



**NYS Legislative Hearing on Water Quality & Contamination  
September 12, 2016**

**Seatuck Environmental Association**

**Honorable Steven Englebright, Chair, NY Assembly Committee  
on Environmental Conservation**

**Honorable Richard N. Gottfried, Chair, NY Assembly Committee  
on Health**

**Honorable Kemp Hannon, Chair, NY Senate Health Committee**

**Honorable Thomas F. O'Mara, Chair, NY Senate Committee on  
Environmental Conservation**

**Good morning. I am John Turner and I serve as a Conservation  
Policy Advocate for the Seaturck Environmental Association. I  
appreciate the opportunity to provide some brief comments to  
the four State Legislative Committees on the very serious issue  
of water quality and contamination as it relates to Long Island.**

**This hearing is very timely as it relates to Long Island's water  
resources. While time constraints prevent me from providing  
significant detail on recent trends, and this has been covered by  
previous speakers, it has become abundantly clear over the past  
several years that water quality in all three of Long Island's  
freshwater aquifers, which collectively form the groundwater**

system, and provide the only source of water for nearly 3 million Long Islanders, has declined, in some cases alarmingly. Similarly, the bays and harbors surrounding Long Island have seen their water quality become increasingly impaired, primarily by excess nitrogen. This has triggered a series of significant adverse ecological actions such as the proliferation of micro- and macroalgae, which, in turn have caused dissolved oxygen levels in coastal waters to decline, promoting the growth of certain algae that produce toxins fatal to wildlife, as evidenced by the die-off of several hundred Diamondback Terrapins in Flanders Bay in May, 2015.

Rather than providing a broad overview of the current water quality problems, the array of possible programs and strategies, technical solutions, and funding needs, I would like to devote my testimony to two specific but very different topics that both relate to legacy nitrogen issue: water reuse and breaches to the south shore barrier islands.

### **Water Reuse**

Water Reuse is a tried and true method that efficiently uses highly treated wastewater for another purpose rather than discharge into the ground or a waterbody. The Environmental Protection Agency reports that more than 2.2 billion gallons of water are safely reused everyday in the United States, most notably in California, Florida, and the arid Southwest. This water

is used for irrigating golf courses and certain agricultural crops including some food crops.

Importantly, water reuse may be unique among water management strategies in that it provides simultaneous dual benefits of improving water quality, and reduced pumping demand, thereby conserving water and reducing the impacts of excessive use.

In little more than a week from today about 325,000 gallons of highly treated wastewater from the Riverhead Sewage Treatment Plant will, on a daily basis, be redirected from discharge into the Peconic River to the adjacent Indian Island County Golf Course (see attached photograph) where it will be used to irrigate the turf grass. Engineering consultants to the project have estimated the project will reduce nitrogen loadings into the Peconic River, and thus the entire Peconic Estuary, by approximately 2,000 pounds annually or about 1 ton of nitrogen. This nitrogen, in dilute concentration in the wastewater, is expected to be taken up by the turf grass, and as a result may have the added benefit of reducing fertilizer expenses occurred by the County.

The other benefit of this water reuse project has to do with quantity. By using wastewater to supplant the water pumped from aquifers previously used for irrigating the course, an estimated 63 million less gallons of water a year will be pumped from increasingly stressed East End aquifers.

Water Reuse has great promise in being a central strategy to address Long Island's water woes in the future. There are two dozen golf courses located within one-half mile of a sewage treatment plant and many more STP's, industrial parks, and power plants, within a mile, so reuse has the potential of increasing in magnitude several fold in the coming years. If this occurs, then tons more nitrogen can be prevented from entering the aquifer and our coastal bays and harbors and hundreds of millions to several billion less gallons of water will need to be pumped from Long Island's already taxed groundwater system.

To intelligently guide the implementation of water reuse on Long Island Seatuck is advocating for the development of an island-wide water reuse feasibility study. By assessing financial, fiscal, technical, logistical, and political issues this study can provide a prioritized roadmap for decision-makers in the future for implementing an important new water protection strategy which, as evidenced by today's action, time has come. We have been informed that this island-wide feasibility study will be included as a work plan element in the Long Island Nitrogen Action Plan currently under preparation. **Given its significant dual benefits Seatuck strongly urges the State Legislature to provide funding for water reuse projects in any environmental bond acts or funding proposals it may consider in the future.**

### **Breach Policy**

Due to the actions of Superstorm Sandy several breaches developed in the south shore barrier island. All of these breaches

were quickly filled except for the breach which formed in the Federal Wilderness section of the Fire Island National Seashore managed by the National Park Service ("Old Inlet Breach"). Shortly after this breach occurred there was significant public and political outcry to close the breach and were it not for the wilderness designation this breach undoubtedly would have also been filled as it is the policy of New York State and the Army Corps of Engineers to fill any and all breaches, based on the 1996 Breach Contingency Plan.

As time has passed and the breach itself and its ecological effects have been studied by government and academia we have come to realize that the breach has not caused flooding to the mainland - the main driver of closing the breach. Rather, the breach has caused water levels in Great South Bay to change little. But what has changed is significantly improved water quality conditions as cleaner ocean water flushes the bay twice a day. This, in turn, has improved the ecological quality as brown tides have diminished and eelgrass beds have begun to expand.

As previously stated these benefits would never have been realized if the breach were to have occurred elsewhere. Seatuck strongly believes we should learn from the message this inlet has sent us and rethink our policy toward breaches. **Specifically, we urge that state legislation be introduced to provide a decision-making framework that allows for a more nuanced and proactive policy as it relates to breaches. In this framework a case-by-case decision would be made about whether or not a breach should be filled or allowed to exist based on an**

**evaluation of data and information gained about the likely effects of a breach in that location.**

I appreciate the opportunity to provide these comments on behalf of the Seatuck Environmental Association.

John L. Turner  
Conservation Policy Advocate

# Long Island Water Reuse Projects

Riverhead Sewage Treatment Plant -

Indian Island County Golf Course

