Desalination in Texas

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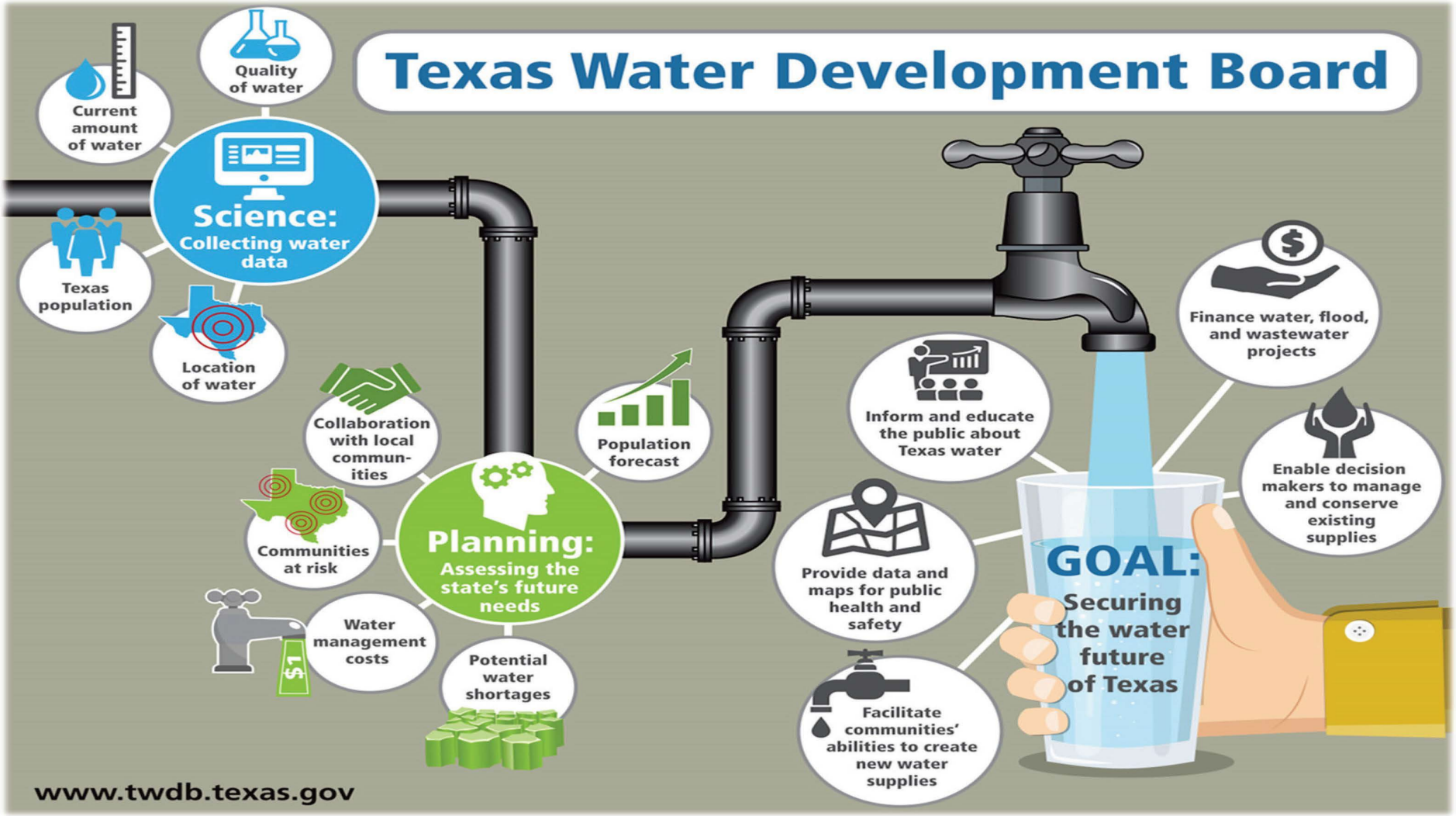
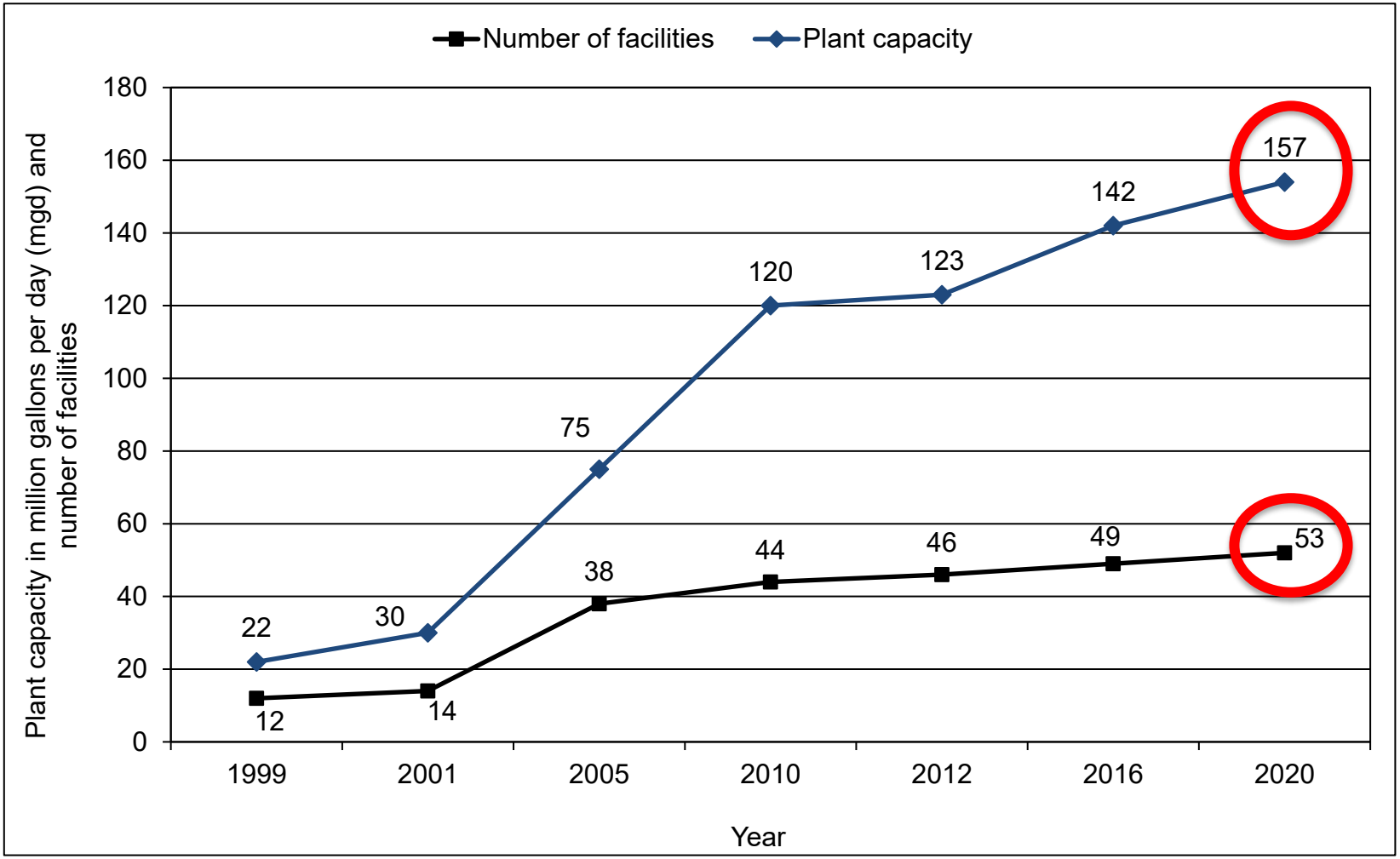
Desalination Technology for Coastal Resilience – Perspectives from the Texas Coastal Bend Region for a Path Towards Implementation

