

Five Questions With Melissa Carter

By **Scott Blake** - September 20, 2019 1:29 am



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Melissa Carter | Planning and design manager, Stantec Inc.

1. What's your job in the final phase of Narragansett Bay Commission's Combined Sewer Overflow project? I am the planning and design manager for Stantec, which is the lead designer and program manager on behalf of the commission. This is for Phase III of what has become the largest public-works project in Rhode Island history and will dramatically improve water quality in Narragansett Bay. Work will begin in early 2020 with construction of the Pawtucket Tunnel, which is expected to be operational in 2026. The deep rock tunnel will be 140 to 180 feet below the ground surface in Pawtucket. The tunnel will be approximately 2.2 miles in length, 30 feet in diameter, and will store 58.5 million gallons of - wastewater.

2. What challenges are posed in creating the tunnel? There are two significant challenges: one is mitigating disruptive construction activities within a densely populated urban environment, and the second is controlling the costs and schedule to maintain the commission's affordability goals for their ratepayers.

3. What will happen to the wastewater collected in the tunnel? During heavy rainfall events that overwhelm the existing sewer system, excess sewage and stormwater will be diverted to the tunnel for storage instead of being overflowed directly to the bay. Once the storm passes and the sewer system has recovered, the wastewater stored in the tunnel will be pumped to the wastewater-treatment facility at Bucklin Point. Untreated overflows into the Blackstone and Seekonk rivers are expected to be reduced by 93% once the tunnel is operational.

4. How does this project compare with similar projects you've worked in Boston, Springfield and Hartford? It is the largest project that I have worked on in the lead designer role. ... For me personally, this has been a progression from leading portions of big projects to leading my own.

5. Do you expect sewer and stormwater projects to gain importance due to global warming? Yes, especially stormwater projects. The frequency and intensity of storms have been increasing in this region and that, in conjunction with sea-level rise, presents a new challenge to retrofit our existing infrastructure to protect human health and the environment from the threat of extreme weather events.

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