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5 reasons why the practice of rainwater harvesting may increase in New England real estate

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The practice of rainwater harvesting is on the rise across the United States. Rainwater harvesting involves capturing rainwater (typically from rooftops) and storing it to supplement certain non-potable water uses such as toilet flushing or irrigation. Particularly along the west coast and arid regions of the country, clean water is scarce - and therefore expensive - and use of the water for purposes such as irrigation is discouraged and in some cases not permitted.

Compared to other regions of the country, potable water in the Northeast is currently widely available, minimally restricted, and relatively inexpensive. As a result, rainwater harvesting has typically been implemented to contribute to water conservation and stormwater management goals on green building projects (such as those seeking LEED Certification). On projects like the Isabella Stewart Gardner Museum, MIT's Stata Center, and Yale University's Kroon Hall, rainwater harvesting is a visible element of sustainability that reduces resource conservation and saves money.

Institutions who build, operate, and maintain their facilities have been most likely to find enough incentive to implement rainwater harvesting systems. Meanwhile, commercial and real estate developers may have found less incentive to implement rainwater harvesting systems due to the longer return-on-investment compared to other green building techniques. However, there are a number of current issues and considerations in New England that may change these trends and make rainwater harvesting more widely used, as it already is in other parts of the country.

1-The cost of water in New England is on the rise, and will continue to rise. For example, the Boston Water and Sewer Commission's published water and sewer rates have shown a steady increase of approximately 3% to 6% per year between 2008 and 2013. The primary expense associated with rainwater harvesting systems is the initial investment. A more complex life-cycle cost analysis that accounts for a projected escalation of water rates may provide a better approximation of the return-on-investment of a rainwater harvesting system than ever before.

2-Stormwater management regulations are strengthening and re-use will be an important method for compliance. Untreated and unmanaged stormwater runoff contributes to water quality impairment, flooding, and erosion in receiving water bodies. The EPA and the model regulations in the Chesapeake Bay Watershed are likely to continue to encourage local and state stormwater management regulations to strengthen nation-wide. The trend is to retain and infiltrate, evaporate, and/or reuse the 90th percentile rainfall depth (approximately 1-inch in New England) on site. This makes rainwater harvesting an enticing option, especially in areas of poor soil conditions or other constraints for infiltration.

3-Tenants demand green buildings. The demand for healthy and environmentally sustainable spaces is greater than ever. A recent article by Forbes cites that commercial green building

construction and renovation is expected to triple by 2015, primarily driven by tenant demand. Like energy use, water use is easily metered and supplementing potable water with captured rainwater for non-potable water uses such as irrigation is both ecologically and financially sensitive.

4-The design and construction industry promotes green buildings. The industry standard for green buildings is being driven by the design and construction industry. The implementation of integrated systems that can address several design goals - such as water conservation and stormwater management - are more frequently recommended by professionals who have increasingly more experience with designing and constructing such systems.

5-Local governments are encouraging green building visibility. The city of Boston recently filed a proposed Building Energy and Reporting Ordinance. Several other cities, including New York and Philadelphia, have already passed similar ordinances to encourage a green economy. These types of ordinances, which require annual disclosure of energy and water use for municipal buildings and commercial buildings of certain size, are becoming increasingly more common.

As these five factors converge, rainwater harvesting will become more important in New England. As a result, developers who integrate rainwater harvesting into their projects will be able to improve the environment, address regulatory requirements, and save money.

Nicole Holmes, PE, LEED AP BD+C, is a green infrastructure planning project manger at Nitsch Engineering of Boston and is a monthly contributing Civil Engineering author for the New England Real Estate Journal's Green Building section.