January 2023

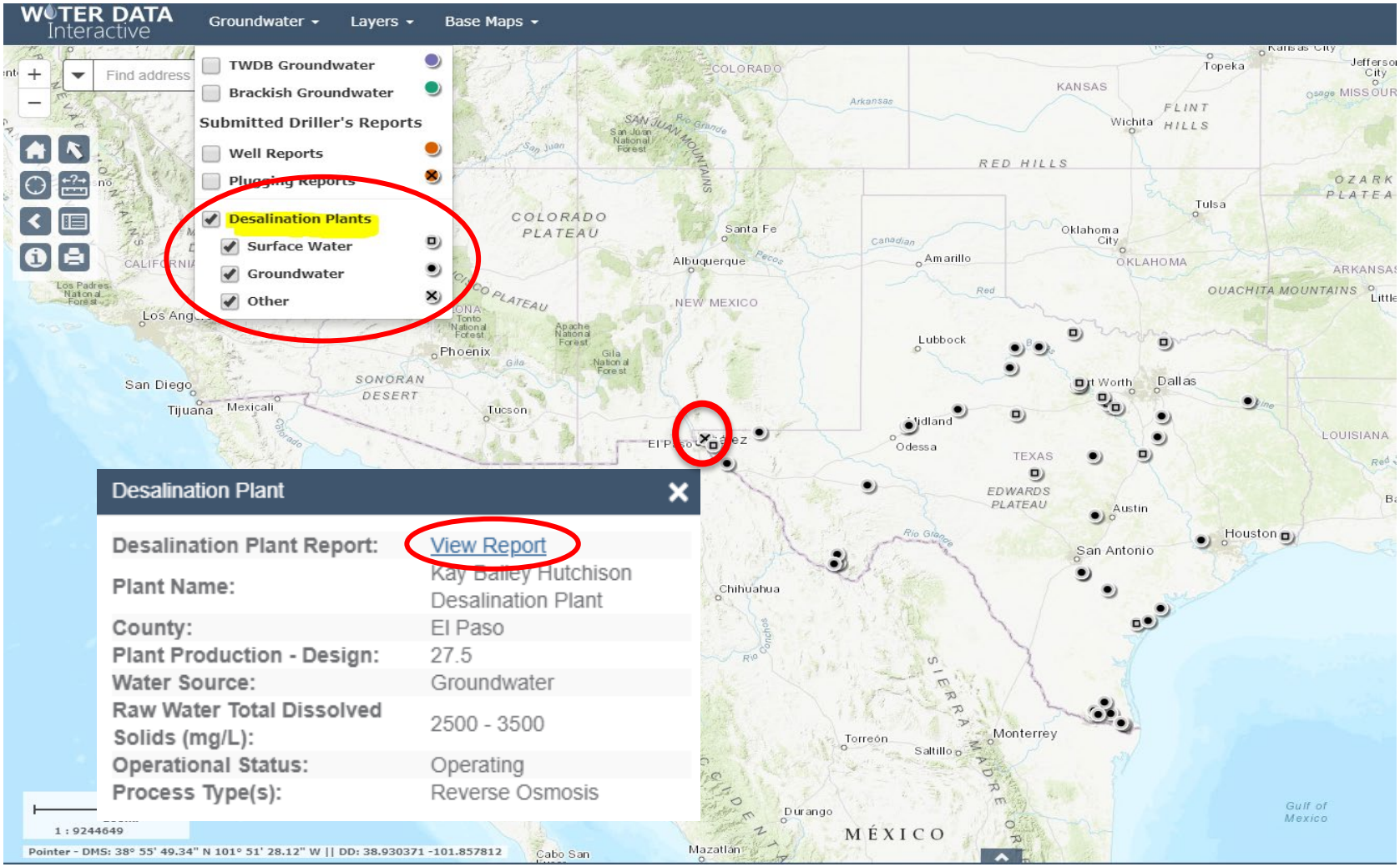
Unless specifically noted, this presentation does not necessarily reflect official Board positions or decisions.


