

RESPONSE TO COMMENTS

REGARDING THE REISSUANCE OF THE FOLLOWING NPDES PERMIT

MASSACHUSETTS DIVISION OF FISHERIES AND WILDLIFE MONTAGUE (BITZER) STATE FISH HATCHERY, MA0110051

Introduction:

The U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) solicited public comments from July 25, 2007 through August 23, 2007 on the draft National Pollutant Discharge Elimination System (NPDES) permit to be issued to the Massachusetts Division of Fisheries and Wildlife for its Montague (Bitzer) State Fish Hatchery.

The Draft NPDES Permit is for the discharge of fish culture wastewater. The facility discharges to an unnamed stream tributary to the Connecticut River.

During the public-notice (comment) period EPA-New England received comments from the Connecticut River Watershed Council (CRWC) and the Water Supply Citizens Advisory Committee to the Massachusetts Water Resources Authority (WSCAC).

In accordance with the provisions of 40 C.F.R. §124.17, this document presents EPA's and MassDEP's responses to comments received on the draft NPDES permit and any appropriate changes made to the public-noticed draft permit as a result of the comments. The final permit is substantially similar to the draft permit that was available for public comment. EPA did, however, revise certain requirements in the permit to provide additional clarification and as a result of the comments raised. These revisions are summarized below and are reflected in the Final Permit.

Changes Made to the Final Permit

1. The Final Permit has been modified to require that the BMP Plan, as well as the certification that the Plan has been updated, be sent to the MassDEP within 120 days of the effective date of the permit.
2. The Final Permit has been modified to require quarterly monitoring for BOD, suspended solids, nitrogen, and phosphorus during periods of normal operation (not during cleaning operations).

Comments from the Connecticut River Watershed Council

COMMENT NO. 1

Aside from pH and flow, the parameters to be monitored from this facility will be tested quarterly during cleaning operations. We understand that this requirement is meant to capture worst case scenario conditions. However, the sampling regime does not characterize normal conditions. Would it not be of interest to also characterize discharge from normal operations? We suggest adding quarterly monitoring during normal conditions, while maintaining quarterly monitoring during cleaning operations.

RESPONSE NO. 1

EPA agrees that characterization of the discharge quality both during cleaning (worst case) operations as well as during normal operations is needed at this facility. In particular, a better understanding of the discharge of phosphorus is needed (see Comment No. 3, below). Therefore, quarterly sampling for BOD, total suspended solids, total nitrogen, and total phosphorus during normal operations was added to the permit to supplement the quarterly monitoring of these pollutants during cleaning operations.

COMMENT NO. 2

pH sampling has been changed from weekly to monthly. This does not appear to be consistent with anti-backsliding regulations. We recommend that EPA stick with weekly sampling of pH, especially because pH sampling is not terribly difficult.

We support the new requirement that pH limits be consistent with Massachusetts Water Quality Standards (6.5 to 8.3)

RESPONSE NO. 2

The pH limits in the proposed permit are from 6.5 to 8.3 std units. This limitation range is more restrictive than the expired permit, which contains the limitation range of 6.0 to 8.3 std units. This more restrictive range corresponds with the Massachusetts Surface Water Quality Standards for Class B Waters. Provision is made for pH values outside of the 6.5 to 8.3 range, if due to natural causes. EPA notes the support for this change.

EPA has reviewed the weekly pH sampling results generated under the expired permit. There were no violations of the expired permit pH range during the past few years. However, there were a number of violations of the proposed permit pH range. EPA believes that these were due to low pH in the natural spring water, which is the water source to the hatchery, and that hatchery operations have little effect on the pH of the water supply to the fish rearing operation. The proposed permit allows a demonstration that the low pH is due to the source water. Therefore, EPA does not believe more

frequent monitoring of pH would provide additional useful information, and no change in the proposed permit's pH monitoring frequency was made.

