



Organization for the Assabet River

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Investing in Wastewater Treatment Plant Upgrades

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Town Meetings have met and voted overwhelmingly to approve funds for wastewater treatment plant upgrades in those communities with municipal discharges to the Assabet River, as has Marlborough City Council. As readers of this newsletter know, it has been a long road to get to the point where upgrades are going forward to address the serious nutrient problems of the river. By 2010-2011 effluent from the major plants will have to meet a phosphorus discharge limit of 0.1 mg/L during the low flow months of April through October.

These limits, specified in permits issued by the EPA and DEP under the Clean Water Act, go into effect in mid-2010 for the Hudson and Maynard plants, and mid-2011 for the Westborough/Shrewsbury and Marlborough/Northborough plants. The different dates are due to the permit appeals by the towns (for less stringent permits) and OAR (for scalable technology) which were settled in 2005 and 2006 (see box). Once the permits went into effect, the plants were given 4.5 years to complete the upgrades and meet the permit limits.

The municipalities are moving forward to meet these deadlines, with Hudson in the lead, having already piloted various technologies (see OAR letter July 2006) and selected the most cost-effective one (AquaDAF). The Marlborough Westerly pilots are also complete. The remaining two plants have narrowed the field of technologies to test, and plan to run the pilots in the coming months.

All communities now have an idea of what the upgrades will cost; the larger the plant, the higher the cost. In all cases, much of the cost is for improvements and repairs needed independent of the new phosphorous limits, and a portion is specific to the phosphorus removal. Hudson and Maynard's consulting engineers estimate that 60-65% of the

cost will be for necessary repairs, not phosphorus removal. These are rough estimates, as it is difficult to clearly allocate some of the costs. Westborough and Marlborough anticipate a higher proportion for phosphorus removal, up to 60%. Marlborough's cost estimate includes a 50% expansion of plant capacity and effluent discharge, which can only be approved if it is proved not to degrade water quality.

Capital improvements of infrastructure are always needed in the life of any community, and Massachusetts is not alone in having deferred the cost of cleaning up contaminated water for too long. As water resources become scarcer and in heavier demand for multiple uses, it looks like the cost can only go up. Users of the MWRA sewer in Greater Boston are bracing for a cost hike to pay for the Boston Harbor cleanup. But perhaps this can be instructive. Boston Harbor, known in the past for its filthy and malodorous water, saw a change overnight when Deer Island wastewater treatment plant went on-line. Now the harbor is a booming recreation, business, tourist and hotel center with people drawn to the glistening and (relatively) clear blue waters.

The pollutant limits allowed under the Clean Water Act take into account how much dilution the natural flow of the river can provide. The Assabet's natural

flow is in short supply during the summer, just when we need it the most. Wise-use and careful stewardship of our remaining groundwater, which feeds clean water into the river, will help dilute the wastewater. Conserving water and reducing our own input of phosphorus by selecting phosphate-free dishwasher detergents will help reduce costs at the treatment plants (see our website for ratings). Finding alternatives to lawn and athletic field fertilizers will prevent phosphorous from running into the river when it rains.

There is no denying the out-of-pocket costs of improving our wastewater systems. Gone are the days when we could toss the compost over the back

wall and dig another pit for the outhouse. Unfortunately, the days of Federal grants to pay for wastewater infrastructure are gone too. However, annual sewer cost per household in the municipalities with pending upgrades are all below state average. The value of clean air and water is being impressed upon us daily—and it is increasingly a monetary value in terms of real estate and attracting people and businesses to a town.

Like bridges and highways, schools and hospitals, putting off improving our water quality benefits few. The sooner the Assabet River provides those glistening, clear waters to our communities the greater the asset it will be. ❖

Municipality	Completion date	Total upgrade cost, \$ million (estimated)	Cost due to phosphorus removal (estimated)
Hudson	May 1, 2010	16.5	35%
Maynard	June 28, 2010	10	40%
Westborough	July 16, 2011	32.3	60%
Marlborough	October 17, 2011	30.6*	50-60%*

* Includes a 1.5 mgd expansion over the current 2.9 mgd permitted volume.