Texas Water Development Board
Quality of water
Current amount of water
Science: Collecting water data
Texas population
Location of water
Collaboration with local communities
Communities at risk
Water management costs
Potential water shortages
Planning: Assessing the state's future needs
Population forecast
Inform and educate the public about Texas water
Provide data and maps for public health and safety
Facilitate communities' abilities to create new water supplies
Finance water, flood, and wastewater projects
Enable decision makers to manage and conserve existing supplies
GOAL: Securing the water future of Texas
www.twdb.texas.gov

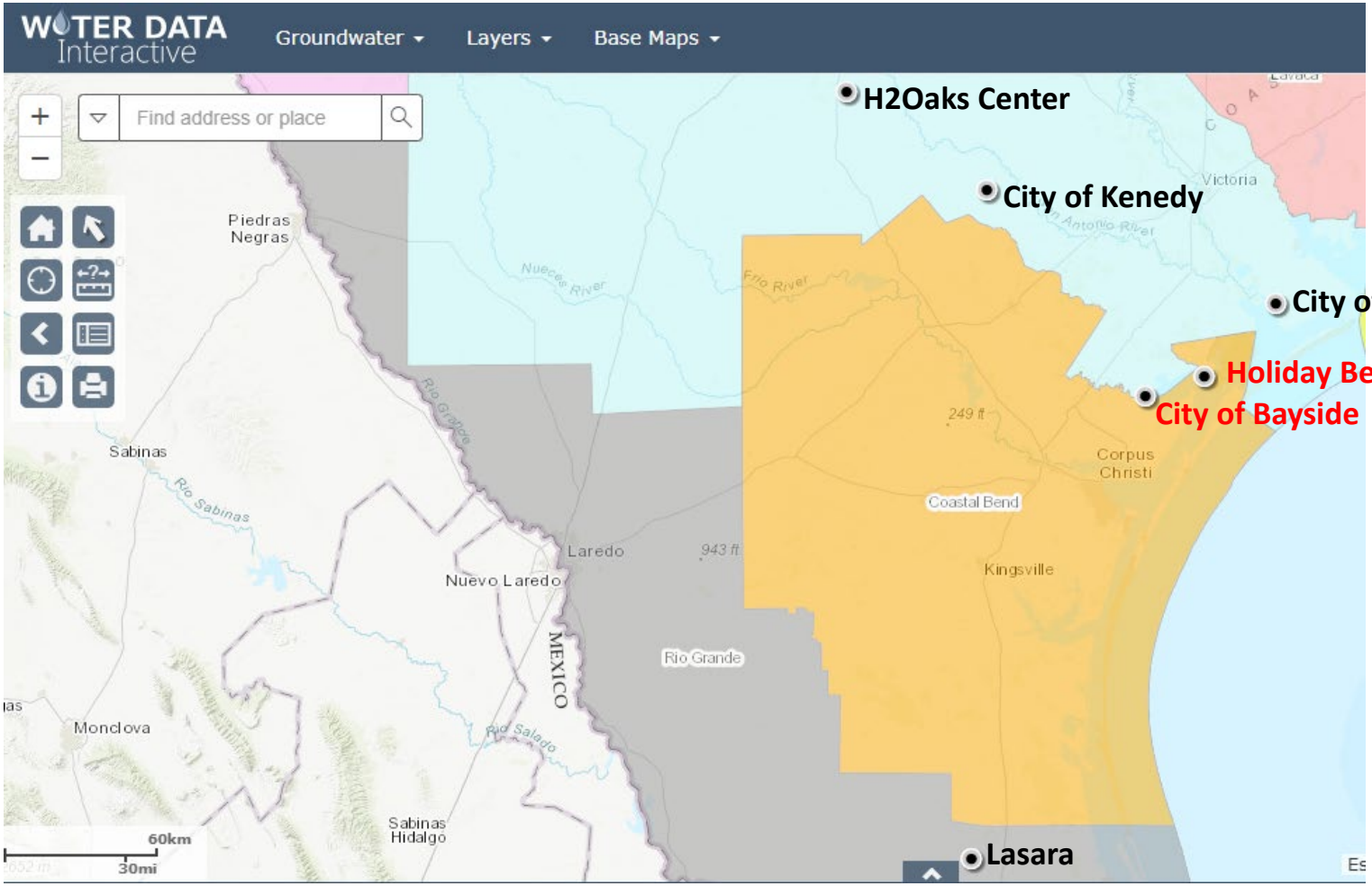
Existing desalination growth in Texas



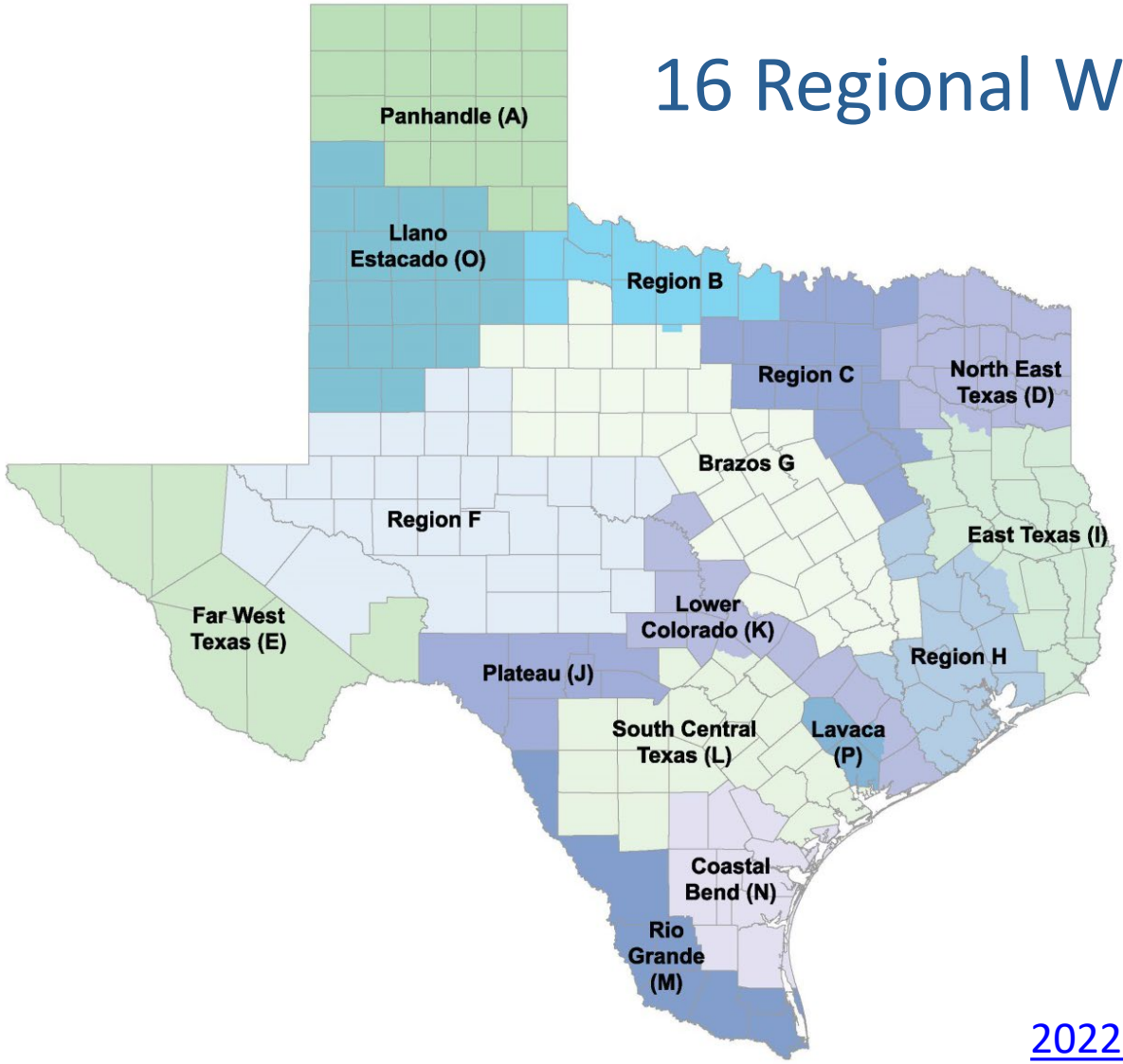
Desalination Plant Database



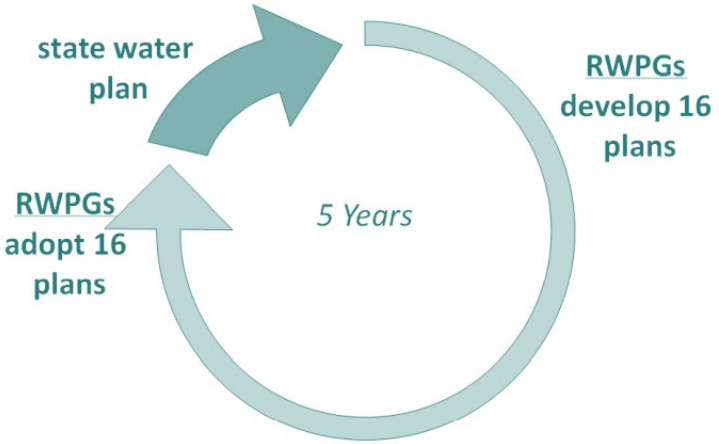
Existing desalination in Coastal Bend



16 Regional Water Planning Areas

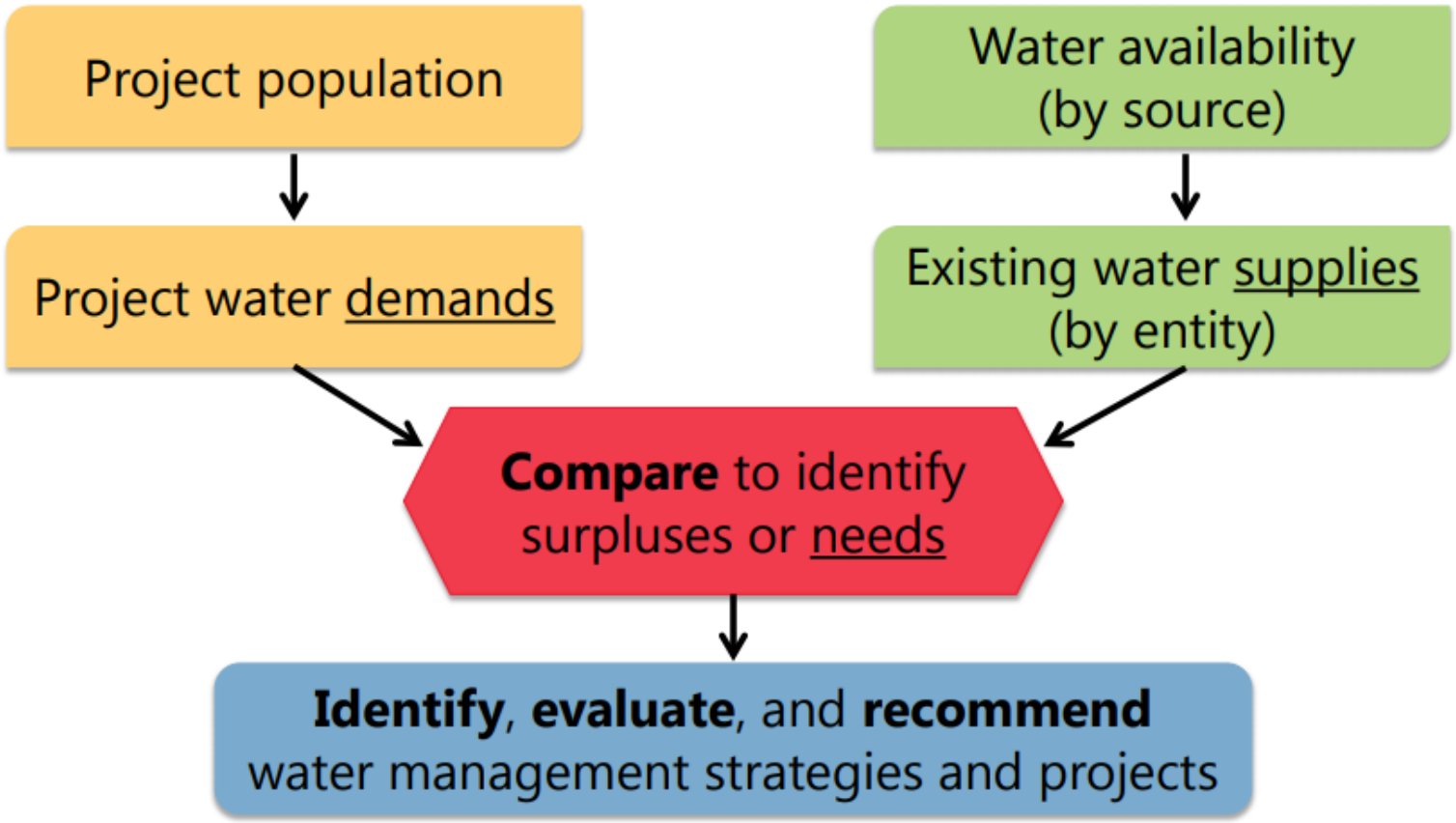


- Bottom-up approach
- State water plan every five years
- Approved 2022 State Water Plan

