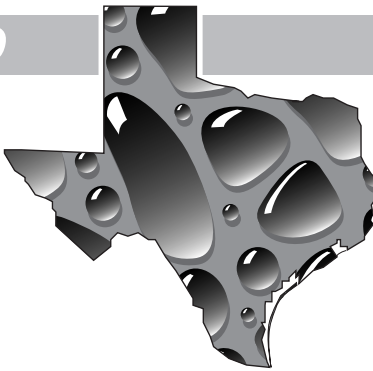


Water



Report

Coastal Bend Regional Water Planning Group
www.sci.tamucc.edu/nra/rwpgsite.html

No. 3 • February 2000

Regional planning process moving to evaluation of water supply options

With population and water demand projections complete, alternatives for meeting future Coastal Bend water needs are now being developed and evaluated.

Those water management options and strategies eventually accepted will become part of a comprehensive 50-year water plan for the region being developed by the Coastal Bend Regional Water Planning Group (RWPG).

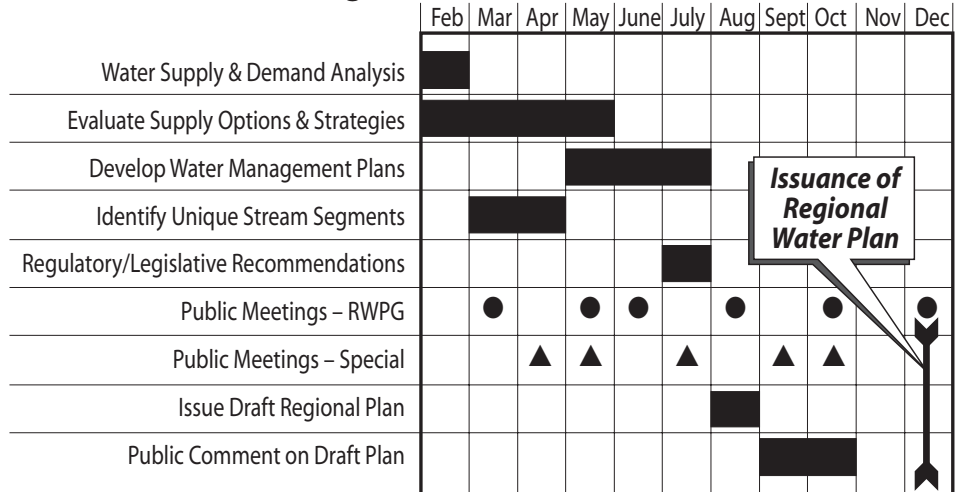
The Legislature has directed that 16 regional plans be prepared to map out how to conserve water supplies, meet future needs and respond to droughts. The regional plans must be completed by the end of the year. The Texas Water Development Board (TWDB) must then incorporate the regional plans into a comprehensive state water plan during 2001.

Extensive opportunities for public participation are being provided in both the regional and statewide planning process.

In the Coastal Bend, population growth projections and future water availability data have been broken down for each county and each community of greater than 500 population. The RWPG has made an effort to measure all currently available water supplies including groundwater.

The process of looking at the region community by community has identified some localized future shortages, as

Program Schedule for Year 2000



illustrated in the two charts below. The initial supply/demand comparisons are being revised based on input from the 16-member Planning Group.

The Final Plan must provide specific strategies for meeting expected demand during the next 30 years and more general options for the full 50-year planning period.

