RESPONSE TO COMMENTS

NPDES PERMIT No. MA0101630
Holyoke Wastewater Treatment Plant

On June 15, 2007, the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) released for public notice and comment a draft National Pollutant Discharge Elimination System (NPDES) permit for the Holyoke Water Pollution Control Facility in Holyoke, Massachusetts. The draft permit was developed pursuant to an application from the City of Holyoke for the reissuance of its permit to discharge wastewater to the designated receiving water, the Connecticut River. During this public comment period, EPA received several requests for a public hearing/meeting. Because of this interest, EPA and the MassDEP released a second public notice which scheduled a public hearing for September 19, 2007 and extended the public comment period to September 21, 2007. The Response to Comments below encompasses written comments submitted to EPA and the MassDEP during the public comment periods and comments made during the public hearing.

After a review of the comments received, EPA has made a final decision to issue the permit authorizing this discharge. The following are the comments and EPA's responses to those comments, including descriptions of changes made to the final permit as a result of the comments. The comment letters are part of the administrative record and are paraphrased herein. A copy of the final permit may be obtained by writing or by calling Mark Malone, EPA Municipal Permits Branch (CMP), 1 Congress Street, Suite 1100, Boston, MA 02114-2023; telephone: (617) 918-1619.

Subsequent to the issuance of the Draft Permit, on September 19, 2007 EPA approved the revision to the bacteria criteria of the State water quality standards discussed in the Fact Sheet. Consequently, the State is now requiring the inclusion of *E. coli* permit limits in the final permit in order to receive water quality certification. The revisions to the bacteria limits can be found in the Effluent Limitations and Monitoring Requirements and the related Footnote 6.

Also, please note that an Attachment D, Summary of Required Reports, has been added to the final permit as a reference guide for the permittee.

A. Comments received from Ms. Sandra N. Ward in a letter dated July 6, 2007.

Comment A.1.

Because many people who swim and fish near the Combined Sewer Overflows (CSOs) are Spanish-speaking, the signage required in Parts 1.B.3.f. and 1.B.4.d. 1. and 2. should be bilingual.

Response A.1.

A requirement for additional signage to be in Spanish has been added to Part I.B.3.f.

Comment A.2.

The requirement that the CSO identification signs be visible from the river is a good idea. I have been rowing on the river and would like to be able to correlate the CSO outfall to a map. One has been leaking during dry weather and this should be reported but without identification it is difficult to describe the CSO outfall accurately.

Response A.2.

Part 1.B.2.f. requires that the sign include an outfall discharge serial number for identification. Dry weather overflows are prohibited in Part I. B.2.a.(5) of the Draft Permit as one of the Nine Minimum Controls (NMC # 5).

Comment A.3.

On Page 2 of the permit, the meaning of "outfall serial number 001"is not defined.

Response A.3.

Language has been added to Part I.A.1. identifying outfall 001 as the treatment facility outfall.

C*omment A.4.*

Why is the Whole Effluent Toxicity (WET) testing performed on only the daphnia, Ceriodaphnia dubia?

Response A.4.

The number of species was reduced because past testing for both species showed consistent compliance with effluent limits. EPA and the MassDEP believe that *Ceriodaphnia dubia* is the more sensitive test species for POTW effluents, so have retained the test for this species. EPA believes that WET testing for the daphnid, in conjunction with chemical-specific pollutant controls is sufficient to control the discharge of toxic substances.

B. Comments received from Shemaya Laurel and Suzanne Jean of Holyoke Friends of the River in a letter dated July 9, 2007.

Comment B.1.

There is a great need for the CSO signs to be in both English and Spanish.

Response B.1.

See Response A.1. above.

Comment B.2.

Because of the recreational hazards presented by the CSOs and the benefits of public education

regarding the relevant water quality issues, we are interested in more testing and notification regarding the CSO situation.

Response B.2.

Part I. B. f. of the Draft Permit requires that the permittee submit a public notification plan describing measures that are being taken to meet the public notification requirement of the Nine Minimum Controls (NMC#8) in its first annual report. It also requires an evaluation of additional measures to enhance the public notification program and an implementation schedule for those additional measures.

Comment B.3.

If appropriate, it would seem useful to include upcoming goals for CSO elimination in the permit.

Response B.3.

The reduction and elimination of CSOs is a high priority for EPA. See Response E.4.

The Massachusetts Surface Water Quality Standards allow compliance schedules in NPDES permits for attaining effluent limitations based on new, newly interpreted, or revised water quality standards. (see 314 CMR 4.03(1)(b)) The inclusion of a schedule in the permit (as opposed to another enforceable mechanism such as an administrative order) is discretionary.

Because CSO abatement schedules are typically longer than the five year term of an NPDES permit and are typically subject to changes as projects are implemented and on financial and technological considerations, EPA does not generally include CSO schedules in permits. The schedule for implementing Holyoke's CSO abatement projects is included in EPA administrative orders.

We have however required, in Part I. B. f. of the Final Permit, that the permittee in its first annual report evaluate additional measures to enhance the public notification program and an implementation schedule for those additional measures, including annual press releases and notification to interested individuals and groups on the progress of the CSO abatement work. This will provide the information being sought in a more efficient manner on a more frequent basis.

C. Comments received from Massachusetts Divisions of Fisheries and Wildlife in a letter dated July 10, 2007.

Comment C.1.

The project must be reviewed by the National Heritage and Endangered Species Program for compliance with the Massachusetts Endangered Species Act and its implementing regulations.

Response C.1.

The review procedure for compliance with the Massachusetts Endangered Species Act and its implementing regulations (321 CMR 10.00) should be coordinated among the appropriate State agencies and the City of Holyoke. The MassDEP has issued a Water Quality Certification determining that the conditions of the permit will achieve compliance with the provisions of the Massachusetts Clean Water Act (M.G.L. c. 21, ss. 26-53) and regulations promulgated thereunder.

Comment C.2.

We are submitting our previous comments of June 15, 2000 on the Draft Long-Term CSO Control Plan and Draft Environmental Impact Report. The Division's two primary concerns are (1) that an adequate zone of passage exists for anadromous fish past CSO discharge plumes considered singly or in aggregate with the any and all WWTP discharges under the City's control and (2) that anadromous fish staging off or at the Holyoke Dam not be subject to CSO plumes. The submitted comments discuss certain details of the Draft Long Term Control Plan including alternatives and schedules in that Plan and expressed objections to certain aspects of the Plan.

Response C.2.

The treatment plant outfall and eight of the City's thirteen CSOs are located downstream of the Holyoke Dam. The CSOs discharge to both the main stem of the Connecticut River and to the Holyoke Canal and are all located on the west side of the Connecticut River. The treatment plant's submerged outfall discharges about 180 feet from the western shore through a diffuser. The Connecticut River averages about 800 feet wide as it passes through Holyoke (scaled from the map in the permit application). Given the width of the Connecticut River, the location of the discharges, the treatment provided by the wastewater treatment plant, and the available dilution, it is unlikely that wastewater plumes from the treatment and CSOs impede fish passage.

The Final Permit requires that the discharges shall not cause **or contribute to** violations of Federal or State Water Quality Standards. If information shows that fish passage is impeded or that other water quality standards are not achieved, this information may be used to require additional CSO control pursuant to the administrative order and/or to modify the permit pursuant to 40 CFR 122.62.

D. Comments received from U.S. Dept. of Commerce; National Oceanic and Atmospheric Administration in a letter dated July 11, 2007.

Comment D. 1.

A population of the federally endangered shortnosed sturgeon is known to exist in the Connecticut River. No information is provided regarding the volume or the pollutant loads of CSO discharges. No toxicity tests have been completed on the CSO discharges. There is little discharge information on the types and concentrations of metals in the Fact Sheet to support the statement that "…there appears to be no reasonable potential for the Holyoke WPCF discharge to exceed the water quality criteria." In addition, no information is provided on the reported

monthly values for ammonia and nitrite which can be toxic to certain lifestages of the shortnosed sturgeon. As listed species are present in the waters where pollutants will be discharged, EPA is responsible for determining whether the proposed action will affect any listed species.

The National Marine Fisheries Service requests that EPA address the concerns above and provide a complete assessment of the potential effects of the discharge to be authorized by this permit, including CSO discharges on shortnose sturgeon.

Response D.1.

EPA does not typically require extensive pollutant monitoring of CSOs in long term control plans or in permits, instead requiring permittees to understand the operation of the collection system and to focus abatement alternatives on reduction of CSO events.

Combined sewage consists of raw wastewater diluted with storm water and its characteristics can vary significantly based on, among other things, storm size and precedent conditions (i.e. how long since the last rain event). However because it is diluted wastewater, its characteristics are bounded by those of wastewater and storm water, meaning that it contains quantities of bacteria and other pollutants that exceed water quality criteria in the absence of any dilution.

As described earlier, the permit contains a narrative limit for CSOs that requires that CSO discharges not cause or contribute to violations of water quality standards. The City has violated this requirement and EPA has issued administrative orders to Holyoke requiring preparation of a CSO long term control plan (LTCP) and its implementation, which will ultimately result in compliance with the permit conditions. The 2000 Draft Long Term CSO Control Plan estimated the annual volume discharge to be about 516 MG from 14 CSOs. The Mosher Street CSO has since been completely eliminated. Partial eliminations have been accomplished at the Green Street and the Berkshire Street CSOs. The number of activations occurring in 2005 and 2006 is shown in Attachment 1.

Regarding the wastewater treatment plant discharge, the high dilution factor of 67 associated with the Holyoke WPCF serves to significantly diminish the potential for the treatment plant discharge to cause or contribute to exceedances of water quality standards. Water quality-based limits are not required for pollutants that do not have the reasonable potential to cause or contribute to exceedances of water quality standards. For example, calculated monthly average limits for some common metals include 7.5 ug/l for cadmium, 223 ug/l for copper, and 46.0 ug/l for lead. The Expanded Effluent Testing Data submitted with the application indicated discharge concentrations of 1.0 ug/l, 15.3 ug/l, and 5.0 ug/l, respectively. Using a temperature of 75°F, and a pH of 6.9 from recent WET tests, a chronic ammonia criterion for fish early life stages present would be 3.32 mg/l. Using the dilution factor of 67, an ammonia limit would be 222 mg/l. The treatment plant discharges much lower concentrations of these pollutants than the calculated limits and therefore does not have the reasonable potential to cause or contribute to violations of the applicable water quality criteria . Accordingly no limits were included.

E. Comment received from Nuestras Raices in a letter dated July 12, 2007

Comment E. 1.

Because many members of the community who visit the area of Jones Ferry Rd. CSO will be primarily Spanish-speaking, we support that signs be written in English and Spanish, and the health risks of the CSOs be clearly defined.

Response E. 1.

See Response A. 1. above regarding bilingual signs. While several commenters requested that additional information be included on the CSO outfall signs, there are practical limitations to the size of the sign. Information on the health risks posed by CSO discharges would be too much to include on the signs.

Comment E. 2.

It is difficult to tell what the next steps in Holyoke's plan to eliminate CSO discharges may be after the completion of the Berkshire St. CSO plant.

Response E.2.

See Response B.3. for discussion of the public notification program. The most recent Administrative Order (No. 05-1) required the City to: 1. By July 1, 2005, begin construction of improvements to the Berkshire St. CSO facility, related necessary improvements at the wastewater treatment plant, and necessary in-line storage that will enable the City to provide screening, preliminary treatment, and disinfection of flows up to those expected to recur every three months at the Berkshire St. CSO facility, 2. By July 1, 2008, complete construction of the Berkshire St. CSO facility, and 3. By December 1, 2005, complete the separation of the collection system tributary to the Mosher Street CSO and eliminate overflows from that outfall. EPA expects to issue the next Administrative Order in 2009.

Comment E.3.

The permit does not set a time limit on fixing CSOs.

Response E. 3.

Please see the response to comment B.3.

Comment E.4.

The permit does not set effluent limits on the CSOs. We are not sure how the permit would actually serve to protect water quality since raw sewage will continue to be dumped into the Connecticut River.

Response E. 4.

EPA has made CSO control a very high priority. CSOs are often a leading cause of water quality impairments, especially in urban waters, and we require the elimination of CSOs wherever that is feasible. Where CSOs cannot be eliminated, we seek to minimize any remaining discharges.

Because the design and construction of CSO projects can take many years, often extending beyond the term of an NPDES permit, EPA generally establishes CSO control schedules through enforcement actions rather than through permits. For example, EPA has issued a series of administrative orders to Holyoke, requiring the construction of various CSO controls. EPA plans to issue its next CSO order to Holyoke later this year.

While CSO control schedules are generally set through enforcement actions, NPDES permits establish discharge requirements for CSOs. Those requirements generally take the form of a narrative limitation that CSO discharges shall not cause **or contribute to** exceedances of the Federal and State Water Quality Standards (WQS), rather than a numeric effluent limit. Because untreated CSO discharges almost always contribute to WQS exceedances, this is a rigorous standard, and it provides a basis for enforcement actions that require construction of CSO controls. EPA's administrative orders to the City of Holyoke, which require the City to proceed with CSO work, are based on violations of this permit requirement.

F. Comments received from Jamison E. Colburn, Western New England College, in a letter dated July 12, 2007 and testimony submitted at the public meeting of September 19, 2007.

Comment F. 1.

While combined sewer discharges are not subject to the secondary treatment requirements that publicly owed treatment works must meet, they are subject to the general technology-based and water quality-based effluent limitations of CWA §§ 301 & 402 as implemented by 40 C.F.R. Part 122. Every NPDES permit must expressly forbid discharges that cause or contribute to water quality violations. See 40 C.F.R. § 122.44(d). As the Region's own administrative orders against Holyoke's CSO's have made clear, the discharges at issue in the Draft Permit do cause and contribute to violations of the applicable water quality standards. It is therefore entirely unclear from the record why this permit lacks any water quality-based effluent limitations and, indeed, lacks any enforceable goals, milestones, or performance metrics of any kind regarding elimination of the CSO's. In this much alone the permit appears to be arbitrary and capricious and not in accordance with EPA's own rules.

