

# CO<sub>2</sub> Storage Characterization of the Basal Aquifer System in the Northern Great Plains–Prairie Region of North America

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A binational effort between the United States and Canada is under way to characterize the lowermost aquifer system in the Williston and Alberta Basins of the northern Great Plains–prairie region of North America in the United States and Canada. This 3-year project will be conducted with the goal of determining the potential for geologic storage of CO<sub>2</sub> in rock formations of the 1.34 million-km<sup>2</sup> Basal Cambrian aquifer system. To date, no other studies have attempted to characterize the storage potential of large deep aquifer systems that span the U.S.–Canada international border. Significant effort is being devoted to understanding the geologic and hydrogeologic architecture of the Basal Cambrian aquifer system and its CO<sub>2</sub> storage capacity. The transboundary nature of the project will present challenges with respect to stratigraphic nomenclature and data integration. Once the challenges are overcome, the result will be a unified geologic model that encompasses the entire area of study that extends from central Alberta in Canada to South Dakota.



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## Annual CO<sub>2</sub> Output (tons) of Regional Point Sources

- 100,000–750,000
- 750,000–2,500,000
- 2,500,000–7,500,000
- 7,500,000–15,000,000
- 15,000,000–20,000,000

## Basal Aquifer Storage Capacity

