August 27, 2014
Mr. Jean Pierre Oriol
Acting Commissioner
Virgin Islands Department of Planning and Natural Resources
Coastal Zone Management Program

Dear Mr. Oriol,

On Wednesday evening I attended the CZM meeting to review the Summers End Group marina proposal for Coral Bay. I remain opposed to this project for a number of reasons: it's size, location, ecological impact and the principals' unsubstantiated claims of an economic benefit for the island. The purpose of this letter is to address one of these concerns: the suitability of the proposed location.

I was particularly dismayed by Mr. Boyd's response to Commissioner Penn's question about the ability of the proposed marina to withstand a storm. Mr. Boyd responded that no marina can be built to withstand a major hurricane. Then, he said that if someone lets a barge drift down on a marina, it would cause significant damage. While these statements are certainly true, I believe that Mr. Boyd deliberately avoided answering the real intent of Commissioner Penn's question. I also believe that the public, and the CZM Committee, deserve a real answer to the following question: *"What special provisions are the Summers End Group planning to take in order to protect the marina, boats and shoreline property from the effects of weather from the Southeast?"*

We all know that hurricane force wind and waves entering the harbor from the Southeast would be devastating to the proposed marina and the community. And, we all know that the only way to protect the harbor from such devastation would be to construct a robust seawall or breakwater. I personally doubt that such a construction would be ecologically or economically feasible.

Furthermore, I question the SEG marina proposal's finding on page 6-20 of the EAR where they state: "Based on the orientation of Coral Harbor the site is well protected and has a limited fetch." Based on my personal experience, observations and data from public sources, I believe that the proposed marina could not be considered to be "well protected." During every month of the year the wind and waves come from the Southeast 10 to 20 percent of the time. For this reason, the proposed SEG marina could not be counted on as a safe and secure marina for visiting yachts. It could only to be counted on as a short-term stop during settled weather.

The remainder of this letter will address two issues: 1) the shortcomings of the SEG marina Environmental Assessment Report with regards to wind and seas in Coral Harbor, and 2) Why prevailing wind and sea state matters to boats and the marina project.

Shortcomings of the SEG marina EAR -- wind and seas

The SEG marina EAR addresses weather in section 6. On page 6-2 they present Figure 6.01-1 which shows a summary of prevailing wind and weather. The prevailing winds were measured from April 20 2012 - April 20, 2013. On this chart, the wind was shown to come from the Southeast 16 percent of the time, and from the East-Southeast 20 percent of the time. This is in direct contradiction of the statement on page 6-20 that "Based on the orientation of Coral Harbor the site is well protected and has a limited fetch." Anybody can look at a map and see that to the Southeast, the fetch is over 2,000 miles.

On page 6-21 Figure 6.05c-1 shows, that for a ten year period, the only sea and swells recorded were from the North to the East ... no seas and swells were recorded from the Southeast through Northwest. The chart says "average sea and swell conditions." The source is listed as a United States core of Engineers buoy L-21-01 Southeast of St John. Buoy data from 1990 to 1999. I was able to find this buoy on their website, but no data was available for download. As a sailor, I can tell you that swells are different than waves and anybody who has sailed on the South side of St John knows that there are plenty of waves coming from the Southeast and East-Southeast. These are the waves that enter Coral Harbor regularly every month of the year.

On page 6-20 there is Table 6.05-b3, "Current Velocity Measurements at Project Site." To compile this table the SEG marina consultants collected current and wind data in Coral Harbor. They took data on 20 different days, during 10 calendar months, over a 22 month period; and they never found waves over 6 inches at the "site." Later, on page 6-21, they say that they observed 1 foot waves along the shore. This is an inconsistent result within their own observations. But, it is possible with the 7 acre footprint of the "site" that they may have picked a different part of the "site" to take wave measurements. Regardless of this inconsistency, I question the validity of their methodology for the purpose of measuring waves at the "site." The data appears to come from random point in time observations and only include one to four measurements from 10 calendar months out of a twenty-two month period. Given the inconsistency in their own observations, it would appear that they came to the "site" to make observations on nice days.

I was able to access the 2002 World Pilot Charts, which have been compiled by the US Government from thousands of ship reports for over 100 years. Here is a summary of the wind direction data for Virgin Islands Area:

Percentage of time that the wind comes from the Southeast (directly towards the unprotected location of the proposed marina):

January	16
February	12
March	12
April	20

May	18
June	16
July	10
August	10
September	16
October	18
November	12
December	8

It is important to note that this data is from ship reports. It does not include hurricane or tropical storm conditions. This data only includes prevailing winds. Seas (not necessarily swells) in the Virgin Islands generally come from the same direction as the winds, and the seas average 1-4 feet in the Virgin Islands. The EAR is correct when it states that the Northeast (Moravian Church) side of the harbor is calmer than the more exposed Southwest side that they are advocating.

So, based on the World Pilot charts, we can expect waves of over a foot to enter Coral Harbor from the Southeast at least 3 to 6 days every month of the year. This is consistent with personal observations of a tropical wave passing the island about once per week in the summer season, and a cold front pushing through the islands about twice per month in the winter season.

Why prevailing wind and seas matter to the proposed SEG marina project

You may drive by Coral Bay and see a number boats on moorings. And you may conclude that the harbor is fine for boats. But, a boat on a mooring behaves very differently than a boat at a dock. A boat on a mooring presents its bow to the wind and can move freely with the waves. A boat that is tied to a dock has limited ability to move, and a boat that is tied beam to the seas will attempt to roll. In some conditions, the roll can be partially controlled with dock lines and fenders. Sometimes, boats need to get off the dock to prevent damage to the boat or injury to guests. From reviewing the EAR, it appears that 113 of the 145 proposed slips (including all of the slips in zone 1) are oriented East-West. These boats will be subjected to rolling a minimum of three to six days every month of the year Until last year, I was the private captain of a 56 foot motor yacht, and I hold a 100 ton Masters License. I have docked boats at most of the marinas in the Virgin Islands hundreds of times. Given the conditions that will surely prevail several days in each month, the proposed SEG marina could only be considered a short-term stop. We could drop-off or pick-up guests, and maybe stop for lunch. Then, we would be off to a quiet anchorage or a secure overnight marina. I know that the owner and his guests do not like a rolling night at anchor, and I'm sure that he would not want to pay for the privilege rolling at the SEG marina for a sleepless night. While most days will not be too bad, it only takes one bad experience, and people will not return.

The site of the proposed marina is exposed to prevailing weather from the Southeast, which can enter the harbor in every month of the year. Some local boats would use the proposed marina because they have no other choice. But, visiting yachts will probably choose other marinas that are more protected and secure. For this reason, the megayacht portion of the marina (zone 2) is bound to fail economically.

When the next hurricane hits Coral Bay, the entire marina will fail physically. Boats and docks will be swept inland, and over 1,300 steel pilings will remain in the harbor. After the shoreside cleanup, these pilings will remain and the harbor will be largely unusable. Consider these pilings to be 1,300 monuments to the folly of building in the path of mother nature.

Please do not let the SEG marina developers compound the next natural disaster with a manmade disaster. Please do not approve this project.

Respectfully submitted,

Stan Nicholas
Coral Bay