Response F. 1.

The reduction and elimination of CSOs is a high priority for EPA. See Response E.4.

As discussed above, the permit does include narrative limitations on CSO discharges in Part I.B.2.b, expressly forbidding discharges that cause or contribute to water quality violations. Also as discussed previously, the inclusion of a compliance schedule in a permit is allowable only under certain conditions and is discretionary. EPA has chosen to address the CSO compliance schedule through administrative orders. See Responses B.3. and E.4. regarding goals and limitations.

Comment F.2.

The Consolidated Appropriations Act for Fiscal Year 2001, P. L. No. 106-554, required that "each permit, order or decree issued pursuant to this Act after the date of enactment of this subsection for a discharge from a municipal combined storm and sanitary sewer shall conform to the CSO Control Policy signed by the Administrator on April 11, 1994." See 33 U.S.C. § 1342(q)(1). Congress's action transformed the CSO Control Policy from its origins as guidance into a legal requirement for CSO discharge permits. The Region may not issue a permit that does not "conform" to that policy.

The CSO Control Policy states unequivocally that CSO's are point source discharges subject to the same legal standards as any other point source. "NPDES authorities should ensure the implementation of the minimum technology-based controls [the so-called "Nine Minimum Controls"] and incorporate a schedule into an appropriate enforceable mechanism, with appropriate milestone dates, to implement the required long-term CSO control plan."

Response F. 2.

The permit requires implementation of the Nine Minimum Controls. (See Part I. B. of the Permit.) An "appropriate enforceable mechanism" includes both NPDES permits and enforcement orders. The CSO abatement schedules for Holyoke have been included in administrative orders.

Comment F.3.

Informally, EPA maintains that a functional long term control plan (LTCP) is the CSO permit's "water quality based controls" as required under Clean Water Act §§ 402(a)(1) and 301(b)(1)(C) (attainment of water quality standards of receiving water). The CSO Control Policy states that "[b]ecause the final long-term CSO control plan will become the basis for NPDES permit limits and requirements, the selected controls should be sufficient to meet CWA requirements." The underlying CWA "requirements," of course, are the applicable water quality standards for the receiving waters.

While the Draft Permit references the CSO Control Policy's nine minimum controls, it contains no water quality based effluent limitations—whether in the form of a LTCP or otherwise. If the Region has made a "best professional judgment" (BPJ) determination that this CSO permit need not include a LTCP requirement because of fiscal or other considerations, the Fact Sheet and/or the record should reflect it. No such determination has been made public in any way, though, and this is inconsistent with both the CWA and EPA's rules. As it stands, the Draft Permit merely states and then restates that the nine minimum controls must be observed and that the "permit maybe [sic] modified or reissued upon completion of a long-term CSO control plan." This does not help to disclose to the public what the agency's reasoning was or how it arrived at the legal conclusions embodied in the permit.

Response F.3.

The City of Holyoke was required to develop a Long Term Control Plan by an administrative order. As described previously, implementation schedules may be included in a permit schedule or an enforcement order, and for CSOs, EPA generally prefers enforcement orders. When the long term control plan is finalized and the state determines, through a UAA, that water quality standards should be revised to allow CSO discharges, then the permit will authorize those CSO discharges.

As described previously, the permit includes narrative water quality-based effluent limitations for CSOs, and administrative orders have been issued requiring a CSO long term control plan. The cited permit language, "permit may be modified or reissued upon completion of a long-term CSO control plan" pertains to a completed plan that results in a change to water quality standards.

Comment F. 4.

Some characterize the BPJ standard as discretionary, but the truth is that permitting authorities have real proof burdens if they choose to set less stringent standards under BPJ out of, for example, cost considerations. Here, given the clear relationship between this discharge and the receiving water's continuing (and documented) failure to meet its water quality standards, EPA as permitting authority must carry a high burden in light of CWA §§ 402 & 301, 33 U.S.C. §§ 1342 & 1311. Thus far, it has failed to do so.

The public record of the proceeding, whether in the Fact Sheet, Draft Permit, or some other publicly released document, must demonstrate why, the most stringent effluent limitations feasible were not set. See Natural Resources Defense Council v. U.S. EPA, 863 F.2d 1420, 1425 (9th Cir. 1988) ("[I]n issuing permits on a case-by-case basis using its "Best Professional Judgment," EPA does not have unlimited discretion in establishing permit effluent limitations. EPA's own regulations implementing this section enumerate the statutory factors that must be considered in writing permits."); cf. Association of Pacific Fisheries v. EPA, 615 F.2d 794 (9th Cir. 1980): When considering different levels of technology, it must be shown that increased costs are wholly disproportionate to potential effluent reduction before the Agency is permitted to rely on a cost-benefit comparison to select a lower level of technology as the BPT. This conclusion is consistent with the interpretation of [CWA] section 304(b)(1)(B) given in the Conference Report on the bill which ultimately became the Act. The Report states: The balancing test between total cost and effluent reduction benefits is intended to limit the application of technology *only where the additional degree of effluent reduction is wholly out of proportion to the costs of achieving such marginal level of reduction for any class or category of sources. (Id at 805 (citing Congressional Research Service, A Legislative History of the Water Pollution Control Act Amendments of 1972 at 170 (1973)).*

*Conclusory assertions that the Region has decided not to set such effluent limitations are not sufficient under the law. "Congress intended BPT standards to be based primarily on employment of available technology for reducing effluent discharge, and not primarily on demonstrated changes in water quality." Association of Pacific Fisheries, 615 F.2d at 805 (citing EPA v. California, 426 U.S. 200, 204-05 (1976)). A permit appeal on this point alone would be appropriate. See, e.g., In re City of Marlborough, Massachusetts Easterly Wastewater Treatment Facility, 12 E.A.D. at Slip Op. *21-23 (2005) (NPDES Appeal No. 04-13); In re Teck Cominco Alaska Inc., Red Dog Mine, 11 E.A.D. 457, 464-68, 472 (2003) (NPDES Appeal No. 03-09).*

At this stage, the Fact Sheet should include a description of the procedures the permit writer used for reaching the final decisions embodied in the Draft 'Permit, including any cost/benefit balancing done. 40 C.F.R. § 124.56 ("Any calculations or other necessary explanation of the derivation of specific effluent limitations..., including a citation to the-applicable effluent limitation guideline, performance standard, as required by § 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed."). In response to a request for records pursuant to the Freedom of Information Act (FOIA), the Region produced no records of any such information, whether in the form of a permit application or otherwise. I enclose a copy of this FOIA Request as an attachment herewith for the record.

Response F. 4.

As noted previously by the commenter, the National CSO Control Policy was adopted into the Clean Water Act. The policy clearly establishes the nine minimum controls as the required technology-based limitations for CSOs, and establishes that documentation produced by the permittee shall be the basis for establishing the appropriate implementation level of the controls. As such, the need for further cost-benefit analysis by the permit writer is not required.

Best Professional Judgment (BPJ) is a process for establishing case-by-case technology-based limitations. If the commenter is suggesting that BPJ, as described in 40 CFR §125.3 be used to develop water quality-based limits this would clearly not be appropriate.

Comment F. 5.

The Fact Sheet erroneously refers to a "federal court order" regarding the implementation of CSO abatement measures. If there is such a federal court order, it has had no bearing on the string of administrative orders the Region has issued to Holyoke imploring it to finish a LTCP and move expeditiously to eliminate its CSOs (consistent with the CSO Control Policy).

Response F.5.

The commenter is correct. No federal court order has been issued to the City of Holyoke. The CSO schedules have been included in federal administrative orders.

Comment F.6.

Massachusetts has designated the Connecticut River a Class B Warm Water Fishery. But besides the specific criteria for Class B waters, Massachusetts has also set narrative water quality criteria applicable to all surface waters. In relevant part, these provide that "[a]ll surface waters shall be free from pollutants in concentrations or combinations that settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste or turbidity; or produce undesirable or nuisance species of aquatic life." 314 C.M.R. § 4.05(5)(a) (2004). According to EPA's own regulations governing the setting of effluent limitations in NPDES permits, "[l]imitations must control all pollutants or pollutant parameters ... which the Director determines are or may, be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." 40 C.F.R. § 121.44(d)(1)(i). Under 40 C.F.R. § 122.44(d)(l)(vi), the Region is under a duty to translate the above-referenced narrative water quality criterion into chemical specific discharge limitations for this permit.

Response F.6.

As described earlier, the National CSO Control Policy recommends narrative water quality-based effluent limitations in Phase I permits. Phase I permits are those permits issued before completion of a CSO Long Term Control Plan. Specifically, Part IV. B. 1. c. of the CSO Policy states that in Phase I permits, the NPDES authority should require permittees to "Comply with applicable WQS, no later than the date allowed under the State's WQS, expressed in the form of a narrative limitation…"

Comment F.7.

In closing, the law governing permits and the setting of effluent limitations, especially in a receiving water currently failing to meet several state water quality standards, dictates that at least some water quality-based effluent limitations be set for the CSO outfalls in the Draft Permit. These outfalls clearly do pose a "reasonable potential" to "contribute" to the nonattainment of the water quality standards in the Connecticut. Nothing in the record reflects the Region's effort to fulfill this duty under CWA §§ 301 and 402 and, from the face of the Draft Permit, the Region's approach to this permit has not been "in accordance with law." 5 U.S.C. § 706(2)(A).

Response F.7.

See Response E.4.and F.6. regarding water quality-based limits. It is acknowledged that the City's CSO discharges are in violation of its water quality-based permit limitations. Administrative Orders have been issued requiring construction of certain CSO abatement projects, which have reduced CSO discharges and improved water quality. We expect that another administrative order, requiring further CSO abatement, will be issued in 2009.

Comment F.8.

It is open to question whether the Draft Permit is even a bona fide implementation of the CSO Control Policy's nine minimum controls as a set of technology-based effluent limitations. As other commenters will no doubt point out, there is a significant non-English speaking population in Holyoke who may or may not be able to read the signs the Draft Permit requires around the CSO outfalls. Even EPA guidance on NMC # 8 states that the chosen notification measures should provide "reasonable assurance that the affected public is informed in a timely manner." See U.S. Environmental Protection Agency, Combined Sewer Overflows: Guidance for Nine Minimum Controls (EPA 8320B-95-003), at 9-1. The Draft Permit is an improvement over the existing permit on NMC # 8. The existing permit's condition reads as follows: "These [CSO identification] signs shall be a minimum of 12 x 18 inches in size, with white lettering against a green background, and shall contain the following information:" [sic] Of course, the Region cannot justify a proposed permit on the grounds that it is the reissuance of an earlier permit.

More importantly, the work Holyoke should have been doing a decade ago according to the CSO Control Policy, i.e., characterizing its CSO discharges by volume, activations, contents, combined toxicity, etc., is just now finally being incorporated into the NPDES permit. Yet the only study and recordkeeping regarding the CSO system required in the Draft Permit limits Holyoke's duties to "direct measurement or estimation" of its discharges. Draft Permit at 8 (emphasis added). Again, the Draft Permit is inconsistent with EPA's own guidance on the applicable requirement (NMC # 9). EPA guidance makes clear that NMC # 9 is integrally related to the creation of a LTCP. What to monitor and what to measure are precursors to, and should be a function of, whatever plan the municipality will implement to eliminate the CSO's. See U.S. Environmental Protection Agency, Combined Sewer Overflows: Guidance for Nine Minimum Controls (EPA 8320B-95-003), at 10-1. Allowing rough estimations at this juncture is simply to inject unnecessary uncertainty into an already complex and drawn-out planning process.

Response F.8.

Regarding the notification requirements for NMC #8 the final permit requires the CSO identification signs also be in Spanish (see response A.1.). Statements regarding the consistency of Draft Permit requirements with previous permit requirements were not intended to be the sole justification for the Draft Permit requirements, but to show what requirements in the Draft Permit were new.

"Chapter 10 of the Nine Minimum Control Guidance, Monitoring to Characterize CSO Impacts and the efficacy of CSO Controls", discusses the implementation of NMC #9. This discussion states that this minimum control is a starting point and extensive monitoring be conducted as part of the LTCP. The minimum control should develop information on the frequency of overflows at individual points in the system. The Guidance recommends the gathering of basic data, such as date and time of overflow events, total daily rainfall, etc. The Guidance also acknowledges that monitoring of flow and quality necessary to calibrate models and/or estimate pollutant loadings may be beyond the intended scope of minimum control monitoring. EPA believes that the major purpose of the monitoring under the nine minimum controls is to help verify improvements in CSO control as CSO abatement projects are constructed. See Response D.1. for further discussion on CSO monitoring.

Comment F.9.

Holyoke's LTCP has been in draft form for some seven years now. From the face of the Draft Permit, though, it seems as if the planning process is just beginning.

Response F.9.

EPA agrees that much more needs to be done to address Holyoke's CSO discharges. Because of the cost and complexity of CSO correction in urban areas, the development and implementation of Long Term Control Plans can span many years, even decades. As a practical matter, EPA requires implementation of the projects with the highest environmental benefit first, followed by a reassessment of the LTCP to assess whether the remaining projects should be modified based on the actual performance of the combined sewer system. If changes are shown to be necessary, the draft LTCP, or priorities within the plan, may be revised or modified. For this reason the LTCP is often not finalized until the later years of the implementation period, after the majority of work has been completed. At that time the change in conditions in the collection system due to the completion of CSO elimination projects can be evaluated and a final solution in addressing the CSOs can be better evaluated and implemented.

Comment F.10.

