



## Sea Diversified, Inc.

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**Sea Diversified Testimony : Hearing Date July 7, 2020**  
**Coastal Zone Management Permit CZJ-04-14 (W)**  
**St. John Marina at Coral Bay, St. John, U.S.V.I.**  
**Sea Diversified P.N. 19-2268**  
**July 3, 2020**

Dear Ladies and Gentlemen:

On behalf of my firm Sea Diversified, Inc., I would like to thank you for the opportunity to speak in reference to the St. John Marina at Coral Bay in St. John, U.S.V.I. My name is Bill Sadler, Owner of Sea Diversified, a marine engineering and surveying firm located in Delray Beach, Florida. Sea Diversified, established in 2004, specializes in coastal and oceanographic engineering and mapping services including related work in the fields of environmental and geotechnical disciplines. Sea Diversified has provided services to multiple governmental agencies and private concerns throughout the State of Florida including numerous areas of the Caribbean, as well as regions off the coast of Central and South America. I am a graduate from Florida Atlantic University with a degree in Ocean Engineering and currently Licensed as a Professional Engineer and Professional Surveyor and Mapper in the State of Florida. I have owned and operated Sea Diversified for 16 years with over 20 years of previous experience as an ocean engineer and hydrographic surveyor, which included work with the world-renowned Woods Hole Oceanographic Institute in Cape Cod, Massachusetts.

We were contracted by Summer's End Group in June of 2019 to provide assistance with various environmental and related studies that were requested by the U.S. Army Corps of Engineers (USACE) and National Marine Fisheries Service (NMFS) as part of the federal permitting process for the proposed marina. Our first task included a geophysical investigation to gain better understanding of the subsurface material characteristics at the marina. The objective was to determine the presence or absence of hard material within the range of projected marina pile penetration that could affect overall pile driving methods and associated noise levels produced from the activity. The geotechnical information was requested by the USACE and NMFS to assess possible noise impacts on marine life caused by the pile driving activities.

The scope for the geophysical investigation, prepared in coordination with the USACE, included seismic or reflection profiling survey techniques. This was determined to be an effective means of evaluating subsurface material conditions and least disruptive to the environment. As a result of the survey there was no evidence of hardbottom material within the projected limits of pile penetration. It was therefore concluded, in coordination with project engineers, that a no-impact vibratory hammer operating at very low noise levels could be used for the installation of the marina support piles. The fact that a vibratory hammer could likely be used for the pile installation instead of an impact hammer, noise produced from the activity would be substantially minimized reducing agency concerns of potential impacts to sea turtles, marine mammals and other marine organisms.

Our second task included the performance of a circulation study, which was requested by the NMFS to determine the possible environmental impacts of turbidity generated by vessels during normal operations at the marina. The study included an assessment of hydrodynamic patterns and travel distances of suspended sediments caused by vessels maneuvering within the marina based on typical wind, wave and current conditions. Of primary interest of the circulation study was to determine the possibility of a turbidity plume



generated at the marina affecting two separate reef areas known as Penn Point and Harbor Point Reefs located in proximity to the proposed marina project.

The circulation study was conducted with the assistance of Humiston and Moore Engineers, a coastal engineering firm with extensive expertise and experience in the field of hydrodynamic modeling within coastal and other marine environments. As part of the study and as required for the modeling efforts by Humiston and Moore, Sea Diversified collected extensive environmental information within and adjacent to the project including single-beam bathymetric data, multi-beam bathymetric data, side scan sonar data and sediment data.

The single-beam bathymetric data was needed for the development of the model and included seafloor mapping within the footprint of the marina extending beyond the harbor to the seaward limits of the existing approach channel. The multi-beam bathymetric and side scan sonar surveys were conducted to accurately map and define the horizontal and vertical limits of the two named reef areas of concern by the agencies. Sediment sampling and analysis was conducted to characterize the type of sediments that could possibly be lifted into suspension by large vessels maneuvering within and around the marina. Sea Diversified also conducted measurements of turbidity, wind, wave and currents over several days within the project area as necessary for the calibration and validation of the hydrodynamic models developed by Humiston and Moore. In conclusion, the study provided reasonable assurance that suspended sediments caused by vessels either at the marina or traveling to and from the marina would not affect the two named reef areas.

