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January 12, 2010

Curt Spalding
Regional Administrator
EPA Region 1
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RE: Marlborough Westerly Waste Water Treatment Works, NPDES Permit No. MA0100480
NPDES Permit Actions for 2010 discharging into the Assabet River from the Waste Water Treatment Works for the Towns of Westborough, Maynard, Hudson, and the City of Marlborough

Dear Mr. Spalding:

We appreciated meeting with members of your staff in early December to discuss the permit modification for the Marlborough Westerly Treatment Plant and again last week. On behalf of both the United States Fish and Wildlife Service (USFWS) and the National Park Service (NPS), managing federal lands along the Assabet and Concord Rivers within the Department of the Interior (DOI or the Department) and in the role of their designated Departmental counsel from our Office of the Solicitor, we welcome the focused discussion on common issues of mutual concern to our agencies.

We look forward to continued collaboration in the year ahead as we address the upcoming four major permit renewals on the Assabet River. As we have learned, when our resource management agencies work together, we can achieve substantial benefits for the federal trust resources managed by the DOI that are affected by water quality programs jointly managed by EPA and the Commonwealth of Massachusetts.

We are particularly pleased with the schedule that Mr. Perkins set out, commencing in February or March with a facilitated public workshop including the multiple stake-holders and key contributors to the phosphorous (P) pollution problems on the Assabet River. We support this initiative as a valuable means to share concerns amongst all of the affected interests. It would be wonderful if the collective group could jointly agree on the implementation actions needed to restore the river. However, even if the effort does not achieve consensus, it should be worthwhile as a means to communicate and educate all of us, as to the needs and impacts of the various alternatives for this round of permits. It is particularly important to the DOI representatives that EPA's goal is to have the 2010 permit cycle achieve a holistic, watershed approach to eliminating phosphorous impairment in the Assabet River, through both permit and other actions in order to achieve water quality standards.

We offer our support to help organize this workshop as well as other appropriate follow up activities to ensure issuance of permits by the end of 2010 that will implement the TMDL.

The Department has carefully considered the question of appealing the pending flow increase permit modification for the Marlborough Westerly Treatment Plant. As representatives from our agencies expressed at these meetings and in correspondence, we are extremely disappointed with EPA's action granting a flow increase of 44% to the City of Marlborough. This action is likely to make the challenge of implementing the TMDL for the Assabet River even more difficult. The DOI is not in any way opposed to economic stimulation efforts for the City. However, restoration of water quality for this river has been mandated for decades; there are four designated federal resource protection areas and the drinking supply for the Town of Billerica downstream; and this piecemeal approach to addressing the many interests of all the people and natural resources downstream is inappropriate, inconsistent with the TMDL[1], and contrary to state water quality standards (WQS). In addition, we believe that both this NPDES amendment action and federal funding awarded or committed through EPA's grant programs for a flow increase were conducted without compliance with applicable federal laws concerning protection of designated Wild and Scenic Rivers.

Nevertheless, we believe that it is more effective to work forward to achieve actual in-the-river improvements in water quality, rather than commit significant staff resources to dispute past decisions. We also do not want to slow down either the 2010 permit process or the construction of a facility that will be able to meet the P limits that will be needed in 2010. For all of these reasons, we will not file an appeal with the Environmental Appeals Board for the Marlborough permit modification.

That being said, there are several important concerns which we want to address. As we summarize below, and set forth in greater detail in the attachment, the Department of the Interior is interested in working with you to bring the four major NPDES permit renewals into compliance with Phase II of the TMDL by the close of 2010. We also believe it is appropriate to develop a specific interagency coordination process to ensure that all your permit and grants/fund reimbursements, on this river and other Wild and Scenic Rivers in New England, are administered in full compliance with federal law.

1. There are four Congressionally-recognized federal resource areas designated downstream of this facility on the Assabet and Concord Rivers which suffer from the effects of sewage effluent. Degraded water quality adversely affects the missions of our bureaus including protection of wildlife and natural resources as well as providing high-quality recreational, scenic and preserved historic river experiences for the American people.

