

# Regional Carbon Sequestration Partnerships



*Sixth Annual Conference on  
Carbon Capture and  
Sequestration*

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Carbon Sequestration Program*

*May 9, 2007*

**National Energy Technology Laboratory**



**Office of Fossil Energy**



# Regional Carbon Sequestration Partnerships

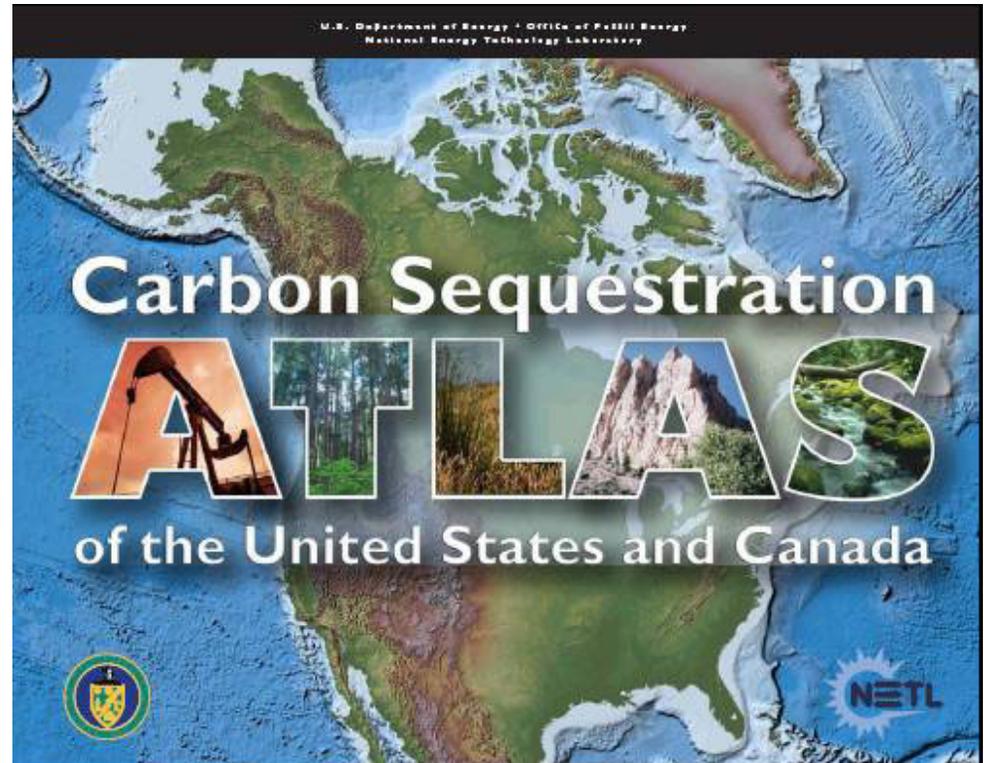
## *“Developing the Infrastructure for Wide Scale Deployment”*

- Over 350 Organizations
  - 41 States
  - 4 Canadian Provinces
- Implemented in 3 Phases
- Over \$175 million invested



# Carbon Sequestration Atlas of the United States and Canada

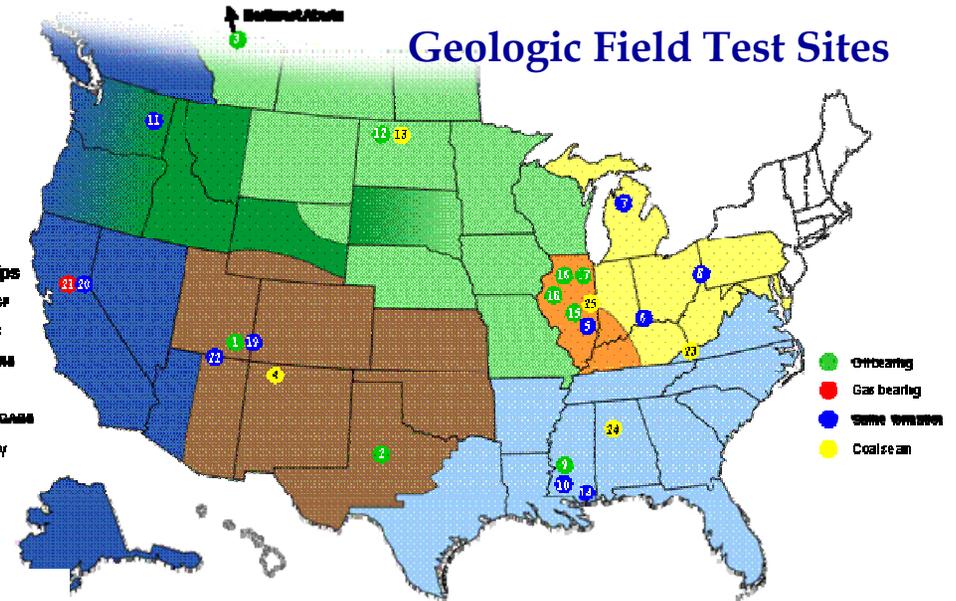
- First version of the Carbon Sequestration Atlas of the U.S. and Canada
- Methodology developed by experts in the U.S. and Canada involved in the Partnerships
- Provides both National and Regional Summaries of CCS opportunities
- Versions will be issued to include additional opportunities not included in this assessment.