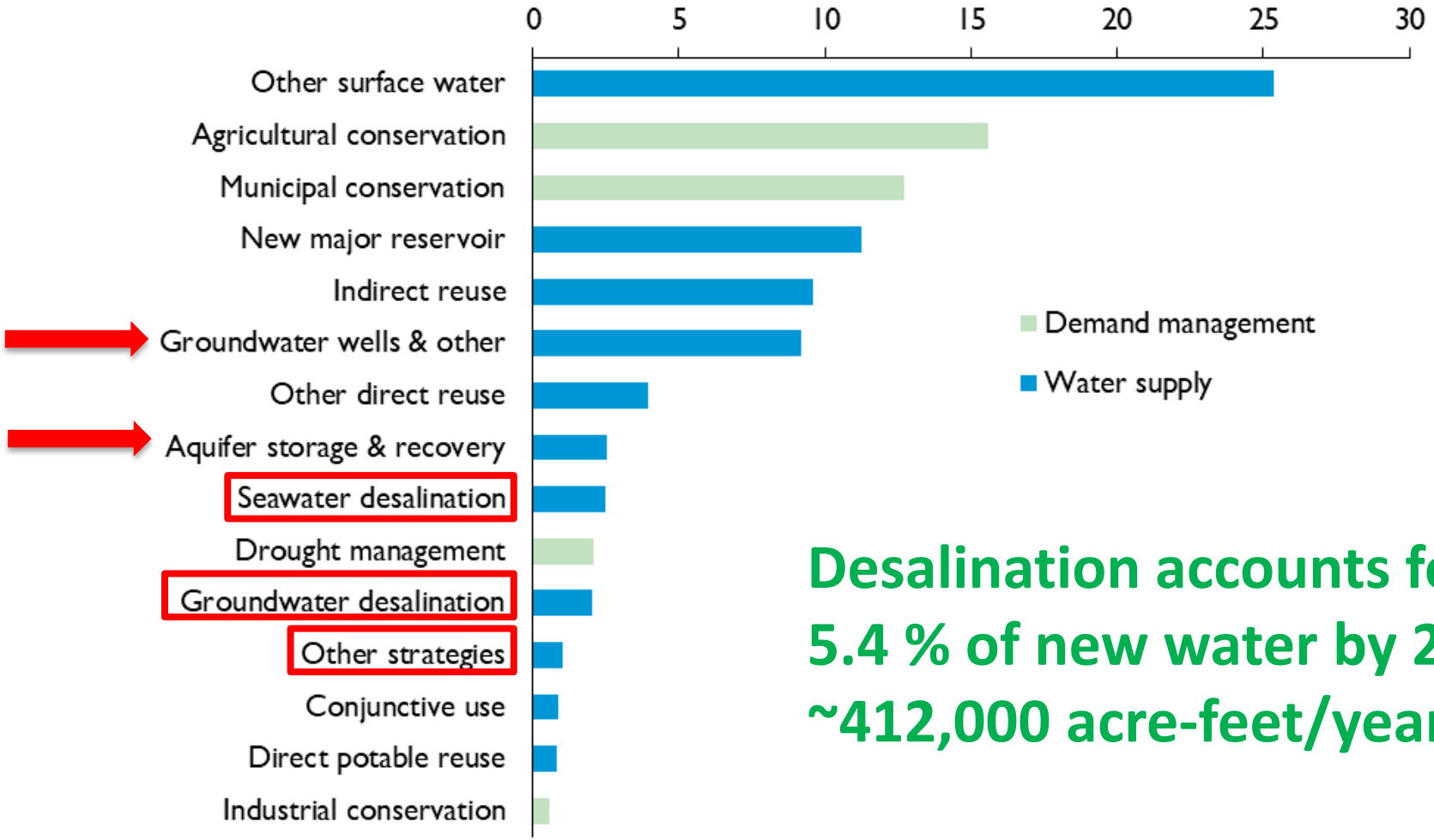


2022.texasstatewaterplan.org/statewide

Water Planning Basics

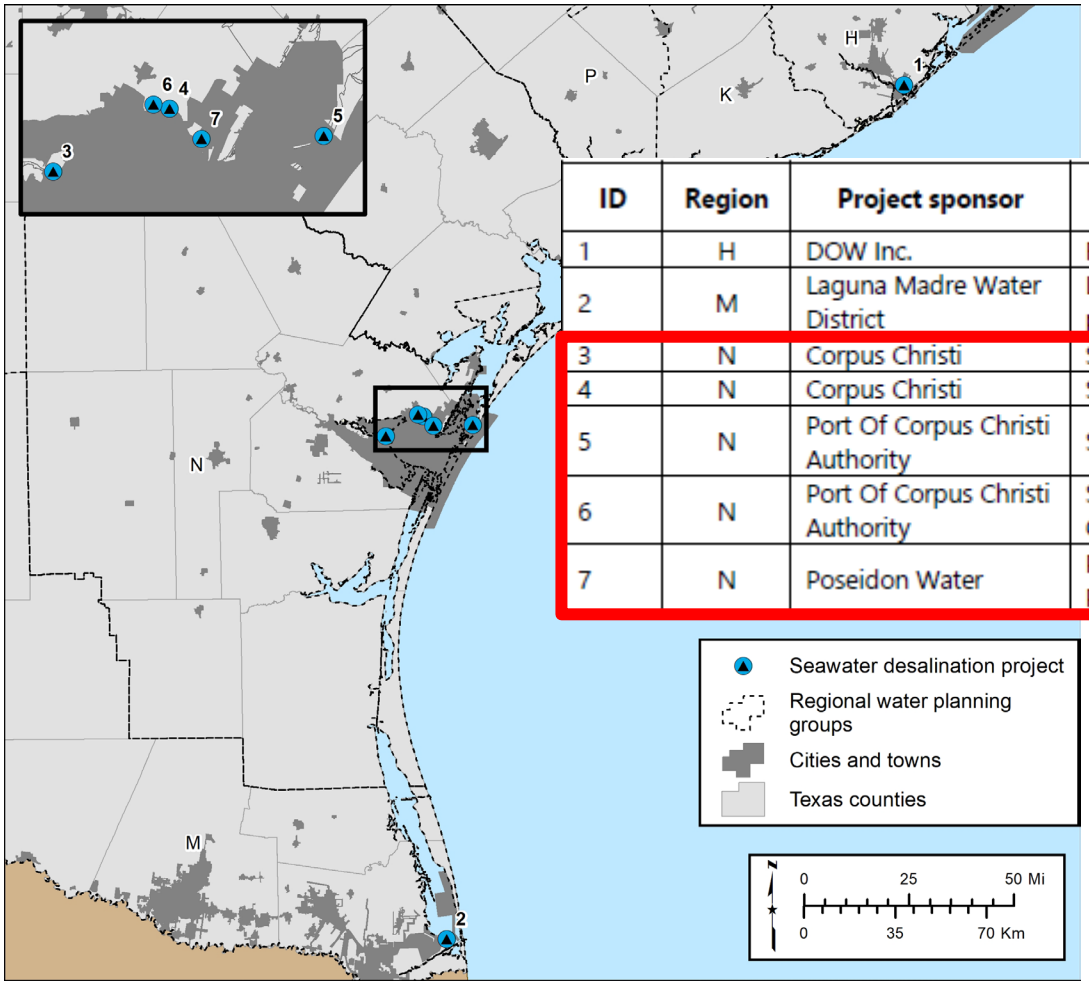


Recommended Water Management Strategies by 2070 in 2022 State Water Plan



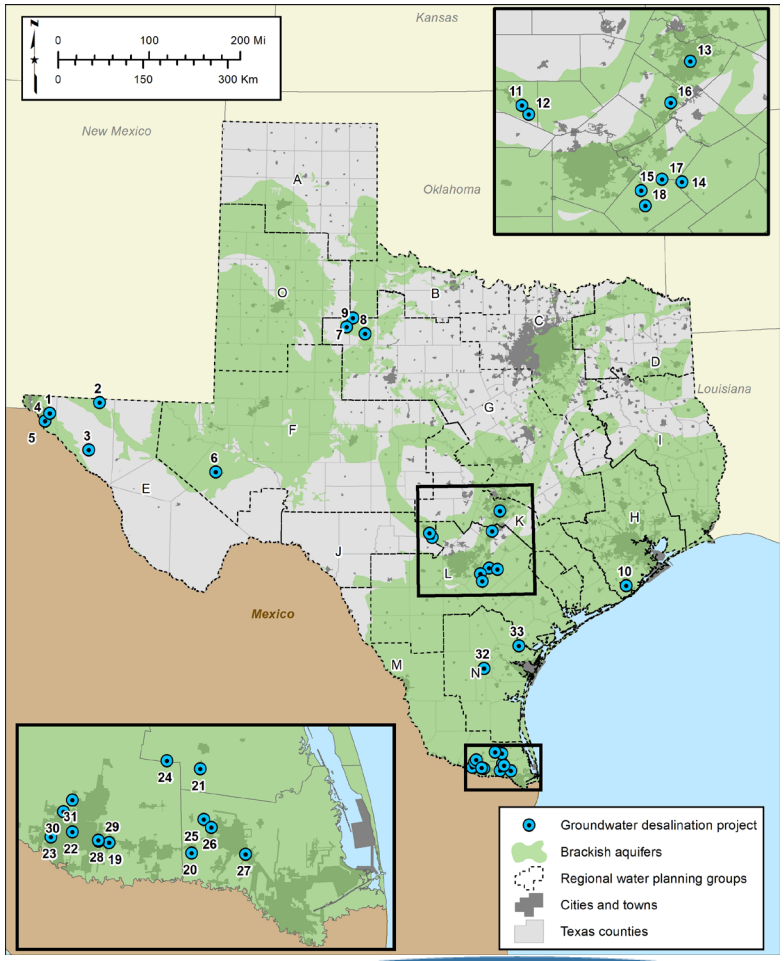
Desalination accounts for 5.4 % of new water by 2070, ~412,000 acre-feet/year

Future seawater desalination

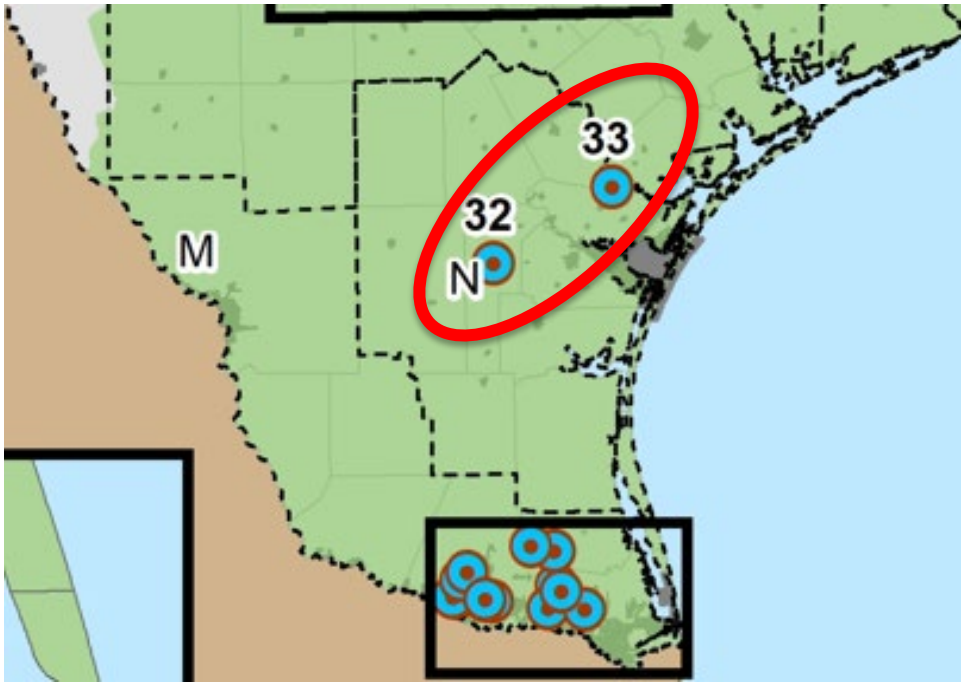


ID	Region	Project sponsor	Project name	Online decade	Capital cost
1	H	DOW Inc.	Freeport seawater desalination	2040	$155,877,822
2	M	Laguna Madre Water District	Laguna Madre seawater desalination plant	2050	$40,290,000
3	N	Corpus Christi	Seawater desalination (Inner Harbor)	2030	$236,693,000
4	N	Corpus Christi	Seawater desalination (La Quinta)	2030	$420,372,000
5	N	Port Of Corpus Christi Authority	Seawater Desalination - Harbor Island	2030	$802,807,000
6	N	Port Of Corpus Christi Authority	Seawater Desalination - La Quinta Channel	2030	$457,732,000
7	N	Poseidon Water	Poseidon Regional Seawater Desalination Project at Ingleside	2030	$724,984,000

