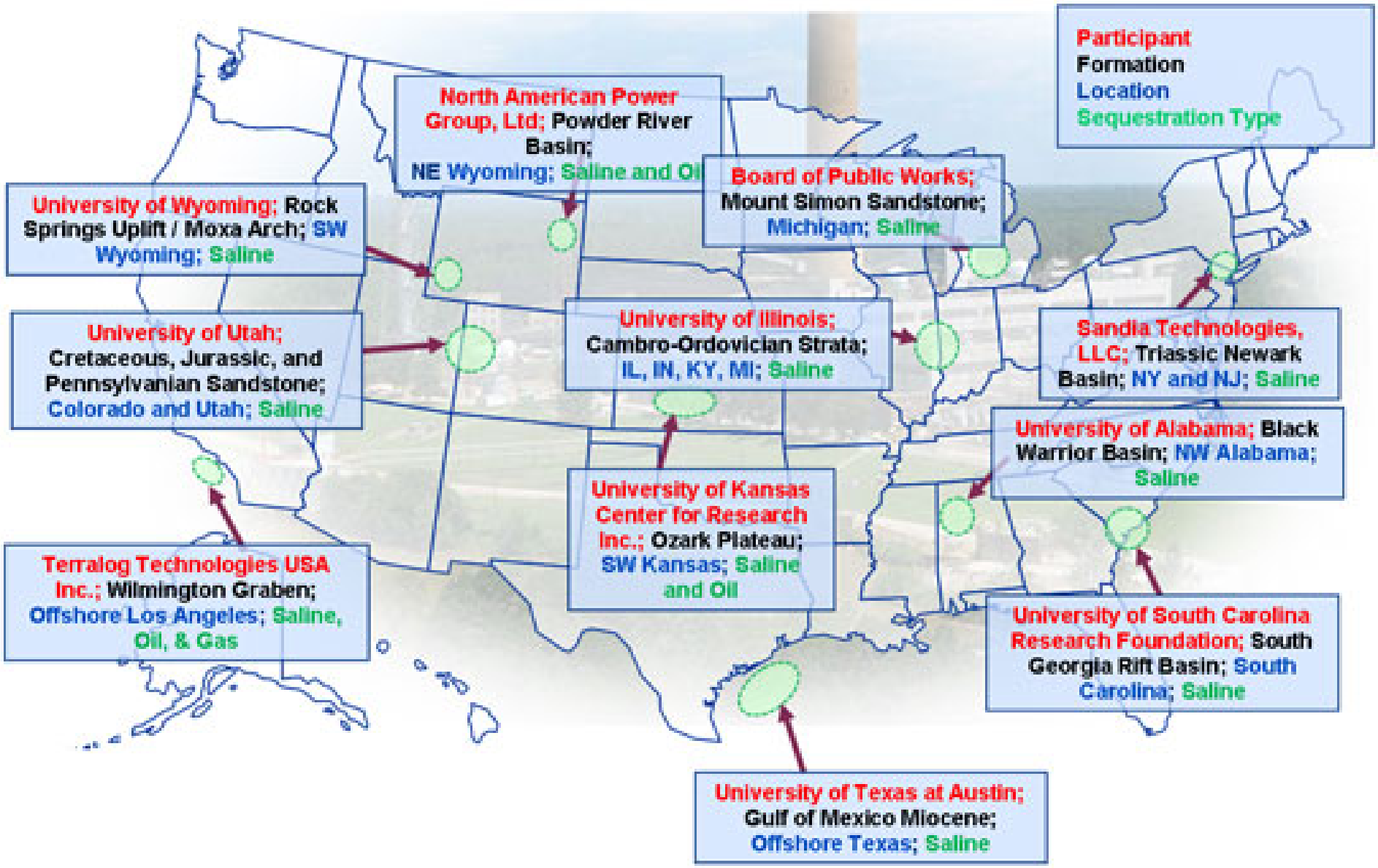
An Evaluation of the Carbon Sequestration Potential of the Cambro-Ordovician Strata of the Illinois and Michigan Basins

- **Illinois State Geological Survey**
- **Kentucky Geological Survey**
- **Indiana Geological Survey**
- **Western Michigan University**

Funding

- Focus is on the Knox Group
- $4,803,000 DOE share; $1,075,383 match
- KGS = $1.62 million over 3 years
- KGS cost share = $411,903
  - WKCSF: $140,000 escrow from current funds
  - Seismic Reservoir 2020: $70,000 of 3D-VSP cost
  - Conoco-Phillips: $152,000 in-kind seismic donation
  - KGS salaries: $49,903


Participant
Formation
Location
Sequestration Type
North American Power Group, Ltd; Powder River Basin; NE Wyoming; Saline and Oil
Board of Public Works; Mount Simon Sandstone; Michigan; Saline
University of Wyoming; Rock Springs Uplift / Moxa Arch; SW Wyoming; Saline
University of Utah; Cretaceous, Jurassic, and Pennsylvanian Sandstone; Colorado and Utah; Saline
University of Illinois; Cambro-Ordovician Strata; IL, IN, KY, MI; Saline
Sandia Technologies, LLC; Triassic Newark Basin; NY and NJ; Saline
University of Alabama; Black Warrior Basin; NW Alabama; Saline
University of Kansas Center for Research Inc.; Ozark Plateau; SW Kansas; Saline and Oil
Terralog Technologies USA Inc.; Wilmington Graben; Offshore Los Angeles; Saline, Oil, & Gas
University of South Carolina Research Foundation; South Georgia Rift Basin; South Carolina; Saline
University of Texas at Austin; Gulf of Mexico Miocene; Offshore Texas; Saline

KGS Work

- Additional testing/monitoring at Blan well
  - Injection of brine and/or CO2
  - 3D vertical seismic profile
  - Plugging and site reclamation
- Porosity prediction from seismic reflection data
  - Seismic inversion models, 3-4 datasets in W. Ky.
- Carbonate diagenesis and porosity evolution in the Blan Knox cores
  - Thin sections, stable isotopes, Sr isotopes, fluid incl.

KGS Work

- Geochemical modeling of CO_2, brine, and reservoir rock interactions
- Fault seal risk analysis