

Response to Public Comments

From May 8, 1998 to June 6, 1998, the United States Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (DEP) solicited Public Comments on a draft NPDES permit, developed pursuant to an application from the Wayland Business Center, MA0039853, for issuance of a permit to discharge wastewater through a wetland to the Sudbury River. After a review of the comments received, EPA has made a final decision to issue the permit authorizing the discharge. The following response to comments describes the changes that have been made to the permit from the draft and the reasons for these changes and briefly describes and responds to the comments on the draft permit. A copy of the final permit may be obtained by writing or calling EPA Planning and Administration (SPA), JFK Federal Building, Boston, MA 02203; Telephone: (617) 565-4424.

UPDATE: On June 4, 1998, the Town of Wayland voted at a Special Town Meeting to take over this wastewater treatment plant by eminent domain. This will result in this treatment plant being operated as a publicly owned facility. Therefore, it is expected that during the life of this permit, the permit and all of its requirements will be transferred from the Wayland Business Center to the Town of Wayland.

A) Comments submitted by The Town of Wayland on 6/1/98:

Comment #1: Although phosphorus is the element of primary concern in the draft permit, nitrogen and other substances should be considered as affecting the watershed and the groundwater when septic systems lack appropriate separation from groundwater.

Response: The draft and final permits contain instream monitoring requirements for several parameters, including nitrogen. These parameters will be monitored monthly between May and November, upstream and downstream of the proposed outfall. If elevated levels of one or more parameters indicate a water quality concern, this permit may be modified to incorporate additional permit limits or requirements.

Comment #2: If the permitted flow is 65,000 gallons per day (gpd), then the septic tie-in minimum should be 20,000 gpd. If the minimum septic tie-in is 4740 gpd, then the total permitted flow should be 49,740 gpd. The Town prefers the former as it will provide the greater benefit to water resources.

Response: The figure of 4740 gpd was an estimate of the minimum septic tie-in flow that would be required in order to meet the proposed watershed trade. Since the maximum design flow as determined by the DEP for this plant was 65,000 gpd, this was chosen as the maximum permitted flow. EPA realizes that there is the potential to tie in more than

the 4740 gpd, up to a maximum of 20,000 GPD. We do not want to limit the number of tie-ins by imposing a maximum flow limit below that for which the plant is designed, or which makes the sewerage option impracticable.

For this ecosystem, EPA and the MA DEP believe there is greater benefit associated with the tie-ins of failing or inadequate septic systems than with the continued operation of such systems, because of the increased treatment to be provided by the treatment plant and the resulting nonpoint source reduction of nutrients to the Sudbury River. It is important to note that the environmental benefit assessment for treatment plants versus septic system management is a case by case determination, based on factors including significance of existing and projected point source and nonpoint source loadings.

Comment #3: The permit allows the payment to public or private parties for addressing failing septic systems. The Town feels that the words "or private" should be stricken. Payment should be to the Town for use by its Board of Health with priority given to business properties.

Response: The requirement for payment to public or private parties to implement upgrades to failing septic systems is a component of an alternative plan only if implementation of the "Sewer Connection Option" cannot be assured. Based on recent information, EPA and MA DEP are strongly assured that the "Sewer Connection Option" will be the preferred option. However, if the alternative plan must be implemented, then EPA and MA DEP believe that the performance standard to be achieved is the upgrade of failing septic systems and resulting nonpoint source nutrient reduction and not whether the recipients are private or public. Accordingly, the permit shall remain unchanged. The permittee may, at its discretion, choose to provide payment to the Board of Health as a means of complying with this requirement.

Comment #4: We question the effectiveness of the plant harvesting and education proposals in the stated objective of reducing the amount of phosphorus being discharged.

Response: Decaying vegetative matter does release nutrients. Harvesting of nuisance plants has been performed for many years by the Hop Brook Watershed Association. EPA and MA DEP believe that similar activities in the Sudbury River and quantification of the associated nonpoint source nutrient reduction can be performed. The educational component is viewed as supporting the funding portion of the alternative watershed trading option. While EPA strongly believes in the importance of education, particularly in the case of nonpoint source pollution, we acknowledge the difficulty of quantifying

its effectiveness in pollution reduction. The permit has been modified to delete educational efforts as a plan component. Alternatively, EPA encourages all parties to voluntarily work together on outreach activities on behalf of the water the resources.

