

MEMORANDUM

April 14, 2021
Updated 5.13.2021

TO: **BOSTON REDEVELOPMENT AUTHORITY**
D/B/A BOSTON PLANNING & DEVELOPMENT AGENCY
AND BRIAN P. GOLDEN, DIRECTOR

FROM: LAUREN SHURTLEFF, DEPUTY DIRECTOR FOR DOWNTOWN AND
NEIGHBORHOOD PLANNING
BRYAN GLASCOCK, DEPUTY DIRECTOR FOR REGULATORY PLANNING
AND ZONING
JEFFREY M. HAMPTON, SENIOR PLANNER FOR ZONING

SUBJECT: TEXT AND MAP AMENDMENT TO AMEND THE GROUNDWATER
CONSERVATION OVERLAY DISTRICT-ARTICLE 32

SUMMARY: This Memorandum requests authorization for the Director to petition the Boston Zoning Commission to adopt a text and map amendment to The Groundwater Conservation Overlay District-Article 32 to harmonize zoning language with BWSC practice, increase the “no harm” elevation from BCB 7’ to elevation 8’ to extend protection to additional buildings, update GCOD map to include Audubon Circle, Lower Roxbury, Central Waterfront area and portions of East Boston, and to clarify documentation submission requirements.

The Groundwater Conservation Overlay District (GCOD) zoning Article 32 was first drafted in 2005, adopted in 2006 and amended in 2007 to ensure stable groundwater levels in areas of Boston where buildings stand on filled land and utilize wooden pilings to support their foundations. Depleted groundwater exposes the tops of those pilings to oxygen and promotes decay, causing structural damage and potential collapse. The GCOD helps ensure stable groundwater levels by requiring projects meeting certain thresholds to capture rainwater for introduction into the water table rather than discharge into the stormwater sewer system.

For many years, the Boston Groundwater Trust (BGWT) has been collecting data on groundwater levels from over 800 monitoring wells and has researched the foundation types and soil conditions of Boston’s older neighborhoods where masonry

buildings on wooden pilings may exist. They have found that in addition to neighborhoods included in the 2006 zoning and 2007 amendment, four new areas are at risk and should be added to the GCOD area; including Audubon Circle, Lower Roxbury, Central Waterfront area and portions of East Boston.

In addition, the original language requires capture of 1 inch of rainfall over the square footage area of the project, while Boston Water and Sewer Commission's current standard is 1 inch over the area of impervious surface. This is an important distinction where a project may include paved areas where stormwater infiltration cannot occur.

The "no-harm" provisions require that below grade structures that extend below 7' above Boston City Base ("BCB") be watertight and not utilize sump pumps or underdrains which deplete groundwater. BGWT has determined that there are a significant number of buildings with pilings cut off above the BCB 6' level, in order to provide a measure of safety for those, BGWT recommends raising the no-harm elevation to 8' above BCB.

Under current practice, abutters and other interested parties may not have access to a project proponent's GCOD plans and documentation prior to the Zoning Board of Appeals hearing and have no way of appreciating the potential impacts. The proposed zoning amendment would require the proponent to submit their rainwater infiltration plans and engineer certification at the time they file their Notice of Appeal. In doing so, abutters will have a chance to review in advance and make known any concerns.

UPDATE: Just prior to the April 14th Board Meeting, the Agency received commentary that raised concerns about the potential impact on institutions in the Longwood Medical Area and the Board moved to table this recommendation until the May 13th 2021 Board meeting to allow staff time to address those concerns. Many of those institutions have very large building footprints on large single parcels. A relatively minor increase in impervious surface could trigger the need to collect and recharge rainwater from the entire site. In addition, there are site-specific questions of soil permeability, the influence of the Muddy River on groundwater levels and the presence of wooden pilings.

Given the potential for recharge requirements disproportionate to actual impact of a proposed project or need for recharge, the proposed amendment now requires Proposed Projects that are part of an Institutional Master Plan to recharge rainwater

equivalent to 1 inch only over the area of the net increase in impervious surface or, in the case of a new or substantial rehabilitation of a structure, 1 inch of rainfall over the area of that structure. Given the unique nature of institutions, the amendment further provides that an institution can be exempted from Article 32 if they have as part of their Institutional Master Plan (IMP) provisions for groundwater conservation, recharge and/or treatment, developed in consultation with Boston Water and Sewer Commission, Boston Groundwater Trust and/or the Boston Planning and Development Agency. This avoids the need for Zoning Board of Appeals review of institutional projects that only require a GCOD permit or variance where recharge is not advisable and promotes a more comprehensive long-term solution to stormwater and groundwater management.

RECOMMENDATION

It is therefore recommended that the Director be authorized to petition the Zoning Commission to amend Article 32 Groundwater Conservation Overlay District to harmonize zoning language with BWSC practice, increase the “no harm” elevation from BCB 7’ to elevation 8’ to extend protection to additional buildings, update GCOD map to include Audubon Circle, Lower Roxbury, Central Waterfront area and portions of East Boston, to clarify that documentation submission occur with the filing of a Notice of Appeal, and provide for development of Groundwater Conservation Plans for Institutional Master Plans .

An appropriate vote follows:

VOTED: That the Director be, and hereby is, authorized to petition the City of Boston Zoning Commission to amend Article 32 Groundwater Conservation Overlay District in substantial accord with the text and map amendments presented to the Boston Redevelopment Authority at its hearing on May 13, 2021.