City Prepares for Stormwater Regulation

Paula Anania, Portsmouth's Wastewater Facilities Plant operator, left, Erik Grotton of Blueleaf Inc., David Allen, deputy director of Public Works, and Peter Rice, engineer in the city's water and sewer division, review details of the new pilot testing for water at the Portsmouth Wastewater Treatment Facility on Peirce Island.Rich Beauchesne

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Editors note: This is the last in a series on the city's water treatment efforts. Part 3 focuses on how the city is dealing with potential regulation of stormwater flow.

PORTSMOUTH — Wastewater treatment appears not to be the only thing weighing heavily on the minds of city officials these days.

Stormwater management has also risen to the surface as of late, leaving city officials to figure out how to deal with future impacts, particularly the cost to taxpayers, as a result of new strict regulatory demands.

Deputy Public Works Director Dave Allen said the city is soon expected to receive a new permit from the U.S. Environmental Protection Agency that could have some dramatic impacts on residents. The city recently held a Stormwater 101 presentation to help bring residents up to date on preparation taking place for the upcoming permit.

Stormwater is defined as "any natural precipitation, including rainstorm water runoff, snow melt runoff and surface runoff in drainage."

The reason stormwater is an issue, according to Allen, is because it carries debris and pollutants that make their way into the receiving water. Allen said more and more attention has been given to stormwater because the vast amount of development going on results in more impervious pavement, such as parking lots and driveways.

Currently, 27 percent of Portsmouth is covered by surfaces impervious to rainwater. Allen said studies have found that percentages above 10 percent can contribute to degradation of the quality of surrounding water bodies, due to a lack of natural soil filtration and groundwater recharge.

The city's current stormwater infrastructure includes 61 miles of storm drains, 4,700 catch basins and 450 discharge outfalls.

The new permit will likely mean the city must increase its monitoring and oversight of that infrastructure. It also could include treatment options to remove nitrogen.

The city is currently operating under a draft permit issued by the EPA. Allen said the city has had no problem meeting the requirements of that permit and then some. But the concern, he said, is that the new 2012 permit is expected to increase the amount of treatment required for stormwater.

Peter Rice, an engineer with the city's water and sewer division, said treatment of nitrogen for stormwater will be difficult because there is currently no sound scientific process in place. "There isn't anything out there, short of really radical space-age type stuff," he said.

The cost of the future permits is also not completely known, but officials are preparing for what could be a major increase in capital and operational costs.

The city currently spends about $290,000 a year on stormwater management through cleaning catch basins, street sweeping and administrative oversight. That money is included in the city's general fund under the Public Works Department.

The future permit requirements could mean the city will need to spend at least an additional $500,000 a year on stormwater management. While the city has not yet proposed how to pay for the increased cost, its officials are studying how other communities across the country are dealing with it.

Assisting the city is engineering consultant Andrew Reese, vice president of AMEC. Reese said there are several potential funding sources the city could consider when figuring out how to pay for the stormwater cost. He said realistically when looking at the many funding sources, the only real options for the city are to use its general fund or create a new user fee similar to water and sewer rates.

Reese said if the city went to a user fee system, the decision on how to charge someone might be to measure how much impervious area they have on their property.
"By far the best measure of stormwater use is using the impervious area," he said.
Reese said there are currently about 1,200 municipalities that are using stormwater fees. Another 200 communities, such as Portland, Maine, are expected to create them in the coming year, he said.

The city is not expected to get its new permit until shortly after the new year. Allen said once the permit is issued, the city will begin to figure out how it wants to pay for the work. That process will include more educational outreach to residents and ultimately a decision being made by the City Council.

"Our ultimate goal is to implement the requirements of the permit and continue to keep Portsmouth on a very sustainable and green infrastructure path," Allen said.