Comment #5: The Town believes that the permit should require the applicant to have a retention basin with an oil/water separator to service its parking lots and driveways regardless of other provisions of the permit.

Response: Storm water runoff from parking lots which does not come into contact with any raw material, finished product, or any waste materials would not usually require permitting. However, this permit could impose Best Management Practices (BMPs) or a Storm Water Pollution Prevention Plan requirement if it was believed that runoff from the parking lot areas could cause or contribute to water quality violations. During construction or re-development of the parking lots and associated areas, we would expect the permittee to conform to the policy of the MA DEP titled "Performance Standards and Guidelines for Storm Water Management". The Town could have jurisdiction for imposing requirements of this guidance through its Conservation Commission.

Comment #6: The Wayland Board of Health has a regulation with specific requirements for the operation and maintenance of wastewater treatment plants and reserves the right to make periodic inspections of any wastewater treatment plant in Town. The final permit should contain a condition that the applicant will comply with all applicable Wayland Board of Health regulations.

Response: This is handled separately by the Town and we expect the permittee to comply with all applicable requirements as long as it is the owner and operator of the plant.

B) Comments submitted by The Town of Wayland's Board of Health on 6/1/98:

Comment #1: We want the applicant to be obligated through the final permit to comply with all applicable Wayland BOH regulations including sending us copies of all reports.

Response: See response to Comment A.6. Copies of all NPDES monitoring reports would be available upon request from the EPA or the MA DEP.

Comment #2: An applicant proposing new construction on lots or increased flows from existing lots should be able to meet Title 5, i.e. construct a subsurface waste disposal system on the property it serves before the parcel can be developed. This should be incorporated into the permit.

Response: The intent of the watershed trade, as described in the permit is to offset (at a 1:3 ratio) the point source phosphorus loading from the permittee's facility by the reduction of nonpoint sources that would have otherwise been released to the Watershed. In order to clarify the above, the permit has been modified to state that "existing" failing septic systems shall be used to meet the trade. Furthermore, Town officials have assured EPA that there are more than enough "existing" failing septic systems to satisfy the trade in the "Sewer Connection Option".

C) Comments submitted by Sarah R. Newbury on 6/3/98:

Comment #1: To Part I(A)(4)(c)(I) I would add "if first approved by the Wastewater Management District Commission" following the words "or private".

Response: See response to Comment A.3.

Comment #2: In connection with existing and post discharge sampling locations described in Part I(A)(6), please note that there are two private golf courses within the floodplain of the Sudbury River in Wayland. At least one of these to my knowledge uses heavy amounts of fertilizers and pesticides; presumably both contribute phosphorus as well as nitrogen. One of these golf courses is adjacent to the former Raytheon property and one is upstream.

Response: EPA and the MA DEP will take these factors into consideration when reviewing the applicant's upstream and downstream sampling locations. We would support and encourage the permittee and the Town to specifically target these two golf courses for education regarding the application of pesticides and fertilizers and their potential impacts to nearby streams via runoff or groundwater migration.

D) Comments submitted by SuAsCo Watershed Coalition on 6/5/98:

Comment #1: The SuAsCo Watershed Coalition would like to request a public hearing to be held on this draft permit. This permit has significant implications on both the ecology and economy of this region and warrants every opportunity for public involvement.

Response: As explained in the August 5, 1998 letter from Linda Murphy (EPA) to Nancy Bryant of the Coalition, EPA determined that significant public interest in a public hearing was not evident and that a public hearing was not advisable for this permit. EPA feels that all the commenters on this permit had their opportunity to voice their concerns and that this document and the final permit will reflect all these comments. Since it appears that the Town will take over the treatment plant in the near future, this will assure that the septic system tie-ins will occur. This will directly address public health and water quality concerns which had previously been difficult to mitigate.

