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That sinking feeling may permeate Hub

By **Thomas Keane Jr.**

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It sounds like the opening shot of a Grade B disaster flick. The day dawns clear and bright. We hear a low rumbling. Suddenly the city of Boston sinks into the ground, never to be seen again.

That scenario, perhaps less apocalyptically played, has been on the minds of a few. Much of downtown Boston - the South End, Chinatown, South Boston, Back Bay, the Fenway and the flats of Beacon Hill - is built on timbers driven deep into the ground. Some of the timbers are rotting. At any moment, they could fail and the buildings on which they rest could give way.

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Boston is largely landfill. Wood pilings were a clever solution to the challenge of building on the soft ground. All manner of 19th-century buildings, from small brownstones to large structures such as Trinity Church, have them as their foundation. As long as the wood remains wet there's no worry; the water acts as an effective preservative.

But the designers back then hadn't anticipated things like subways, vast stretches of pavement, the Massachusetts Turnpike, leaking sewers and the Big Dig, all of which interfere with groundwater levels, causing them to rise and fall. When that happens - when the timbers alternately dry out and then are rewetted - they begin to deteriorate. The concern is not merely theoretical. In recent decades, buildings throughout Boston have developed severe structural problems. Some have collapsed. Right now, residents of St. Charles Street in the South End are fearing the worst for their homes.

Yet for all that this sounds like an engineering problem, it's really a political issue. The solutions aren't that hard; they aren't even all that expensive. But for years, the standard operating procedure was to ignore, forget, delay or disclaim responsibility - a sad example of the notion that if we can't see it, then it doesn't really matter.

The good news is, all of that is finally changing.

Back when Boston's buildings were built, the thinking was that as long as the Charles River and Boston Harbor were around, they would replenish the groundwater and there was no real cause for concern. In fact, from the very first that wasn't true - Beacon Street in the Back Bay, for example, sits atop an old dam that continues to this day to hamper underground water flows. As the city developed, the interference became more severe. Sewer mains would break and groundwater would run into them. Subway lines acted as barriers, preventing water from flowing.

Some apprehension over this developed back in 1929, when major repairs were needed to prevent the collapse of the Boston Public Library. The Depression-era Works Progress Administration dug a number of wells that were supposed to be checked on a regular basis. But with World War II, attention drifted elsewhere and afterward - at least through the 1960s - Boston was so economically depressed that few really cared. The wells went unmonitored; many filled with dirt and became unusable.

Collapsing buildings caused the issue to be rediscovered in the late 1980s. A city ordinance created a quasi-independent entity, the Groundwater Trust, and charged it with investigating. However, with no city dollars forthcoming and with few taking the issue seriously, the trust was largely moribund. That didn't change until the mid-1990s, when a local architect, Timothy Mitchell, began to raise alarms.

Largely due to his prodding, things today are better. The city provides the trust with a small operating budget - enough for it to hire staff. Wells have been cleaned and are being monitored. The state has provided capital funds that should allow for the construction of another 500. Eventually, says Elliott Laffer, the trust's new executive director, around 1,000 wells will be in place.

Problems remain. The status of the trust - city agency? independent? - is unresolved. Boston's Inspectional Services Department has refused to participate in trust meetings, arguing that if it knew what was going on, it would have to condemn a number of buildings (a perfect illustration of the "hear no evil, see no evil" approach of many to the issue). And the trust itself has no power. When it finds something of concern, it depends upon the good will of other agencies to identify causes and implement solutions. Yet those agencies - including the city's environment department, the water and sewer commission, the MBTA, the Turnpike, Amtrak and the Massachusetts Water Resources Authority - don't work together well and often seem more preoccupied with avoiding lawsuits and liability.

Nevertheless, the trust has made progress. Hiring an executive director was a step forward and Laffer vows to make sure the issue is no longer ignored or forgotten. Wells are now tested every two months and the results are posted at www.bostongroundwater.org. Check it out. Find a well near where you live. If the water level is consistently at 5 feet or more, you're in good shape. But if it's below that or varies significantly from one reading to the next? Uh-oh. A disaster movie soon may be in your future.

(Talk back to Tom Keane at tomkeane@tomkeane.com.)