WATER SOURCE TOOLBOX

Baseline Water Resource Inc. (BWRI), has created a Water Source Toolbox to promote best practices in the sourcing of fresh water alternatives where appropriate, and in the recycling of water as much as practical for current and future oil and gas development. The Water Source Toolbox provides a framework for the assessment and selection of the most viable water source for oil and gas operations at a specific site, while incorporating a process to capture the important social and environmental implications of the water source decision. The development of the Water Source Toolbox addresses the need to proactively mitigate impacts on water resources, while creating partnerships within communities and continuing to build confidence, credibility and trust towards the Oil and Gas industry.

The Water Source Toolbox incorporates three valuable water sourcing tools that are used together for each development: 1) Water Source Decision Tool, 2) Water Source Cost Calculator, and 3) GEMI Local Water Tool™ (LWT) for Oil and Gas.

1) The Water Source Decision Tool (WSDT) is a visual flow-chart that aids in ensuring all potential water sources are considered for use in oil and gas operations. Water sources considered include surface water and groundwater and may be fresh, saline or from a tertiary (re-used/recycled) source.

2) The Water Source Cost Calculator (WSCC) tool was developed in conjunction with the WSDT. The WSCC addresses the economics component of the WSDT and is used to evaluate and compare costs associated with different water sources. Cost categories for each water source type are detailed in the WSCC and include Infrastructure, Water Purchase, Water Treatment and Transport. Cost figures are entered in the designated cells on separate tabs in the workbook, while the total cost per cubic meter (m³) is automatically calculated on the WSCC tab.

3) The GEMI Local Water Tool™ (LWT) for Oil and Gas was developed by the Global Environmental Management Initiative (GEMI) Water Sustainability Work Group to evaluate the external impacts, business risks, opportunities and management plans related to water use at a specific site or operation. The utilization of the GEMI LWT™ for Oil and Gas is an essential risk assessment component of the tool, as it integrates economic, social and environmental considerations.

The final result from applying the Water Source Toolbox is a dynamic, integrated and holistic approach to the management of water resources. The social and environmental considerations are important components of the Water Source Toolbox and are highly influential in the water source decision making process. Social and environmental aspects are especially critical as these criteria may be overlooked when the focus of water sourcing could be on short-term economic objectives. The Water Source Toolbox promotes positive economic, social and environmentally responsible development.