

NATURAL RESOURCES AND ENVIRONMENTAL QUALITY

Natural Resources Supply & Quality

The availability of clean air and the quality of water, both for consumption and for recreation, are major factors impacting the Coastal Bend. Few communities with such a high percentage of the economy tied to the oil refining and petrochemical industry have maintained air quality equal to ours. Likewise, planning and careful monitoring have provided adequate supplies of safe water, with a few notable exceptions. Maintaining the quality of our bays and estuaries remains a top concern.

The City of Corpus Christi, which also supplies water to Nueces and San Patricio Counties, is projected to have enough water to meet the city's needs beyond a 50-year planning horizon, according to city officials. This is an enviable position for the Coastal Bend as clean, dependable natural resources diminish elsewhere in the country.

Corpus Christi's water is obtained from a combination of surface-water sources. The Atascosa River and Nueces River supply water to Lake Corpus Christi, while the Frio River supplies Choke Canyon Reservoir. Water from Lake Texana is transported through the 101-mile Mary Rhodes Pipeline, and an average of 74.353 million gallons a day of drinking water is produced at the O.N. Stevens Water Treatment Plant. In 2006, the Stevens plant produced 26.8 billion gallons of drinking water.

Water Quality Issues

The city monitors water quality on an on-going basis at various points in the water distribution system to ensure a minimum of 1 part per million of total residual chlorine. The U.S. Environmental Protection Agency requires water systems to test for as many as 97 contaminants.

On July 20, 2007, the City of Corpus Christi advised residents to boil water before drinking it after a stronger disinfectant needed to clean nitrates from the system raised chlorine levels. A second boil notice on August 14 may have been caused by the switch in disinfectant. The City of Corpus Christi Water Department detected fecal coliform or E. coli in the drinking water from August 13 to August 16. Restaurants and other businesses that rely on the availability of safe drinking water were forced to shut down or find an alternative source.

To address the problem, the city has spent more than \$2.3 million on equipment, consultants and overtime, hired a new water director and reviewed and revised procedures to improve water quality and prevent future problems.

Air Quality

Voluntary controls have helped the Corpus Christi area remain in attainment of federal air quality ozone standards. Although the U.S. Environmental Protection Agency (EPA) estimates that more than 170 million people live in counties with unhealthy air due to pollutants, so far the Coastal Bend has avoided this. However, this area came close to violating ozone standards in 1995 and, as a result, local authorities took action to reduce ozone levels by reducing emissions of volatile organic compounds.

Thanks to local efforts, the area has never exceeded federal ozone standards. Organizations such as the Pollution Prevention Partnership at Texas A&M University-Corpus Christi and Texas A&M University-Kingsville are leading efforts to educate residents on the issue.

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In 2000, the EPA began using its Air Quality Index to measure five air pollutants and converting the measured pollutant to a number on a scale of 0 to 500. A score of more than 100 means that a pollutant is in the unhealthy range on a given day.

Nueces County ranked 13th out of 25 counties in the number of person-days the air exceeded the 100 mark. Person-days are calculated by multiplying the number of days the air exceeded the mark times the number of people affected. Nueces County recorded 945,618 person-days in which at least one pollutant exceeded the 100 mark.

That compares favorably with counties such as Travis County (Austin) with more than 4.2 million person-days, Bexar County (San Antonio) with more than 13.2 million and Harris County (Houston) with more than 884 million.

Bays & Estuaries

Some economists estimate that more than 70% of the Coastal Bend economy depends on the three major estuary systems: Aransas-Copano, Corpus Christi-Nueces and upper Laguna Madre-Baffin Bay. The health of the Aransas National Wildlife Refuge and Padre Island National Seashore are directly affected by the quality of the water in these systems.

Fish and shellfish harvested in Coastal Bend waters account for more than 30% of Texas seafood harvested each year, and many visitors come to the area to fish, helping boost the tourism industry. There are eight principal estuary habitats in the Coastal Bend. The associated land habitats are home to more than 3,200 species of plants and animals.

The Corpus Christi Bay National Estuary Program, established in 1992, called for developing a plan to protect and restore the health of the three regional estuary systems. The resulting Coastal Bend Bays Plan seeks to balance environmental and economic goals. The plan provides a framework for tracking changes to

natural resources in the region and establishes goals for habitat restoration and impact reduction.

The following priority issues were identified by the Corpus Christi Bay National Estuary Program:

- altered freshwater inflow into bays and estuaries;
- loss of wetlands and estuarine habits;
- condition of living resources;
- degradation of water quality;
- altered estuarine circulation;
- bay debris; and
- public health issues

A study of wetland trends from the 1950s through 2004 demonstrated a decline in total area of major habitats from 90,328 to 84,176.

Parks and Green Spaces

A 2006 study commissioned by the City of Corpus Christi found that the city's park system is "generally in poor condition." The study found that Corpus Christi had more than 200 parks covering 1,024 acres, and that by 2007 the city would need as much as 654 additional acres of parks to meet recommended standards for the city's population. To meet recommended standards in 2015, according to the report, the city would need an additional 793 acres.

Parks fit into two categories: neighborhood parks and community parks. The recommended ratio of acres of neighborhood parks for every 1,000 residents is 1.5, whereas in Corpus Christi the ratio is 0.97. The recommended ratio for community parks is 4 acres per 1,000 residents, whereas the ratio in Corpus Christi is 2.58.

According to the report, most of the city's neighborhood parks are very small. One third are less than 3 acres in size, and many of those are no

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more than 1 acre in size. Many of the smaller parks are significantly undeveloped, with only one or two pieces of park equipment. Although the city has a network of smaller community parks that are well-located. However, the city does not have the resources to maintain its smaller neighborhood parks. They are underdeveloped and, as a result, poorly utilized.

Despite this, the study found that, given its limited resources, the city generally has an adequate overall supply of park lands.

The most-desired facilities based on citizen response are:

- construction of additional picnic areas;
- playgrounds/neighborhood parks;
- additional hike and bike trails;
- construction of new soccer fields;
- construction of a new skateboard park (completed);
- construction of new senior centers;
- development of natural habitat/nature areas;
- construction of new basketball courts;
- construction of new swimming pools; and
- construction of youth softball fields.

The only significant hike-and-bike trails are the 1.1-mile Texas A&M University-Corpus Christi Hike and Bike Trail and the Corpus Christi Bay Trail, which extends from the American Bank Center to Oso Bay, although much of that is located on Ocean Drive and not in a nature area. Plans call for this trail to be extended along Ennis Joslin Road to South Padre Island Drive and eventually through the city's Southside.

Questions We Need to Consider

1. How can we maintain or improve our current air quality in the future?
2. Will future business and industry growth harm our air quality? If so, how?
3. Can we improve the quality of our regional drinking water?
4. Are we prepared to supply future water needs throughout the region?
5. Can we maintain or improve our bays and estuaries for the future?
6. How can we provide parks and green spaces equivalent to state averages, and maintain them?
7. How can we improve the business climate or tourism industry through natural resources development?

Sources:

City of Corpus Christi, Coastal Bend Bays & Estuaries Program

Pollution Prevention Partnership