

Water Quality and Quantity in the Oil Sands: The Goals, Regulatory Response and the Conundrum of Remaining Flexible

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Recent press and public discourse on oil sands mining have been dominated by negative views on water use, water quality, reclamation and ultimately on sustainability. These interdependent issues are indeed challenges in oil sands management but their solutions are comprehensible, approachable and are being effectively tackled. This talk will provide an overview of the key environmental challenges with respect to water and how these are being addressed. In so doing the talk is meant to dispel some of the fictions in an unapologetic attempt to focus attention on the most pressing environmental issues, especially the eventual return of water and its solutes to the Athabasca River system. Key to this debate is assurance that managed problems remain low impact so I will review monitoring in the oil sands region, the current status of water quality and quantity in the Athabasca River and link this to emerging regulatory direction under the Lower Athabasca Regional Plan. Emerging techniques for performance evaluation and reporting, particularly the analysis of contaminants related to oil sands will also be briefly reviewed. The talk will conclude with an assessment of potential regulatory challenges, where flexibility must be considered to reconcile potential conflicting goals (e.g. creation of storage to meet Instream Flow Needs vs. reduction of footprint and rapid tailings reclamation).

Dr. Preston McEachern, Ph.D.

Dr. McEachern received his Ph.D. from the University of Alberta dealing with northern hydrology and water quality. He has been with Alberta Environment for 7 years, 6 of which were with the Northern Region and now the Oil Sands Environmental Management Division tackling oil sands related issues. He has played a key role in five oil sands mine hearings and built an effective group for addressing the wide-ranging air, water and reclamation issues that challenge oil sands development in Alberta. He has participated in multi-stakeholder groups and was chairman for groups with a surface water quality focus and the principal author of the *In Stream Flow Needs* framework for the mine area. Dr. McEachern continues to be active in research with adjunct professor appointments at the University of Alberta in Civil and Environmental Engineering and in Renewable Resources. Dr. McEachern also lived and worked in southwest Asia, Africa and the USA. He is an avid outdoor enthusiast with a passion for mountain climbing, running and skiing.