

August 20, 2014  
Mr. Jean Pierre Oriol  
Acting Commissioner  
Virgin Islands Department of Planning and Natural Resources  
Coastal Zone Management Program

Dear Mr. Oriol:

I am writing you to oppose a proposal by a group calling itself Summer's End to build a 149-slip marina and associated retail development and restaurants on the west shoreline of Coral Harbor in Coral Bay, St. John.

As you must fully understand, sustaining the ecological integrity of near-shore marine communities hinges upon stopping nitrogen flux land to sea. Nitrogen loading from poorly treated wastewater:

- a. overloads seagrass with macroalgae, lowering photosynthesis, causing eventual loss of habitation
- b. respiration caused hypoxia (low dissolved O<sub>2</sub> levels, high CO<sub>2</sub> levels)
- c. toxic algal blooms (red, rust and browntides)
- d. depletion or loss of benthic fishery habitats, shellfish and finfish

The proposal under consideration by the St. John Coastal Zone Committee has committed to the installation of wastewater treatment units on various parcels they hope to develop on the coastline. They chose a particular wastewater treatment system of a type called a Sequencing Batch Reactor (SBR), made by a company called Chromaglass, for their marina project, and it is a vital part of their proposal reviewed by you and your staff. This system requires:

- a) high electric power input to run pumps almost constantly,
- b) produces large amounts of sludge that must be removed and trucked to Cruz Bay, and
- c) Has a long history of failure and inefficiency leading to pollution of groundwater with excess nitrogen

In the brief moments allotted, I will characterize in summary form, testimony from official sources regarding the deficiencies of the proposers selection of septic treatment.

A November 2006 letter from the Pinelands Commission suspended the use of Chromaglass for its failure to meet Pinelands area groundwater quality standards. The Commission decided to exclude the use of the Chromaglass SBR on all new developments. The NJ Pinelands are a sensitive ecological area along the east coast.

Long Island Sound: two out of three installed Chromaglass SBR systems fail to meet groundwater discharge standards.

State of Maine Drinking Water Prog. of Center for Disease Control and Prevention on the Chromaglass wastewater system "... because installation and owner maintenance has a significant effect on the working order of onsite sewage disposal systems, including their components... registration of this product for use in the State of Maine does not represent Division preference or recommendation of this product over similar or competing products."

Excerpt from the U.S. EPA's Onsite Wastewater Treatment Systems Manual (EPA/625/R00/008) Feb. 2002 Fact Sheet 3: Risk management issues "... If neglected, however, the process can result in environmental damage through production of poor quality effluent that may pose public health risks and can result in the premature failure of subsurface systems. Odor and noise may also create some level of nuisance. SBRs are less susceptible to flow and quality loading changes than other aerobic biological systems, but they are still not suitable for seasonal applications... Long power outages can result in odors and effluent degradation, as is the case with other aerobic biological systems."

Why did VI CZM officials sign off on a system with such an appalling reputation for failure? Did they require a hydrologic study to characterize seasonality of ground water levels?

There is a larger issue here. Should Summer's End be allowed to obtain a groundwater discharge permit for this project having committed to a poorly designed wastewater system that, indeed, no longer exists? If it is no longer being produced, does that not make Summer's application incomplete? Or does DPNR intend to send untreated wastewater directly into Coral Harbor with your Seal of Approval?

Sincerely,

Gary Ray, Ph.D.  
Virgin Forest Restorations  
9901 Emmaus  
St. John, VI 00830  
(340) 5140457