The experience with CSO elimination across the country should have taught EPA as much by now. Instead of learning from its mistakes in past permitting of CSO's and their gradual elimination, the Region seems ready to defer to a discharger (even though it is not necessarily in the discharger's long term interest) because of cost considerations—although without any explanation in the public record, even that much must be deduced from the Region's cryptic documents. The CSO Control Policy states that "[p]ermittees should be required to coordinate system-wide implementation of the nine minimum controls and the development and implementation of the long-term CSO control plan." 59 Fed. Reg. at 18695. The Region has done no such thing in this Draft Permit.

Response F.10.

In EPA's experience, long term control plans, because they are typically based on hydraulic models of the sewer system, are not always accurate in predictions of the level of control that will be attained through the implementation of the recommended projects. A step-by-step implementation approach allows results to be verified with actual system information and allows fine-tuning of subsequent projects. While EPA's goal is to eliminate or minimize CSOs as quickly as possible, affordability, especially in communities with low household incomes, is also a very real concern. The CSO policy allows the financial capability to fund CSO improvements

to be considered when developing compliance schedules for implementation. EPA published "Combined Sewer Overflows Guidance for Financial Capability Assessment and Schedule Development" for this purpose. As previously mentioned, the development and implementation of the LTCP is and has been the subject of Administrative Orders (AOs). Administrative Orders are not subject to public review and comment. However, there are usually opportunities for the public to comment on proposed projects during the planning phases of projects and when procuring financing for the projects.

The requirements for the implementation of the Nine Minimum Controls can be found in Part 1.B.3. The requirement for a LTCP is discussed in Response F.3.

Comment F.11.

Furthermore, as a technology-based effluent limitation, the Region's proposal to commute the requirement of a CSO monitoring plan until three months after the effective date of the Draft Permit will deprive the public of its right to a "public hearing" on this permit in violation of CWA § 402(a)(1), 33 U.S.C. § 1342(a)(1). Because this particular "effluent limitation" will not be subject to public comment or participation, the public is being deprived of its right to review this most critical part of the permit and to participate in its creation. When CWA § 402(a)(1) allows that EPA "may, after opportunity for public hearing, issue a permit for the discharge of any pollutant" notwithstanding CWA § 301(a)'s prohibition of such discharges, it does so only "upon condition that such discharge will meet ... all applicable requirements" of CWA § 301. "All applicable requirements" have ***not*** *been met in EPA's issuance of this permit because, by the Region's own admission, it is relying on "effluent limitations" not yet written.*

Response F.11.

Since the CSO monitoring plan is not a requirement until the effective date of the final permit, some time must be given to the permittee to develop and document the required monitoring plan. Once it is received by EPA, the CSO monitoring plan will be available to the public. The Region would welcome comments on the plan once it is received and would consider those comments in reviewing the plan.

Comment F.12.

Finally, even where Holyoke is moving to construct appropriate facilities for its CSO's, the Draft Permit lacks a reopener clause that would allow the Region to impose outfall-specific effluent limitations once the discharger's Berkshire Street facility is operational. This is simply arbitrary given the age and conditions of the Holyoke sewer system and the state of the receiving water. The aging combined sewer system in Holyoke necessarily requires significant operational maintenance in order for it to maximize flow to a treatment plant, maximize the storage capacity of the collection system, and ensure that the measures being implemented by Holyoke are, in fact, controlling solid and floatable materials from the CSOs (NMC # 2, 4, 6). Assuming that the work is even done to begin with, though, it may have significant ramifications for how the Berkshire Street facility should be used under NMC# 2, 4 and 6. The Region pays no attention to this systemic change it knows will occur in the life of the Draft Permit, though, and for that reason alone has failed to discharge its duty as a permitting authority.

Response F.12.

Under 40 C.F.R. 122.62(a)(2), the Region could propose a modification if it receives new information during the term of the permit the justify different conditions than those contained in the permit. There is no need, therefore, to include such a re-opener in the permit.

Comment F. 13

The Region's Improper Combination of Roles on the Connecticut River

EPA rules governing the approval of a state's water quality standards amendments—amendments Massachusetts currently has under submission to the Regional Administrator—requires that states submit any proposed changes to their EPA Region for review and approval. See 40 C.F.R. Part 130. Because of the Region's role as the permitting authority in Massachusetts, this means that the very agent making the final water quality standards judgment is the agent permitting discharges—in this case, discharges that materially affect the achievement of such standards. There may or may not be anything inappropriate about the Region processing Massachusetts' most recent attempt to weaken the applicable water quality standards for the segment of the Connecticut above the Holyoke Dam at the same time the Region is re-permitting CSO outfalls 18(3X), 19, 20, and 21 (the very discharges jeopardizing that segment of the river's fishable/swimmable status). That is a separation of functions question I shall only raise but not argue here. But if the Regional Administrator has already become involved in this matter, his immediate recusal from the permit proceeding is necessary to avoid the appearance of impropriety. Whatever is feasible, achievable, or workable regarding water quality on the Connecticut River, it must not become the choice of one small group of unelected officials outside the watershed who are accountable only to themselves. Indeed, to whatever extent conferences, meetings, discussions, etc., have occurred with state or local officials while the Region considers Massachusetts' water quality standards submission, this whole proceeding may be a violation of the Federal Advisory Committee Act (FACA). FACA states that "[n]o advisory committee shall meet or take any action until an advisory committee charter has been filed with the head of the agency to whom any advisory committee reports and with the standing committees of the Senate and of the House of Representatives having legislative jurisdiction of such agency." 5 U.S.C. App. 2 § 9(c)(2). The only pertinent exception is for those advisory committees composed "wholly of full-time, or permanent part-time, officers or employees of the Federal Government." Id. FACA defines an "advisory committee" as "any committee, board, commission, council, conference, panel, task force, or other similar group, which is established by an agency official, for the purpose of obtaining advice or recommendations . . . or on issues or policies within the scope of an agency official's responsibilities." Id. at § 3(2). To my knowledge, neither the record of the Regional Administrator's consideration of Massachusetts' Part 130 submission nor the Draft Permit mentions any chartering of such an advisory committee by the General Services Administration. Chartering is required under FACA. Id. at § 9(c).

If the Region, in reviewing Massachusetts' water quality standards while at the same time processing this permit—and EPA guidance on CSO permitting, the CSO Control Policy, and Part 122 all say it should have done so—conducted any discussions with Massachusetts or Holyoke regarding the Draft Permit's relevance to the state's 2006 Surface Water Quality Standards amendments submitted to the Region pursuant to 40 C.F.R. § 130.10, the Region may be guilty of FACA violations. If so, I respectfully request that the Region immediately renotice this proceeding and either seek to comply with the substantive and procedural requirements of FACA, or end its consideration of Massachusetts' 2006 water quality standards submission before seeking to reissue Holyoke's permit:

For the reasons given, it is my view that the Draft Permit is arbitrary, capricious, and not in accordance with law. I respectfully request a public hearing and/or a public meeting, see 40 C.F.R. §§ 25.5, 25.6, as the Region sees fit in light of other comments.

Response F.13.

EPA is required by Section 303 of Clean Water Act to review and approve proposed revisions to State water quality standards and by Section 402 of the CWA to issue NPDES permits in states that have not been delegated NPDES authority. To the extent that the commenter sees a conflict of interest in these duties (which EPA does not), it is a matter beyond the scope of this permit in that the duties were assigned to EPA by the Congress of the United States.

Regarding the comments pertaining to the Federal Advisory Committee Act (FACA), no groups associated with the issuance of the Holyoke NPDES permit or with the review and approval of Massachusetts Surface Water Quality Standards are "advisory committees" within the meaning of the term in FACA. FACA defines the term "advisory committee" as "any committee, board, commission, council, conference, panel, task force, or other similar group, or any subcommittee or other subgroup thereof (hereafter in this paragraph referred to as "committee"), which is -

> (A) established by statute or reorganization plan, or
> (B) established or utilized by the President, or
> (C) established or utilized by one or more agencies, in the interest of obtaining advice or recommendations for the President or one or more agencies or officers of the Federal Government, except that such term excludes
> (i) any committee that is composed wholly of full-time, or permanent part-time, officers or employees of the Federal Government, and
> (ii) any committee that is created by the National Academy of Sciences or the National Academy of Public Administration."

Accordingly, the issues cited by the commenter do not lead to a conclusion that the permit is arbitrary or capricious. However, as noted previously, EPA did hold a public hearing on the draft permit pursuant to 40 CFR§124.12.

Comment F.14.

The CSO control policy states that the regions should ensure the implementation of the nine minimum controls and incorporate a schedule into an appropriate enforceable mechanism with appropriate milestone dates to implement the long term CSO plan. This is not happening in this permitting procedure.

Response F.14.

See Response F.2.

Comment F.15.

The 2000 Draft LTCP has remained in draft for seven years and is not mentioned at all in the permit or the Fact Sheet.

Response F.15.

The commenter is correct. See Response F.9. regarding the draft status of the LTCP.

Comment F.16.

The CSO control policy states that because the final LTCP will become the basis for NPDES permit limits and requirements, the selected controls should be sufficient to meet Clean Water Act requirements. Those underlying requirements are the applicable water quality standards for the receiving water. Of course, the CSOs cause a violation of those standards in this stretch of the Connecticut River, but the draft permit contains no water quality based effluent limitations, whether in the form of a long term control plan or anything else.

Response F.16.

See previous discussion in E.4.

Comment F.17.

The region has failed to disclose to the public how it arrived at the legal conclusions in this permit. The Fact Sheet should include the procedures used in reaching the final decisions reached in this permit including any cost benefit done. 40 CFR §124.56 requires that any calculations or other necessary explanation of specific effluent limitations and reasons why they are applicable or an explanation of how the alternative effluent limitations were developed should be in the fact sheet or with the permit.

Response F.17.

The discussion on effluent limitations is discussed in the Fact Sheet in sections IV. Permit Basis and Explanation of Effluent Limitation Derivation and V. Combined Sewer Overflows (CSOs). We have shown additional calculations regarding metals limits for the wastewater treatment plant discharge in Attachment 1.

As previously noted, the water quality-based limits for CSOs are in narrative form. Numeric limits will be included at such time as a UAA is submitted and approved that authorizes CSO discharges. Financial capability is addressed in the UAA and with any schedule for implementing CSO abatement. The effluent limitations and conditions in the draft (and final) permit do not consider financial capability.

Comment F.18.

On July 6, I visited the EPA Regional Office to view the record in this matter. The Region could not produce any records or information relative to a cost or feasibility study for Holyoke's permit. In my conversation with the permit writer, I was told that this had not been considered in this proceeding. I was also told that the CSOs were the sole concern of the region's enforcement staff. The 117 miles of pipeline below the City of Holyoke cannot be separated from

the City's wastewater treatment facilities. The citizens of Holyoke and of this valley deserve more than EPA's illegal processing of this permit thus far.

Response F.18.

As discussed in the response to the previous comment, the final permit requires that CSOs comply with existing water quality standards and there was not a cost or feasibility analysis conducted in establishing this requirement. To the extent that financial capability influences the future permit requirements, this will be through a UAA that shows that necessary controls will cause "substantial and widespread economic and social impact" (40 CFR 131.10(g)(6)) and/or in determining an appropriate compliance schedule for achieving the required CSO controls. Also as discussed previously, in this matter EPA has the discretion under federal law and state water quality standards to include the appropriate compliance schedule in either the permit or in a enforcement order, and in this instance, as is typically done, has chosen to include the schedule in an enforcement order.

Comment F.19.

The Connecticut River has been put behind Boston Harbor and other waters long enough. It's time for the Agency to follow it along here too.

Response F.19.

CSO correction is complex and the financial costs are significant. While progress may appear slow, progress is being made as evidenced by the Green Brook sewer separation project, the elimination of the Mosher St. CSO and the recently completed Berkshire St. CSO facility.

G. Comments received from the Connecticut Department of Environmental Protection in a letter dated July 12, 2007

Comment G.1.

Our primary concern is that the draft permit does not include a limit for nitrogen loading. The Fact Sheet correctly identifies nitrogen-driven hypoxia as the most serious water quality impairment in Long Island Sound. The Fact Sheet also states that development of nitrogen loadings of all tributaries to the Sound will be part of EPA's approach to establish a nitrogen control strategy. There have been many years of nitrogen evaluations and modeling efforts. Also, EPA approved a dissolved oxygen Total Maximum Daily Load (TMDL) analysis in 2001. The TMDL identified the importance of managing nitrogen loads from sources beyond Connecticut and New York. This need has been reinforced by additional modeling evaluations supported by the Long Island Sound Study (LISS). Nitrogen contributions from the upper Connecticut River are well studied.

The Holyoke facility contributes a significant load of nitrogen. The available data needs to be more rigorously analyzed and a realistic baseline condition for the facility should be established. That evaluation can establish a nitrogen limit consistent with the 2000 TMDL analysis for dissolved oxygen and nitrogen reduction schedule. We request that the nitrogen limit be included in the permit.

In our submittal of written comments we raised a concern that there had been no nitrogen permit limit incorporated into the Holyoke Draft permit despite years of work that has defined the relationship of nitrogen loads from sources in the Connecticut River north of Connecticut and their effects on the oxygen levels in Long Island Sound. The 2001 TMDL approved by EPA set initial targets for the reduction of nitrogen from all sources throughout the basin. We have provided EPA and the State of Massachusetts written comments on the draft permit including TMDL recommendations, technical data on loads of nitrogen and the relationship to Long Island Sound and a request that they begin to formalize nitrogen management by incorporating nitrogen permit limits into the Holyoke permit.

It would be our preference that EPA and the State of Massachusetts adopt a comprehensive nitrogen control plan for all facilities that collectively discharge nitrogen into the all major rivers that feed Long Island Sound. However, as permits come up for renewal, there appears to be no evidence of progress being made towards this objective. The time to act is during this permit renewal cycle

Response G.1.