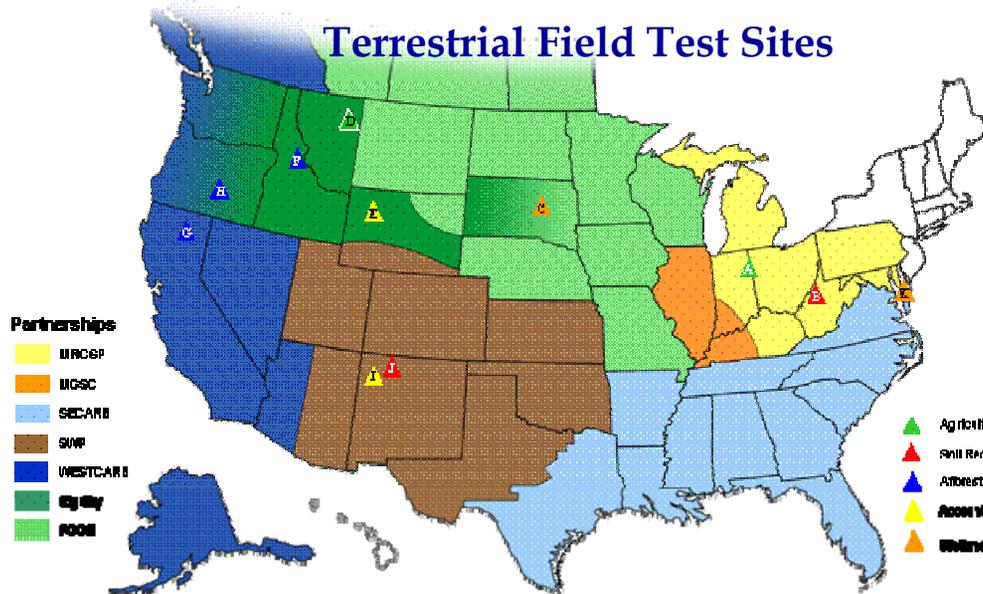
# Validation Phase Field Tests

## Geologic Tests (25 injection tests)

- Validating geologic formation capacities
- Validating injectivity
- Monitoring mitigation and verification technologies (reservoir modeling)
- Permitting requirements
- Public outreach and perception
- Testing formation seals
- Investigating well bore construction methods



