

NEPONSET RIVER WATERSHED ASSOCIATION

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December 2, 2004

Ms. Madelyn Morris
Deputy Regional Director, NERO
Bureau of Resource Protection
One Winter Street
Boston, MA 02108

RE: Response by the Town of Walpole to DEP's Request for Review Form regarding
Water Management Act Permit # 9P-3-19-307.02 5-Year Review

Dear Ms. Morris:

The Neponset River Watershed Association is generally supportive of the modified permit conditions outlined in your July 9, 2004 letter to Richard E. Mattson, Jr. of the Town of Walpole Sewer and Water Department. We believe these conditions are consistent with DEP's April 2, 2004 "Water Management Policy for Permit and Permit Amendment Applicants and 5-Year Review", which we strongly support.

We do, however, have a concern with the Department's emphasis on reducing the summer/winter water use ratio (modified permit condition 7) as an end in itself. While it is indeed critical for Walpole to decrease its summer water use to 2.58 mgd (modified permit condition 6d), there are many measures that the Town can take to reduce its water use year-round; i.e., indoor water conservation measures. Ironically, year-round conservation measures would do nothing to reduce the summer/winter ratio even though they would significantly reduce summer water use; theoretically, the summer/winter ratio could even create an incentive to increase *winter* water use. We would propose, therefore, that the revised Water Management Act permit contain a summer "average gallons per day reduction" condition and not a summer/winter ratio condition.

NepRWA is also sympathetic to the desire of the Town of Walpole, expressed in its "Request for Review" submittal, to delay the schedule for full implementation of a number of conditions in the modified permit. It is reasonable, we believe, to give the Town more time to meet conditions such as:

- Reducing residential water use to no greater than 65 gallons per capita per day;
- Reducing the summer water usage to 2.58 mgd; and
- Limiting annual average daily withdrawal volume for the next five years to 2.50 mgd.

We do *not*, however, support the Town's request that these conditions be eliminated from the modified permit. Despite the request in your July 9, 2004 letter to the Town, Walpole has

not submitted “to the Department for its review and approval a plan for meeting this seasonal water withdrawal.” Nor has the Town, as requested by the Department, made a determination of whether it believes the proposed 2.50 mgd annual average daily withdrawal volume limit is adequate and, if it determines that such a limit is inadequate, given DEP the basis for that determination. The Walpole Sewer and Water Commissioners maintain that “DEP should indicate the amount of water that would be conserved under its conditions.” We disagree.

NepRWA believes that it is Walpole’s responsibility to respond to DEP’s requests as soon as possible. It should be feasible for Walpole to implement many conservation measures within a year. However, *DEP should require that the town submit a plan for fully achieving all the permit conditions within the 5-year lifespan of the permit at the absolute latest.* The plan should include reasonable annual benchmarks for getting to full compliance as well as annual reports documenting money spent for conservation and the amounts of water saved through each type of conservation activity. Walpole should identify as soon as possible which water conservation measures it will *commit* to, and provide a *schedule* for their implementation.

Effective Water Conservation Measures that Walpole Should Consider (many of these are explained in detail in the “*Options for Managing the Impact of Private Irrigation Wells and Surface Diversions on Wetlands, Waterways and Public Water Supplies*” prepared for the Westwood Conservation Commission and the (then) Massachusetts Department of Fisheries, Wildlife and Environmental Law Enforcement in 2003, enclosed):

- *Retrofitting all public buildings* with water saving devices, as required by the current Walpole Water Management Act permit condition # 5.
- *Significantly increasing public education on and subsidies for effective water conservation methods* such as installation of low flow toilets, faucets, shower heads and front loading washing machines; use of rain barrels to capture roof runoff; and adoption of sound lawn and landscape water conservation measures (see the MA Water Resource Commission’s “Guide to Lawn and Landscape Water Conservation” -- www.state.ma.us/envir/mwrc). Applying straightforward, readily available and affordable conservation methods can cut water use in the average household by almost 35% according to the “Handbook of Water Use and Conservation” by Amy Vickers.
- Using the more detailed and timely data that the Water Department will be getting (and the manpower it will be saving) from its planned installation of an automated meter reading systems to provide “Home Water Conservation Audits” (especially for large water users) similar to electric companies’ home energy audits. See discussion directly below on ways to raise money to finance these activities.

