

THE FUTURE IS LIQUID

As Albertans, we are fortunate to have access to an abundance of natural resources. As stewards of the environment, it is incumbent upon us to develop and manage these natural resources in an appropriate manner to benefit current and future generations. A fundamental component of economic prosperity within the province is sustainable water resource management. The question most often asked by stakeholders is “are Albertans adequately managing the province’s water resources to ensure sustainability over the long-term?” The Alberta government is specifically targeting this question in their *Water for Life Strategy* which was introduced in the fall of 2003. The *Water for Life Strategy* process is in its infancy, and it will take some time before a complete understanding of the state of Alberta’s surface water and groundwater resources is recognized.

In accordance with the *Water for Life Strategy*, policies are being developed and preventative measures are being implemented by the Alberta government to protect our water supplies. As an example, the placement of a moratorium on surface water diversions in the semi-arid and densely populated South Saskatchewan River Basin has affected the approach to development in this region. Other practices, directives, and guidelines have been updated, or introduced over the last several years to address growing concerns regarding the effects of economic development on Alberta’s water resources. Some examples include; the Water Conservation and Allocation Guideline for Oilfield Injection, watershed management plans, Water Act License transfers and EUB Directive 35, 44, 51 and 56. These concerns are also being intensified by global alerts related to climate change.

Record population growth and investment in Alberta over the last decade has increased the demand for fresh or non-saline sources of groundwater. In order to meet this demand, and ensure the long-term viability of groundwater resources in the province, funding and staffing levels at both the regulatory and private sectors will have to increase. This investment must occur to ensure sustainable water resource management in Alberta.

This presentation will provide an overview of some of the issues relating to groundwater protection and management that are currently being implemented across Alberta. Thereafter, relevant and practical case studies will be presented to highlight the state of flux that exists between the historic and present regulatory regime as it affects various market sectors, including oil sands, non-saline water use for oilfield injection, coalbed methane development and residential subdivision development.

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Mr. Wills is a founder of, and a Principal Hydrogeologist with Waterline Resources Inc., a Calgary-based firm providing consulting hydrogeology services to industry, government and the private sectors. Mr. Wills has a graduate degree in hydrogeology from the University of Waterloo, and over 20 years of related experience focusing mainly on groundwater exploration, development and management. He has a broad national and international experience-base and is involved in a wide variety of water resource projects ranging from small residential subdivisions to billion dollar oil sands developments. In

addition to providing technical expertise, Mr. Wills is increasingly being retained to provide expert witness testimony, and to provide senior expertise in interpreting new or updated water guidelines and directives pursuant to conflict resolution on water resource projects. Mr. Wills has chaired and presented at numerous technical and lay conferences and presentations over the last decade. He is a former regulator, and a past-President of the Canadian Chapter of the International Association of Hydrogeologists.