

Need more water? Make your own!

If your golf course is in a littoral zone
— or anywhere that salt water intrusion
has become a problem — and fresh water
is in short supply, Ray Hansen has the
solution.

Make your own water.

Hansen, superintendent at the Ocean Reef Club, an exclusive 36-hole layout on the northern tip of Key Largo, most likely is the only golf course manager in the continental U.S. whose responsibilities include overseeing the operation of a reverse osmosis plant capable of transforming nearly a million gallons of brack-

ishwater i n t o f r e s h

water every day.

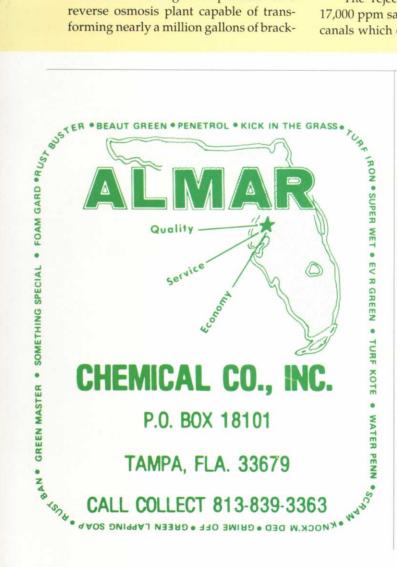
Fed by deep (1,100 feet) wells which supply water with about 3,000 parts per million dissolved salts and solids, the plant produces water at 150 ppm salts and solids. Anything below 1,000 ppm is considered safe for turfgrass; anything below 500 ppm is potable.

The reject water containing about 17,000 ppm salts and solids is piped into canals which empty into the ocean. Sea-

water contains about 35,000 ppm salts and solids.

The plant was built in the 1970s to meet all the community's freshwater needs but, as it grew, running an aqueduct from a wellfield on the mainland became economically feasible.

Still, water from the wellfield costs \$6 per thousand gallons. Water from the "RO" plant costs about half that.







Gunnite-lined reservoir holds about 2 million gallons, or slightly more than two days' supply of irrigation water at peak consumption.

"I figure it costs me about a thousand dollars a day to water my golf courses," Hansen says. "Three hundred thousand a year for the golf course's share of the operating

costs of the plant and another \$60,000 for the irrigation system."

In addition to Hansen's two golf courses, the desalinated water is used to irrigate Card Sound GC, a private course within the ultra-private Ocean Reef community, and other landscaped areas.

Although he knows of no other golf courses using desalinated water on his scale, Hansen says he has had inquiries from Texas and Hawaii.

"Places that learned to get by on less water don't have to with this technology," he said.



Ray Hansen at the controls of one of the reverse osmosis units.

