Updated Information on Analysis of Water Management Alternatives 
And Beneficial Uses of Coal Bed Methane Produced Water

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Biographical Sketch of the Presenting Author
Dan Arthur is a founding member and the Managing Partner of ALL Consulting (www.all-lc.com). Mr. Arthur earned a Bachelors degree in Petroleum Engineering from the University of Missouri-Rolla. He is a recognized authority on environmental issues pertaining to coal bed methane development and production. Currently, he serves as the lead researcher on several significant projects involving coal bed methane, including the Montana Statewide Environmental Impact Statement and Amendment of the Powder River and Billings Resource Management Plans; a U.S. Department of Energy (DOE) funded research project involving the development of best management practices utilizing Geographical Information Systems technologies for efficient environmental protection during Coal Bed Methane Development and Production; a DOE funded research project to develop a national primer on coal bed methane; a DOE funded research project to develop a Handbook on the preparation and review of environmental documents for CBM development; and a project managed by the Ground Water Protection Research Foundation (GWPRF) and funded by DOE and BLM involving analysis of produced water management alternatives and beneficial uses of coal bed methane produced water. Mr. Arthur has published many articles and reports and has made numerous presentations on environmental, energy, and technology issues.

Abstract
This presentation provides a description and research update for a project being performed for the Ground Water Protection Research Foundation. The project involves performing a feasibility study to analyze coal bed methane produced water management and beneficial use alternatives in various basins throughout the western United States. The project emphasis areas include the Powder River Basin and the San Juan Basin, but incorporate basins in other western states. The analysis being performed includes technical and regulatory feasibility and preliminary conceptual engineering options of highly feasible alternatives.

The project is being funded through grants provided to the GWPRF by the Department of Energy’s National Petroleum Technology Office (NPTO) – part of the National Energy Technology Laboratory (NETL) and the Bureau of Land Management. The U.S. Forest Service, more than a dozen CBM producers, several states, and other organizations are providing additional in-kind funding. Lead researchers for the project are ALL Consulting and Ft. Lewis College. Matt Janowiak of the BLM is managing the project for the GWPRF.