

Government

## Lawn Watering Stresses Local Water Supply, Future Growth

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The Hunt River flows from near East Greenwich's southern border with North Kingstown. It then follows Frenchtown Road, crosses under Post Road and becomes Potowomut Pond, and then the Greene River, before spilling out into Narragansett Bay.

That is, when there is enough water left in the river to make it all the way to the Bay.

Because residents of East Greenwich, the town of North Kingstown and the Quonset Business Park together consume millions of gallons water a day from the underground reservoir beneath the Hunt River – known as the Hunt River Aquifer – the river doesn't always make it all the way to Narragansett Bay in the hot summer months, according to state and local officials who have been studying this water supply.

"It's just being over pumped," said Brown University Environmental Studies Professor Harold Ward. "There is more water being taken every summer than there should be. Even in years when there is no drought, like last year, water stops flowing over the dam."

Ward and a variety of state and local Hunt River Aquifer stakeholders have been meeting to devise a strategy on how to deal with the summertime water shortage. While solutions vary, most stakeholders agree on the cause: the over-watering of suburban yards in the hot summer months.

"The problem is lawn watering in the summertime," said Alisa Richardson, the principal engineer with the state Department of Environmental Management Water Quality Certification Program.

Richardson and others described the Hunt River Aquifer as being in a crisis condition. She said some 6 million



### Summer Water Shortage

While the Hunt River has a healthy flow this time of year, during the hot summer months the river at times doesn't flow beyond this dam near Potowomut Road. (Photo by Jeff Stevens)

gallons of water a day are drawn from the aquifer in July and August when somewhere between 2 and 3 million daily gallons is "what we believe is ecologically sustainable."

"If people were to water properly, there might be enough water for everyone," she added.

### Ecology and public safety at risk

For most of the year the aquifer can satisfy the water appetites of the various users; but during the dog days of summer, when water in the aquifer is at its lowest level, water use is at its height. The amount of water being taken from the aquifer doubles in July and August, and the primary reason is people in the suburbs are excessively watering their lawns, officials said.

"It's gotten to the point where water use has actually exceeds our system capacity," said Susan Licardi, the director of the North Kingstown Department of Water Supply. "People started using a lot more water after all the development occurred in the late '80's early '90's."

The environmental effects are being seen already, Richardson said. There are no longer Brook trout found on the lower stretches of the Hunt River. Additionally, she said, the low flow could have adverse effects on Narragansett Bay. When there isn't enough fresh water mixing with the brackish water of the Greene River, dramatic algae blooms occur which could cause another fish kill-type event in Greenwich Cove, she said.

"The river is suffering because of outdoor residential water use," Richardson said.

And Licardi, and others, said the water shortage could mean local fire departments won't have enough water to fight a summertime blaze.

“We’re running the risk of not having adequate supply in case of a fire,” said Licardi. “We’ve been lucky we haven’t had a major fire during that period of time.”

### **Economic consequences**

In addition to environmental and public safety implications, state and local officials fear there could also be economic consequences to the summertime water shortages in the aquifer. Officials from Quonset said the summer water situation could impede future development at the North Kingstown business park.

“It would be a shame for Rhode Islanders to have to decide between jobs and green laws,” said David Preston, a spokesman for Quonset Development Corporation.

Steven King, the executive director of QDC, said the summer water shortage has not yet deterred any businesses from developing space at Quonset. But it could and will, if something is not done to conserve water during the hot summer months. It “would have been an issue,” he said, had Bristol Meyers Squibb, a pharmaceutical company that recently considered relocating to Quonset, decided to move to North Kingstown.

“It’s clearly something that needs all of our attention,” King said. “It’s something that needs to be looked at in the near term. “If something is not done to constrain the usage outside of the park, it could become an issue.”

Quonset Business Park gets all of its water from the Hunt River Aquifer. In the summertime, that means some 700,000 to 800,000 gallons a day. While Kent County Water Authority, the entity that supplies water to East Greenwich residents, gets only about 10-percent of its water from the aquifer, it pulls some 1.5 million gallons a day from the aquifer in July and August. North Kingstown can use as much as 4 million gallons a day during times of peak demand.

“The real issue is a waste of water in East Greenwich and North Kingstown,” Richardson, the DEM engineer, said. “It’s not on people’s radar. They don’t seem to care about it.”

### **Conservation strategies**

Kent County Water Authority General Manager Tim Brown said he disagrees with other’s bleak assessment of the state of the aquifer. He said if this July and August are as wet as predicted, the situation could be moot. If it’s a dry summer, he said there could be a residential outdoor water moratorium.

KCWA will no longer allow new development inside the area of this aquifer to use its water for irrigation. Brown said property owners with private wells are also a large

contributor to pulling water from this stressed supply. He said DEM should do a better job regulating private irrigation wells.

Water consumers in East Greenwich and North Kingstown are already limited to using public water supplies every other day for outdoor irrigation purposes during the dry season. But those familiar with the situation said this restriction actually increases water usage. People either water twice as much every other day, or – as several said – ignore the restriction altogether.

“It turns out it actually increases usage,” said Harold Ward, the Brown professor who is helping to study the Hunt River Aquifer. “It spreads out the load so we don’t have the single day peaks, but it doesn’t save any water.”

Brown said the only method of policing water use is having employees drive around to see if sprinklers are on. Several familiar with the situation said it is not uncommon for people to water their lawns at night to avoid detection.

Ken Burke, the general manager for the Rhode Island Water Resources Board, said those familiar with the situation in the Hunt River Aquifer have been meeting recently to determine a strategy for conserving more water during the hot summer months.

One potential solution, he said, would be to institute a once-a-week irrigation restriction.

“The professionals will tell you that watering once a week is probably sufficient,” Burke said. “We do know that most Americans enjoy a nice green lawn. But more than likely they only need to water it a fraction of the amount they do.”

He said if sufficient amounts of water from the Hunt River Aquifer can’t be conserved, water for future development at Quonset and elsewhere would likely come from new wells dug in the Big River Management Area. Such an engineering project could cost between \$20 and \$50 million, he said.

“We’ve got a critical issue in the Hunt,” he added. “It is severely stressed. We’re trying to pull everyone together so we don’t have the problems we’ve had in the past.”

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