

Rain Has Been Good For the Groundwater



By Cullum Paradis

Heavy rains have restored Boston's groundwater system to safe levels, protecting the wooden struts that support many buildings from collapse and giving nearly a quarter of the city a new 20-year record.

Groundwater levels are dependent on rainfall and the maintenance of the infrastructure that retains water within Boston's systems. Christian Simonelli, executive director of Boston's Groundwater

Trust, said the season's rains and diligent engineering have kept the city at minimal risk of collapse.

"We've benefitted from the rainfall in early summer, particularly July," he said. "We're roughly three quarters through reading the 800 wells we have, and we've had close to 25% of those wells be the highest they've ever been. And we've got data for some that goes back almost 20 years."

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If levels fall too low, the wooden “piles” that support many buildings can be exposed to air, which in turn exposes them to microbes and degradation.

Groundwater levels are closely monitored to prevent damage to buildings. If a particular well is lower than the surrounding area, it can indicate the groundwater system is leaking into tunnels meant for subways or other infrastructure.

Also contributing to the year’s success is public policy, which was updated in June.

The changes updated and streamlined the bureaucracy of the Groundwater Conservation Overlay District, a zoning tool requiring new construction to add groundwater recharge systems that capture rainfall to replenish water levels.

“Picture a dry well, but instead of having the roof installations going off into the street or storm system, they’re put into a dedicated recharge system adjacent to or below the building,” added Simonelli.

The updates also folded in some areas that were left out of the original overlay district and updated the required groundwater levels to reflect a more up-to-date understanding of the system’s needs.

Elliott Laffer, chair of the Neighborhood Association of the Back Bay (NABB), mentioned he’s satisfied with the current regulations. Both NABB and the Groundwater Trust were strong proponents of the proposal.

“We’re very happy with what’s been done. If more needs to be done, more will be done, but we’ll see how it goes forward,” he said. “The Groundwater Trust got what it needed, and we’re very pleased with that.”

For now, experts are confident that Boston’s groundwater levels will be safe for the near future.

“There’s always work to be done to increase public awareness, to let people know this issue exists and what we’re doing to mitigate the risk to buildings,” said Simonelli. “Levels may move four or five inches every few weeks, but we’re in a pretty good spot right now.”