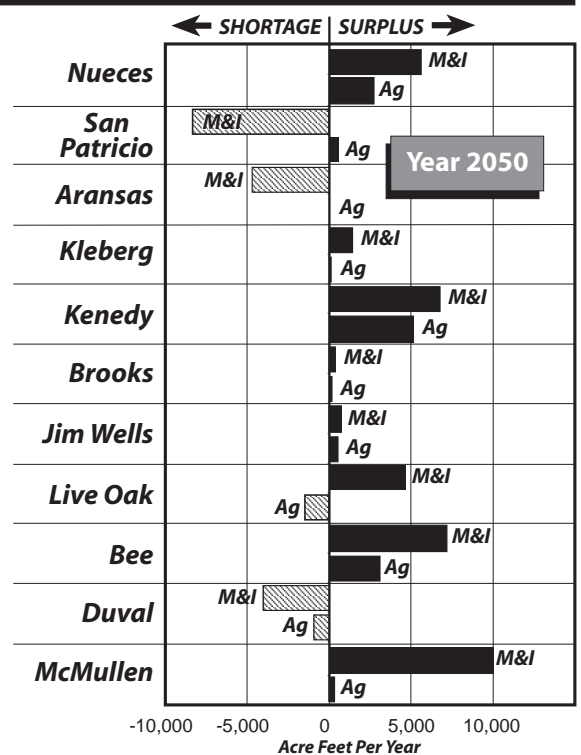
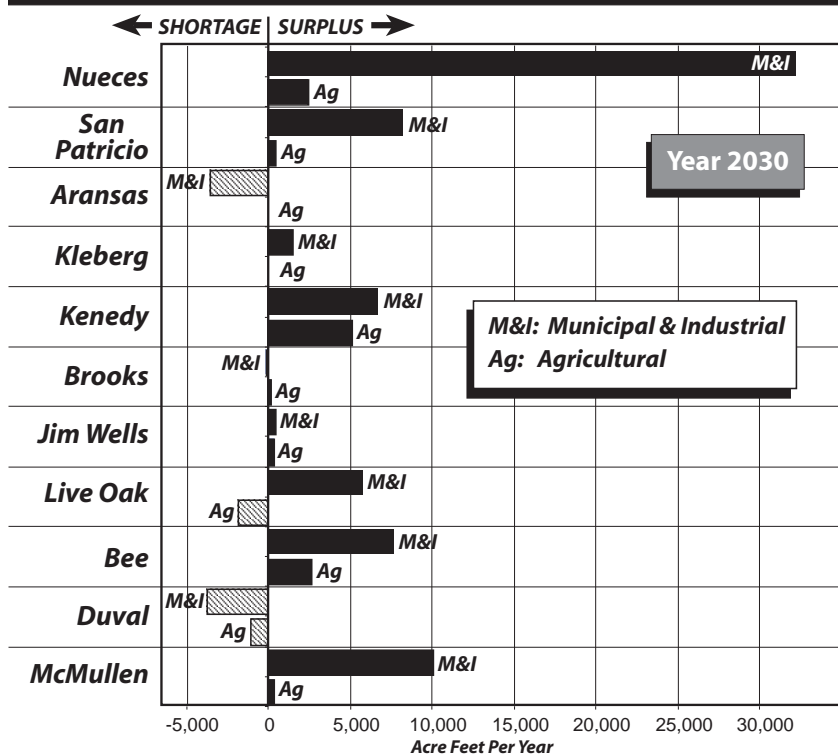
Most of the shortages identified over the next several decades are expected to take place in San Patricio and Aransas counties because that is where a significant share of the region's growth is projected to occur.

The individual county calculations do not take into consideration the fact that

most of the region's non-rural population depends on the surface water system managed by the City of Corpus Christi. This system includes water from Lake Corpus Christi, Choke Canyon and Lake Texana. In the future water will come to the system from the Colorado River.

It is likely that the draft regional water plan due out in August will deal with water supply on two levels. First it will address the general strategies that Corpus Christi, as the regional water manager, is expected to implement on behalf of all customers who buy water under contract. Additionally there will be specific set of strategies aimed at guiding individual communities, including options (see Page 2)

Projected Water Availability Without Additional Supplies



Supply Options...

for communities to supplement or substitute new sources for water now bought from the regional system.

The RWPG has collected all drought contingency plans developed by communities in the Coastal Bend and will incorporate them into the Final Regional Plan.

The RWPG is moving forward with formation of a working group to help meet the requirement for identification of unique reservoir sites and stream segments in the region. A subcommittee is being formed to oversee the program of public participation that will be conducted throughout the remainder of this year.

