



Charles River Watershed Association

BY FAX AND MAIL

March 31, 2008

Ian A. Bowles, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Attn: William Gage, MEPA Unit

Re: *Environmental Notification Form, Glen Ellen Country Club Senior Residential Community, Millis and Holliston, MA, EOE # 14204*

Dear Secretary Bowles:

The Charles River Watershed Association (CRWA) submits the following comments on the Environmental Notification Form (ENF) for the above-referenced project. The project is subject to a mandatory Draft Environmental Impact Report (DEIR). The project will create about 24 acres of new imperviousness, add 836 parking spaces, and generate an additional 83,000 gallons of wastewater per day of water, while using 100,000 gpd for domestic use.

Bogastow Brook, an important Charles River Tributary bisects the site. While the Charles River is classified as medium stressed under the Water Resources Commission's *Stressed Basins Report* (2001), this section of the watershed should more properly be classified as high stress.

Flows in Bogastow Brook are already impacted by water withdrawals; new imperviousness only exacerbates this problem. According to a report by the United States Geological Survey, *Evaluation of Strategies for Balancing Water Use and Streamflow Reductions in the Upper Charles River Basin, Eastern Massachusetts* (2004), Tables 1-4, August average flows in Bogastow Brook under average conditions are 0.30 cfs (pumped) vs 0.34 cfs (no pumping). However, under dry conditions these flows are 0.03 cfs (pumped) vs 0.07 cfs (no pumping). In addition to onsite wastewater infiltration, every effort should be made to recharge stormwater. The soils on this site are mostly sandy loam 50-100 feet deep and should be excellent for recharge.

While no discussion of stormwater management is contained in the ENF, the preliminary plan in the ENF prepared by EarthTech shows a number of basins to which stormwater is piped. However, this project appears to be ideal for low impact development techniques (LID).

This project should use LID techniques to the greatest extent possible, including reducing imperviousness, improving roadway infiltration through the elimination of curbs and use of infiltration devices, permeable pavement, green roof technology, rain gardens, biofiltration and increased vegetation on-site. Rooftop runoff should be harvested and used for all irrigation needs other than for the golf course itself with the overflow infiltrated. The proponent should also commit to meeting the Department of Environmental Protection's 2007 Stormwater Management Policy.

The 2007 Total Maximum Daily Load (TMDL) for Nutrients issued by MassDEP and U.S. EPA documents that phosphorous loadings to the river are directly causing or contributing to the eutrophication and excessive algal blooms in the Lower Charles River -- including the very severe toxic algal bloom in the downstream portion the river that first appeared last year and reappeared this summer. Pursuant to the TMDL, phosphorous loading needs to be reduced by 54% across the watershed to comply with water quality standards.

The Upper Charles Nutrient TMDL, which CRWA was involved in developing and which will soon undergo review by the environmental agencies, also documents the need similarly to reduce phosphorous loadings in the upper watershed. After the wastewater treatment plants, high density residential land use is the second highest contributor of annual phosphorous loadings to the upper Charles watershed (above the Watertown Dam).

Car exhaust paints roadways and parking spaces with phosphorous, which is picked up in stormwater runoff. Infiltration of stormwater is an effective method of removing phosphorous. The proponent should commit to using LID techniques for capturing and recharging stormwater and the DEIR should discuss how the project will comply with the TMDL. Stormwater infiltration is a win-win here, since it will enhance groundwater supplies, which in turn provide needed baseflow to surface waters. Source controls to reduce pollutants should also be discussed. The proponent will need to go beyond compliance with DEP's Stormwater Policy in order to meet the Nutrient TMDL.

A stormwater management plan should be submitted with the DEIR that discusses operation and maintenance, street and lot sweeping, roadway de-icing and snow storage/removal. If the internal roads are going to be privately owned, the proponent should commit to weekly sweeping of parking lots and access roads within the site with high efficiency vacuum sweepers to reduce pollutants, including phosphorus. Eliminating fertilizers with phosphorus, and establishing a vegetation management program that removes any leaf litter and lawn clippings from the site can also help reduce phosphorus loading.

The EIR should discuss the basis for the determination that 1121 parking spaces are necessary. Alternative configurations to reduce imperviousness, including a reduced build should also be discussed in the DEIR.

The basis for the determination that the project will generate 100,000 gpd wastewater should be provided. The DEIR should also fully discuss the proposed on-site wastewater treatment facility.

The basis for the water use projection in ENF should also be discussed and broken out according to use, i.e., residential, wellness center, function rooms, golf course, other outdoor irrigation, as well as by source. The golf course has a Water Management Act (WMA) permit for a surface water withdrawal. The number of holes the course will be reduced to and its water needs should be discussed in the DEIR. The proponent should commit to developing a drought management plan for the golf course. The feasibility of grey water for golf course irrigation should be discussed in the DEIR.

Water conservation is important for this project and will reduce wastewater flows. The WMA registration statement recently re-issued to the Town of Millis by DEP requires the Town to reduce water use to 65 residential gallons per capita per day in accordance with the 2006 Massachusetts Water Conservation Standards. The proponent should discuss how it will meet this performance standard in the DEIR. It should also discuss the amount of turf that will be used in the residential portion of the project, and commit to minimizing, or better yet, eliminating lawn areas and using drought tolerant grasses and xeriscaping throughout the project to reduce irrigation demand and pollutant runoff. In-ground sprinklers should not be used and the proponent should commit to drip irrigation only. The project should also commit to harvesting rooftop runoff for its irrigation needs. Potable water should not be used for irrigation. The proponent should also commit to installing high efficiency toilets and low water use appliances -- dishwashers and front end washing machines in units -- both to conserve water and to reduce wastewater flows.

Please feel free to call me if you have any questions at 781-788-0007 ext. 234.

Sincerely,

Margaret Van Deusen
Deputy Director and General Counsel

cc: Charles Aspinwall, Millis Town Administrator
Millis Planning Board
MassDEP
David Derrig, EarthTech