## Terrestrial Field Test Sites

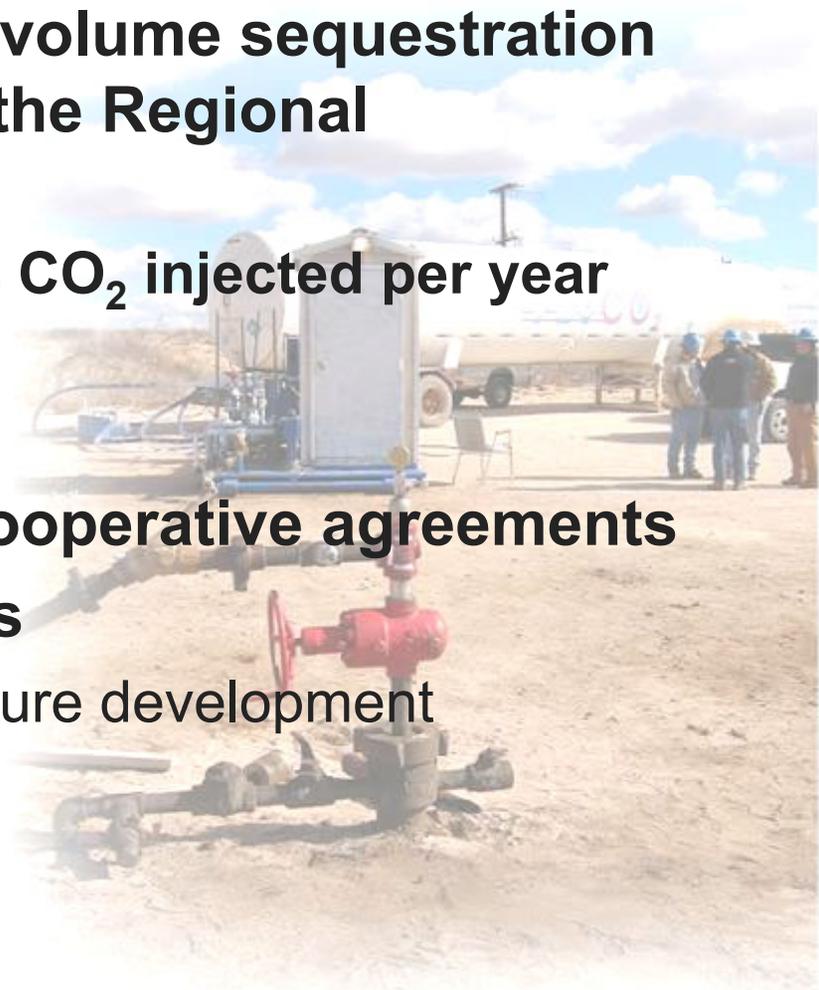


## Terrestrial Tests (11 field tests)

- Tree-plantings
- No-till farming
- Wetlands restoration
- Land management: grasslands, grazing lands
- Fire management
- Forest preservation
- Monitoring, mitigation, and verification technologies
- accounting protocols for trading markets (CCX)

## Deployment Phase

- Awarding several large volume sequestration injection tests through the Regional Partnership Program
- Large volume – ~ 1M tons CO<sub>2</sub> injected per year for up to 4 years
- Currently negotiating cooperative agreements
- Implemented in 3 stages
  - Permitting and infrastructure development
  - Operations
  - Closure and monitoring



# Deployment Phase

## *Outcomes*

- Evaluate regional opportunities
- Site selection requirements
- Design criteria
- Permitting requirements
- Validate reservoir and risk assessment models
- Best practices manuals and operating protocols



# Additional Information

National Energy Technology Laboratory Site Map  GO>



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## Technologies

### Carbon Sequestration

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NETL manages a portfolio of laboratory and field R&D focused on technologies with great potential for reducing greenhouse gas emissions and controlling global [climate change](#). Most efforts focus on capturing carbon dioxide from large stationary sources such as power plants, and sequestering it using geologic, terrestrial ecosystem, or oceanic approaches. Control of fugitive methane emissions is also addressed.



Carbon sequestration work directly implements the President's Global Climate Change Initiative, as well as several National Energy Policy goals targeting the development of new technologies. It also supports the goals of the Framework Convention on Climate Change and other international collaborations to reduce greenhouse gas intensity and greenhouse gas emissions.

The programmatic timeline is to demonstrate a portfolio of safe, cost effective greenhouse gas capture, storage, and mitigation technologies at the commercial scale by 2012, leading to substantial deployment and market penetration beyond 2012. These greenhouse gas mitigation technologies will help slow greenhouse

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## NEWS & FEATURES // All >

- Carbon Sequestration Technology Roadmap [PDF-4542KB]
- Carbon Sequestration Program Outreach Plan [PDF-1438MB]
- DOE-Advances Commercialization of Climate Change Technology
- Regional Carbon Sequestration Partnerships Program Adds Canadian Provinces

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## EVENTS CALENDAR // All >

- The 2006 EIC Climate Change Technology Conference - Engineering Challenges and Solutions in the 21st Century

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## PUBLICATIONS & PROJECTS // All >

- Carbon Sequestration Reference Shelf
- Carbon Sequestration Project Portfolio [PDF-1201KB]



[http://www.netl.doe.gov/technologies/carbon\\_seq/index.html](http://www.netl.doe.gov/technologies/carbon_seq/index.html)