwash strainer water from the operation of the backwash strainer on the cooling water intake line (see Parts I.A.4 and 5, B.4 and 5). The description of this discharge category has been revised to equipment-related backwash strainer water in these parts and in Parts I.F.1 and I.G.2). The BMP Plan includes requirements for the backwash strainer in Part I.D and in a new Part III.D.5.

8. The monthly monitoring frequency for Flow, pH Range, Temperature, and Oil and Grease is revised to once per quarter. A provision is included to begin the monitoring requirements for all discharges with the first full quarter following notification of permit coverage.
9. Parts I.A.6 and B.6 are revised to indicate commencement of effluent sampling, to include a representative outfall requirement for sampling purposes and to allow concurrent outfall sampling where feasible. The BMP plan has been revised to incorporate a requirement for representative outfalls in Part III.E.
10. The permit has been revised to authorize a reduction in the monitoring frequency under specific conditions in a new Part I.H.5.
11. The BMP Plan updates Part I.D and includes a new Part III.D.4 with facility specific debris removal practices and disposal of the solid waste following each state's regulations. The final permit clarifies that the installation of equipment to remove solid materials is not required and that the trash removal requirement applies to trash racks as well as functionally similar devices, including intake screens (Parts I.A.7 and B.7).
12. The exclusion language (Part I.F.3.a) includes exceptions for a facility discharging to waters impaired due to oil and grease and for a facility discharging to waters impaired due to pH.
13. The final permit includes a state recommendation as another instance when an individual NPDES permit may be required by the Director (Part I.F.3).
14. The ESA consultation process (Part I.G) is revised to indicate the consultation is to occur between EPA and the NMFS and to consider a hydroelectric facility's previous consultation with NMFS under specific conditions.
15. The general permit regulations concerning when an operator may request to be excluded from general permit coverage by applying for an individual permit have been added to Part I.I.3.a of the final permit.

EPA Review

The following changes to the draft permit were made by EPA during the preparation of the final permit for issuance.

1. The narrative draft permit requirements in Parts I.A.14 and B.14 prohibit additives used to control corrosion, and/or scale in cooling water. This language conflicts with the intent of these permit requirements as mentioned in the Fact Sheet discussion on the use of water treatment additives in cooling water in the Water Quality Based Limitations - Toxic section, page 12. These two Parts of the final permit are revised to allow the use of these additives to control corrosion, and/or scale in cooling water.
2. The Notice of Intent (NOI) requires that the operator provide the combined turbine discharge for the hydroelectric facility (Part I.G.2). This is clarified as the combined turbine discharge at the installed capacity. The NOI specifies the average flow magnitude for each outfall and this language is updated to the average flow from each operation that contributes flow to the outfall consistent with the NPDES permit application Form 2C. The language in this part concerning the antidegradation review is also clarified to apply to new and increased discharges as mentioned in the Fact Sheet.
3. The language concerning the date a facility receives permit coverage in Parts III.D.2.b. and c. is revised to be consistent with the language referencing the active date of permit coverage in Part I.D.1 of the permit.
4. The exclusion language for new dischargers in Massachusetts is clarified indicating it applies to Class A and Class SA waters (Part I.F.3.c).
5. The language in Part III.D.2.a.(2), describing pollutants anticipated in the “internal facility drainage water discharges”, is revised to be consistent with similar language in Part I.D.1 and in the first two paragraphs with the general requirements for Part III.D.
6. The New Hampshire water quality standards are generally found at 50 RSA § 485-A:8 and the N.H. Code of Administrative Rules Env-Wq 1700-1709. Accordingly, the references to these administrative rules are included in the final permit on pages 10 and 20.
7. The process for a facility in Massachusetts to request permit coverage (Part I.H.2) was updated to the current process.
8. A statement is added to Part I.H. 3 indicating a new discharger to New Hampshire waters should contact the NHDES to determine if additional review time is necessary.
9. The NPDES Standard Conditions in Part II that were updated in January 2007 replace the Part II Standards Conditions that were included with the draft permit on public notice. This update corrects typographical errors in the previous Part II.

10. Owners and/or operators of hydroelectric generating facilities may use a suggested NOI form to apply for coverage under either General Permit. This NOI form with instructions is provided in a new Attachment I of the permit. Parts I.G and H are updated to reflect the availability of the suggested NOI form.