Wastewater Management and Utilization of Reclaimed Water in Baja California, Mexico

4th World Water Forum
Mexico
March 2006
Project Areas: Mexicali, Tijuana and Ensenada.

Components: Water Distribution and Treatment, Wastewater Collection, Treatment and Disposal (Secondary Treatment, Mexicali; Advanced Secondary Treatment, Tijuana).

Status: 66% Complete, 100% by 30/11/2007.

Funding: JBIC (67%); Federal and State (33%).
Wastewater Management

- Coverage of Sewer System: 82%
- Wastewater Collection: 154 Million m³
- Recycled Water: 24%

Mexicali has major utilization of recycled water primarily for green area irrigation and industrial use.
Status of Wastewater Management and Water Resources in Urban Areas

Water Resources Management

- Coverage of Water System: 95%
- Water Supply: 214 Million m³
- Colorado River Water: 57%
- Surface Supply: 86%

- The State is highly dependent on surface water (mainly Colorado River) and for future growth will need to look at a combination of desalination and recycled water
State Proposed Plan for use of Recycled Water to Supplement Water Demand

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2015</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume of Wastewater Collected</td>
<td>153.8</td>
<td>229.5</td>
<td>300.0</td>
</tr>
<tr>
<td>Volume of Wastewater Recycled</td>
<td>36.5</td>
<td>223.8</td>
<td>289.4</td>
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<tr>
<td>Percentage of Recycled Water</td>
<td>23.7%</td>
<td>97.5%</td>
<td>96.5%</td>
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</tbody>
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(Million Cubic Meters / Year)
State Proposed Plan for use of Recycled Water to Supplement Water Demand

Reuse by Municipalities

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2015</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexicali</td>
<td>54.4%</td>
<td>94.4%</td>
<td>91.1%</td>
</tr>
<tr>
<td>Tecate</td>
<td>0.0%</td>
<td>100%</td>
<td>89.5%</td>
</tr>
<tr>
<td>Tijuana</td>
<td>4.2%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Ensenada</td>
<td>9.5%</td>
<td>97.6%</td>
<td>98.2%</td>
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State Proposed Plan for use of Recycled Water to Supplement Water Demand

Primary Use of Recycled Water

- Green Areas
- Industrial Use
- Aquifer Recharge
- Agricultural