In December 2000, the Connecticut Department of Environmental Protection (CT DEP) completed a Total Maximum Daily Load (TMDL) for addressing nitrogen-driven eutrophication impacts in Long Island Sound. The TMDL included a Waste Load Allocation (WLA) for point sources and a Load Allocation (LA) for non-point sources. The point source WLA for out-of-basin sources (Massachusetts, New Hampshire and Vermont wastewater facilities discharging to the Connecticut, Housatonic and Thames River watersheds) requires an aggregate 25% reduction from the baseline total nitrogen loading estimated in the TMDL.

The baseline total nitrogen point source loadings estimated for the Connecticut, Housatonic, and Thames River watersheds were 21,672 lbs/day, 3,286 lbs/day, and 1,253 lbs/day respectively (see table below). The estimated current point source total nitrogen loadings for the Connecticut, Housatonic, and Thames Rivers respectively are 13,836 lbs/day, 2,151 lbs/day, and 1,015 lbs/day. (Please note that EPA's current estimate of loadings to the Connecticut River is slightly greater than the CT DEP's, but is based on more recent information and includes all POTWs in the watershed). The following table summarizes the estimated baseline loadings, TMDL target loadings, and estimated current loadings:

Basin	Baseline Loading[1] lbs/day	TMDL Target[2] lbs/day	Current Loading[3] lbs/day
Connecticut River	21,672	16,254	13,836
Housatonic River	3,286	2,464	2,151
Thames River	1,253	939	1,015
Totals	26,211	19,657	17,002

1. Estimated loading from TMDL, (see Appendix 3 to CT DEP "Report on Nitrogen Loads to Long Island Sound", April 1998)
2. Reduction of 25% from baseline loading
3. Estimated current loading from 2004 – 2005 DMR data

The TMDL target of a 25 percent aggregate reduction from baseline loadings is currently being met, and the overall loading from MA, NH and VT wastewater treatment plants discharging to the Connecticut River watershed has been reduced by about 36 percent.

In order to ensure that the aggregate nitrogen loading from out-of-basin point sources does not exceed the TMDL target of a 25 percent reduction over baseline loadings, EPA will include a permit condition for the City of Holyoke requiring the permittee to evaluate alternative methods of operating their treatment plants to optimize the removal of nitrogen, and to describe previous and ongoing optimization efforts. The permittee will also be required to implement optimization measures sufficient to ensure that its nitrogen load does not increase so that the aggregate 25 % reduction is maintained.

Specifically, the permit in Part I.H. requires an evaluation of alternative methods of operating the existing wastewater treatment facility in order to control total nitrogen levels, including, but not limited to, operational changes designed to enhance nitrification (seasonal and year round), incorporation of anoxic zones, septage receiving policies and procedures, and side stream management. This evaluation is required to be completed and submitted to EPA and MassDEP within one year of the effective date of the permit, along with a description of past and ongoing optimization efforts. The permit also requires implementation of optimization methods sufficient to ensure that there is no increase in total nitrogen compared to the existing average daily load. The annual average total nitrogen load from this facility (2004 – 2005) is estimated to be 696 lbs/day. The permit requires annual reports to be submitted that summarize progress and activities related to optimizing nitrogen removal efficiencies, document the annual nitrogen discharge load from the facility, and track trends relative to previous years.

The agencies will annually update the estimate of all out-of-basin total nitrogen loads and may incorporate total nitrogen limits in future permit modifications or reissuances as may be necessary to address increases in discharge loads, a revised TMDL, or other new information that may warrant the incorporation of numeric permit limits. There have been significant efforts by the New England Interstate Water Pollution Control Commission (NEIWPCC) work group and others since completion of the 2000 TMDL, which are anticipated to result in revised wasteload allocations for in-basin and out-of-basin facilities. Although not a permit requirement, it is strongly recommended that any facilities planning that might be conducted for this facility should consider alternatives for further enhancing nitrogen reduction.

Comments received from Andrea Donlon, Connecticut River Watershed Council, in a letter dated July 13, 2007, an email dated July 13, 2007, testimony at the public hearing of September 19, 2007, and an email dated September 21, 2007.

Comment H.1.

The permit states that the receiving water is the Connecticut River only. The Front Street/Appleton Street (CSO 16) discharges into the Holyoke canal system. The Holyoke canal system is listed as the receiving water for another NPDES permit. EPA and MassDEP should be consistent in identifying receiving waters on NPDES permits.

Response H.1.

We have verified that CSO 16 does discharge into the Holyoke Canal System and have made the change in the final permit.

Comment H.2.

Given that the stretch of river below the Holyoke Dam is impaired for solids, it seems that this limit should be lowered. Waiting for a TMDL to take place will likely be more expensive and lead to a much longer time frame for water quality improvements.

Response H.2.

The 303(d) list does not identify the WWTP as a cause of the solids impairment. An examination of the DMR data over a 1 ½ year period indicated only one month with a reported maximum daily value over 50 mg/l. This data indicates that the plant's secondary limits are sufficient to ensure that the discharge doesn't cause or contribute the impairment and that more stringent limits are not justified at this time.

Comment H.3.

Because of the solids problem in this stretch of the river, we recommend that daily maximum load and concentration limits be included in the permit. It appears the facility does have a problem with TSS as the percent removal for a month reached 33% in April, 2004.

Response H.3.

See Response H.2. regarding a maximum daily solids limit. As in any combined sewer system, TSS percent removals can fluctuate greatly depending upon the magnitude of rainfall events, snow melt and other hydraulic conditions. 40 CFR §133.103 (a) *Combined Sewers* recognizes that such facilities may not be capable of meeting the secondary treatment percentage removal requirements and that limits, if any, may be defined on a case by case basis. Language has been added so that the percent removals for BOD and TSS will be calculated using dry weather flows only.

Comment H.4.

The minimum discharge limitation for pH (6.0) is not in compliance with the Massachusetts Water Quality Standard for pH which specifies a minimum of 6.5.

Response H.4.

The permittee had in the past requested a reduced lower pH limit of 6.0 based upon the natural reaction of the pure oxygen reactors in the wastewater treatment process. The Massachusetts Water Quality Standard for pH is an in-stream standard (314 CMR 4.05(3)(b)). EPA and the MassDEP believe that, due to the high dilution factor, there is sufficient buffering capacity in the river so that a discharge with a minimum pH of 6.0 will not cause any in-stream water quality

violations of that standard. Consequently, the minimum pH limit shall remain at 6.0 as in the current permit.

Comment H.5.

Between January 2004 and November 2005, the monthly average pH was below 6.0. Has the cause of these violations been identified? The Fact Sheet does not provide a description of this problem nor a rationale for not bringing this discharge to compliance with the Massachusetts Water Quality Standards.

Response H.5.

As discussed above, a low pH is characteristic of a pure oxygen wastewater treatment process. In addition, acid rain can contribute to lower pH in combined systems. Since December 2005, the facility had only one month when the minimum pH did not meet the limit of 6.0.

Comment H.6.

Because the river is impaired due to pathogens, Attachment 2 of the Fact Sheet should have included bacteria testing data.

Response H.6.

See Response D.1. regarding data summaries provided with the Fact Sheet. In response to the commenter, the following information is provided. For the disinfection period of 2006 and through July 2007, the discharge had an average of 12 colony forming units (cfu) per 100 ml as a geometric mean and a maximum daily of 326 cfu per 100 ml.

Comment H.7.

Unless EPA is potentially going to disapprove the state's change from fecal coliform to E. coli in its water quality standards, it does not make sense to conduct E. coli testing only once per month compared to twice weekly testing of fecal coliform.

Response H.7.

Since the issuance of the draft permit, EPA has approved the State *E. coli* standard and the State is now requiring *E. coli* limits as a requirement for Water Quality Certification. Consequently, the final permit requires twice weekly sampling of *E.coli* in addition to the fecal coliform testing. As an adjustment period, the *E.coli* limit is report only for the first year after which it will become the permit limit and the fecal coliform limit will end.

Comment H.8.

We recommend increased bacteria testing of outfall 001 during CSO events. A letter dated January 20, 2001 indicates that the Holyoke facility is already monitoring fecal coliform during high effluent flows, so the increased testing requirements would not be burdensome.

Response H.8.

It is expected over time that the sampling frequency will result in a representation of all operating conditions including those during CSO events and high effluent flows. Also, PART I.A.1.f. of the permit requires that "Sample results using EPA approved methods for any parameter above its required frequency must also be reported."

Comment H.9.

The existing permit requires testing for "Total Ammonia, as [NH3]" whereas the draft permit requires testing for "Ammonia Nitrogen as N." EPA should establish consistent terminology for permit parameters.

Response H.9.

"Total Ammonia Nitrogen" is the current terminology being used and is used in the final permit.

Comment H.10.

EPA should be assigning nitrogen limits to wastewater treatment plants in Massachusetts now that regular monitoring has been ongoing for 5 years.

Response H.10.

See Response G.1. above.

Comment H.11.

All wastewater treatment plants downstream in Connecticut call for phosphorus testing. Based on the large size of the Holyoke facility, we recommend that total phosphorus and ortho phosphorus sampling be added to the permit requirements.

Response H.11.

The segment of the Connecticut River which receives the Holyoke WPCF discharge is not on the Proposed Massachusetts 2006 Integrated List of Waters for nutrients. In addition, the discharge has a high dilution factor and does not appear to have the reasonable potential to cause or contribute to exceedances of the applicable state narrative criteria. Consequently, at present, the available information does not support the need for phosphorus limits.

Comment H.12.

Because this stretch of the river is known to have federally endangered shortnose sturgeon and many other migratory fish species, we request that the WET test include the fathead minnow (Pimephales promelas) in addition to the daphnid.

Response H.12.

See Response A.4. above.

Comment H.13.

The Berkshire Street CSO treatment facility will become operational in 2008. At that point, will Outfall 09 be given permitted discharge limits, either by amending this permit or by being issued its own permit? It would make sense to include a deadline as was done in the South Hadley permit which authorizes the permittee to discharge from CSOs until December 31, 2007. The Mass DEP has established interim limits for this CSO treatment facility. It is not clear as to why this information was not included in the draft permit. A schedule should be included in the permit in anticipation of this milestone. Any permit, or modification, should ensure that the treatment plant is performing properly minimizing bacteria and the discharge of chlorine.

Response H.13.

It is EPA's intent to include interim limits for the Berkshire St. CSO facility in an enforcement order, and to not include numeric limits in the NPDES permit unless a UAA is completed and MA WQS are adjusted to allow the discharge. The commenter is referring to the design parameters for the Berkshire St. CSO facility. These parameters are established by the MassDEP for an applicant receiving a permit for the construction of the proposed facilities which will provide screening, preliminary treatment, and disinfection for a 3-month storm.

South Hadley submitted a Final Long Term Control Plan which recommended completing separation of the entire combined collection system within the term of the permit. For these reasons, EPA determined that a schedule in the NPDES permit was appropriate. The permit schedule reinforced the deadline already established in the enforcement action taken against the Town.

Comment H.14.

Without a definition of "dry weather" for Part I.B.(2)a(5), there is no way to determine if the permittee is in compliance with the requirement that there be no dry weather discharges.

Response H.14.

A definition for dry weather has been added to Part I.A.1.e.

Comment H.15.

Part I.B.(2) states that "…approvable documentation must include the minimum requirements set forth in PART I.C.2 of this Permit…" There is no PART I.C.2

Response H.15.

It has been corrected to read "PART I.B.3." in the final permit.

Comment H.16.

A study, "Summary Report Connecticut River Bacterial Monitoring Report", published results of dry and wet weather sampling conducted in 2001 and 2002. That report concluded that water quality standards were being met for dry weather but that the standards were being exceeded during wet weather. In violation of PART I.B.(2)b of the permit which states that CSO discharges "shall not cause or contribute to violations of Federal or State Water Quality Standards", CSOs are, in fact, causing or contributing to violations of the State Water Quality Standard for bacteria. We recommend that, at a minimum, EPA and the MassDEP establish a due date for the Long Term Control Plan for the CSOs and set water quality sampling requirements for all CSO outfalls in the City.

Response H.16.

Because the City's CSOs have caused or contributed to violations of water quality standards, these discharges have been found in violation of its NPDES permit conditions regarding CSOs, Administrative Orders have been issued to the City for the development and implementation of the LTCP. See Response F.9. regarding the Final LTCP. It is generally acknowledged that CSOs discharges violate water quality standards and there has been sufficient sampling of Holyoke's CSOs to establish that they do discharge levels of bacteria in excess of water quality criteria. There would appear to be little benefit in expending any additional resources in an effort to measure bacteria in CSO discharges; however, as discussed previously, EPA does believe that it is very important to monitor activation frequency and duration and has established a requirement for such a program as part of the nine minimum controls program.

Comment H.17.

We recommend that the phrase "…and tidal surcharging…" be deleted from the first sentence in PART I.B.3.b. of the draft permit unless dam and/or canal releases create such a condition. We recommend that the permit require the permittee to submit by February 1 each year to EPA and the State a certification stating that the previous calendar year's monthly CSO inspections were conducted, results recorded, and records maintained.

Response H.17.

The phrase "...tidal surcharging..." has been changed to "...high river stage..." in the final permit. PART I.B.4.c. of the permit already includes a requirement that the permittee certify that the required CSO inspections were done and requires that the certification be included in the Annual Report to be submitted by April 30.

Comment H.18.

PART I.B.3.e.requires that records of CSO discharges be maintained for six years. We recommend that records be maintained for eight years consistent with other permits in the state.

Response H.18.

Part II C.1.b. of the Standard Conditions specifies that monitoring records, except for sludge and stormwater records, be kept for three years. The CSO records retention requirement of six years in the permit is the same as that required for stormwater records. The retention period for CSO records will remain at six years.

