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An Update on the Midcontinent Interactive Digital Carbon Atlas and Relational Database (MIDCARB) Project

The "Midcontinent Interactive Digital Carbon Atlas and Relational dataBase" (MIDCARB) is a multi-state consortium (Indiana, Illinois, Kansas, Kentucky, Ohio), which has constructed an online distributed Relational Database Management System and Geographic Information System (GIS) for analyzing the relationship of major, stationary sources of anthropogenic carbon dioxide and geologic sequestration options (<http://www.midcarb.org>). The MIDCARB database is a tool that can be used to evaluate the feasibility and associated costs of geologic sequestration. Users have the ability to analyze CO₂ quantities available for sequestration from large point sources (power plants, ethanol plants, and other industrial sources) in relation to nearby geologic sequestration capacity of local and regional geologic reservoirs (e.g. oil or gas fields, deep coal seams, saline aquifers). Consortium states are linked into a coordinated regional database system consisting of datasets useful to industry, regulators and the public. The project provides advanced distributed computing solutions that dynamically link database servers across the five states so that data can be maintained at the local level but accessed through a single web portal. All data is available to the user online and can be queried, assembled, analyzed, displayed and downloaded. The MIDCARB consortium utilizes individual assets in each state to gather, manipulate and display data, including GIS mapping, custom application development, web development, and database design. In the future, the consortium intends to add additional information from other regional sequestration partnerships, thus expanding the breadth of the mapped area and the expertise available to assess the sequestration potential of various reservoirs