Welcome to the Center for Water Supply Studies

Center for Water Supply Studies
Texas A&M University - Corpus Christi
NRC Suite 3100 Unit 5864
6300 Ocean Drive
The Center For Water Supply Studies (CWSS) at Texas A&M University - Corpus Christi (TAMUCC) was organized in 1991, by Dr. C. Alan Berkebile, with the support of a special legislative appropriation, to initiate cross-disciplinary research on water resources and other water related issues in the Coastal Bend of South Texas. The Center focuses on research and education to develop professionals and leaders who can recognize and address water issues. Through active research CWSS provides the information needed to evaluate alternative strategies for local and regional management of surface and subsurface water resources. The Center's Division of Coastal Geology and Stratigraphy (DCGS) conducts multi-disciplinary research to provide CWSS researchers with information on the sedimentology, geometry, architecture, and stratigraphy of coastal sandstone aquifers and fluid reservoirs.

CWSS is an integral partner in the Environmental Research Consortium at Texas A&M University - Corpus Christi. CWSS collaborates on projects with a variety of universities, community conservation organizations, and local, state, and federal agencies.

CCWS is a non-degree-granting institution which supports undergraduate and graduate students seeking degrees in various disciplines. Faculty and staff associated with the Center serve as advisors and mentors for Texas A&M University - Corpus Christi students.
Region

CWSS Mission

The Center for Water Supply Studies is dedicated to addressing water supply issues in the South Texas Region by: conducting relevant research, disseminating information via partnerships with local, state and federal agencies, evaluating resource management strategies that impact water quality/quantity in reservoirs, rivers, bays, estuaries, and aquifers, educating citizens to understand water supply issues, and developing synergy between higher education institutions and the Center for Water Supply Studies.

CWSS Vision

The Center for Water Supply Studies is committed to:

- Conducting original research on surface water systems and on subsurface aquifer characterization and stratigraphic complexity through quality data collection and modeling
- Assessing management strategies for maintaining water quality and quantity while balancing conservation and resource needs
- Compiling, analyzing and disseminating data now being gathered by the Center and other agencies
- Supporting Texas A&M University - Corpus Christi’s research and education goals as well as its commitment to public service

CWSS Objectives

Research

- Investigate barrier island stratigraphy, aquifer dynamics, and freshwater/saltwater interactions
- Develop models for the stratigraphy and architecture of subsurface coastal reservoirs including aquifers
- Develop techniques for evaluating water contamination using proxies
- Evaluate new water treatment technologies
Conduct geophysical studies to evaluate the stratigraphic and hydrogeological properties of aquifers

Compliance and Remediation Studies

- Evaluate and model pollutants such as bacteria and trace elements in local hydrologic systems
- Model groundwater availability
- Apply GIS technology to develop integrated databases for evaluating water resource issues

Education

- Supervise Texas A&M University - Corpus Christi graduate students in stratigraphic and hydrogeological investigations
- Mentor Texas A&M University - Corpus Christi undergraduate students in directed independent studies involving stratigraphic and hydrogeological investigations
- Support the Environmental Science and Geology Programs at Texas A&M University - Corpus Christi by serving as course instructors
- Provide computing and laboratory facilities for graduate and undergraduate studies and research

Community Outreach

- Support conservation efforts by participating on advisory boards and forums oriented to local resource preservation
- Counsel local school district educators about water resources and water quality issues affecting the coastal bend
- Expose students from local school districts to water supply and Earth science topics

Capabilities

Through interaction with other University Institutes and Research Centers, the Center for Water Supply Studies can assemble a diverse multidisciplinary scientific team to address difficult and complex water problems and issues.

- **GIS**: Geographic Information Systems capabilities exist to display and analyze spatially-distributed hydrologic and geologic data.
- **Computer Modeling**: Expertise in numerous computer models permits modeling of distinct surface and groundwater systems.
• **Field Studies**: Field based work for surface and subsurface investigations is a strong component of hydrologic and geologic research conducted through the Center for Water Supply Studies and its [Division of Coastal Geology and Stratigraphy](#).

• **Education**: Programs which lead to degrees in [Geology](#) and [Environmental Science](#) permit students to specialize in the study of water-supply issues. Continuing education meets the needs of local industry and individuals seeking career advancement.

• **Conservation**: Expertise is available to design, implement, and evaluate experimental water-conservation equipment and programs.

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**Facilities, Equipment, and Software**

The Center for Water Supply Studies has the [facilities and equipment](#) to address difficult and complex hydrologic and geologic problems and issues, including computer and lab facilities, research vessels, lab and field equipment, and GIS, modeling, and subsurface interpretation software.