

## Southwest Regional Partnership for Carbon Sequestration

# Evaluating Carbon Sequestration Opportunities in the Southwestern U.S.

Third Annual Conference on Carbon Sequestration  
May 6, 2004




## Primary Goal:

### Prepare comprehensive analysis of carbon sequestration options for the southwestern United States



## Partners



Each of the Phase I Partnerships consists of many partners, necessary because the Phase I assessment and planning programs require a great deal of intrastate and interstate coordination.

<p><b>State Partners</b></p> <p><b>Arizona Universities &amp; Government</b> Arizona Geological Survey Arizona State University</p> <p><b>Colorado Universities &amp; Government</b> Colorado Geological Survey Colorado State University</p> <p><b>New Mexico Universities &amp; Government</b> New Mexico Oil Cons. Division New Mex. Bureau of Geology New Mexico Envir. Department NM Inst. of Mining and Technology New Mexico State University</p> <p><b>Oklahoma Universities &amp; Government</b> Oklahoma Geological Survey University of Oklahoma Oklahoma State University Stanley's Energy Center</p> <p><b>Texas</b> Texas Bureau of Economic Geology Texas A&amp;M</p> <p><b>Utah Universities &amp; Government</b> Utah Geological Survey University of Utah Utah State University Utah AGRC Utah Division of Air Quality Utah Energy Office Utah Division of Oil Gas &amp; Mining</p>	<p><b>Industry Partners</b></p> <p><b>Power utilities:</b> Tucson Electric Power Oklahoma Gas &amp; Electric Intermountain Power Agency PacifiCorp Public Service Co. of New Mexico (PNM)</p> <p><b>Energy providers (oil, gas, coal):</b> Yates Petroleum, Chevron/Texasco Marathon, Occidental Petroleum ConocoPhillips, Burlington</p> <p><b>Gas infrastructure (CO<sub>2</sub> pipeline):</b> Kinder Morgan</p> <p><b>U.S. Federal Government Partners</b> Los Alamos National Laboratory Sandia National Laboratory U.S. Dept. of Agriculture</p> <p><b>Other Important Partners</b> Navajo Nation New Mexico Oil and Gas Association Gas Technology Institute Electric Power Research Institute Interstate Oil &amp; Gas Compact Commission Center for Energy &amp; Economic Development Advance Resources International Waste-management Educ. &amp; Res. Wyoming Geological Survey (Data Sharing) Kansas Geological Survey (Data Sharing)</p> <p><b>Coordinating Partner</b> Western Governors Association</p>
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## Major Emissions Sources in the Region

Sources being catalogued include

- electrical power plants
- cement & other processing plants
- urban centers
- non-point sources (agriculture, automobiles, etc.)

Total regional point source emissions ~10<sup>9</sup> t/yr.

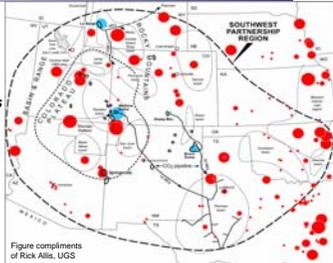
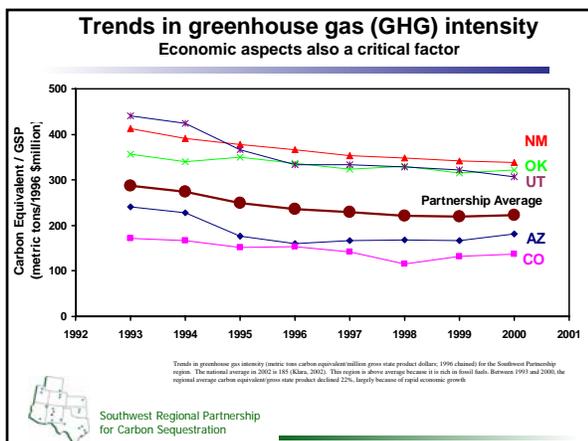


Figure compliments of Rick Allis, UGS

**EXPLANATION**

- Red circle size: Annual mass of CO<sub>2</sub> emissions from point sources (metric tons per year)
- Blue circle size: Annual mass of CO<sub>2</sub> emissions from non-point sources (metric tons per year)
- Blue circle with 'x': Major non-point source
- Blue circle with 'x': CO<sub>2</sub> emissions from a natural sink (not point)
- Blue circle with 'x': CO<sub>2</sub> production (same key as emissions)
- Red circle with 'x': Natural CO<sub>2</sub> sequester
- Blue circle with 'x': Major CO<sub>2</sub> sink
- Blue circle with 'x': Other CO<sub>2</sub> sink

## Major Sinks and Pipeline Infrastructure

### Sequestration Possibilities Being Assessed:

- **geologic:** oil/gas reservoirs, deep saline aquifers, coalbeds, natural CO<sub>2</sub> reservoirs, etc.
- **terrestrial:** agriculture, forests, reclaimed mine lands, etc.
- **mineralization engineering:** surface approaches at source

### Infrastructure

- Extensive CO<sub>2</sub> pipeline networks

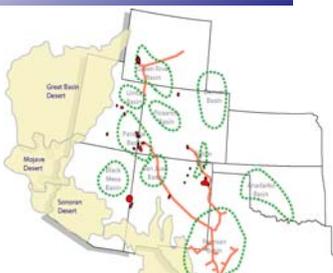


Figure compliments of George Guthrie, LANL



## Some Major Tasks Underway

- Characterization of sequestration options for the region  
- current stage: intrastate assessments
- Cataloging of applicable regulatory constructs in place  
- current stage: intrastate assessments
- Evaluation of current public opinion and knowledge of sequestration  
- current stage: intrastate assessments
- Open forums and other means to educate public about sequestration
- Cataloging of data / database development  
- current stage: intrastate, interstate (partnership-wide)  
and inter-partnership database being developed
- Partnership has begun assessment & ranking of sequestration options  
- current stage: intrastate rankings



Southwest Regional Partnership  
for Carbon Sequestration

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[southwestcarbonpartnership.org](http://southwestcarbonpartnership.org)



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