The anti-backsliding requirement is found in Section 402(o) of the Clean Water Act. Section 402(o) generally prohibits reissuance of NPDES permits to contain effluent limits which are less stringent than the previous permit, with several specified exceptions. Since the pH limit is actually being made *more* stringent, and since there is no mention of monitoring frequencies in Section 402(o), the proposed permit is not inconsistent with anti-backsliding.

COMMENT NO. 3

Data provided in the DMR Summary at the end of the Fact Sheet indicate total phosphorus discharge levels ranging from 0.19 to 0.39 mg/L. The Massachusetts target maximum for total phosphorus in flowing streams is 0.1 mg/L. Given that dilution at the outfall site is zero, we strongly recommend that effluent limits be placed on total phosphorus from this facility. Municipal wastewater treatment plants are commonly held to a limit of 0.2 mg/L. Perhaps this is an appropriate effluent limit for the fish hatchery as well.

RESPONSE NO. 3

The phosphorus concentrations measured in the effluent have been in the range indicated in the comment. However, the samples during recent years have all been taken during cleaning operations (worst case), as required by the expired permit. Conditions during cleaning operations are representative of only a small percentage of the time during which there is a continuous discharge from the facility. The majority of discharge from the facility occurs during normal operations when cleaning is not occurring. It is expected that the pollutant loading from the facility during normal operations (not during cleaning) would be notably lower than the loading that occurs during cleaning operations.

The effect of phosphorus as a nutrient on the receiving waters, particularly flowing streams like the unnamed tributary, is more a function of long-term continuous or average loading, rather than the infrequently occurring pulse loadings that occur during the cleaning operations. At present, there are no nutrient enrichment assessments that have been done specifically for the unnamed tributary to the Connecticut River and EPA and MassDEP have not observed evidence of nuisance enrichment in the stream downstream from the discharge.

Based on the current information available and the lack of evidence of eutrophication in the receiving water, EPA has not added a phosphorus limit to the Final Permit. As discussed in Response No. 1, above, a new monitoring requirement was added for several pollutants, including phosphorus, to obtain discharge concentrations under normal operations. This new information will provide EPA and MassDEP with a more thorough understanding of the overall phosphorus loading from the facility. Also, MassDEP acknowledges the need to consider assessing nutrient enrichment of the receiving stream.

If the additional information shows the need for phosphorus controls to prevent nuisance enrichment, a phosphorus limit will be proposed for the permit by modification or at the time of reissuance.

COMMENT NO.4

We support the new requirement to include quarterly nitrogen sampling.

RESPONSE NO. 4

EPA recognizes the need to gather data on this pollutant and has added total nitrogen monitoring during normal operations to the Final Permit. EPA notes the support for that new requirement.

COMMENT NO.5

We support the requirement of a Best Management Practices (BMP) Plan to control medications and disease control chemicals. We also support the prohibition of prophylactic use of disease control medications. Release of medications and chemicals, and the evolution of resistant strains of bacteria, diseases, parasites, and pathogens, is serious business. Fish hatcheries have the potential to negatively affect the greater Connecticut River watershed; utmost care should be taken in the hatchery's practices. We would like to request that the Commonwealth of Massachusetts or EPA post the state hatchery BMP on a website so the public can be aware of the state's practices.

RESPONSE NO. 5

EPA agrees that the development and implementation of the BMP Plan is an important permit requirement. EPA notes the comment's support of its inclusion as a permit requirement.

EPA routinely posts final permits and all permit attachments on its web site which is accessible at <http://www.epa.gov/region1/npdes/index.html>. EPA intends to post this final permit shortly after it is signed and before it becomes effective. EPA does not post documents it receives as a permit requirement, however they may be requested from EPA. In addition, the Final Permit has been modified to clarify that the updated BMP Plan is to be sent to the MassDEP within 120 days of the effective date of the permit. The BMP Plan will then be available for public review by following the standard public information review policies of the MassDEP. The BMP Plan will be available at the MassDEP-Division of Watershed Management office at 627 Main Street, Worcester, MA.

