

# Boston Groundwater Trust

229 Berkeley St, Fourth Floor, Boston, MA 02116  
617.859.8439 voice – 617.266.8750 fax  
www.bostongroundwater.org

## Board of Trustees

Gary L. Saunders  
Tim Ian Mitchell  
Co-Chairs

Felix G. Arroyo  
Janine Commerford  
Greg Galer  
Galen Gilbert  
Stephanie Krueel  
Aaron Michlewitz  
William Moy  
Molly Sherden  
Peter Shilland  
Brian Swett  
Keith Williams

## Executive Director

Elliott Laffer

August 14, 2013

Casey Hines, Project Manager  
Boston Redevelopment Authority  
One City Hall Square  
Boston, MA 02201-1007

Subject: Belvidere/Dalton Project

Dear Ms. Hines:

Thank you for the opportunity to comment on the Expanded Project Notification Form for the Belvidere/Dalton project. The Boston Groundwater Trust was established by the Boston City Council to monitor groundwater levels in sections of Boston where the integrity of building foundations, especially those supported on wood pilings, is threatened by low groundwater levels and to make recommendations for solving the problem. Therefore, my comments are limited to groundwater related issues.

As noted in the PNF, the project is located in the Groundwater Conservation Overlay District established in Article 32 of the Boston Zoning Code. The proponent has committed, both in the PNF and in the First Amendment to the Master Plan for Planned Development Area No. 80, the Christian Science Plaza, to meet the requirements of the GCOD, both in terms of recharge and of the engineer's certification that the project will not cause a reduction in groundwater levels. This is particularly important in this area, where many buildings are supported on wood piling foundations and some have required major repairs because of piling deterioration.

According to information included in the PNF and further explained at the scoping session, the proponent has identified locations for the recharge systems. I look forward to learning more details about these systems and to receiving the letter from the Boston Water and Sewer Commission confirming that the standards for recharge are met.

The high rise structure will have two levels below grade, while the mid-rise building will have one. As stated in the PNF, excavation for the taller building will extend 45 feet below ground surface while that for the shorter will extend 25-30 feet below ground surface. In both cases, the depth of the excavation will extend below the largely impervious layer at the bottom of the critical aquifer that is critical to the preservation of wood piling foundations. It is vital that these foundations be designed so that they don't allow infiltration of groundwater and also that they don't create a path for groundwater to penetrate from this critical aquifer through the impervious layer to a lower level.

In addition to the below grade sections of the buildings, a tunnel is planned to connect the high rise building to the Christian Science Center garage. This is another location where the potential exists to create a situation that could lead

to a reduction in groundwater levels. It is very important that the tunnel and associated building penetrations be designed so that they cannot cause groundwater level reductions. All of these design issues need to be addressed in the engineer's certification letter.

Because of the below grade construction issues described above, groundwater levels should be monitored by the proponent. While below grade work is underway, wells should be read weekly, with results reported to the Authority and the Trust.

I look forward to working with the proponent and the Authority to assure that the project can only have positive impacts on groundwater levels.

Very truly yours,

Elliott Laffer  
Executive Director

Cc: Kathleen Pedersen, BRA  
Maura Zlody, BED