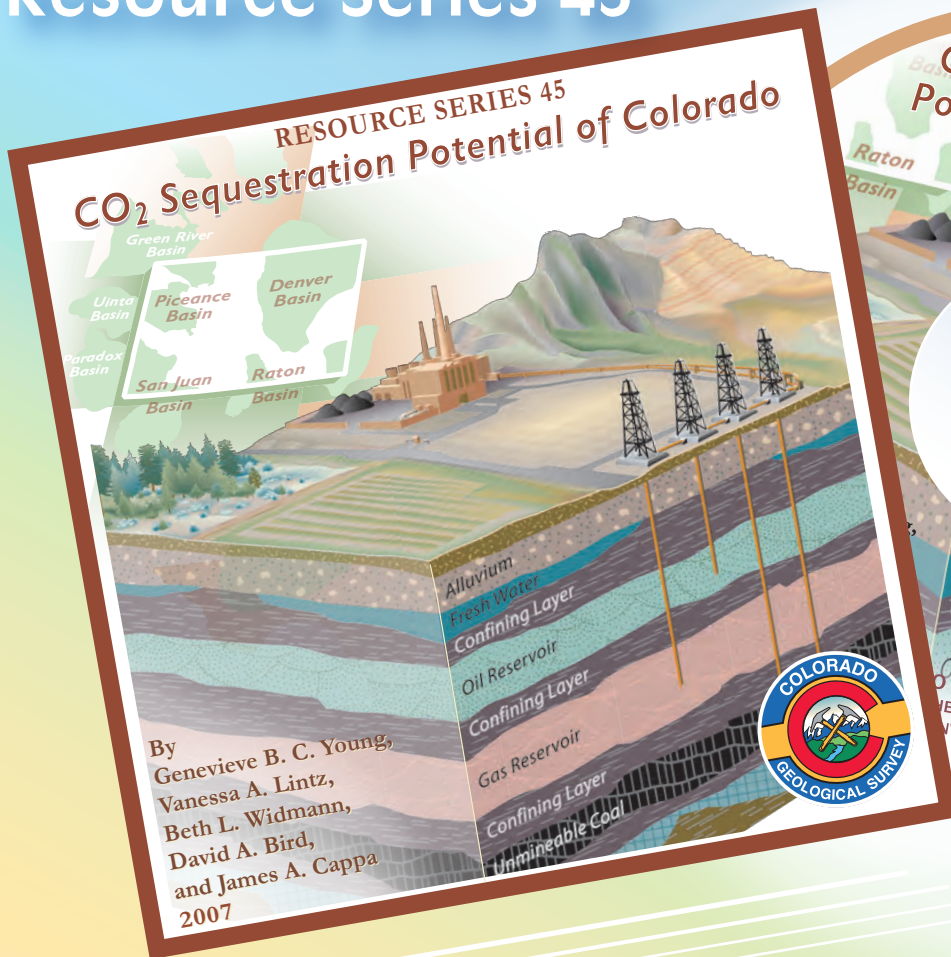


# CO2 DVD PUBLICATION

## Resource Series 45



- ✓ Report
- ✓ Shapefiles
- ✓ Databases
- ✓ Appendices

Includes ArcMap™  
shapefiles of:

- Oil & Gas Fields & Basins
- Coalbed Reservoirs
- Saline Aquifers
- CO<sub>2</sub> Emissions
- CO<sub>2</sub> Storage Sites

**\$18**

CGS RS-45 CO<sub>2</sub> Sequestration Potential of Colorado

CONTENTS: Adobe Acrobat™ files (pdf): RS-45 CO<sub>2</sub> Sequestration Potential of Colorado.pdf  
Folders for Appendices, Databases, and Shapefiles (ARC-GIS files)

**NETL**

**SWP**  
SOUTHWEST PARTNERSHIP  
CO<sub>2</sub> SEQUESTRATION

Colorado Geological Survey  
1313 Sherman St., Room 715  
Denver, Colorado 80203  
(303) 866-4762 / <http://geosurvey.state.co.us>

DEPARTMENT OF ENERGY  
UNITED STATES OF AMERICA

CGS RS-45 CO<sub>2</sub> Sequestration Potential of Colorado

# CO<sub>2</sub> SEQUESTRATION POTENTIAL OF COLORADO

The Colorado Geological Survey is a participant in the Southwest Regional Partnership on Carbon Sequestration project whose primary goal is to determine an optimum strategy for minimizing greenhouse gas intensity in the southwestern United States. The Southwest Partnership is led by the New Mexico Institute of Mining and Technology and comprises a large, diverse group of expert organizations and individuals specializing in carbon sequestration science and engineering, as well as public policy and outreach.

In 2000, CO<sub>2</sub> emissions were more than 92 million short tons in Colorado; of which 46 percent came from coal-fired power plants. These stationary point sources afford the possibility of capture and separation of CO<sub>2</sub> for transport to, and storage at, nearby “geologic sinks”.

Although CO<sub>2</sub> sink potential is widely distributed across the state, characterization efforts during Phase I (2003-2005) focused on seven “pilot study regions” defined on the basis of maximum diversity in potential sequestration options relatively close to large CO<sub>2</sub> sources. Utilizing both geologic and mineralization options, carbon storage capacity within these regions is an estimated 720 billion short tons. With the availability of suitable technology, the pilot areas have the potential of providing a long-term storage solution. The highest CO<sub>2</sub> sequestration capacity potential for Colorado lies within the oil, gas, coalbed, and saline aquifer reservoirs of the Denver, Cañon City Embayment, Piceance, and Sand Wash basins (see reverse side for the results of the Phase I work).

The Southwest Partnership is currently conducting three pilots for Phase II (2005-2009) of the DOE/NETL Carbon Capture and Storage Program. These include one pilot each in the San Juan Basin, the Paradox Basin, and the Permian Basin. The Colorado Geological Survey (CGS) is taking a key role in the design, implementation, and analysis of the San Juan Basin Fruitland coal pilot because of expertise in coalbed methane development. In addition, CGS is co-lead for the Site Characterization technical team for all three pilot projects, as well as the point-of-contact for the Site Characterization, Reservoir Modeling, and Data Archiving technical teams.

DOE/NETL plans to establish multiple carbon capture and storage demonstrations on the scale of one million metric tonnes CO<sub>2</sub> sequestered per year. When the smaller-scale pilot projects conclude, larger-scale deployment projects are envisioned for each of the regional partnerships. The Southwest Partnership is considering two Colorado options (among others) for larger-scale demonstrations – Shell’s oil shale development project in the Piceance Basin and Xcel Energy’s planned Integrated Gasification Combined Cycle power plant for Colorado.

*For additional information, contact the Colorado Geological Survey, 303-384-2655*