- Adopting an aggressive, increasing block rate structure (Walpole now has a flat rate unit structure). The additional revenues could be used to counteract the effects of decreased public water supply usage that will result from the new Water Management Act permit conditions, as well as to fund the efforts described in the preceding paragraph. The Town of Sharon has adopted a rate structure that both creates financial incentives for larger water users to conserve and at the same time netted them a \$350,000 surplus in 2003. Sharon charges \$2.60 per thousand gallons for up to 30,000 gallons a year, with the rate gradually rising to \$7.00 per thousand for over 90,000 per year. With data from its new automated meter reading system, Walpole could even increase the price differential for large-scale water use in the summer months when conservation is most important.

The pricing system can remain revenue neutral. Small users would pay no more than they now do. Larger users would be charged more per gallon of water but, through conservation efforts, could use less water. And if larger users didn't conserve, the extra money they paid could be directed to conserving water in the ways described above. The Sewer and Water Department would lower costs by pumping and distributing less water, while keeping up its current revenues by charging more for it.

- Adopting a Wetlands Bylaw to regulate all private water withdrawals that are likely to have a significant or incremental adverse impact on wetland resource areas (see model regulation in Appendix B of the enclosed "Options" document).
- Adopting a regulation like those adopted in many Massachusetts municipalities to regulate the efficiency of irrigation systems that use public water supplies, including limits on the hours that lawns can be watered (see Table 3 on p. 16 and Appendix B of the enclosed "Options" document).
- Adopting a regulation like the one in Falmouth (discussed below) to establish outdoor water use restrictions on private well users during periods of hydrological stress (see Table 3 on p. 16 and Appendix B of the enclosed "Options" document).
- Adopting, as some communities have done, zoning rules to set a maximum lawn size, designed to minimize unnecessary irrigation.
- Installing updated technology to identify leaks when they are relatively easy and cheap to repair. (See, for example, the Advanced Leak Detection Systems at www.flowmetrix.com.) Such technology could probably be installed relatively cheaply when the town is installing its automated meter reading systems.

NepRWA also disagrees with Walpole's request that "(t)he department should provide the Town with legal opinion prior to imposing a condition on the permit relative to restricting the use of private wells, as such condition may not be enforceable." NepRWA believes that such restrictions are clearly legal; see the aforementioned "*Options*" document, enclosed. DEP has already asked communities in the Ipswich River Basin to adopt such restrictions.

Appendix B of the "*Options*" document includes a 2003 letter from the state Attorney General to the Town of Falmouth, approving a bylaw containing the following provision:

(I) If the Board of Selectmen makes a specific finding that the shortage of water exists because of a clear and imminent threat to the sole source aquifer underlying Falmouth, such threats to include severe drought..., the restrictions (on water use) shall apply to all citizens, water users, and consumers regardless of the source of water supply.

Finally, NepRWA is concerned with modified permit condition 6c: "Limits on non-essential outside water use (is) to be implemented based upon streamflow thresholds as measured at the United States Geological Survey gage on the Neponset River at Norwood." This condition is useful, but it is not adequate to address the problems of the highly stressed (and frequently dry) Mill/Mine Brook where Walpole gets much of its public water supply. DEP should require Walpole to create a plan regarding the relative amounts of water to be pumped from the Mill/Mine and the Spring Brook aquifers under varying conditions. Where Mill/Mine Brook is visibly dry, the Town should pump mostly or entirely from the Spring Brook aquifer.

DEP itself has repeatedly described Mill/Mine Brook as highly stressed (see the enclosed October 26, 2004 letter from NepRWA to you regarding Medfield's draft revised Water Management Act permit). For example, DEP's John Fiorentino in a 8/5/2000 Technical Memorandum stated that "(i)t is strongly recommended that strict water conservation measures be employed by communities in the Mine/Mill Brook system".

In the Ipswich River, DEP WMA permits set two instream flow thresholds, a relatively high "caution" threshold at which public water suppliers must impose voluntary irrigation restrictions, and a lower "danger" threshold at which water suppliers must impose total outdoor water bans. Such a scheme would be useful for Mill/Mine Brook as well.

NepRWA appreciates the opportunity to comment on this matter and would very much appreciate being copied on all future correspondence between the Town of Walpole and DEP regarding this permit.

Sincerely yours,

Steven Pearlman
Water Resource Analyst

cc: Rick Mattson
Steve Davis
Paul Lauenstein

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