2. Excessive levels of phosphorous released from the four main publicly owned waste water treatment plants (POTW's or WWTP's), which combined constitute up to 98% of the river's P,

[1] Assabet River Total Maximum Daily Load for Total Phosphorous, Report Number MA82B-01-2004-01, Commonwealth of Massachusetts, EOEA, Massachusetts Department of Environmental Protection-Bureau of Resource Protection, Division of Watershed Management, hereafter "TMDL, page xx"

cause eutrophication, poor water quality, and impair the ability of the river to support healthy populations of indigenous aquatic life. EPA expects that at design discharge flows, without an increased flow for Marlborough and under low flow conditions, wastewater effluent will "approach 100%" of the river's flow. (2005 permit, Response to Comments, page 2 and 30) Since the four WWTP's constitute such substantial volumes of P on a continuous basis, restoration of water quality in the Assabet and Concord Rivers will not be possible until the WWTP's P discharges are consistent with the natural in-stream levels for healthy lakes and their tributaries in this region.

3. The TMDL sets out alternative means and a schedule to meet the mass loadings of P to be allocated to the waste water treatment plants. Some of those alternative approaches focused on removing the accumulated sediments behind the dams as well as the dams themselves in order to reduce cycling of P (sediment flux) and which could thereby allow higher levels of P to be released from the effluent. One alternative would allow winter 1.0 mg/L/summer 0.1 mg/L limits for P, but also requires the presently unachievable assumption that sediment flux could be reduced by 90%.

4. There is a substantial amount of new information regarding the dynamics of P and water quality impacts on the Assabet River which, in concert with the goals and timeframes set out in the TMDL, should lead to significant permit limit revisions for all four facilities during 2010.

Important information gained from follow-up investigations shows that winter effluent discharges play a key role in sediment flux. The June, 2008 CDM study for the U.S. Army Corps of Engineers observed that "winter limits for the WWTP's below the current planned limit of 1.0 mg/L would contribute *significantly* to the reduction in sediment P flux...because winter instream P concentration has such a strong effect on the P flux the following summer."[2] At present and during the 2010 permit cycle, there is little likelihood that any dams will be removed and certainly not the key ones needed to substantially reduce sediment flux. Therefore, significantly lower year-round effluent limits will be needed to meet water quality standards.

It is not necessary to project the precise P reductions which may be gained from year-round limits before making the 2010 decisions. Existing models and projections can be revised and up-dated with monitoring results from facilities in Massachusetts and elsewhere or as compliant facilities come on line. Likewise, non-point approaches, such as modifying drainage and storm flow contributions or ineffective septic systems, can be implemented immediately so that by 2015 all interested parties can learn whether additional measures will be required to meet the TMDL.

5. We support EPA's decision in its November, 2009 permit amendment to reduce the P levels to .07mg/L in the summer months and 0.7 mg/L in the winter as an *interim limit* on effluent discharges, we continue to have several significant concerns with the flow increase component of the permit amendment.

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[2] U.S. Army Corps of Engineers, Assabet River Sediment and Dam Removal Study; Modeling Report, June 2008, prepared by CDM, page 6-7, hereafter referenced as "CDM, 2008, page xx."

a. The Assabet River already fails to meet the basic water quality standards (WQS), including sustaining healthy populations of indigenous aquatic life. To meet its Class B designation, these waters should be capable of supporting fish, wildlife and other aquatic life under conditions needed for "their reproduction, migration, growth, and other critical functions" without "changes from natural background conditions...necessary to protect normal species diversity, successful migration, reproductive functions or growth of aquatic organisms." 314 CMR §4.05(2)(b). Sampling of the extant fish populations in the Assabet River described in the U.S. Army Corps of Engineers study revealed that the species composition is heavily skewed towards pollution tolerant species and that a target fish population for a northeastern river such as the Assabet should include many other species that are either extirpated or present in very small numbers. Given that these water quality standards and the most lenient of the anti-degradation levels (Tier I-existing uses) are not being attained, and that background conditions and existing effluent discharges have impaired these waters, it is inconsistent with 314 CMR §4.03(1)(a) to have issued this permit amendment.

