Socio-Enviro Impact of Increasing water use in the Duvernay Formation

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The proposed research examines the socio-environmental implications of amplified water use, access, and disposal issues associated with increased shale gas development in the Duvernay formation, located in the Kaybob region of Alberta, Canada. Substantial well bore length and multi-stage fracturing requirements in shale formations necessitate the use of a considerable amount of water; a typical horizontal shale gas well requires 3,500 m3 to 15,000 m3 of water to complete (Canadian Society for Unconventional Gas, 2011). The water is withdrawn from local water resources, both surface and underground, used for drilling and well fracturing purposes, and is then disposed of using disposal methods specified by the provincial regulator, including deep well injection and on-site disposal.

Conflicting water user interests in the region, as well as increasing public concern regarding groundwater contamination from disposed water, result in potential socio-environmental disagreement. Study and analysis of local and regional stakeholder

interests related to shale gas water use in the Kaybob region will allow industry to determine appropriate industry mitigative measures for continued development of shale gas plays while addressing potential stakeholder concerns proactively.

Policy Issue
Socioeconomic Study of the Public's Perception of Industry's Water Use.

Knowledge Gap
Study of comparison of the benefits (social and economic) to Alberta on the basis of water use/boe, water use / surface area footprint?

Report