RWPG to elect officers on March 9

Officers for the Regional Water Planning Group will be elected during a regular meeting of the group at 1:30 p.m. Thursday, March 9, in the auditorium of the A&M Agricultural Extension Center on Highway 44 near Clarkwood. A map showing directions to the center is available at our website:

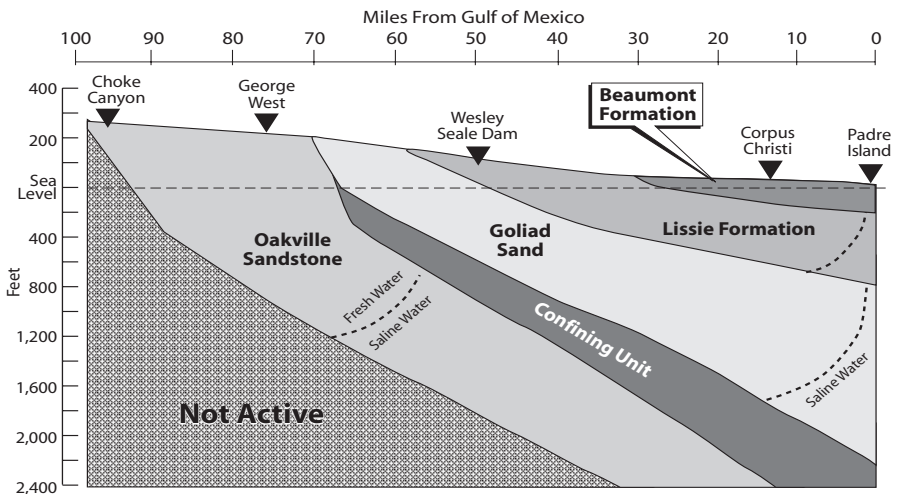
www.sci.tamucc.edu/nra/rwpgsite.html

How to get information & websites you can visit

Administrative support for the Coastal Bend RWPG is being provided by the Nueces River Authority's Coastal Bend Division which offices on the campus of Texas A&M University-Corpus Christi. For more information about this program contact James Dodson, NRA deputy executive director at: 361-825-3193; fax 361-825-3195; or e-mail: jdodson@falcon.tamucc.edu

There are a growing number of websites available to keep the public informed on water supply, water quality, conservation and education efforts. These include:

www.twdb.state.tx.us
www.sci.tamucc.edu/nra
www.texaswater.org
www.tnrcc.state.tx.us
www.twri.tamu.edu
www.ci.corpus-christi.tx.us/services/water.html



This is a conceptual cross-section of the Gulf Coast Aquifer system like that used in building a computerized three-dimensional groundwater model for the Coastal Bend.

Groundwater investigation reveals little additional sustainable yield

A consistent theme sounded by Regional Water Planning Group (RWPG) members and stakeholders early in the regional planning process was that more information was needed on the availability of groundwater. This is in contrast to the extensive available data from previous studies on surface water in the region.

RWPG Co-Chair Josephine Miller notes that there are large portions of the region that will continue to rely on groundwater regardless of how the region's surface water system is expanded. "It is important to know whether these communities are going to have adequate groundwater resources to support them far into the future," she said.

The result was that learning more about potable groundwater availability in the region became a priority of the program. Rather than use data provided by the Texas Water Development Board, state-of-the-art groundwater modeling techniques were used by the Center for Water Supply Studies at Texas A&M University-Corpus Christi to characterize the region's groundwater resources. The model developed will be a valuable tool for future Coastal Bend water planning.

A Groundwater Advisory Panel was formed to help the research team decide what criteria and constraints would be used in building the model.

Key constraints were that water could

only be withdrawn at sustainable rates, that water quality would be maintained, that the drawdown of water table levels would be kept within an acceptable range, and that pumping would not cause intrusion of sea water.

The computerized three-dimensional model shows that while there is adequate groundwater to supply Coastal Bend communities and rural families that depend on it, there is little extra groundwater available for new uses or for transfer to other areas. A relatively simple concept was used in building the model. The area over the Gulf Coast Aquifer was divided into thousands of grid blocks with a layer for each of the underlying aquifers. The cells and layers can be adjusted independently to see the impact of various pumping rates.

The resulting groundwater availability values were used in the water supply evaluation depicted in the charts on Page 1. The study found that there are some countywide groundwater surpluses but that the water is generally not located at the point where demand is focused.

An important constraint on the modeling effort was that the water produced had to meet drinking water standards. If developed in conjunction with membrane technologies, water with higher chloride levels could be pumped and more groundwater could be made available on a localized basis.

COASTAL BEND

Water Report

The **Coastal Bend Water Report** is published by the Coastal Bend Regional Water Planning Group which is developing a regional plan that will be incorporated into a comprehensive state water plan to be adopted by the Texas Water Development Board in 2001.

Prepared by The Bohannan Company

COASTAL BEND REGIONAL WATER PLANNING GROUP

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