

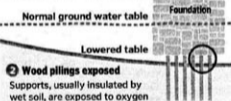
# Some have that sinking feeling

## Losing ground

Low ground water levels are causing foundations to sink in the South End, Back Bay and other Boston neighborhoods.

### 1 Ground water drops

Underground construction, tunnels, or leaky sewers can cause ground water to drain



### 2 Wood pilings exposed

Supports, usually insulated by wet soil, are exposed to oxygen

### 3 Pilings degrade

Moderate temperatures and increased oxygen encourage growth of corrosive fungi and the attack of insects



## Drop in ground water levels puts many old pilings at risk

By Scott S. Greenberger

GLOBE STAFF

Alarmed by two "hot spots" where ground water has dropped to alarmingly low levels, residents of the South End and the Back Bay are calling on city and state officials to take immediate action to prevent their homes from sinking on their foundations.

The problem in the South End, the Back Bay, the Fenway, and Beacon Hill has been on Boston's radar screen for decades: Many older structures in neighborhoods built on 19th century landfill are supported by wood pilings. When tunnels or other underground projects drain away ground water, the pilings are exposed to air — and to fungi and bacteria that cause them to rot. The sinking can crack foundations and buckle walls, and replacing the decayed pilings of a single rowhouse can cost more than \$250,000.

But while the state has decided to spend \$1.6 million on new monitoring wells to gauge the extent of the problem — adding 500-800 wells to 200 that exist — residents are fuming that city and state officials show no signs of taking action to raise ground water levels.

# Drop in ground water levels puts some Boston buildings at risk

► **PILINGS**  
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"The city and state have been looking at this problem for 60 years now," said Lewis Lloyd, who lives on West Hill Place at the base of Beacon Hill. Tired of waiting for

government help, Lloyd has begun reinforcing his pilings at his own expense. "Everybody agrees there's a problem, everybody agrees there's a problem in certain places, but no one can agree on a general approach to dealing with

it."

Many residents say agencies should not now to raise the ground water level in two spots where existing wells and test pits have shown it to be dangerously low: an area around the Orange Line tunnel through the South End, and near the Arlington Street underpass of Storrow Drive.

Until the state devises a long-term solution in those areas, many residents say, it should artificially "recharge" ground water levels by pumping in water. They worry that further delay could put hundreds of structures in jeopardy.

"There are temporary solutions while they study it," said Peter Pogorski, a resident of St. Charles Street in the South End. "The temporary replenishment is critical to us. The fact that nobody is able to take action is a political problem, not a technically complex issue."

Jim Lambrechts, an engineer with Haley & Aldrich who has been working on the ground water issue since the late 1970s, said Pogorski and his South End neighbors have a point.

"They've seen that the water level in the test pits is below the tops of the wood pilings, but the wood isn't rotted yet, so if you raise the ground water level you

can save them," said Lambrechts, a pro bono consultant for the Boston Groundwater Trust, a board made up of city officials and neighborhood leaders appointed by the mayor. "It's a reasonable thing to consider doing."

At residential water rates, it could cost hundreds of dollars a day to pour water into the ground at the hot spots and raise underground water levels, at least temporarily.

"To keep the housing stock from crumbling in short order, that's an easy solution," Pogorski said. "They've done it before," in the 1980s. "But who's going to pick the meter bill?"

Some residents accuse Boston officials of seeming strangely disinterested in a problem that could take a huge bite out of the city's tax base. And so far, state officials are focused on studies, not stopgap measures.

"Everybody's trying to deal with it, but it's just taking a long time and people are getting very impatient," said Antonia Pollak, director of Boston's Environment Department. "We're trying to get a system in place that can help us identify these issues as they come up."

At a recent community meet-

ing, MBTA officials pledged to complete their study of the Orange Line area by next fall, and MBTA spokeswoman Lydia Rivera said this week the agency is "not going to run" from the problem if it determines its tunnel is responsible for the problem there. Meanwhile, the state Office of Environmental Affairs has proposed spending \$250,000 on a three-year study of the Arlington Street underpass, according to agency spokeswoman Katie Ford.

Federal, state, and local officials plan to meet sometime in the coming weeks to discuss the broader ground water issue, Ford said.

Pollak, the city's point person on ground water, said the task of raising ground water levels is complicated by the uncertainty over who caused the problem.

"If the Metropolitan District Commission and the MBTA are pumping the water out of these specific sites, that's one thing. But if it's 300 years of mucking around with the landscape, then that's a bigger problem," Pollak said. "You've got to get over the blame game and figure out how to solve it."

The fear of legal liability is a stumbling block. In the mid-

1980s, residents of Beacon Hill's Brimmer Street sued the city, the Boston Water and Sewer Commission, the Massachusetts Water Resources Authority, and the Metropolitan District Commission, arguing that all four defendants negligently allowed ground water levels to drop. The cases were all settled by 1992, but the terms are protected by a confidentiality agreement.

Damage to the Brimmer Street buildings helped spark the 1986 creation of the Boston Groundwater Trust, which is funded by city, state, and private sources and charged with monitoring ground water levels.

Tim Ian Mitchell, a member of the Neighborhood Association of the Back Bay and cochairman of the group, called it disappointing that city and state officials at the recent community meeting did not have more to offer residents, especially those in the South End.

"Of all the neighborhoods in the city that seem to cry out for some quick investigation and remedial measures, I would say that is it," Mitchell said.

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