b. The EPA and the MADEP are both required to implement the TMDL. Permits issued by EPA must be consistent with both "the assumptions and requirements" of any TMDL, see 40 CFR §122.44(vii)(B). For waters impaired by nutrients, the MADEP is explicitly required to "not exceed the site specific criteria developed in a TMDL" 314 CMR §4.05(5)(c). The state's antidegradation regulations as written and incorporated into the allocation premises of the 2004 TMDL prohibited "new or increased point source discharges of nutrients [including] phosphorous to lakes and ponds" defined to include dammed river channels, or "increased point source discharges to tributaries of lakes or ponds that would encourage cultural eutrophication or the growth of weeds or algae in these lakes or ponds." While the state may have amended its current regulations to allow increased flows into impounded rivers, the TMDL was written with these regulations in place. The model run that projected acceptable levels of biomass and assumed increased flows for Marlborough at discharge levels of 0.1 mg/L (run 29) also assumed that sediment flux would be reduced by 90%, an assumption impossible to make at present given the failure to make any headway in removing the dams. All of the TMDL's model runs that project satisfactory levels of biomass reduction possibly achievable without dam removal are based on the 2.89 MGD design flow and will require discharge limits of .025 mg/L or .050 mg/L.

Since dam removal is so unlikely within the next five years, the only realistic expectation that flux reductions of 75%, or possibly only 50%, can be achieved at all rest upon whether year-round P limits can satisfactorily reduce the sediment flux to meet the TMDL, (discussed in more detail in part V of the Attachment) [Ref, pages 29, 55, & 79 of the TMDL] Therefore, the 2009 permit action was inconsistent with the assumptions and requirements of the TMDL.

c. EPA's recent enforcement order to the City of Marlborough recognizes that the City has not been in compliance with winter phosphorus limits established in the 2005 permit.. Marlborough has been illegally discharging at twice its permitted winter levels of P since 2006, thereby illegally discharging thousands of pounds of P into the Assabet River. (It has also failed to meet the design and construction deadlines for a new facility and to limit its aluminum discharges, as required by the 2005 permit.) These on-going violations will continue until a new facility is on-line. EPA has required that they be on line within one year. For EPA to actually

accomplish a "no-increase in P" result, it must address all of the pounds of P already illegally dumped into the river.

To accurately result in "no increase of P", no increased flows should be allowed until the applicant has removed the volume of P already unlawfully discharged. By delaying the .07/0.7mg/L limits until the permittee's discharges exceed the 2.89 MGD level, EPA simultaneously failed to address prior and authorizes future P loads above those permitted under the 2005 permit, contrary to anti-degradation requirements and thereby exacerbating the existing violations of the state's water quality standards.

d. To be consistent with anti-degradation requirements, a flow increase of 44% on a river presently failing to protect existing uses should be based upon an comprehensive analysis showing what combination of reduced effluent limits, decentralized WWTP's, conservation, ground discharge, and other alternatives will actually achieve the TMDL's criteria. Without such an analysis, there has not been an adequate evaluation of how the permit's authorization for increased discharges will implement the TMDL or meet the law. Should the Phase II limits require the City to reduce the volume of P it releases below any means that are technologically achievable, it will either have to reduce its flows, even more stringently reduce its P concentrations, or it will have to remove commensurate quantities of P through other means. No analysis of the relative feasibility of these alternatives or their costs was assembled showing how this amendment moves the conditions closer to achieving the TMDL. Assuming that EPA, the State or the applicant ultimately produces analytical documents which detail and support how the TMDL will be achieved, a flow increase for the City of Marlborough may be appropriate, but the 2009 permit action is not based upon a sufficient record showing how this will occur. This flow increase, given the lack of information about how it helps achieve the load restrictions needed to meet Phase II, appears unreasonable and likely to further diminish the scenic, recreational, and fish and wildlife values of the Assabet River.

