



Montana State University  
<http://www.bigskyco2.org>



University of Illinois, Illinois State Geological Survey  
<http://www.sequestration.org>



Battelle Memorial Institute  
<http://www.mrcsp.org>



University of North Dakota,  
Energy & Environmental Research Center  
<http://www.undeerc.org/pcor>



Southern States Energy Board  
<http://www.secarbon.org>



New Mexico Institute of Mining and Technology  
<http://www.southwestcarbonpartnership.org>



California Energy Commission  
<http://www.westcarb.org>

## Regional Carbon Sequestration Partnerships

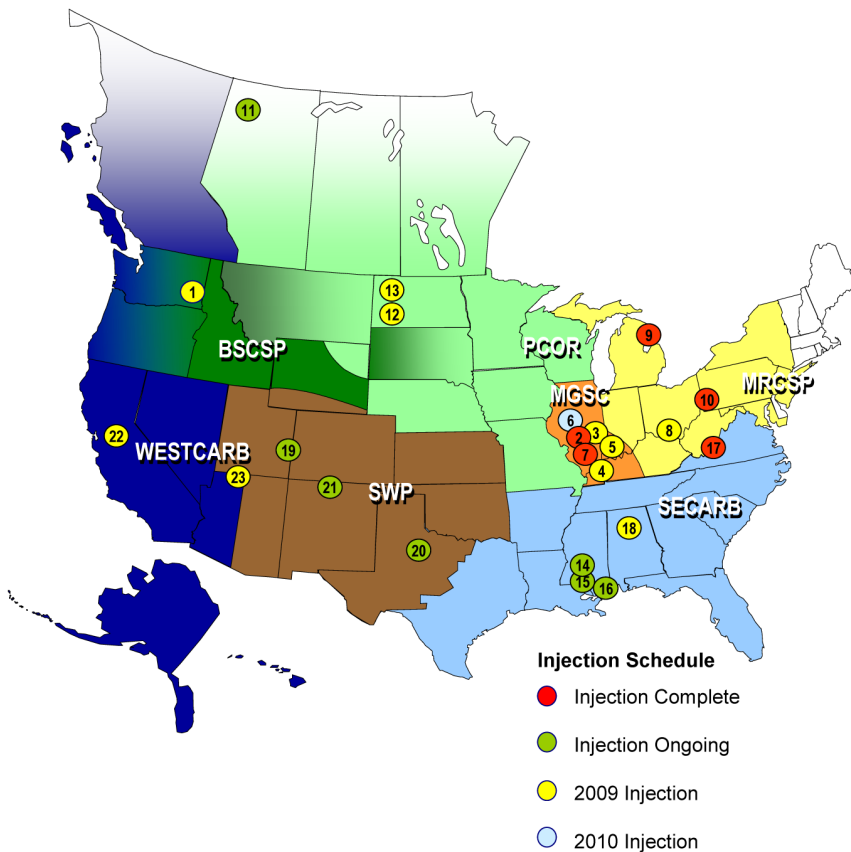
As part of a comprehensive effort to assess options for sustainable energy systems, the U.S. Department of Energy formed seven regional partnerships, through its Regional Carbon Sequestration Partnership (RCSP) Program, to determine the best approaches for capturing and permanently storing carbon dioxide (CO<sub>2</sub>), a greenhouse gas which can contribute to global climate change. The RCSPs are made up of representatives from state and local agencies, universities, private companies, national laboratories, coal companies, oil and gas companies, engineering and research firms, electric utilities, agricultural industry, and non-government organizations that form the core of a nationwide network helping to establish the most suitable technologies, regulations, and infrastructure needs for carbon sequestration. Altogether, these public/private partnerships include more than 350 organizations, spanning 43 states and four Canadian provinces.

The RCSP initiative is being implemented in three phases. The **Characterization Phase** began in September 2003 with the seven partnerships working to develop the necessary framework to validate and potentially deploy carbon sequestration technologies. In June 2005, work transitioned to the **Validation Phase**, a four-year effort focused on validating promising CO<sub>2</sub> sequestration opportunities through a series of more than 20 geologic and 11 terrestrial field tests in the seven regions. Presently, activities in the **Development Phase** (2008–2017) are proceeding as an extension of the work completed to date and will demonstrate that CO<sub>2</sub> capture, transportation, injection, and storage can be achieved safely, permanently, and economically at a large scale. These tests will promote understanding of injectivity, capacity, and storability of CO<sub>2</sub> in the various geologic formations identified by the partnerships. Results and assessments from these efforts will help in the commercialization efforts for future sequestration projects in North America.