Comment #2: The Sudbury River does not presently meet its federal water quality standards and we are concerned with the total phosphorus limit of 0.5 mg/l. Since there are technologies that can achieve lesser limits, such technologies should be adopted on this highly eutrophic river.

Response: EPA and MA DEP believe that, for this case, a phosphorus limit of 0.5 mg/l will be protective of the Sudbury River for the following reasons:

- a. This permitted discharge represents a significant reduction over phosphorus point source loadings from the previous operator, the Raytheon Company. The 0.5 mg/l effluent level represents about an 80% reduction over previous loadings;
- b. The point source phosphorus loading is relatively minor: an estimated daily maximum phosphorus loading of 0.22 pounds per day with reasonable assurance that this loading can be offset through watershed trading;
- c. The permittee will conduct an optimization study of the treatment plant and implement the findings in order to further remove phosphorus through the treatment process.

Finally and most importantly, EPA and MA DEP decided on this limit only because this permit contains a watershed trading requirement which will result in a net decrease of phosphorus entering this watershed during the life of the permit.

Comment #3: Given the uncertainties regarding nutrient loading and the lack of a current TMDL study, it may also be warranted to set permit limits for nitrogen. A determination of the nitrogen/phosphorus balance in the river should be made before finalizing this permit.

Response: Nitrogen will be monitored upstream and downstream of this proposed discharge between May and November. If it is found that nitrogen is the limiting nutrient in the area of the discharge, the permit may be modified to include additional nitrogen monitoring or limits.

Comment #4: The watershed trading scenario in the permit lacks specific detail and allows an implementation scheme that may not be achieved until five years after the onset of this discharge. We believe this timetable is unreasonably lenient and lacks the specific guidance and planning required for successful implementation of this innovative technique.

Response: There are several steps to developing the watershed trade outlined in the permit which are conditioned upon approval by EPA and the DEP. The mechanism is not specific in order to give the permittee flexibility in developing a trade and being able to assure that it will happen. The watershed trading requirement has been shortened from 5 years after the permit's effective date down to two (2) years after the effective date. This period was shortened due to assurances from the Town, that upon taking over ownership and operation of this treatment plant, that it will proceed quickly to meet the conditions of the trade.

Comment #5: The Coalition is also concerned about the potential impacts this discharge may have on the Wild and Scenic values of the Sudbury River. The antidegradation clause of the permit is compromised by qualifiers such as "tentatively" and "insignificant".

Response: The MA DEP has determined that all of the existing water uses will be fully protected as a result of this discharge. The terms "insignificant" and "significant" are often used in making these determinations. These terms and their application are further explained in the Massachusetts Antidegradation Policy.

Comment #6: The ownership and location of the plant pose a potential for increased residential development in Wayland, beyond what the land could presently accommodate under Title 5 standards.

Response: See response to Comment B.2.

E) Comments submitted by The National Park Service (United States Department of the Interior) on 6/5/98:

This proposed discharge is into a segment of the Sudbury River which is currently subject to a Congressionally authorized wild and scenic study, pursuant to P.L. 101-628. Any federally licensed water resources projects, such as this permit, must be reviewed under Section (7)(b) of the Wild and Scenic Rivers Act to determine whether the proposed project would have direct and adverse effects on the river's free flowing character, or on the values that make it eligible for inclusion in the National Wild and Scenic River system. The NPS has determined that the proposed discharge's impacts on the river will not be "direct and adverse" as long as the following conditions are included:

Comment #1: The "sewer connection option" should be required to be pursued by the Town of Wayland, in the event it becomes an assignee of the permit.

Response: Although the final permit will retain the two different scenarios for meeting the watershed trade, the Town has acknowledged that it has every intention of pursuing the sewer connection option to meet the watershed trade. This is clearly the preferable alternative and the most direct way to alleviate the nutrient flow to the Sudbury River from failing or inadequately operating septic systems.

Comment #2: The nutrient trading standard and implementation schedule must ensure that there is no net cumulative increase in phosphorus loading at the end of the first five year period. Under the schedule set forth in the permit, it appears that the permittee could discharge up to 0.125 lbs/day of phosphorus every day for the first five years and only start eliminating 0.375 lbs/day on the final day of that period.