Comment H.19.

The permit requires a monitoring plan that quantifies CSO activations and volumes. We note that the current permit already requires the permittee to record duration and volume of CSO discharges.

Response H.19.

Progress towards the elimination of CSO discharges can be measured in part by a reduction in the number of CSO discharge events over a period of time. The inclusion of CSO activations in the monitoring plan provides that data.

Comment H.20.

The current and draft permits require the permittee to maintain identification signs for all CSO structures. Holyoke has not maintained the signs. (Note: The commenter submitted a photo dated July 31, 2006 of the sign for Outfall 03 on which only the outfall number is legible.) Having legible bilingual signs is critical. We recommend that the permit be amended to require that CSO signs be inspected twice a year, before and after the recreational season, and replaced if illegible or stolen.

Response H.20.

See Response A.1. above regarding bilingual signs. Language has been added to Part I. B. 3. f. requiring routine inspections of the identification signs.

Comment H.21.

We recommend that the permit specify that the CSO identification signs be readable from land and water. We also recommend that the signs include the words "Warning", "Department of Public Works", and a phone number should someone want to report something or ask a question regarding the sign. The permittee, to the extent feasible, should add a universal symbol to the signs reflecting a CSO discharge.

Response H.21.

The final permit does require the signs to be readable from both land and water. See Response A.1. regarding a universal symbol for the signs and E.1. regarding limitations on signage size.

Comment H.22.

We recommend that the public notification plan required by PART I.B.4.d. be made available to the public and that the Annual Report on the implementation of the Nine Minimum Controls be posted on the City's website. Regarding the requirement for notification of downstream public officials of CSO activations, how far downstream should the notification occur?

Response H.22.

The permittee is required to submit the public notification plan in its first Annual Report (Part 1. B.4. Annual Report). The Annual Report is a public record that will be made available by EPA upon request. EPA encourages the City to post its Annual Report on its website in the public interest. The downstream notification would be on a case-by-case basis depending on the magnitude of the overflows, time of year, etc. These factors should be evaluated and discussed in the referenced annual report.

Comment H.23.

We recommend that the retention of all monitoring information, data, records, and reports required or used to demonstrate compliance with this permit be maintained for at least eight years. The period could be modified by alternative provisions of the permit or extended at the request of the Director.

Response H.23.

See Response H.18.

Comment H.24.

The current permit requires the permittee to develop and implement an I/I control plan; so it is unclear as to why the draft permit again has this requirement. It is also not clear why only the separated portion of the sewer system fall under this requirement. We see a benefit to minimizing I/I in the entire system, not just the separated portion

Response H.24.

The current permit requirement is for an annual report summarizing activities conducted the previous year to reduce I/I. The Infiltration/Inflow (I/I) conditions in the final permit require a control plan, which is a more structured, long-term approach to eliminate I/I in the separate sewer portions of the collection system. Combined systems are designed to accept and transport stormwater from inflow sources; separate systems are not. I/I removal from separate systems, while still complex and difficult, and can reduce the flow in the combined portions of the collection system and the resultant CSO discharges.

Comment H.25.

I/I and CSO appear to contribute greatly to the flow to the treatment facility. Reducing the I/I would be extremely beneficial in reducing CSO flows. We recommend that PART I.D.2.require

the City to report its estimation of the volume reduction achieved through its various efforts to reduce extraneous flows into the collection system and set implementation deadlines beyond the required I/I plan.

Response H.25.

Part I.D.3. of the permit requires that the permittee estimate the annual average and maximum daily I/I in the annual report due by March 31. Because of the year to year variability of conditions which cause I/I, the estimate of the extraneous flow volume reduction achieved in any year might not be entirely reliable. We would expect that I/I flow to the separate sewer collection system is relatively small compared to I/I to the combined systems given that only 34 percent of the collection system is separate sewers, and that separate systems tend to have much lower rates of I/I because storm water runoff is conveyed by a separate storm sewer and infiltration tends to be much lower in separate sanitary sewers than combined sewers for a given length of sewer because of much smaller pipe diameters Therefore, while removing I/I to separate sewers will contribute to a reduction in CSO discharge flows, implementation of CSO abatement projects will have a more dramatic impact on CSO volumes and will be the main focus of compliance schedules.

Comment H.26.

Section 2 in the draft Long Term Control Plan/Environmental Impact Report noted that the Day Brook enters the sewer system on Hicks Avenue and has a significant impact on the CSO flows at CSO Outfall 9. We recommend that language should be added to the permit that prohibits natural streams from being part of any of the CSO or WWTP outfall pipes in the system.

Response H.26.

The connection of a natural waterway to a sewer system can sometimes be found in combined systems in older, urban communities such as Holyoke. Disconnecting the Day Brook from the sewer system has been investigated and, because of the surrounding topography, no cost-effective alternatives for relocating the brook are available. To ensure that the greatest reduction in overflows obtainable with available resources is achieved on the shortest practicable schedule, the Region has not urged the City to address this problem in the short term, leaving resources available for more cost-effective projects. In lieu of the Day Brook project, the City separated the combined sewer system in the Mosher St. area and eliminated that CSO.

Comment H.27.

The existing permit required a report documenting the effectiveness of the chlorination system; the draft permit does not. Has there been a change that makes this report no longer required?

Response H.27.

That report was initiated in order to assess effectiveness of chlorination systems and once established there is no need to include that requirement in each permit reissuance.

Comment H.28.

Several significant industrial users identified in the Fact Sheet did not have current permits with the City of Holyoke. Has EPA checked with Holyoke's compliance on this issue lately?

Response H.28.

EPA will conduct this type of review during a Pretreatment Program Audit and an audit is scheduled to be performed within the next 6 months..

Comment H.29.

Attachment 3 to the Fact Sheet lists New England Etching as contributing 800,000 gpd to the wastewater flow. We request that EPA verify this number.

Response H.29.

The correct flow is 800 gpd and the change is noted in the record.

Comment H.30.

Which industrial users are part of CSO sewersheds and subject to I.B.3.d. of the permit? The largest Significant Industrial User, Sonoco, was out of compliance on permitting and according to a letter dated September 17, 2003, from Holyoke's WPCF it had been discharging without an Industrial User permit since 1997. If industrial wastewater with questionable pretreatment practices is being discharged through a CSO to the Connecticut River, then we should have a better characterization of the CSO discharge and its effects on the river and the public that uses the river.

Response H.30.

The current status of Sonoco's industrial user permit will be reviewed in the upcoming Pretreatment Program Audit. As previously discussed, because the character of CSO discharges exhibit significant variability depending upon the frequency, intensity, duration, and timing of the storm events, previous attempts to characterize CSO discharges have been unsuccessful. Their impacts on the receiving stream will also depend on the available dilution at the time of the CSO events.

Comment H.31.

The City's contract with the treatment facility's operators currently allows up to 40,000 gallons per month of "trucked-in material" until the Company conducts a study and agrees upon another appropriate amount. We could not find where the permit addresses the influx of this material or limits the inflow during times when CSOs are triggered. We recommend EPA inquire into this and determine if any changes to the permit be needed.

Response H.31.

Septage receiving and treatment at wastewater treatment plants is a common practice. Introduced at the beginning of the wastestream, septage is subject to the same pretreatment requirements as industrial users, meaning that the discharge of septage cannot cause pass through the treatment plant or cause interference with the treatment plant processes. Septage is added to the treatment plant at the headworks, meaning that is not discharged through CSOs. Because the amount of septage is small compared to the total plant flow, septage addition has a minimal impact on wet weather treatment capacity.

Comment H.32.

Given that over the next 5 years of this permit, certain areas will continue to contribute CSO volumes. It would be good if the permit set certain limits for new sewer hookups in those areas. We recommend that for those areas (i.e. "sewersheds) the following language be adopted: "Increased flows from new commercial and residential development or facilities currently connected to the sewer system shall be offset, to the extent feasible, in order to minimize any net increase of flow to the WWTP during CSO discharge events."

Response H.32.

The commenter is correct in noting that increases in base sewage flows would, in the absence of removal of flows from other sources, result in increased CSO discharges. However, EPA does not typically include conditions in NPDES permit that would control individual sewer connections, unless there is evidence that planned connections would significantly impact overflows or result in violations at the treatment plant. Typically, CSO abatement projects more than offset any small increase in flows from new connections, particularly in cities such as Holyoke, where no significant increase in sewer connections is anticipated. Therefore, we have not included the suggested requirement. We would note however that MassDEP has a sewer system connection program that requires certain connections to receive state approval.

Comment H.33.

The metals calculations used a hardness value of 30 mg/l for the Connecticut River. In 2003, the MassDEP sampled twice at the I-90 bridge resulting in hardness values of 35 and 45 mg/l. What is EPA's source for the 30 mg/l hardness and would a hardness value of 35 or 40 change the metals limits for this facility?

Response H.33.

As stated in the Fact Sheet, the 30 mg/l of hardness is taken from the chemical analyses of the receiving water (i.e. the Connecticut River) during recent WET testing. An increase in hardness results in a reduction of toxicity for hardness-dependent metals and less stringent limits for these metals.

Comment H.34.

Although past Administrative Orders issued by EPA in 1997 and 2001 set deadlines for the final

Long Term Control Plan (LTCP) for Holyoke's CSOs, Administrative Order 05-01 has no mention for a due date for the LTCP and the issue of finalizing the LTCP appears to have been dropped altogether. It appears that the 30-year time frame which EPA once found unacceptable is now looking optimistic. This is objectionable to CRWC because it slows down the entire schedule for eliminating Holyoke's CSOs and decisions about the next steps in CSO elimination are being done in a piece-meal fashion with little input from the public and with no obvious holistic view of the best way to achieve a cleaner river in an affordable way. Delays and limited public scrutiny has the potential to result in higher costs to the City.

Response H.34.

See Response F.9.

EPA's goal is to implement CSO controls as quickly as feasible. In the Region's experience, the most practical approach is sometimes to implement controls step-by-step, with the highest-priority projects completed first.

We have worked with the Commonwealth and the City, to identify and implement those control alternatives that will achieve the greatest benefits. The 30 year plan to which the Region objected would have yielded little meaningful benefit in the first twenty years or more of its implementation. That was unsatisfactory. In the past several years, the City has made far more progress than it would have under the original plan as proposed.

Clearly there is much more work to be done in Holyoke. The Region will work with the City to identify additional projects to implement in the short term. While it may appear "piece-meal," the strategy has been to select projects that can be built upon to achieve higher and higher levels of control. There has been a concerted effort to make sure that resources are not applied to facilities that will one day be obsolete. Because of the financial stresses at work, the pace of implementation sometimes can appear frustratingly slow. However, EPA will push for controls to be completed as quickly as possible.

The Massachusetts Environmental Policy Act provides for public involvement in the decision-making process for projects of this scope. Beyond that, the Region welcomes public scrutiny of this process, and regional staff is available to meet with the CRWC at your convenience to review the CSO control strategy for Holyoke. The Region always welcomes proposals for specific control measures and information that advocacy organizations present on these seemingly intractable problems.

Comment H.35.

Page 9 of the Fact Sheet mentions a 1999 document titled "Evaluation of CSO abatement Program". The Fact Sheet does not mention Holyoke's draft LTCP submitted in May of 2000. Then the Fact Sheet states that the schedules for the required CSO facilities are contained in a federal court order. To our knowledge there have been no court orders in this case. Various Administrative Orders from EPA have been filed. The most recent order, AO 05-01, sets a deadline of 2008 for completing construction of the Berkshire Street CSO treatment facility. Once completed, there are no other implementation projects scheduled. Unless new deadlines are set soon, there will be another delay in water quality improvements in Holyoke. This is

unacceptable. The Fact Sheet and permit should be written with a firmer sense that there is a strong need to clean up the Connecticut River.

Response H.35.

The commenter is correct that the schedules for implementing CSO abatement are included in EPA administrative orders, not a federal court order, and that a new order is necessary to ensure continued CSO abatement following completion of the Berkshire Street CSO facility. See Responses F.5., F.15., and E.3. regarding federal orders, the LTCP, and schedules, respectively.

EPA believes that the Waterbody Classification and Usage discussion of the Fact Sheet firmly establishes the need to clean up this segment of the Connecticut River, and that the administrative orders, issued because of violations of the permit's narrative water quality limits, have resulted in significant benefits to water quality.

Comment H.36.

Is the Water Quality Certification a part of the permit or is it a separate document? Could I receive a copy of the Certification when it is issued.

Response H.36.

The Water Quality Certification is a separate document issued by the State. Issuance of a final permit is contingent upon receipt or waiver of state certification. A copy of the Water Quality Certification will be sent to you.

Comment H.37.

An article in the Republican newspaper dated September 20, 2007 recounted how the City of Holyoke has an "extra" $12.9 million in the City Budget. I think it would be appropriate for regulators to ask that the city spend some of it on CSO-related projects.

Response H.37.

The financial capability of permittees is considered when developing and implementing CSO correction projects.

Comment H.38.

We would like to express our disappointment that the hearing process could not be expanded to include a separate presentation and question and answer period as other commenters had requested.

Response H.38.

There were several requests for public hearings and for public meetings. Federal regulations found at 40 CFR§124.12 state that "The Director shall hold a public hearing whenever he or she finds, on the basis of requests, a significant degree of public interest in the draft permit."

Because of the numerous requests for a public hearing EPA was obligated, pursuant to the above regulation, to hold a hearing. Public hearings are non-adversarial, and are a vehicle for collecting public comment. EPA did not choose to also have a public meeting, believing that the public notice materials, including the fact sheet and draft permit, and the final permit materials including the response to comments would provide the necessary information to the public.

Comment H.39.

