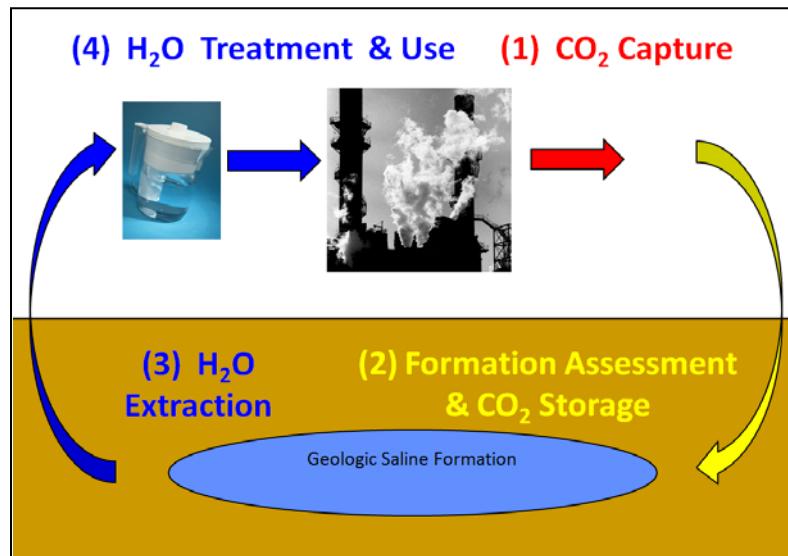


Geologic Sink Parameters & Analysis:

Analytical Challenges & Opportunities for Collaboration

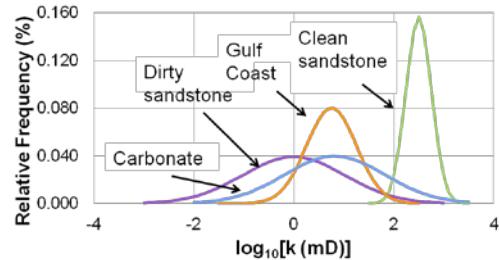


The Water, Energy and Carbon Sequestration Model (WECSSim) is an integrated assessment software tool developed to calculate the potential performance, location, and cost characteristics that are associated with a national-scale CO₂ capture and storage program. A challenge to the project is to quantify the geologic storage resource with explicit consideration of uncertainty and the impacts on the economics.



National-Scale Data Challenges & Opportunities

→ WECSSim employs probability density functions (PDFs) based on rock type to supplement existing NATCARB and other geologic sink data/properties.

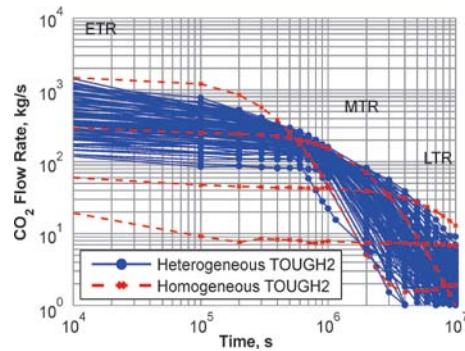


Opportunities for Collaboration

→ Inform each other's projects through sharing of data and analysis techniques to avoid repetition
 → Co-author conference papers or journal manuscripts on injectivity and storage capacity work

Heterogeneity and CO₂ Injectivity,

→ System models need to incorporate spatial heterogeneity and not just parameter variability



Heath et al., 2012

Select Past Collaborative Works:

Heath, J.E., Kobos, P.H., Roach, J.D., Dewers, T.A. and S.A. McKenna, 2012. Geologic Heterogeneity and Economic Uncertainty of Subsurface Carbon Dioxide Storage. SPE Economics & Management 4, 32–41.

Kobos, P.H., Cappelle, M.A., Krumhansl, J.L., Dewers, T.A., McNeamar, A., and D.J. Borns, 2011. Combining power plant water needs and carbon dioxide storage using saline formations: Implications for carbon dioxide and water management policies. Int. J. of Greenhouse Gas Control 5, 899–910.

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