Sea Diversified's extensive environmental data collection and analysis efforts, as pertaining to the concerns of federal agencies, provide valuable information with supporting data that indicate the proposed marina construction activities, specifically pile driving, as well as long-term operational activities associated with vessel maneuvering, should have minimal to no effect on sea turtles, marine mammals and sensitive coral reef areas.

I feel it is important to note that I personally participated in the field efforts described above and, as such, felt very fortunate to have the opportunity to visit the beautiful island of St. John. I, including my staff, have worked at some of the most beautiful places in the Caribbean, but feel that St. John is probably one of the best based on the beauty of the coastal areas and pristine nature of the marine environment. We did take time to travel the entire coastal shoreline of St. John by boat stopping at numerous locations along the way to snorkel and dive. The island provides crystal clear water with fantastic coral reef areas inundated with numerous fish and other marine resources to observe and explore.

I will say my visit to Coral Bay was not what I expected and certainly not typical of other areas we visited on the island. The harbor including surrounding shoreline was dirty and filled with derelict vessels and apparent hurricane related debris and trash. Overall the harbor was obviously not maintained and in great need of clean-up and other improvements. As part of our contracted tasks included diving to set underwater gauges and to grab sediment samples, I, including my dive partners were somewhat hesitant to enter the water due to the conditions of the water with unknown extent of pollutants that were expected to exist from vessel discharges and upland runoff. Water clarity within the harbor was so bad from the surface to the seafloor, it was very challenging to deploy and mount underwater gauges. We were so concerned of losing our very expensive gauges, even with the best and most accurate GPS positioning equipment, we tied surface buoys to the gauges, which we commonly do not do with fear of vessel entanglement or possible theft especially in remote areas.



We pushed our dive from the middle of the harbor to the two known coral reef areas, Penn Point and Harbor Point. There was not much to observe at Penn Point Reef as it was small and located predominately in very shallow water with very little vertical relief. Harbor Point Reef was much larger and extended into deeper water with much greater relief and many more corals, fish and other marine organisms. Water clarity at both reefs was much better than we encountered within the harbor but both reefs did show signs of stress caused by obvious sediment discharges from adjacent upland development areas and additionally both reefs were observed to be littered with trash and apparent hurricane related debris.

Overall, my team spent 7 to 8 days at the site performing underwater investigations, boat work and other studies in support of the project. We observed, first-hand, existing conditions and gathered extensive data to assist agencies with their review and consideration of the project. I will make note that we have either directly permitted or assisted in the permitting of marinas of similar size in the State of Florida and based on this experience, will say it is not common for agencies to require this extent of data collection for their review of a project. Regardless, the data has been collected and with this information combined with the various studies conducted per request of the agencies, it is our opinion the results of these efforts are positive towards the project and should help to reduce or alleviate any concerns of both state and federal agencies.

Finally and in closing, having visited the project site and observing present conditions, the harbor and surrounding areas are in poor condition and are in need of extensive clean-up and other improvements. We feel that upland, uncontrolled sediment discharges and/or upland stormwater run-off around the harbor has contributed to the terrible condition of the water. Additionally, and although not truly understood, it is apparent that unmanaged vessels, occupied and abandoned within the harbor, may be affecting the condition of the water through pollutant discharges. It is our professional opinion that the development of the St. John Marina should be viewed as a potential environmental enhancement project and not a project that would cause harm to the environment.

If the St. John Marina project does not push forward with associated upland improvements, stormwater management initiatives along with strict operational and enforcement protocols relating to moored vessels, as promised by the Summer's End Group, we feel the harbor will continue to degrade and what remains of the only two named coral reefs in proximity to the project will eventually die. Coral Bay needs the St. John Marina project for the recovery of the harbor and enhancement of the marine environment. If the project is ultimately approved, Coral Harbor will have the potential to be a pristine destination to match other areas of beautiful St. John, U.S.V.I. I trust that you will vote in favor of this project.

Thank you so much for your time.

Sincerely,

A handwritten signature in blue ink, appearing to read "W. Sadler", is positioned above the typed name.

William T. Sadler Jr., P.E., P.S.M.  
President  
Sea Diversified, Inc.