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**A conceptual review of water extraction requirements  
associated with shale gas activities in New Brunswick**

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The development of shale gas resources throughout North America has been referred to as an economic game changer by economists and the media. Recently developed techniques to fracture low permeability host rocks to extract significant volumes of natural gas are reshaping the global energy supply chain. As shale gas exploration activities expand reserves, an exciting variety of economically viable opportunities are emerging for increased use of natural gas as a “clean” fuel for generation of energy.

However, there has been a collision between the needs of the industry to access large volumes of water to fracture the host rock and public perception. People have expressed concerns that potential environmental impacts associated with the industry's use of water are excessive. Further complicating the matter, shale gas related activities commonly occur in areas where, historically, there has not been a strong oil and gas industry presence. In the absence of an established relationship with the industry representatives, people in the local communities are turning to some information sources that may not be subjected to the appropriate level of scientific rigour. Developers are concerned that the fear and emotion being generated in the public sphere can sway regulators to place moratoriums, or outright bans on shale gas. Accordingly, the shale gas industry needs to proactively respond to these concerns by collecting and distributing the scientific data required to help enable the

public, politicians, and policy makers to formulate educated decisions regarding future of this valuable resource.

As a starting point, the industry can collect the data required to benchmark water usage associated with the shale gas activities against other activities that are familiar to the public. A preliminary attempt at compiling publically available data to benchmark shale gas developments in New Brunswick has been completed. The data has been reviewed to determine the relative potential impact that shale gas development could have on the regional water resources assuming a peak of 200 wells are being fraced each year.