

# **The Gulf Coast Carbon Center: carbon sequestration opportunities in geologic formations**

**GCCC Digital Publication Series #04-03**

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**Keywords:**

**Capacity, Characterization, Regional study-Gulf Coast**

**Cited as:**

**Kim, E. M., Hovorka, S. D., and Holtz, M. H., 2004, The Gulf Coast Carbon Center: carbon sequestration opportunities in geologic formations: Gulf Coast Association of Geological Societies Transactions, v. 54, p. 281–288. GCCC Digital Publication Series #04-03.**

**Abstract:**

For the next several decades, during the transition to a hydrogen-based economy, fossil fuels will be the dominant source of global energy. Part of sustaining a fossil-fuel-based economy is to mitigate the environmental impacts of greenhouse gas emissions by sequestration efforts. Geologic sequestration of carbon dioxide, a major form of greenhouse gas, is an important step toward this energy future. The Gulf Coast provides a world-class site for the implementation of geologic sequestration because of the unique combination of knowledge, geology, infrastructure and government. Opportunities for enhanced oil and gas recovery could not only serve as a geologic site for carbon sequestration, but also could offset the cost of implementing sequestration thus making it economically viable. While a carbon-constrained world is still an evolving public policy issue, due to the substantial economic links to the chemical, refinery and electric power industries, the Gulf Coast Region could be negatively impacted. To address these issues, the Gulf Coast Carbon Center, Bureau of Economic Geology, was formed as an industrial associates program. Funding is obtained through the Jackson School of Geosciences, The University of Texas at Austin and from contributions of companies with financial, economic, and political interest in the challenges and opportunities created by a carbon-constrained environment. Major current accomplishments include characterizing the Gulf Coast region in terms of: (1) major anthropogenic CO<sub>2</sub> sources and (2) geologic formations. This was accomplished by employing a Geographic Information System (GIS) and assessing the economic viability and environmental risks of geologic sequestration.

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