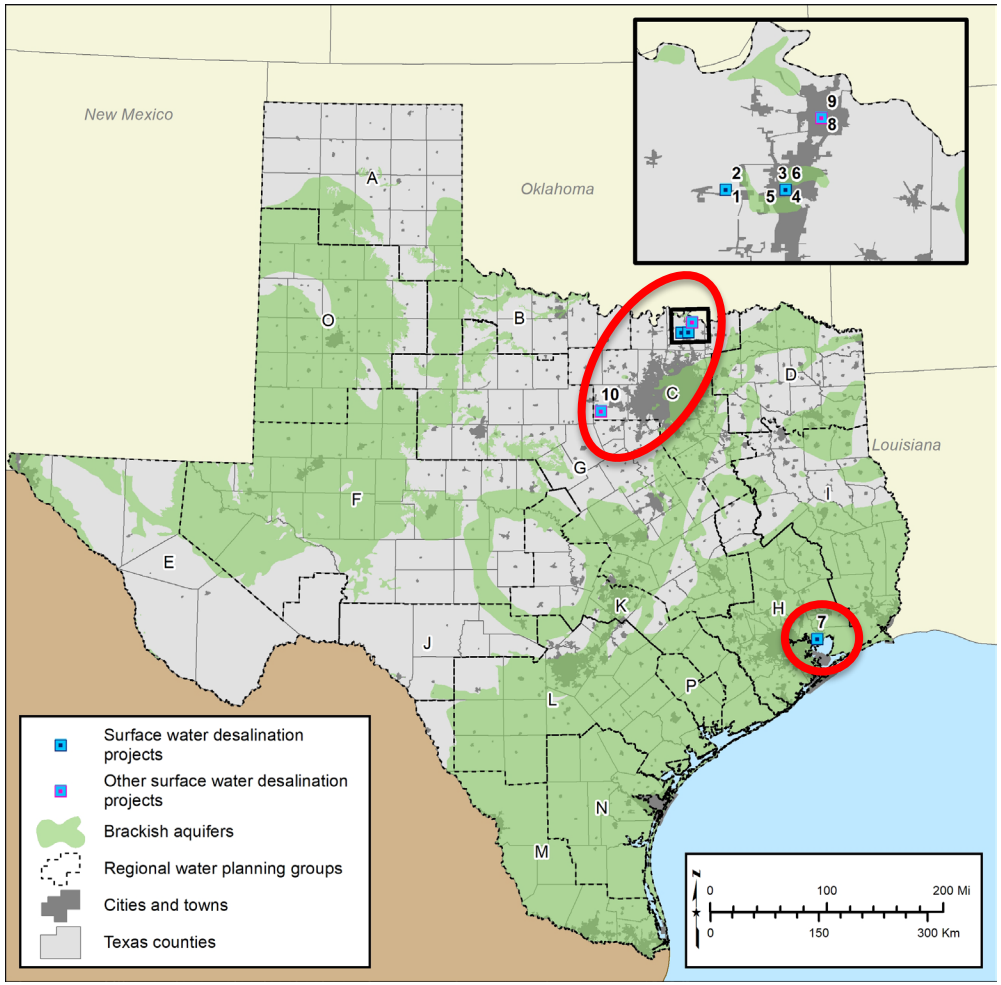
Future groundwater desalination



32	N	Alice	Brackish groundwater desalination	2030	$23,983,000
33	N	San Patricio Municipal Water District; Corpus Christi	Evangeline/Laguna treated groundwater project	2030	$157,550,000

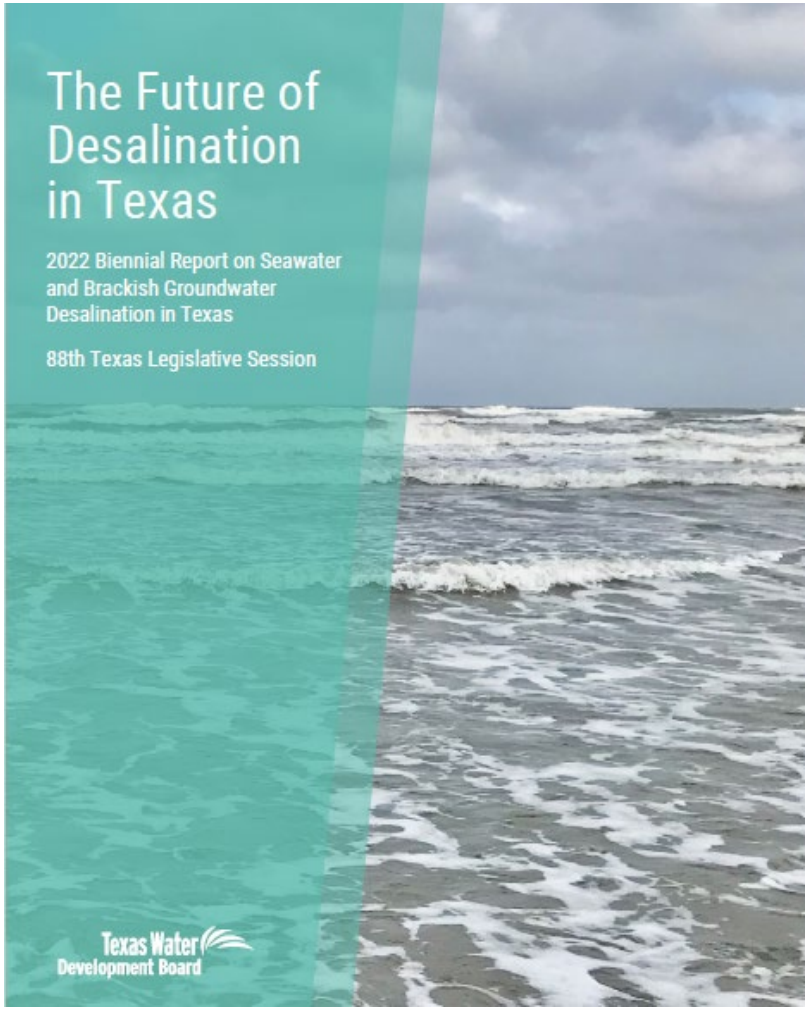


Future surface water desalination



Biennial Report on Desalination

- Tenth report in series
- 20 years of activities toward advancing seawater desalination
- Fourth report to include brackish groundwater desalination



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Desalination Program
www.twdb.texas.gov/innovativewater/desal/index.asp