According to the permit the CSOs shall not cause or contribute to violations of water quality standards. However, there are no numerical limits for the CSOs in the permit. The only controls on the outfalls are the Nine Minimum Controls. However data indicates that the CSOs do contribute to state water quality standards. So, EPA is issuing a permit that everyone knows will be violated from day one.

Response H.39.

See Response E.4. regarding numerical limits for CSOs. As previously discussed, it is acknowledged that the discharges will be in violation of the permit upon its issuance. As a result, enforcement actions have and will be taken against the City.

Comment H.40.

Holyoke is behind in tackling its CSO problem. It submitted a draft LTCP in 2000 which did not meet EPA's or the MassDEP's approval and a deadline for that report seems to have been abandoned. That plan proposed a 30-year schedule considered by some people as too long. This permit does not require any schedule and there is no schedule in the public domain. We need a plan and a goal visible to the public. We do not think the EPA is doing the City any favors by not pushing for a schedule for CSO projects. The cost of construction continues to go up. This draft permit does not move the City far enough along towards the goal of fishable swimmable.

Response H.40.

As previously discussed, LTCPs and their schedules are often adjusted as individual components are completed. We understand that some people consider that progress on CSO correction is taking too long. However, projects, priorities, and schedules can be affected by the scale, complexity, phasing, and financing of extremely large projects and by other obligations and needs of the municipality. The inclusion of the compliance schedules in administrative orders rather than the permit has been discussed in previous responses. The goal of the final permit is the attainment of water quality standards in the Connecticut River. The schedule required by the Administrative Orders resulting from the violation of the permit requirements moves the City towards that goal.

I. Comment from Bill Phillips in an email dated September 19, 2007

Comment I.1.

It is an outrage that Holyoke, Springfield and Chicopee discharge over 1 billion gallons of raw sewage into the Connecticut River every year. I trust the Connecticut River Watershed Council will take actions to try and stop this negligence in Massachusetts.

Response I.1.

The issuance of NPDES discharge permits to those communities and the compliance actions taken to enforce those permit requirements have the ultimate goal of the elimination of CSO discharges and the attainment of water quality standards. The Connecticut River Watershed Council has provided comments on the Draft Permit and at the Public Meeting.

J. Comments received from David Stoff in a letter dated September 19, 2007

Comment J.1.

I request that the DEP provide me with a copy of the water quality certification for the Holyoke permit when it is issued.

Response J.1.

A copy of the Water Quality Certification will be sent to you.

Comment J.2.

The Connecticut River is a regional warm water fishery resource that supports recreational uses and is home to short-nosed sturgeon and other migratory endangered species. It is my goal that any permitting decision recognizes and supports the existing uses of the river, even during wet weather.

Response J.2.

The Draft Permit requires that the discharges meet water quality standards in support of the fishable, swimmable goals of the Clean Water Act.

Comment J.3.

The CSO Policy requires municipalities with combined sewer systems to develop long-term control plans. The CSO policy also requires immediate implementation of the Nine Minimum Controls which are the minimum technology based controls necessary to ensure compliance with Sec. 301of the Clean Water Act. While the CSO policy permits a cost-performance analysis to be used as a factor in selecting long-term CSO controls, it does not mandate the use of such an analysis for minimum controls. The appropriate standard for the Nine Minimum Controls is the "Best Available Technology "("BAT") standard. It is difficult to justify a one-year delay for an "evaluation of further measures." The public has a reasonable expectation that the minimum control technology should already be in place at all CSO outfalls and that it be as good as the best measures available anywhere in the United States.

The public notification requirement (NMC # 8) requires the permittee to provide "adequate" public notice of CSO events informing the public of actual CSO locations and discharges, possible health effects and activities that should be curtailed as a result of the discharges. Many other communities provide automatic electronic warning systems, real-time posting in affected areas, emails, telephone hotlines, websites, and media notifications. While a one-year evaluation period may be appropriate for the development of such a real-time warning system, it is not appropriate to remedy past non-compliance with a minimum control measure.

Response J.3.

The implementation of the Nine Minimum Controls (NMCs) is among the first steps a municipality is expected to take in response to the CSO policy. As described in the National CSO Control Policy, "All permits for CSOs should require the nine minimum controls as a minimum best available technology economically achievable and best conventional technology (BAT/BCT) on a best professional judgement (BPJ) basis by the permitting authority (40 CFR 125.3)." (*see* Part IV. A) As described in 40 CFR 125.3, one of the factors to be considered in setting site-specific (BPJ) limits to achieve BPT, BCT, and BAT requirements is cost. The National CSO Policy establishes that the permittee "should submit documentation demonstrating implementation of the nine minimum controls….."(*see* Part II.A.)

EPA's *CSO Guidance For Nine Minimum Controls* also confirms that cost and cost effectiveness are considerations in establishing the permittee's NMCs. Specifically, the Guidance states that "The appropriate mechanism for public notification will probably vary with local circumstances, such as the character and size of the use area and means of public access. The measures selected should be the most cost-effective measures that provide reasonable assurance that the affected public is informed in a timely manner (see page 9-1).

In summary, cost is a factor to be considered in establishing technology-based limits, the NMCs are expected to be site-specific technology-based limits, the permittee is required to evaluate and implement NMCs and submit documentation of implementation to EPA, and the permitting authority (EPA) is expected to review the documentation.

Because the NMCs are site-specific, EPA believes that the selected controls must be reviewed regularly to determine whether the NMCs should be modified to reflect current conditions, and sometimes requires that specific NMCs be evaluated by the permittee to determine whether this NMC is appropriate for the community. The Draft Permit required the community to evaluate enhancements to its monitoring program (NMC#9) and to its public notification program (NMC#8) and to submit this evaluation in its annual report. EPA intends to review the annual report to confirm that it satisfies the permit requirements. The annual reports submitted by the community are public records that will be made available by EPA upon request.

Comment J.4.

The permitting provisions of the CSO policy apply to all Combined Sewer Systems that overflow as a result of stormwater flow. According to Holyoke's Draft LTCP/EIR of May, 2000, Day Brook which originates in the mountainous western edge of Holyoke is a surface water tributary to CSO outfall 9. Perennial streams, brooks, and rivers are not included in the definition of

stormwater. If Day Brook is considered part of the "dry weather flow" it is difficult to see how the City is in compliance with NMC #1 (proper operation of the sewer system) because it increases the magnitude and duration of the treatment facility's discharge and is a factor in the pass-through of pollutants to the Connecticut River. Likewise, the City would not appear to be in compliance with NMC #2 (maximum use of the collection system for storage) because it displaces wastewater and stormwater which could be stored for treatment at the treatment facility.

Response J.4.

See Response H.26. regarding Day Brook.

K. Comment from Bruce Hart and Ilene Goldstein in an email dated September 20, 2007

Comment K.1.

We support the Connecticut River Watershed Council's goal to have an overall plan or schedule to eliminate sewage discharge from the 14 outfalls into the Connecticut River, increase public notification when untreated sewage is discharged into the Connecticut River, and to set nutrient limits on the City's wastewater discharge.

Response K.1.

These issues have been addressed in Response Nos. E.3. (re. schedule), J.3.(re: public notification), and G.1.and H.11.(re: nutrients) above.

L. Comment from Charles Delannoy in an email dated 9/20/07

Comment L.1.

It is important to me that the City of Holyoke and the State of Massachusetts not allow nutrient rich wastewater into the Connecticut River when the State of Connecticut regulates those to keep Long Island Sound clean.

Response L.1.

See Responses G.1. and H.11. above regarding the discharge of nutrients by the City of Holyoke.

M. Comment received from Philip F. Tomlinson, Jr. in an email dated 9/20/07

Comment M.1.

I have read reports that Holyoke, Springfield and Chicopee, Massachusetts discharge over one billion gallons of raw sewage annually into the Connecticut River causing significant downstream pollution. It is my understanding that Holyoke continues to operate 14 CSO outfalls with no numerical limits set for the discharges and after the completion of the Berkshire St. CSO facility there is no schedule for additional sewage treatment projects. The condition of Long Island Sound is declining and there is no better time than the present to implement an ecosystem-

based management program to restore, maintain, and protect the health of Long Island sound. Please establish a concrete schedule that remains on course and a plan that is accessible to the public to minimize and eliminate significant nutrient loading and combined sewer overflow events impacting the Connecticut River and its tributaries.

Response M.1.

See Response E.4. regarding numerical limits, Response E.3. regarding schedules in permits, Responses G.1. and H.11 regarding nutrients, and Response F.10. regarding LTCPs and AOs.

Comment M.2.

Increase timely public notification through multiple channels with pertinent information regarding CSO events.

Response M.2.

Part I. B. 4. Annual Report of the permit requires the permittee to submit a public notification plan which describes public notification measures being taken, evaluates additional measures to enhance the public notification program, and includes a schedule for the implementation of the public notice measures.

Comment M.3.

Set nutrient limits on wastewater discharges into the Connecticut River and its tributaries.

Response M.3.

The discussion on nutrients being discharged to the Connecticut River is discussed above Responses G.1. and H.11.

Comment M.4.

Provide for the adequate implementation and enforcement of these recommendations.

Response M.4.

Administrative Orders have been issued to the permittee in the past to ensure compliance with its permit limitations.

N. Comment from Glenn Conway by email dated 9/20/2007

Comment N.1.

The conditions of the Connecticut River have improved in the last three decades but the job is still not done. Let's reduce and even rid the river of any additional discharge from the sewage-containing overflow.

Response N.1.

The Draft Permit is written to meet State water quality standards with the goal of eliminating the CSOs.

O. Comment received from Sandra Kistner by email dated 9/20/2007

Comment O.1.

I would like to object to the granting of an unlimited wastewater permit to Holyoke. There needs to be a plan in place for sewage discharge from the many sewer pipes aimed into the river. There should also be limits on nutrients in the wastewater.

Response O.1.

The Draft Permit is not unlimited; it establishes numerical and narrative limitations on the discharges in order to meet water quality standards. See Responses G.1.and H.11. above regarding nutrients.

P. Comment received from Marianne and John Reiff via an email dated 9/20/2007

Comment P.1.

The permit allows continued wet weather CSO discharges from 13 locations with no limits set for nutrients or toxic pollutants and with no requirement to reduce or eliminate discharges from any of these locations. It also does not set any limits on nutrient loads or toxic pollutants from the main sewage treatment facility. The segment of the Connecticut River receiving these discharges does not meet current water quality standards as shown in the proposed Massachusetts Year 2006 Integrated List of Waters. Connecticut citizens have made major commitments to clean up their discharges but the water that comes to them is seriously polluted by its passage through Massachusetts and the continuation of permits such as this one which does not require municipalities to alter their patterns of pollution. We request that the permit be revised to set appropriate numerical standards for nutrient loads, especially nitrogen, and for toxic pollutants. We also request that you give the City of Holyoke a timetable to continue elimination of the CSOs.

Response P.1.

The permit establishes narrative limts for the CSO discharges as discussed above in Response E.4. See Responses G.1. and H.11. above for the discussions on nutrient limits for the treatment plant. The Draft Permit also sets limits for toxic pollutants from the treatment facility by requiring the Whole Effluent Toxicity (WET) Test. The schedules for CSO abatement projects are established in Administrative Orders.

Q. Comment from Pat Ingellis in an email dated September 21, 2007

Comment Q.1.

Please don't allow the City of Holyoke to discharge sewer overflows into the Connecticut River.

Response Q.1.

The City has been found to be in violation of its NPDES permits relative to its CSO discharges and has been subject to enforcement orders requiring abatement of those CSOs.

R. Comment received from Karl Meyer in an email dated September 21, 2007

Comment R.1.

I want to express my strong concern that Holyoke and surrounding communities not be allowed to continue dump billions of gallons of raw sewage into the Connecticut River annually. It is time this oxygen-sapping situation was brought under control. Bacteria spikes should have been a thing of the past not a common occurrence in the 21st century. Please hold these cities to the standards that should have been safely in place decades ago.

Response R.1.

As discussed in previous responses, the permit includes narrative water quality-based limits for CSOs and compliance schedules enforcing those limits are issued in administrative orders. While CSOs currently cause or contribute to exceedances of water quality criteria for bacteria there are no indications that dissolved oxygen criteria are violated in the Connecticut River. The control of CSOs is complex and the financial considerations for communities can be significant. A community's Long Term Control Plan for CSO abatement can extend over many years; sometimes even decades.

S. Comment received from Jonathan Souweine in an email dated 9/21/2007

Comment S.1. I understand that Holyoke continues to operate 14 outfall pipes with no numerical limits set for these discharges. There is no plan or schedule for eliminating sewage discharge from these outfalls. We should not treat the Connecticut River like an open sewer. The City should be ordered to comply.

Response S.1.

The City of Holyoke has 1 outfall from the Water Pollution Control facility and 13 Combined Sewer Overflows. The permit establishes numeric limits for the discharge from the treatment facility. The permit also establishes technology-based limits (the Nine Minimum Controls) and narrative water quality-based limits on CSO discharges. The City has been ordered to comply with the CSO limits in its permit in Administrative Orders, which include schedules for CSO abatement projects.

T. Comment received from Louis R. Kornet in an email dated 9/21/2007

Comment T.1.

The usage of the river by our community is increasing as the positive benefits of past reductions in pollution are seen. Yet we continue to have to warn people of the health issues after rain storms. We need a plan in place to achieve zero pollutants. As an elected member of the Planning Board of Longmeadow, Massachusetts and a member of the Pioneer Valley Yacht Club I strongly urge a plan detailing the next steps and timetables for achieving this goal. The current permit should include these steps and timetables.

Response T.1.

See Response E.3. regarding schedules and H.35. regarding AOs.

U. Comment received from Elaine J. Baskin in an email dated 9/21/2007

Comment U.1.

