

## **EXECUTIVE SUMMARY**

The Pope's Island Marina Facility (the Marina) is comprised of a timber pile supported fixed pier and tee-head, and a series of six (6) main floating docks with finger floats providing slips for 198 vessels, not including the berths at the ends of the floats or along the tee-head. The facility was constructed in 1992 and has had repairs to the floating docks over the years, typically following storm events.

The purpose of this report is to provide the New Bedford Port Authority (NBPA) with an updated assessment of the Marina since the last inspection for the Marina which was completed in 2014. For this report update, the topside of the pier was inspected by Pare personnel, the underwater portion of the pier was inspected by Inner Tech Marine Services, and the electrical system was inspected by Buia Engineering.

Inspection of the main floats and finger floats indicated extensive deterioration of the concrete modules that make up the concrete floats. Many cracks and spalls were observed on the top of the deck. The concrete on the sides of the float was observed to be severely deteriorated. The deteriorated concrete leads to the weakening of the overall structure and listing of the floats. The mooring piles were noted to be in generally fair condition above and below water with some isolated piles in poor condition; however, many of the pile guides (hoops) and galvanized chain guides were observed to be in poor condition. Many of the pile hoops have been replaced with galvanized chain, which may allow for more movement of the float system and should not be considered a long-term solution. Several of the failing and deteriorated concrete finger floats have been replaced with timber and composite floats over the past several years. Along the fixed pier, the utility conduits are discontinuous, and the timber cross bracing was in poor condition with much of the lower hardware in critical condition. The timber wave fence along the tee-head was observed to be in poor condition with many rotted or broken members. The timber framing and decking of the pier was observed to be in fair condition.

The 2014 inspection report indicated that replacement of the floating docks would likely be required in approximately 3-5 years. Since then, several of the critical float modules have been replaced which has allowed the marina to extend the useful life of the system to keep the marina operation; however, the float system is in need of continuous repair and replacement of critical modules in order for the marina to be safe and useable. The weakened condition of the float system is such that significant storm events will likely cause increasing damage over the short term. More deficiencies were reported during this inspection report update than the previous inspection, indicating that the floating dock system is continuing to deteriorate even with regular repair and maintenance.

It is recommended that the entire marina float system be replaced with a new concrete wave attenuating float along the south side of the marina, and timber main and finger floats along the interior to allow for easier maintenance of floats as described in Alternative 4.

The approximate construction cost to replace the floating dock system with the recommended alternative is in the order of \$5,500,000.

In the interim, it is recommended that repairs to critical deteriorated concrete float modules be completed to provide safe operation of the marina until full replacement is completed. The approximate cost to complete these repairs is \$509,000; however, a significant cost savings may be realized if these repairs can be completed by marina staff.