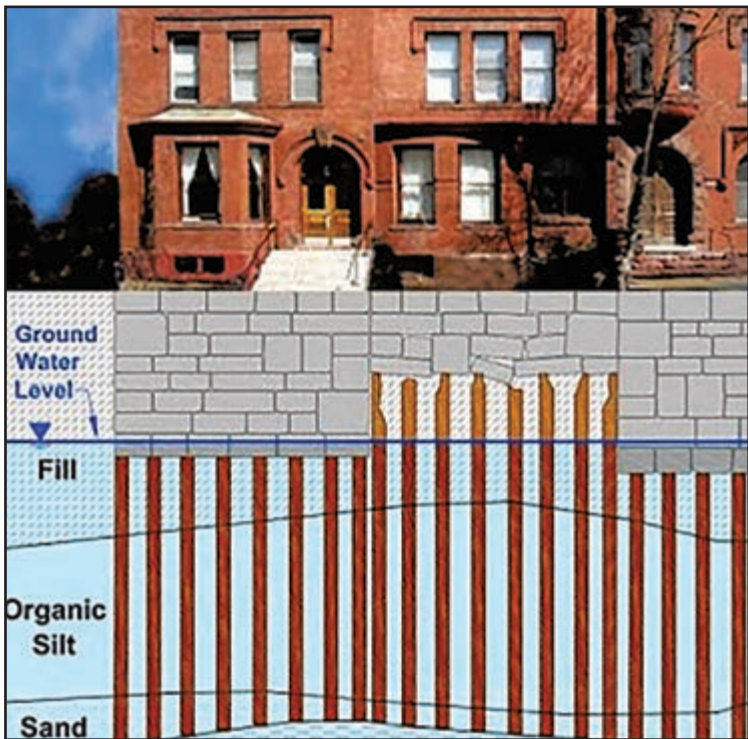


No Worries About Groundwater



By Dan Rabb

Amidst the growing economic instability unleashed by the coronavirus, homeowners in the downtown neighborhoods can at least be reassured

that the foundations of their houses will remain on solid footings.

A relatively dry winter has raised concerns that low groundwater levels

Continued on Page 7

Groundwater

Continued from Page 1

could destabilize many of the downtown neighborhoods' oldest buildings. Built atop artificially filled marshlands, more than 6000 buildings in the Back Bay, South End and Fenway are supported by wooden piles driven into the soil nearly two centuries ago that rot when exposed to air.

Yet despite the lack of recent precipitation, there is no immediate cause for alarm, according to Christian Simonelli of Boston Groundwater Trust, an organization created by the city to measure and control groundwater levels. Although Boston had almost no snowfall this winter, and the 10.42 inches of precipitation that fell in downtown from December through February was below average, Simonelli says groundwater levels have stayed within normal limits.

"[The water level] is down a little bit, but it's pretty typical for what we see," Simonelli said, adding that levels have bounced back quickly after recent dry winters. "In 2016, the levels were also low, but by the fall they raised back up again."

This will come as a relief to homeowners throughout the downtown areas. Rotting piles can cause the buildings atop them to "settle" or sink, causing structural damage and leading to a risk of collapse. The cost of repairing damaged piles and re-stabilizing a building often runs into the millions of dollars. With a freeze on construction due to the coronavirus outbreak, it would be difficult for

homeowners to move quickly to stabilize at risk buildings were groundwater levels found to be dangerously low.

Groundwater levels in the downtown neighborhoods are impacted by more than just rain and snowfall. While rotting pilings in the Back Bay were reported as early as the 1920's, the problem grew over the course of the 20th century as nonporous paving surfaces limited the amount of rainwater absorbed into the ground and the construction of deep subbasements and tunnels redirected groundwater unpredictably.

The city created the Boston Groundwater Trust in 1986 after a number of buildings were condemned due to their rotted pilings. The Trust monitors water levels using a series of wells dug around the downtown neighborhoods. Most frequently, cracked sewage lines and other infrastructure problems result in the sudden loss of groundwater in small sections of Boston's landfilled neighborhoods.

Yet the city has also made changes to ensure that the annual ebb and flow of groundwater stays close to acceptable limits. The city now uses porous paving surfaces, and mandates the installation of "groundwater recharge" systems, which collect rainwater and allow it to absorb into the soil.

"We're in a much better place than we were 30 years ago," Simonelli said. "In the 1980s, there was no Groundwater Trust. No one was monitoring the levels. That's why we were established. You have to look, and no one was looking."