

Nasty Winter May Be Boon to Groundwater

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This winter's walloping storms have given Bostonians plenty to grumble about, but the resulting piles of snow might help alleviate one prevalent problem in the city: low groundwater.

"The snow should help. We don't know for sure the extent though, because it depends how much is getting into the ground," said Elliott Laffer, executive director of the Boston Groundwater Trust, an organization that installs and monitors groundwater wells.

Many of Boston's buildings and homes are built on wood pilings that can rot when groundwater levels drop and the foundations are exposed to air. Precipitation is the primary means that groundwater is recharged.

The city has received more

than 80 inches of snow this season as of press time. Only a small portion will actually turn into groundwater, however, as the city's paved surfaces prevent most of the melted precipitation from reaching the earth. The water will instead be guided to the ocean through storm drains.

"The snow has melted gradually. The slower it melts the more likely it will sink into the ground rather than run off," Laffer said.

Laffer can only speculate about the exact helpfulness of the precipitation, however, because most of the wells that measure the water table have been blocked by mounds of snow throughout the winter.

The effect of the snowfall on groundwater is not determined only by the total inches of precipitation, but also by the temperature, according to John Kastrinos,

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a senior hydrogeologist for Haley and Aldrich, a leading underground engineering consulting firm in Boston. If the ground is frozen, then the wintry precipitation cannot penetrate the surface.

"Snow is always good for groundwater, but just how good depends on various factors," Kastrinos said. "Overall this winter has been good for groundwater compared to last winter because it hasn't been that cold and we've had a lot of snow."

March and April are the best times for recharging groundwater, according to Kastrinos.

"April actually doesn't get more rain than other months, but the growing season isn't well estab-

lished yet in early spring, there's snow melting and there's some rainfall. Also, the plants and trees are not really soaking up a lot of water yet." Kastrinos said. "I don't think a lot of people realize that vegetation has a tremendous impact on groundwater levels and recharge."

The generally slower and steadier precipitation in April is also better than the summer storms when the earth is pummeled with raindrops and does not have time to soak them all up.

Despite the potential for snow to further aid groundwater levels this winter, Laffer and the trust are not rooting for more accumulation this month. "[Helping groundwater] may be the one good thing we get out of the snow, but even we're ready for spring," Laffer said.