## Regional Carbon Sequestration Partnerships Validation Phase

The Validation Phase of the RCSP initiative is building on the accomplishments of the Characterization Phase through the following activities:

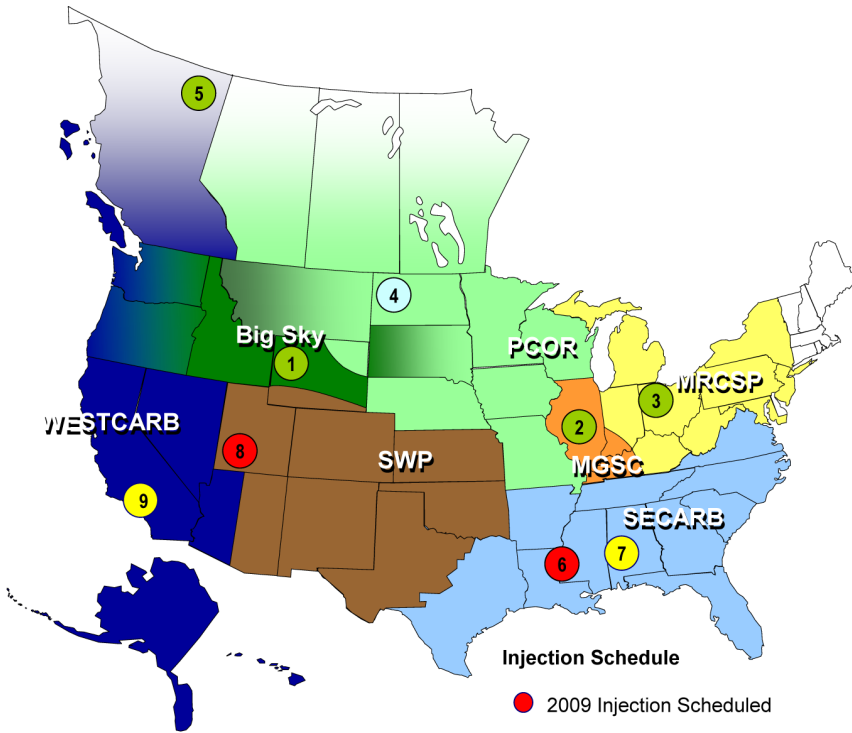
- Twenty-three field tests with CO<sub>2</sub> storage in geologic formations
  - Nine geologic field tests being conducted in deep saline formations
  - Nine enhanced oil or gas recovery projects being conducted for value-added CO<sub>2</sub> storage
  - Five enhanced coalbed methane tests being conducted in unmineable coal seams
- Eleven ongoing tests of enhanced carbon uptake in terrestrial ecosystems



Partnership	Geologic Province	Formation Type
1	Columbia Basin	Saline
2	Illinois Basin	Oil-Bearing
3		Oil-Bearing
4		Oil-Bearing
5		Oil-Bearing
6		Saline (Combined with large-volume storage test)
7		Coal Seam
8	Cincinnati Arch	Saline
9	Michigan Basin	Saline
10	Appalachian Basin	Saline
11	Keg River Formation	Oil-Bearing
12	Duperow Formation	Oil-Bearing
13	Williston Basin	Coal Seam
14	Gulf Coast	Oil-Bearing
15		stacked test Saline
16	Mississippi Salt Basin	Saline
17	Central Appalachian	Coal Seam
18	Black Warrior Basin	Coal Seam
19	Paradox Basin, Aneth Field	Oil-Bearing
20	Permian Basin	Oil-Bearing
21	San Juan Basin	Coal Seam
22	Sacramento Valley	Saline
23	Colorado Plateau	Saline

## Regional Carbon Sequestration Partnerships Development Phase

The Development Phase of the RCSP initiative will encompass one to three years of site characterization; two to three years of injection; and two to four years of monitoring, verification, and accounting. Tests during the Development Phase involve the injection of one million tons or more of CO<sub>2</sub> into a range of geologic formations.



- Injection Schedule**
- 2009 Injection Scheduled
  - 2010 Injection Scheduled
  - 2011 Injection Scheduled
  - 2012 Injection Scheduled

	Partnership	Geologic Province	Formation Type
1		Triassic Nugget Sandstone / Moxa Arch	Saline
2		Mt. Simon Sandstone	Saline
3		Mt. Simon Sandstone	Saline
4		Williston Basin	Oil-Bearing
5		Devonian Age Carbonate Rock	Saline
6		Lower Tuscaloosa Formation	Saline
7		Massive Sand Unit	Saline
8		Regional Jurassic and Older Formations	Saline
9		San Joaquin Basin	Saline