



## Midwest Regional Carbon Sequestration Partnership

*Managing Climate Change and Securing a Future for the Midwest's Industrial Base*

MRCSP Briefing for the Third National Carbon Sequestration Conference May 2004

**MRCSP Website:**  
[www.projects.battelle.org/mrcsp/](http://www.projects.battelle.org/mrcsp/)  
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5/11/2004

## The Midwest Regional Carbon Sequestration Partnership



*The Midwest Regional Carbon Sequestration Partnership will be the premier resource in the region for identifying the technical, economic, and social considerations associated with and creating viable pathways for the deployment of CO<sub>2</sub> sequestration.*

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## MRCSP Region



**MRCSP Region: The Nation's Engine Room**

- Population 50.8 million, that's one in six Americans
- Gross Regional Product \$1,534 billion (16% of the U.S. economy)
- 77% of electricity generated by coal
- 21.5 % of all electricity generated in the U.S.

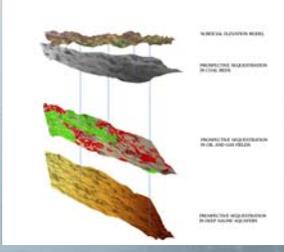
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## Detailed Mapping of the Region's Geosequestration Potential

**The State-of-the-art a couple of years ago**

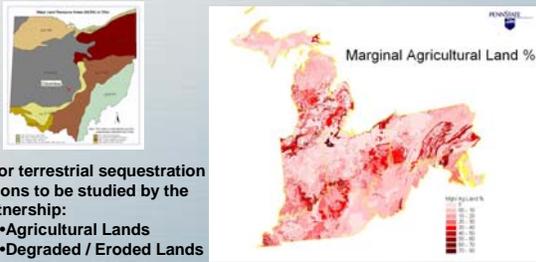


**Where we are heading in the MRCSP...**



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## Detailed Mapping of the Region's Terrestrial Sequestration Potential



**Major terrestrial sequestration options to be studied by the Partnership:**

- Agricultural Lands
- Degraded / Eroded Lands
- Abandoned Mine Lands
- Forests

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## Moving Towards Phase II - A Wealth of Potential Project Ideas in a Region this Large and Diverse



Existing refinery w/ high purity stream in close proximity to deep saline formation

Coal-fired power plant already capturing CO<sub>2</sub>

New ethanol plant with high purity stream sequestration into coals and DSA

Active area of mine land reclamation and reforestation

On-going long-term field experiment of soil carbon sequestration

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An Open and Deliberative Process for Down Selecting to a Small Subset of Candidate Phase II Projects to Be Studied in Detail

|  |  | Candidate Phase II Project #1 | Candidate Phase II Project #2 | Candidate Phase II Project #n |
|--|--|-------------------------------|-------------------------------|-------------------------------|
| <b>Evaluating Proposed Phase 2 Projects</b>              | eligibility score for phase II   |                               |                               |                               |
|  | likelihood of getting >50% non-federal cost share (majority cash)                      | H, M, L                       |                               |                               |
|  | \$ / ton of CO2 sequestered in Phase II project  |                               |                               |                               |
|  | novelty of Phase II research (vs. the leading to define the state of the art)          | H, M, L                       |                               |                               |
|  | ability to build upon pre-existing infrastructure                                      | yes / no                      |                               |                               |
|  | degree of public / stakeholder support for proposed project                            | H, M, L                       |                               |                               |
|  | strength of DOE support for proposed project   | H, M, L                       |                               |                               |
|  | degree of support / partnership with state and federal regulators                      | H, M, L                       |                               |                               |
|  | capable of addressing multiple reservoirs  | yes / no                      |                               |                               |
|  | security risks of proposed project   | H, M, L                       |                               |                               |
| <b>Impact of Phase II Research Results on the Region</b> | scale of deliver potential for region  | positions of CO2              |                               |                               |
|  | cost of potential offsets  | \$                            |                               |                               |
|  | time to commercial implementation of Phase II efforts                                  | Years                         |                               |                               |
|  | degree of addressing the needs or impediment of Region's point source emission needs   | H, M, L                       |                               |                               |
|  | Does it help attract new business or substantial new research projects into the Region | yes / no                      |                               |                               |
|  | degree to which project could help to define new science based regulations             | H, M, L                       |                               |                               |
|  |  |                               |                               |                               |
|  |  |                               |                               |                               |

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## MRCSP Will Deliver Solutions

- The Partnership brings together internationally recognized research leaders to help define real world carbon management solutions
- The Partnership will define the real world potential and what it will take to realize this potential for carbon sequestration in the Region
- These sequestration technologies are needed to protect core economic assets in the Region in a greenhouse gas constrained world
- The Partnership's research will help the Region take a first step towards the avoidance of a potential multi-hundred million if not multi-billion dollar future problem
- The Partnership's work will allow the Region to position it as leaders in developing robust carbon management solutions

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