Response: The Town, assuming it will take over ownership and operation of the plant, appears to be ready to fulfill the requirements of this trade much sooner than the entire five year period, possibly within two years. The final permit will require that the permittee comply with a two year schedule rather than the five years to meet the trade, as the draft permit had allowed. This proposal will be made within ninety days after the effective date of this permit as described on Page 5 of the final permit.

Comment #3: The NPS encourages EPA to require the permittee to achieve as much of the nutrient trading requirement as is feasible through the elimination of existing land based sources of phosphorus. This will help to ensure that baseline phosphorus loadings do not increase in order to meet the resource protection goals created by the river's wild and scenic status.

Response: EPA and the MA DEP agree that the land based sources of phosphorus should be mitigated, because this seems to be the most direct way of reducing phosphorus loadings to the watershed. The second watershed trade option was offered for the applicant in case it would not be able to reach an agreement with the Town of Wayland on how to tie in septic systems to its' treatment plant. Since it appears that the Town will be taking over the plant, it was mentioned before that the septic system tie-ins seem to be assured.

Comment #4: EPA should consider adding seasonal limitations on phosphorus if the need for this is established as a result of the monitoring program. Also, if N:P (nitrogen:phosphorus) ratios indicate that N is limiting, EPA should examine the need for a discharge limitation for nitrogen and/or non-point source reduction for this nutrient.

Response: As was mentioned earlier, nutrient and nutrient ratio information is limited. As we gather information through this permit and other modeling or load allocation efforts, we could modify the permit as necessary to include additional nutrient monitoring or limits and/or trading to include other nutrients.

Comment #5: NPS strongly encourages EPA to consider using this opportunity to pilot removal technologies such as membrane separation in the basin.

Response: Piloting of new technologies is not a goal of the NPDES Program through the issuance of permits. However, EPA does encourage the piloting and use of innovative technologies through its' Office of Research and Development (ORD) and its' Center for Environmental Industry and Technology (CEIT). This EPA Regional office has been in contact with these programs regarding innovative technologies relative to the Hop Brook and Assabet Watersheds, concerning phosphorus treatment technologies.

F) Comments submitted by the Town of Wayland's Conservation Commission on 6/3/98:

Comment #1: We vote to support the points noted in the letter drafted by the (Town of Wayland) Wastewater Management District Commission and the Chair of the Board of Selectmen.

Response: These comments were addressed above in Part A.

G) Comments submitted by Michael J. Fleming, The SUASCO Watershed Team Leader of the Massachusetts DEP on 6/10/98: (After the close of the comment period.)

Comment #1: The permit's phosphorus limit should be reduced to 0.2 mg/l. The DEP is moving forward with future limitations of 0.2 mg/l and this facility should look to new technologies to achieve this standard.

Response: The rationale for the final permit limit is 0.5 mg/l was described earlier. This permit has included conditions that will ensure a decreased impact of nutrient loading through the watershed trading and the optimization study to be conducted. See response to Comment D.2.

Comment #2: Sampling for total phosphorus and oxygen above and below the discharge should be included in the final permit. The inclusion of this condition would provide data needed for future permitting.

Response: Instream phosphorus sampling will be conducted as required in the draft permit. In addition, the permit has been changed to include dissolved oxygen monitoring, which is a good indicator of eutrophication. Dissolved oxygen will be monitored during the months of June, July and August of each year. In these months, DO will be sampled three days per week, with two samples on each of these three days, taken in the early morning and late afternoon.

Comment #3: The watershed trading scenario in the permit is inadequate as it allows for deferred trading for five years after the onset of the discharge.

Response: See response to Comment E.2.

Comment #4: The permit should include quantifiable measures and definite assurances that protect the values of the Sudbury River in the ongoing pursuit of the "Wild and Scenic" designation.

Response: Under Section E, The National Park Service would not expect direct and adverse effects by this discharge as long as its' particular concerns were addressed. These concerns are discussed in Section E.