e. The permit also allows the discharge of other regulated pollutants, including copper, silver, aluminum, nickel and ammonia, without appropriately taking into account natural background levels and the contribution of these pollutants from upstream discharges, again violating the state's water quality standards, see 314 CMR §4.03(1)(a) and §4.05(2)(b). While the new permit reduced the allowable volumes of these chemicals (or added new limits, as with nickel) to maintain the volumes permitted in the 2005 permit, actual discharge results, coupled with background levels in the river, could now result in violations. While we are pleased that EPA is imposing maximum daily limits on ammonia and nickel when it did not have them before, we are concerned whether, with background levels taken into account, these chemicals will be at low enough levels to maintain a naturally diverse community of native aquatic flora and fauna. The Response to Comments does not address how the metals already contained in the river (background levels) in concert with the levels to be allowed for this facility will affect the sediments, the receiving waters, or the aquatic life resident in these waters as the river continues on through impoundments and reaches the other downstream WWTPs and beyond. Since EPA admits that in its calculations, a "zero background concentration is assumed" (Response to Comments, 2009 permit, page 28) we are concerned that this permit amendment failed to comply with the state's WQS.

6. Staff from multiple bureaus of the Department of the Interior have been meeting collaboratively with EPA to address common concerns with "emerging contaminants or PPCP's". Some of these contaminants have caused documented impacts on fish and aquatic life including as the growth of female eggs within male reproductive organs and other observable "intersex" characteristics, accompanied by significantly reduced reproductive success, in fish exposed to estrogenic compounds common from public wastewater. It may be some time before research results have been incorporated into national effluent standards for any of these compounds, but there are existing technologies, operating protocols, monitoring, and design features (such as detention ponds) which can be included in new or existing facilities to reduce the discharge of many of these compounds. Given the alarming impacts that are already known to occur to fish, even if they have not yet been documented in humans, both to protect existing aquatic populations and the potential effects that may arise in humans exposed to these substances through their drinking water, such as the residents of Billerica, these existing design, monitoring, and operation tools should be included in future permits for all of the Assabet River facilities.

7. Appeal of the proposed flow increase and review of the deficiencies of the November, 2009 permit action would likely result in additional delays to the implementation of Phase I limits and plant design/construction. These improvements are already seriously overdue and out of compliance with the original permit schedule. While DOI is loathe to condone or reward such delay/non-compliance, we have determined that it is more effective to focus on the future and the achievement of Phase II limits without additional delay. Therefore, design and construction of a new facility could proceed without delay to (at the minimum) comply with the 2005 permit and (being realistic) should be designed to anticipate considerably reduced year-round effluent discharge levels in 2010.

8. Legally, the duration of the 4.15 MGD flow increase lasts only as long as the permit that it amends. Once that underlying permit lapses, EPA is not merely is free, *but is obligated*, to reduce or impose more stringent discharge or flow limits, to require additional off-site measures to mitigate for flow impacts, to delay or phase a flow increase contingent upon other identified actions or results, or to reallocate flows of any permittee as necessary to achieve river-wide implementation of the TMDL. While EPA infrequently restricts permittees from utilizing already-approved flows, inherent in Congress's concept of a TMDL is the recognition that waters which will remain polluted even after the application of technology standards will require allocation of waste loads amongst permittees as needed to attain water quality standards. Simply put, there are no "guaranteed long-term pollution rights" into an impaired waterbody. In fact, even in non-impaired waters, while communities frequently construct facilities with excess capacity, they bear the risk that subsequent permit conditions may require infrastructure changes or prevent a facility from being used at full capacity. The CWA intends that effluent standards become increasingly stringent with each permit cycle. Here, in an impaired waterbody, given the clear legal requirement that the 2010 NPDES permit actions achieve WQS with this permit cycle, this 44% flow increase approval may prove to be short-lived. Conceivably, given the additional off-setting costs and burdens such increases could place upon the City, the permittee itself may even choose not to increase its flows.

