



# TEXAS DESAL PROJECT

## General Summary of Project Concepts

Project Component	Alternative Strategies Under Consideration	
	Brownsville Ship Channel SWRO Project (2.5 MGD at demonstration capacity; 25.0 MGD at full capacity)	South Padre Island SWRO Project (1.0 MGD at full capacity)
Intake	<ul style="list-style-type: none"> <li>Constructed intake channel off the Ship Channel with filter media bed.</li> <li>Open water intake on the Ship Channel.</li> </ul>	<ul style="list-style-type: none"> <li>Series of shallow beach wells and a raw water collection pipeline.</li> <li>Open water intake in the Gulf of Mexico with raw water intake pipeline directionally-drilled under the dunes.</li> </ul>
Treatment System	<ul style="list-style-type: none"> <li>Site located on the south shore of the Ship Channel; treatment technology to include membrane pretreatment and reverse osmosis.</li> </ul>	<ul style="list-style-type: none"> <li>Site located on the bay-side of South Padre Island some distance north of Andy Bowie County Park; treatment technology to include membrane pretreatment and reverse osmosis.</li> </ul>
Finished Water System	<ul style="list-style-type: none"> <li>Ground storage tank and high service pump station.</li> </ul>	<ul style="list-style-type: none"> <li>Ground storage tank and high service pump station.</li> </ul>
Concentrate Disposal	<ul style="list-style-type: none"> <li>Diffusion into the Gulf of Mexico (full 25 MGD scale only).</li> <li>No-discharge evaporation ponds (2.5 MGD demonstration only).</li> <li>Blend 1:1 (back to ambient TDS) with river water and discharge to the surface tidal flats south of the Ship Channel (2.5 MGD demonstration scale only).</li> </ul>	<ul style="list-style-type: none"> <li>Diffusion into the Gulf of Mexico.</li> <li>Injection well into hypersaline geologic formation.</li> <li>Diffusion into Laguna Madre.</li> </ul>
Power Consumption	<ul style="list-style-type: none"> <li>Grid only.</li> <li>On-site renewable energy (wind) with grid supplement.</li> </ul>	<ul style="list-style-type: none"> <li>Grid only.</li> <li>On-site renewable energy (wave buoys) with grid supplement.</li> </ul>