



SEA WATER RO

The Moorings

newterra Helps Reduce Cost of Potable Water While Greatly Improving Reliability and Availability for Customers and Staff

Challenge



The Moorings is an international yacht charter company with locations throughout the world. They charter new sail and power boats and offer resort-like amenities for their guests at their various marinas.

The Moorings was going through an expansion to increase their harbor size and dock area by adding 25% more slips for added yacht charters. City provided municipal water was very costly and often unreliable, and at times unavailable. The Moorings realized it was more economical to own and operate their own water plant that would provide a more reliable source of higher quality water than the city could provide.

Solution

- Seamega-45K Seawater RO Systems (45,000 GPD of potable water)
- Duplex Multimedia Filtration for RO system feed water pre-filtration (suspended solids removal)
- ERI PX energy recovery turbine (ERT)

A seawater intake was installed in the harbor to draw 78 GPM of seawater feed water supply to the RO system. The feed water is sent through two multimedia filters to remove suspended solids and sediment. Anti-scalant is then injected into the feed water to substantially reduce RO membrane fouling. The RO system then removes 99% of total dissolved solids (TDS), producing 31 GPM of less than 300 PPM water. Finally a pH adjustment is made and chlorine is dosed for disinfection to provide clean potable water. This water is fed into a large underground cistern (storage tank) and is then distributed throughout the facility as needed.

Results

The Moorings was able to eliminate a costly and unreliable municipal water supply and focus on providing its guests with world-class service, even after expanding its capacity by 25%.



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