9. However, in the absence of comprehensive analysis evaluating how the 44% flow increase will impact achieving the TMDL, we cannot conclude that there has been compliance with required procedures for either this permit action or for the disbursement of federal grant funds. The TMDL's two-phase schedule and the 2005 permit were determined by our agencies as not likely to invade nor unreasonably diminish the scenic, recreational, and fish and wildlife values of the designated Wild and Scenic River, as required by section 7 of the Wild and Scenic Rivers Act (WSRA). Thus, federal funding actions subsidizing the design and construction of a facility conforming to the 2005 permit requirements is valid. However, given the myriad of issues described above, the lack of adequate information and analysis of the issues involved in an increase in design flow, and the absence of analysis integrating this increase with the necessary steps to achieve the TMDL, it is more difficult to determine with assurance that the integrity of the TMDL has not been jeopardized and that there is no invasion or unreasonable diminishment of the outstanding resource values.

Attached to this letter you will find additional explanation of DOI lands and interests in the Sudbury, Assabet and Concord watershed. Included is a more in depth description of our responsibilities under Section 7 of the Wild and Scenic Rivers Act and how we hope to work with EPA in the future on these issues. While recent inter-agency coordination efforts on the Wayland permit, the Birch Road proposal, and our meetings have reinforced the requirements of the Section 7 compliance process with your staff, this law is not being appropriately integrated into EPA's procedures for any number of grants, smaller-scale point source permits, etc. We believe that our two programs need to work together to achieve a more comprehensive operating memorandum of agreement for all EPA actions within and up-river from designated Wild and Scenic Rivers. We look forward to discussing this with you.

In conclusion, after careful focused consideration of the factors summarized above, DOI has concluded that it would not be in the best interest of the Assabet and Concord Rivers and DOI's interests therein to appeal the pending Marlborough Westerly flow increase. We believe it is more important to be forward-looking, to bring the new WWTP on-line as rapidly as possible and to have the 2010 permits achieve compliance with WQS.

While the available science indicates that more stringent year-round effluent requirements for phosphorus will be effective and should be required in order to meet the TMDL goals, other components of a management strategy still need further evaluation and public consideration. In addition to all of the storm water reduction, I/I reduction, water conservation alternatives, and others discussed in this letter and the Attachment, we support continued efforts by the EPA, the State, and local communities and the dam owners, to develop a multi-pronged approach for restoration of the Assabet River.

It is for these reasons that we would like to participate in your proposed workshop. In order to meet EPA's goal of issuing these permits by their expiration date of November of 2010, all of us will need to begin working on these issues in earnest as soon as possible. We are very willing to work closely with you and your staff over this year to try to answer the outstanding questions, to

examine other feasible alternatives to reduce P in the river, and ultimately to design a permit that protects water quality, with a realistic and aggressive compliance schedule.

We hope that by working together in the development of the permits all of us will gain a better understanding of all the issues and thereby craft permits to meet the common goal of restoring water quality on the Assabet and Concord Rivers.

We look forward to working with you,

Sincerely,

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Encl: Attachment With Supplemental Information
(Full Set of Exhibits to the Attachment to Addressee under separate cover)
Exhibit 1 – Map of the Assabet River National Wildlife Refuge
Exhibit 2 - Map of the Sudbury, Assabet and Concord Wild and Scenic River
Exhibit 3 - Initial Study of the Proposed SuAsCo Wild and Scenic River
Exhibit 4 – River Conservation Plan

Distribution:

Copy of letter and Attachment to the following:
Glenn Haas, MADEP
Nancy Stevens, Mayor, City of Marlborough
Town of Westborough
Town of Hudson
Town of Maynard
Congresswoman Niki Tsongas
Congressman James McGovern
Senator James Eldridge
Senator Susan Fargo
Representative Kate Hogan
Representative Cory Atkins

Representative Jennifer Benson
Representative Danielle Gregoire
Representative William Green, Jr.
Representative Carolyn Dykema
Board of Selectmen, Town of Stow
Organization for the Assabet River