Having lived along the banks of the Hudson River I know rivers can be saved. I understand that there is no limit to the number of outfall pipes nor any nutrient limits imposed by the past discharge permit for the city. The city has lacked the will to reduce pollution on its own. The new discharge permit could impose limits such as the number of outfall pipes and reducing the amount of nutrients that can be dumped into the river. There is much activity that goes on in the river and we want to be able to fish and swim in the river. The City of Holyoke needs to take ownership of the Connecticut River and become a steward of this precious resource. Please draft a new discharge permit that makes the City do better than it has in the past.

Response U.1.

The permit authorizes the City of Holyoke to discharge from 14 outfalls; Outfall 001 at the treatment facility and 13 CSO outfalls at various locations. A discussion of the role of nutrients has been provided in the Fact Sheet and in Responses G.1.and H.11. above. The City is making progress with CSO abatement. The Mosher St. CSO has been eliminated and the Berkshire St. CSO treatment facility has been completed.

Comment U.2.

The river is now safe to boat in, but not really safe to swim, especially after the rains because of the outfalls released by upriver cities such as Holyoke. EPA should live up to the standards that ought to govern an Environmental Protection Agency and require the City of Holyoke to clean up its sewers. Either that Draft Permit is substantially modified or it should be turned down.

Response U.2.

As discussed above, the Permit requires that all discharges meet water quality standards. Compliance actions in the form of Administrative Orders have been taken against the City of Holyoke to ensure that it meet its permit requirements.

V. Comment from Jonathan Moss, President, Pioneer Valley Riverfront Club in an email dated 9/21/2007

Comment V.1.

I have long enjoyed Long Island Sound and the lower Connecticut River. The issuance of a permit which lacks adequate limitations to improve the overall water quality is concerning. I'd like to see tighter controls on CSO discharges and a more robust notification methodology for the public and river users especially when high bacteria levels make the river a health hazard.

Response V.1.

See Response F.4. regarding CSO limits and Response B.3. regarding public notification above.

W. Comment from Raul de Brigard in an email dated 9/21/2007

Comment W.1.

The State of Connecticut has approved $100 million for the cleanup of Long Island Sound. The Hartford Metropolitan District Commission has agreed to a very expensive long term plan to take care of the remaining overflow problems from the City's combined sewers. I find it incredible that the EPA would even consider issuing a permit to Holyoke's many outfall pipes without requiring an overall plan and schedule for eliminating sewage discharge and stormwater overflow.

Response W.1.

As discussed above, the development and implementation of Long Term CSO Control Plan has been required in Administrative Orders issued to the City of Holyoke.

Comment W.2.

Nutrient overflow is one of the major problems in the Sound. Why is it that the draft permit does not set nutrient limits on wastewater?

Response W.2.

See Responses G.1.(re: nitrogen) and H.11 (re: phosphorus) above.

X. Testimony from Megan Hearne Connecticut River Watershed Council

Comment X.1.

Pollution in one stretch of river contributes to a degraded environment far downstream. Holyoke has a responsibility to not pollute downstream and the permit should be strong enough to result in no harm down river. We ask that Holyoke be required to measure nitrogen and phosphorus and effluent at all CSOs. We also request monthly monitoring of bacteria loading, total suspended solids loading, and nutrient loading.

Response X.1.

EPA believes that understanding the frequency, duration, and quantity of CSO discharges is important, but, as discussed in Response D.1., we do not believe that pollutant monitoring is especially useful. To the extent that load estimates for specific pollutants become necessary, we believe that existing data, or textbook data is sufficient.

Y. Testimony from Chelsea Gwyther Connecticut River Watershed Council

Comment Y.1.

It in this day and age it is unacceptable that one billion gallons of overflow containing raw sewage is dumped into the river where we swim, fish and boat. It is equally appalling that there is no schedule to fix this problem. We cannot say that because Holyoke is a financially struggling community that pollution is acceptable or that low-income communities should bear an uneven share of hazardous environmental exposures.

The Connecticut River Watershed Council believes that the River is an important resource for the people who live along it. I ask you to use this opportunity that the permit gives us to take a step forward in cleaning up the Connecticut River.

Response Y.1.

As discussed in previous responses, the permit includes narrative water quality-based limits for CSOs and compliance schedules enforcing those limits are issued in administrative orders.

Z. Testimony received from Glen Conway

Comment Z.1.

Every year I give my students an assignment related to environmental issues that concern them. Many students are concerned about the pollution in the Connecticut River and they want to see a clean river. What I hope comes out of this meeting here is some kind of good that the river remains clean or even gets cleaner.

Response Z.1.

Compliance with the NPDES permit will improve the water quality of the Connecticut River.

AA. Testimony from Suzanne Jean

Comment AA.1.

There is a need for bilingual signage at the outfalls. There is also a need for public notification of CSO outfall events and the results of bacterial tests performed relating to those events. Also, as others have mentioned, will the City be required to develop a more definitive plan for the remaining work to be done regarding the CSOs.

Response AA.1.

See Responses A.1. (regarding bilingual signs), B.2. and B.3. (regarding public notification). As previously discussed, the requirement developing and implementing a Long Term Control Plan has been included in Administrative Orders.

BB.1. Testimony from Mrs. Beatrice Shenker

Considering that we can't eat the fish, children can't go swimming and the stench coming off the river, I don't understand what would prevent all of us working together to get all of this pollution out of the river. Don't you think this is the forum and this is the time we could change our laws and prevent dumping of sewage into our rivers. It's just not the overflow facilities but all the street waste going into the river every time it rains. Let's make the river something we can be proud of rather than a hazard and an embarrassment.

Response BB.1.

The Clean Water Act requires that sewage discharges be treated to achieve technology-based and water quality-based limits and that all point source discharges of pollutants to waters of the United States be authorized by an NPDES permit. The Permit issued to Holyoke includes the appropriate technology-based and water quality-based limits for the wastewater treatment plant and for the City's combined sewer overflows. We recognize that the City is not in compliance with the CSO limits and have issued a series of administrative orders which will lead to compliance with the permit.

The City also owns and operates discharges from separate stormwater systems. These discharges are permitted through the City's coverage under the NPDES Small MS4 General Permit.

CC. Testimony from Rabbi Shmuel Simeonwitz

Comment CC.1.

I believe the procedural shortcomings of the application have been discussed by previous speakers. I also think the City has the responsibility to consider the impacts of its discharges on those people downstream. It behooves those involved in conducting a cost-benefit analysis to consider the cost of the present situation against the potential costs to the redevelopment of the area, to the tourist area, and to the Connecticut River. I urge that the permit be revisited and that the shortcomings, especially regarding the inability of public comment and real time during the five year renewal periods and the lack of nitrogen removal be revisited.

Response CC.1.

The Permit includes limitations and conditions requiring compliance with Massachusetts surface water quality standards. Limits are not established on the basis of cost benefit. Cost is one of the factors that is considered in developing appropriate compliance schedules and can also be considered in modifying water quality standards if it is shown that attaining the existing

standards will cause substantial and widespread economic and social impact (40 CFR§131.10(g)(6). See Responses B.2. and B.3. on public notification and G.1 on nitrogen.

Testimony DD. from Jonathan Moss

Comment DD.1.

I won't present comments that are duplicative of others. We've been starting a program which introduces rowing to quite a number of people from youth to the elderly. During the learning process, there's a lot of wading, splashing, and at times swimming, from people flipping the boats over. I am looking to have a way so that we know when it's safest to row.

Response DD.1.

Please see Response B.2.

EE. Testimony from Mrs. Beatrice Shenker

Comment EE.1.

Is there a reason why the goal isn't to make that nobody's polluting the river and fish can be eaten and children can swim without getting sick?

Response EE.1.

As previously discussed, the Permit includes limitations and conditions requiring the discharges

achieve water quality standards, which include the fishable, swimmable goals of the Clean Water Act.

FF. Testimony from Mr. Richard Purcell

Comment FF.1.

We want the river clean but at an expense that we can afford. Holyoke is the poorest city in the State. We ask EPA and the United States government to help us with funding it.

Response FF.1.

We recognize the financial costs associated with CSO correction. These costs can be a significant burden, especially in economically distressed urban areas. The financial impact of these projects is considered in developing a compliance schedule for the elimination of CSOs, and in cases where the necessary controls would result in substantial and widespread economic and social impact, can be considered in downgrading water quality standards (40 CFR§131.10(g)(6).

The federal government awards capitalization grants to the states by which low cost loans are provided to communities for their wastewater treatment needs.

Comment FF.2.

There also is the issue of the long-term contract for the operation of the treatment facilities. There are odor issues at the treatment plant. Is the private contractor properly operating the treatment works? I don't believe it is.

Response FF.2.

There are no specific permit limits related to odor but the Part II Standard Conditions of the NPDES permit require proper operation and maintenance of the wastewater treatment facility and a well operated treatment plant should not produce significant odors. Compliance with permit limitations is an indicator that the facility is being properly operated. An examination of the Discharge Monitoring Report data for this facility indicates the facility is in compliance with its permit limitations.

GG. Although the following comment was received after the closing of the extended public comment period, we will address it in this response to comments

GG.1. Comment received from David Stoff in a letter dated October 16, 2007

I am sending this memo for inclusion in the public record.

The public notice for the joint public hearing held on September 19, 2007 noted that the scope of the hearing included a "request for state water quality certification pursuant to sec. 401 of the Clean Water Act" ("401 water quality certification"). EPA and the MassDEP issue NPDES permits pursuant to a Joint Permitting Agreement dated March 18, 1973. Among other things, that Agreement provides that the Commonwealth will provide, deny, or waive the 401 water quality certification within 20 days of any public hearing on the permit. The Mass DEP should have issued its certification of the NPDES permit on or about October 9, 2007. The MassDEP has not provided this certification and is, therefore, not in compliance with the Terms of the Joint Operating Agreement.

Massachusetts regulations provide that an aggrieved person must file an appeal of 401 water quality certification within 21 days of issuance (314 CMR 9.10). It is unclear whether the state appeal period is triggered by the Joint Permitting Agreement 20 day certification/waiver provision, or by some undefined public comment/public hearing/appeal process. Because the appeal period for the 401 water quality certification is shorter than the 30 day appeal period for the permit itself, the practice of bundling the state water quality certification with the final permit in a single mailing has the practical effect of truncating or eliminating an administrative appeal of the water quality certification.

This memo is intended to place EPA and DEP on notice that a conflict exists between state regulations used in issuing the water quality certification and the procedures used in issuing NPDES permits.

Response GG.1.

The EPA and the MassDEP proceed in this manner for administrative convenience so that each agency's independent permit can be issued jointly. The operating agreement between EPA and MassDEP is simply an agreement between the two agencies to facilitate the issuance of those joint NPDES permits. It establishes no legal requirements on either agency and is not enforceable by outside parties. The 20 day period is not a provision of federal law or regulation nor do we believe it has a basis in state law. MassDEP's current practice regarding certification of NPDES permits has been to provide certification upon receipt from EPA of the proposed final permit, regardless of whether that extends beyond the 20 day period in the operating agreement.

The commenter states that by bundling the state water quality certification with the final permit in a single mailing has the practical effect of truncating or eliminating an administrative appeal of the water quality certification. We agree that the timing of the typical state certification does create an overlap between the time frames for appealing the certification and the permit. While this overlap would not prevent a concerned party from appealing both actions, it would cause additional work for a party seeking a more stringent limit in an NPDES permit based on a faulty state certification. We see no practical way to resolve this issue in this permit issuance, but do plan to discuss this issue with MassDEP in the context of future permits.

2005 CSO ACTIVATIONS

CSO #	LOCATION	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL/YEAR
2	Providence Hospital	1	1	1	1	0	2	3	4	3	5	3	1	**25.0**
3	Jones Ferry	2	0	1	3	2	3	3	4	3	6	3	2	**32.0**
7	Northampton/Glenn	2	2	2	3	5	3	2	4	4	5	4	2	**38.0**
8	Springdale	2	3	2	3	6	5	5	5	4	4	5	3	**47.0**
9	Berkshire St	2	2	2	2	5	3	5	5	4	6	3	4	**43.0**
11	Jackson St	2	3	1	2	4	3	4	5	4	6	4	3	**41.0**
13	Appleton St	2	3	2	4	5	3	3	3	5	5	4	3	**42.0**
16	Front/Appleton	1	1	2	4	3	3	2	4	4	5	5	2	**36.0**
18	Essex St	2	3	2	4	3	4	3	4	4	5	5	3	**42.0**
18	Walnut St	2	3	2	3	2	4	5	4	5	6	4	3	**43.0**
18	Highland Pk	0	0	0	1	0	0	0	0	0	0	0	0	**1.0**
19	Yale St	1	3	1	3	0	3	4	5	4	7	3	2	**36.0**
20	Cleveland St	3	2	2	2	4	4	5	4	5	23	21	3	**78.0**
21	River Terrace	1	2	1	3	0	3	3	4	4	21	3	2	**47.0**
23-1	Jefferson St	1	1	1	2	1	3	2	3	3	6	3	1	**27.0**
														0.0
TOTAL NUMBER OF OCCURENCES/MONTH		24	29	22	40	40	46	49	58	56	110	70	34	**578.0**
TOTAL PRECIPITATION/INCHES		2.36	1.56	2.39	0.96	1.27	1.47	3.95	1.44	1.05	18.3	3.8	3.2	**41.8**

