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## **Current drought highlights smart water mgmt. in buildings - by Jeffrey Diehl**

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Rhode Island is currently experiencing its worst drought in twenty years. Governor Gina M. Raimondo issued a statewide drought advisory in early September and reminded “Rhode Islanders to be considerate of their water usage, because we all play a role in our state’s water conservation efforts.” Rhode Island Infrastructure Bank (RIIB) administers several programs that support water distribution, treatment, and quality, and through our Commercial Property Assessed Clean Energy program (C-PACE), we also provide a mechanism to fund water conservation initiatives.

C-PACE provides access to long-term, fixed-rate capital for businesses and building owners to implement water conservation improvements, such as, low or dual flush toilets, water efficient fixtures, and irrigation controls. These improvements typically pay for themselves within a few years and their straightforward installation will not disrupt normal building operations. The case for these upgrades is so compelling that many building owners have already installed these measures. Once these basic modifications have been completed, how can a building owner be more ambitious about water management and conservation?

Installing a green roof helps a building manage stormwater, reduce energy costs, and improve the longevity of the roof. Green roofs, sometimes called vegetated or living roofs, consist of a waterproof membrane, a growing medium, and vegetation on top of a traditional roof. The General Services Administration (GSA), the Federal agency responsible for managing 370 million square feet of public buildings, has installed over 50 acres of green roofing across eighty buildings. GSA calculated an average payback of 6.2 years on their green roof investments and has found that their green roofs last twice as long as conventional roofs.<sup>1</sup>

Direct water reuse, another technology gaining momentum, takes wastewater and stormwater collected from the building and repurposes it for non-potable uses like toilet flushing, cooling tower make-up, and irrigation. This reuse reduces freshwater consumption and cost. Gillette Stadium

implemented a direct water reuse system that recycles up to 250,000 gallons per game day for cooling and toilet flushing. It is also possible to implement these systems at a smaller scale for commercial and industrial buildings.

RIIB's C-PACE program can provide building owners 100% project financing for water management initiatives, secured through a property tax assessment. No personal guarantee is required, and in certain cases, the interest can be capitalized for up to two years, mitigating the near-term impact on cash flow. C-PACE works in new construction as well as refurbishments and can help finance the addition of water conservation measures to projects in development. Through C-PACE, businesses and building owners support our statewide imperative for water conservation while at the same time reducing operating costs, extending the useful life of facilities, and reducing their environmental impact.

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