Comments from the Water Supply Citizens Advisory Committee

COMMENT NO. 1

These facilities (referring to Bitzer and Sunderland State Fish Hatcheries) will not be tested during normal operation, and even discharge to an unnamed stream as in the case of Montague; a stream barely noted by the state's Department of Environmental Protection programs.

RESPONSE NO. 1

See CRWC Response No. 1 and No. 3, above, and WSCAC Comment and Response No. 2, below.

COMMENT NO. 2

We are very concerned with the discharges, especially the surface water limiting nutrients of phosphorus and secondarily, nitrogen. The phosphorus limits should be maintained at no less than wastewater treatment plant limits of 0.2 mg/l.

We have also noted in our experience with the fish hatchery downstream from the Quabbin Reservoir's Winsor Dam, that the hatchery discharge encouraged colonies of choking grasses downstream, impairing flow and quality. All hatchery discharges should be prevented from fouling the streams to which they discharge. Filtering of hatchery waste or some other treatment to limit nutrient content must be required.

RESPONSE NO. 2

See CRWC Response No. 3, above. In addition, regarding the McLaughlin Trout Hatchery, which is located on the Swift River just downstream from the Quabbin Reservoir, a permit reissuance is also now in progress. That proposed permit includes a more restrictive water quality-based phosphorus limitation, 0.26 mg/l to be complied with during cleaning operations, in order to prevent accelerated eutrophication in the Swift River. EPA agrees that all discharges from fish hatcheries should be controlled to levels that prevent the discharges from causing problems in the receiving waters.

COMMENT NO. 3

We support the proposed quarterly monitoring for nitrogen -- it is a step in the proverbial right direction.

RESPONSE NO. 3

EPA recognizes the need to gather data on this pollutant and has added total nitrogen monitoring during normal operations to the Final Permit. EPA notes the support for that new requirement.

COMMENT NO. 4

The control of pharmaceutical products will become an ever-increasingly important topic in all of our water bodies. The application of BMPs to disease medication is a good beginning and prophylactic use of such medications should be prohibited, as proposed.

RESPONSE NO. 4

The BMP Plan is indeed a very important part of the permit. EPA notes the comment in support of its inclusion.

COMMENT NO. 5

We feel it necessary to mention that the MA DEP may soon be looking at an application by the Nestle North American Company to seek permission to drill test wells for possible bottling of the spring water sources that currently feed the Montague Plains Aquifer. The impact of such an enterprise would be to further reduce the Montague Plains discharge to the Connecticut River and likely will impact the rivers quality in that reach, while also, possibly, preventing the hatchery from having sufficient flow from the spring. While this is not a direct EPA issue, we hope you will bring interest in it to the attention of the MADEP. We hope that EPA will discourage the reduction of available public water resources to the Connecticut River, which, as you know, can spare little flow unless and until its quality is improved.

RESPONSE NO. 5

This issue is not regulated by EPA. However, Massachusetts statutes do address water withdrawals. The following information has been provided by MassDEP via email from Paul Hogan:

The withdrawal and use of surface water or groundwater for a consumptive use requires an application be filed for a Water Management Act permit with MassDEP. The general threshold for this requirement is a withdrawal volume equal to or greater than an average of 100,000 gallons per day for a period of three consecutive months from a total withdrawal not less than 9 million gallons. The regulations pertaining to this process are found at 310 CMR 36.00 (Massachusetts Water Resource Management Program: May 6, 2005). The applicant must address not only withdrawal volumes and related changes in stream hydraulics but also potentially related environmental and habitat impacts. These items are outlined at 310 CMR 36.20(2)(b). The permit can also require post-operational hydraulic monitoring to determine the actual impact versus the projected results (see the

"Site Screening" application form at <http://www.mass.gov/dep/water/laws/ss020501.doc> for the required information form). The MassDEP will assess the impact of any proposed withdrawal from the Montague Plains Aquifer on the base flow in the local watershed and the impacts upon habitat. The permit review considers many factors outlined at 310 CMR 36.26(1) & (2). If approved, the permit can be conditioned to address these concerns. The application can also be denied by MassDEP.