2006 CSO ACTIVATIONS

CSO #	LOCATION	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL/YEAR
2	Providence Hospital	3	2	1	2	3	4	2	3	1	2	5	0	**28.0**
3	Jones Ferry	4	3	1	0	3	3	2	3	1	3	4	1	**28.0**
7	Northampton/Glenn	4	4	1	3	8	5	3	4	2	4	4	1	**43.0**
8	Springdale	4	5	1	2	7	5	3	5	3	4	4	1	**44.0**
9	Berkshire St	5	3	1	2	7	4	3	5	0	3	3	0	**36.0**
11	Jackson St	5	2	1	1	6	4	3	3	1	2	4	0	**32.0**
13	Appleton St	4	1	1	2	5	4	3	3	1	2	4	1	**31.0**
16	Front/Appleton	4	4	1	3	5	5	3	4	4	4	4	1	**42.0**
18	Essex St	4	4	1	4	7	7	3	4	4	4	4	1	**47.0**
18	Walnut St	4	4	1	3	7	9	3	4	4	4	4	1	**48.0**
18	Highland Pk	4	0	1	0	2	3	0	0	0	0	0	0	**10.0**
19	Yale St	4	0	1	0	6	5	3	3	1	2	4	0	**29.0**
20	Cleveland St	19	5	1	4	12	7	3	3	3	4	6	1	**68.0**
21	River Terrace	3	0	1	0	5	4	3	3	1	2	4	0	**26.0**
23-1	Jefferson St	1	1	1	0	5	3	3	3	1	2	4	0	**24.0**
														0.0
TOTAL NUMBER OF OCCURRENCES/MONTH		72	38	15	26	88	72	40	50	27	42	58	8	**536.0**
TOTAL PRECIPITATION/INCHES		6.0	1.4	0.8	3.4	6.0	2.5	2.4	4.1	2.3	7.4	4.7	2.3	**43.1**

Exhibit A
Nitrogen Loads

NH, VT, MA Discharges to Connecticut River Watershed

FACILITY NAME	PERMIT NUMBER	DESIGN FLOW (MGD)[1]	AVERAGE FLOW (MGD)[2]	TOTAL NITROGEN (mg/l)[3]	TOTAL NITROGEN - Existing Flow(lbs/day)[4]
NEW HAMPSHIRE					
Bethlehem Village District	NH0100501	0.340	0.220	19.600	35.962
Charlestown WWTF	NH0100765	1.100	0.360	19.600	58.847
Claremont WWTF	NH0101257	3.890	1.610	14.060	188.789
Colebrook WWTF	NH0100315	0.450	0.230	19.600	37.597
Groveton WWTF	NH0100226	0.370	0.290	19.600	47.405
Hanover WWTF	NH0100099	2.300	1.440	30.000	360.288
Hinsdale WWTF	NH0100382	0.300	0.300	19.600	49.039
Keene WWTF	NH0100790	6.000	3.910	12.700	414.139
Lancaster POTW	NH0100145	1.200	1.080	8.860	79.804
Lebanon WWTF	NH0100366	3.180	1.980	19.060	314.742
Lisbon WWTF	NH0100421	0.320	0.146	19.600	23.866
Littleton WWTF	NH0100153	1.500	0.880	10.060	73.832
Newport WWTF	NH0100200	1.300	0.700	19.600	114.425
Northumberland Village WPCF	NH0101206	0.060	0.060	19.600	9.808
Sunapee WPCF	NH0100544	0.640	0.380	15.500	49.123
Swanzey WWTP	NH0101150	0.167	0.090	19.600	14.712
Troy WWTF	NH0101052	0.265	0.060	19.600	9.808
Wasau Paper (industrial facility)	NH0001562		5.300	4.400	194.489
Whitefield WWTF	NH0100510	0.185	0.140	19.600	22.885
Winchester WWTP	NH0100404	0.280	0.240	19.600	39.231
Woodsville Fire District	NH0100978	0.330	0.230	16.060	30.806
New Hampshire Total		**24.177**	**19.646**		**2169.596**
VERMONT					
Bellows Falls	VT0100013	1.405	0.610	21.060	107.141
Bethel	VT0100048	0.125	0.120	19.600	19.616
Bradford	VT0100803	0.145	0.140	19.600	22.885
Brattleboro	VT0100064	3.005	1.640	20.060	274.373
Bridgewater	VT0100846	0.045	0.040	19.600	6.539
Canaan	VT0100625	0.185	0.180	19.600	29.424
Cavendish	VT0100862	0.155	0.150	19.600	24.520
Chelsea	VT0100943	0.065	0.060	19.600	9.808
Chester	VT0100081	0.185	0.180	19.600	29.424
Danville	VT0100633	0.065	0.060	19.600	9.808
Lunenberg	VT0101061	0.085	0.080	19.600	13.077
Hartford	VT0100978	0.305	0.300	19.600	49.039
Ludlow	VT0100145	0.705	0.360	15.500	46.537
Lyndon	VT0100595	0.755	0.750	19.600	122.598
Putney	VT0100277	0.085	0.080	19.600	13.077
Randolph	VT0100285	0.405	0.400	19.600	65.386
Readsboro	VT0100731	0.755	0.750	19.600	122.598
Royalton	VT0100854	0.075	0.070	19.600	11.442

St. Johnsbury	VT0100579	1.600	1.140	12.060	114.662

NH, VT, MA Discharges to Connecticut River Watershed

FACILITY NAME	PERMIT NUMBER	DESIGN FLOW (MGD)[1]	AVERAGE FLOW (MGD)[2]	TOTAL NITROGEN (mg/l)[3]	TOTAL NITROGEN - Existing Flow(lbs/day)[4]
Saxtons River	VT0100609	0.105	0.100	19.600	16.346
Sherburne Fire Dist.	VT0101141	0.305	0.300	19.600	49.039
Woodstock WWTP	VT0100749	0.055	0.050	19.600	8.173
Springfield	VT0100374	2.200	1.250	12.060	125.726
Hartford	VT0101010	1.225	0.970	30.060	243.179
Whitingham	VT0101109	0.015	0.010	19.600	1.635
Whitingham Jacksonville	VT0101044	0.055	0.050	19.600	8.173
Cold Brook Fire Dist.	VT0101214	0.055	0.050	19.600	8.173
Wilmington	VT0100706	0.145	0.140	19.600	22.885
Windsor	VT0100919	1.135	0.450	19.600	73.559
Windsor-Weston	VT0100447	0.025	0.020	19.600	3.269
Woodstock WTP	VT0100757	0.455	0.450	19.600	73.559
Woodstock-Taftsville	VT0100765	0.015	0.010	19.600	1.635
Vermont Totals		**15.940**	**10.960**		**1727.302**
MASSACHUSETTS					
Amherst	MA0100218	7.100	4.280	14.100	503.302
Athol	MA0100005	1.750	1.390	17.200	199.393
Barre	MA0103152	0.300	0.290	26.400	63.851
Belchertown	MA0102148	1.000	0.410	12.700	43.426
Charlemont	MA0103101	0.050	0.030	19.600	4.904
Chicopee	MA0101508	15.500	10.000	19.400	1617.960
Easthampton	MA0101478	3.800	3.020	19.600	493.661
Erving #1	MA0101516	1.020	0.320	29.300	78.196
Erving #2	MA0101052	2.700	1.800	3.200	48.038
Erving #3	MA0102776	0.010	0.010	19.600	1.635
Gardner	MA0100994	5.000	3.700	14.600	450.527
Greenfield	MA0101214	3.200	3.770	13.600	427.608
Hadley	MA0100099	0.540	0.320	25.900	69.122
Hardwick G	MA0100102	0.230	0.140	14.600	17.047
Hardwick W	MA0102431	0.040	0.010	12.300	1.026
Hatfield	MA0101290	0.500	0.220	15.600	28.623
Holyoke	MA0101630	17.500	9.700	8.600	695.723
Huntington	MA0101265	0.200	0.120	19.600	19.616
Monroe	MA0100188	0.020	0.010	19.600	1.635
Montague	MA0100137	1.830	1.600	12.900	172.138
N Brookfield	MA0101061	0.760	0.620	23.100	119.445
Northampton	MA0101818	8.600	4.400	22.100	810.982
Northfield	MA0100200	0.280	0.240	16.800	33.627
Northfield School	MA0032573	0.450	0.100	19.600	16.346
Old Deerfield	MA0101940	0.250	0.180	9.200	13.811
Orange	MA0101257	1.100	1.200	8.600	86.069
Palmer	MA0101168	5.600	2.400	18.800	376.301
Royalston	MA0100161	0.040	0.070	19.600	11.442
Russell	MA0100960	0.240	0.160	19.600	26.154
Shelburne Falls	MA0101044	0.250	0.220	16.900	31.008
South Deerfield	MA0101648	0.850	0.700	7.900	46.120
South Hadley	MA0100455	4.200	3.300	28.800	792.634
Spencer	MA0100919	1.080	0.560	13.600	63.517
Springfield	MA0103331	67.000	45.400	4.300	1628.135

Sunderland	MA0101079	0.500	0.190	8.700	13.786
Templeton	MA0100340	2.800	0.400	26.400	88.070

NH, VT, MA Discharges to Connecticut River Watershed

FACILITY NAME	PERMIT NUMBER	DESIGN FLOW (MGD)[1]	AVERAGE FLOW (MGD)[2]	TOTAL NITROGEN (mg/l)[3]	TOTAL NITROGEN - Existing Flow(lbs/day)[4]
Ware	MA0100889	1.000	0.740	9.400	58.013
Warren	MA0101567	1.500	0.530	14.100	62.325
Westfield	MA0101800	6.100	3.780	20.400	643.114
Winchendon	MA0100862	1.100	0.610	15.500	78.855
Woronoco Village	MA0103233	0.020	0.010	19.600	1.635
Massachusetts Totals		**166.010**	**106.950**		**9938.820**

1. Design flow – typically included as a permit limit in MA and VT but not in NH.
2. Average discharge flow for 2004 – 2005. If no data in PCS, average flow was assumed to equal design flow.
3. Total nitrogen value based on effluent monitoring data. If no effluent monitoring data, total nitrogen value assumed to equal average of MA secondary treatment facilities (19.6 mg/l), average of MA seasonal nitrification facilities (15.5 mg/l), or average of MA year round nitrification facilities (12.7 mg/l). Average total nitrogen values based on a review of 27 MA facilities with effluent monitoring data. Facility is assumed to be a secondary treatment facility unless ammonia data is available and indicates some level of nitrification.
4. Current total nitrogen load.

Total Nitrogen Load = 13,836 lbs/day
MA (41 facilities) = 9,939 lbs/day (72%)
VT (32 facilities) = 1,727 lbs/day (12%)
NH (21 facilities) = 2170 lbs/day (16%)
TMDL Baseline Load = 21,672 lbs/day

TMDL Allocation = 16,254 lbs/day (25% reduction)

MA Discharges to Housatonic River Watershed

FACILITY NAME	PERMIT NUMBER	DESIGN FLOW (MGD)[1]	AVERAGE FLOW (MGD)[2]	TOTAL NITROGEN (mg/l)[3]	TOTAL NITROGEN - Existing Flow(lbs/day)[4]
MASSACHUSETTS					
Crane	MA0000671		3.100	8.200	212.003
Great Barrington	MA0101524	3.200	2.600	17.000	368.628
Lee	MA0100153	1.000	0.870	14.500	105.209
Lenox	MA0100935	1.190	0.790	11.800	77.745
Mead Laurel Mill	MA0001716		1.500	6.400	80.064
Mead Willow Mill	MA0001848		1.100	4.600	42.200
Pittsfield	MA0101681	17.000	12.000	12.400	1240.992
Stockbridge	MA0101087	0.300	0.240	11.100	22.218
West Stockbridge	MA0103110	0.076	0.018	15.500	2.327
Massachusetts Totals			**22.218**		**2151.386**

1. Design flow – typically included as a permit limit in MA and VT but not in NH.
2. Average discharge flow for 2004 – 2005. If no data in PCS, average flow was assumed to equal design flow.
3. Total nitrogen value based on effluent monitoring data. If no effluent monitoring data, total nitrogen value assumed to equal average of MA secondary treatment facilities (19.6 mg/l), average of MA seasonal nitrification facilities (15.5 mg/l), or average of MA year round nitrification facilities (12.7 mg/l). Average total nitrogen values based on a review of 27 MA facilities with effluent monitoring data. Facility is assumed to be a secondary treatment facility unless ammonia data is available and indicates some level of nitrification.
4. Current total nitrogen load.

Total Nitrogen Load = 2151.386 lbs/day

TMDL Baseline Load = 3,286 lbs/day
TMDL Allocation = 2,464 lbs/day (25% reduction)

MA Discharges to Thames River Watershed

FACILITY NAME	PERMIT NUMBER	DESIGN FLOW (MGD)[1]	AVERAGE FLOW (MGD)[2]	TOTAL NITROGEN (mg/l)[3]	TOTAL NITROGEN - Existing Flow(lbs/day)[4]
MASSACHUSETTS					
Charlton	MA0101141	0.450	0.200	12.700	21.184
Leicester	MA0101796	0.350	0.290	15.500	37.488
Oxford	MA0100170	0.500	0.230	15.500	29.732
Southbridge	MA0100901	3.770	2.900	15.500	374.883
Sturbridge	MA0100421	0.750	0.600	10.400	52.042
Webster	MA0100439	6.000	3.440	17.400	499.199
Massachusetts Totals		**11.820**	**7.660**		**1014.528**

1. Design flow – typically included as a permit limit in MA and VT but not in NH.
2. Average discharge flow for 2004 – 2005. If no data in PCS, average flow was assumed to equal design flow.
3. Total nitrogen value based on effluent monitoring data. If no effluent monitoring data, total nitrogen value assumed to equal average of MA secondary treatment facilities (19.6 mg/l), average of MA seasonal nitrification facilities (15.5 mg/l), or average of MA year round nitrification facilities (12.7 mg/l). Average total nitrogen values based on a review of 27 MA facilities with effluent monitoring data. Facility is assumed to be a secondary treatment facility unless ammonia data is available and indicates some level of nitrification.
4. Current total nitrogen load.

Total Nitrogen Load = 1014.528 lbs/day

TMDL Baseline Load = 1,253 lbs/day

TMDL Allocation = 939 lbs/day (25% reduction)