Desalination Briefing

1. Texas Water Code §16.060

2. Biennium Activities

3. Policy Issues
«(a) The board shall undertake or participate in research, feasibility and facility planning studies, investigations, and surveys as it considers necessary to further the development of cost-effective water supplies from seawater desalination in the state.

(b) The board shall prepare a biennial progress report on the implementation of seawater desalination activities in the state and shall submit it to the governor, lieutenant governor, and speaker of the house of representatives not later than December 1 of each even-numbered year.»
Texas Water Code §16.060(b)
The report shall include:

• “(1) Results of the board's studies and activities relative to seawater desalination during the preceding biennium;

• (2) Identification and evaluation of research, regulatory, technical, and financial impediments to the implementation of seawater desalination projects;

• (3) Evaluation of the role the state should play in furthering the development of large-scale seawater desalination projects in the state; and

• (4) The anticipated appropriation from general revenues necessary to continue investigating water desalination activities in the state during the next biennium.”
## Biennium Activities

<table>
<thead>
<tr>
<th>Seawater Feasibility Studies</th>
<th>Other Research and Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshops, presentations, seminars</td>
<td>Federal Funding Opportunities</td>
</tr>
<tr>
<td>Legislative Appropriations Request FY 06-07</td>
<td>Benchmarking</td>
</tr>
</tbody>
</table>
The Future of Desalination in Texas

Policy Volume: TWC §16.060 (b)

Technical Volume

Availability  Technology  Case Studies  Resources
Report Time Line

Sep 04

Status Report
Policy Input

Oct

Draft
HB 1370
Report

Nov

Final
HB 1370
Report

Dec 1

Report Delivered To The Governor And Texas Legislature
Statements of Interest

- Screening criteria
  - Need
  - Siting advantages
  - Support for the project
  - Project cost
  - Demonstration value

- Three projects recommended on the basis of their implementation potential

- 78th Legislature-TWDB to use $1.5 million grants to fund feasibility studies
Feasibility Reports
[DRAFTS-under review]

<table>
<thead>
<tr>
<th>Million Gallons per Day</th>
<th>Brownsville</th>
<th>Corpus Christi</th>
<th>Freeport</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25 [100]</td>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td>Capital Cost ( Millions)</td>
<td>$151</td>
<td>$197</td>
<td>$76*</td>
</tr>
<tr>
<td>Annual O&amp;M ( Millions)</td>
<td>$8</td>
<td>$18</td>
<td>$7</td>
</tr>
<tr>
<td>Delivered Cost of water</td>
<td>2.08</td>
<td>3.86</td>
<td>4.71</td>
</tr>
<tr>
<td>[$/1,000 gal]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Subsidy</td>
<td>1.24</td>
<td>3.23</td>
<td>3.49</td>
</tr>
<tr>
<td>$/1,000 gal [$/Acre-ft]</td>
<td>[400]</td>
<td>[1,042]</td>
<td>[1,127]</td>
</tr>
<tr>
<td>Customers</td>
<td>Brownsville</td>
<td>Corpus Christi</td>
<td>Brazosport WA</td>
</tr>
<tr>
<td></td>
<td>Brownsville/Cameron C</td>
<td></td>
<td>WA</td>
</tr>
</tbody>
</table>
Other studies

- Oil & Gas Mining Product Water
- Permitting Model
- Capacitive Deionization Technology
- Desalination Facilities Inventory
- Pass the Salt-Concentrate disposal
- Three proposals submitted for funding competition at US Bureau of Reclamation
Other activities

- Concentrate disposal permitting
- Work with Texas Delegation [$400,000]
- Partnerships with research interests and others
- Workshops/Seminar
- American Membrane Technology Association
- International Desalination Association
- South Central Desalting Association
Legislative Appropriations Request for FY 2006-2007

- $3.3 million
  - Up-to $2.5 million for pilot plants
  - $600,000 for development of small-to-medium size brackish groundwater desalination facilities
  - $200,000 to finance two full-time employees to conduct outreach and technical desalination assistance
Policy Issues
The role of the State

- Seawater desalination demonstration project
  - Project funding

- Other TWDB desalination efforts
  - Development of brackish groundwater demonstration projects
  - Transferability of knowledge
  - Next Steps