Facts and Reasoning

Review It — Excerpt Document

Excerpt from Newsela article California to tackle water scarcity by converting seawater:

How To Deal With Leftover Water

6 The second major environmental concern with desalination is discharge water. Most desalination plants take in two times more seawater than the fresh water they produce. To produce 50 million gallons per day of fresh water, Carlsbad will draw in 100 million gallons of seawater. The leftover water is returned to the ocean as discharge water, but with its salinity — its salt level — doubled.

7 The discharge water is so salty that it does not dissolve well in the ocean.

8 "It's like oil and vinegar — they stay separate," Whitney said. "You end up with these very large dead zones ... where you have really salty water just sitting on the ocean bottom."

9 Carlsbad will deal with this problem by mixing the salty water with cooling water discharged from a nearby power plant. As a result, the discharge water will be only about 20 percent saltier than the ocean.

10 Another approach is to use spray nozzles to spread the discharge water under the ocean surface. This helps the salty discharge mix with the ocean water. The water board currently recommends this approach. MacLaggan from Poseidon says, however, that the force of such sprayers is so great that it can kill some sea life.

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