



Protecting the Athabasca River offers industry a chance to earn social licence

BY SIMON DYER

If you're looking for a case study about the environmental management of oilsands development, take a look at how water from the Athabasca River is used in oilsands extraction.

This case study tells the story of how our governments are failing to balance the needs of the river with the demands of a thirsty industry, though no single company or project is to blame.

The narrative is complex, featuring a series of missed policy deadlines, competing statistics and questionable facts. But it could also be a good news story, with an economically viable solution waiting in the wings.

Let's start with the water.

Oilsands extraction uses a lot of water. Producing a single barrel of bitumen from oilsands mining takes

2.4 barrels of fresh water, even after accounting for the amount of water that is recycled. In total, oilsands mines used the equivalent of over 800 million bathtubs of fresh water last year, most of it withdrawn from the Athabasca River. And the industry's water use will be far higher in the future as oilsands mining projects that have already been approved are constructed.

But the Athabasca River is a big river, so does the industry's water use necessarily mean the environment is at risk?

Well, that depends.

On rare occasions in the winter, the amount of water flowing in the Athabasca River can drop dramatically. When water flows drop, habitat availability for fish is reduced and the river contains less oxygen, and

this can harm the eggs and fry of fall-spawning species such as lake whitefish.

Although the amount of water used to produce each barrel of bitumen from oilsands mining has decreased over the years, rates of production and cumulative water withdrawals from the Athabasca River have steadily increased. This means water use must be carefully managed through introducing new rules to protect the river when flows are critically low.

The myth of average flows

It's common to hear government or industry representatives say that the oilsands industry withdraws only about one per cent of the average annual flows from the river.

Unfortunately, statistics related to average river flows are not very useful in guiding decisions on water management. The average temperature in Fort McMurray may be above freezing, but that is definitely not useful information for making clothing choices on a cold January night.

And while companies are required to reduce water use during low flow periods, there is currently no period when protection of the river takes

precedence over industrial withdrawals and water withdrawals are halted.

An opportunity for leadership

An ecosystem base flow (EBF) establishes a flow target in a river below which no water withdrawals are allowed—effectively protecting the river when it is most vulnerable. EBFs are increasingly considered both a science and policy best practice.

Rather than requiring companies to halt production during low-flow periods, a balanced approach would be for companies to withdraw and store extra water during periods of higher flow, which they can use instead of making withdrawals directly from the river during low-flow periods.

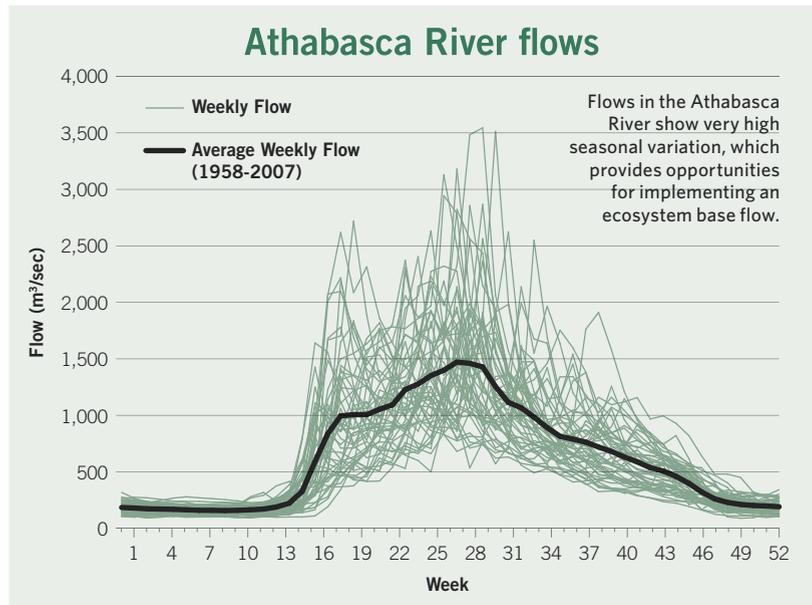
Anyone who spent time in Fort McMurray this rainy June will appreciate that flow levels in the summer can be phenomenal. Rather than limiting production, therefore, the river's seasonal variability provides an opportunity for the government and the industry to plan ahead and manage water use responsibly.

Companies like Shell Canada Limited, Canadian Natural Resources Limited, Imperial Oil Limited and Total E&P Canada Ltd. have already incorporated many months of water storage into their plans, and have also incorporated the costs of the engineering solutions for water storage into project budgets. According to industry data on water storage options, implementing a water management framework that includes an EBF for all operators would cost as little as 40 cents per barrel of bitumen produced.

By implementing a low-flow cut-off, Alberta and the oilsands industry would be taking a significant step closer to responsible oilsands development, and could answer their critics by demonstrating where real progress is being made on balancing environmental protection and energy production.

Missed deadlines and delays

While the government has initiated various efforts to establish water management planning for the Athabasca River, those efforts have failed in several respects. A 2007 joint water management framework announced by Fisheries and Oceans Canada and Alberta Environment and Sustainable Resource Development took a first



SOURCE: WWF CANADA, ADAPTED FROM OKYERE, 2009

step by establishing a plan to account for water demand and establish rules about reducing water withdrawals, but it did not set an EBF limit at which point withdrawals would be halted to protect the river.

The government also promised to strengthen the management framework for the Athabasca River by January 2011, but so far no changes have been implemented. A committee made up of oilsands companies, environmental organizations, First Nations and Metis agreed in principle about the need for an EBF, but could not come to consensus.

A major stumbling block was Suncor Energy Inc. and Syncrude Canada Ltd.'s reluctance to agree to halting water withdrawals during rare periods of extremely low flow. To be both fair and effective, an EBF limit on water withdrawals must apply to all companies.

In failing to make progress on setting a low-flow cut-off, both the government and the industry leave themselves open to criticism that they are not committed to developing the oilsands resource responsibly.

The case of the Imperial Kearl mine

New oilsands mine approvals are being granted on the incorrect assumption that the Athabasca River is being protected. Earlier this year, the newest mining operation, Kearl, started operations. The independent regulator's decision report—which weighed the

merits of the project and was released in 2007—underscored the importance of impacts on the Athabasca River when it concluded that the Kearl project would not likely result in significant adverse environmental effects, as long as an enforced EBF was implemented.

In other words, the decision that the Kearl project was in the public interest was contingent on rules being introduced that would halt river withdrawals during low-flow periods. It states: "The Joint Panel finds that [Kearl] is in the public interest for the reasons set out in this report. The Joint Panel concludes that the project is not likely to result in significant adverse environmental effects, provided that the recommendations and mitigation measures proposed by the Joint Panel are implemented."

The review panel's specific recommendations included that "Phase II of the Water Management Framework be implemented by January 1, 2011, in keeping with the stated commitments of the Governments of Alberta and Canada," and that the Fisheries and Oceans Canada and Alberta Environment "incorporate an ecological base flow into the final Water Management Framework for the Athabasca River."

So, in the circular reasoning that has become common in oilsands decision making, approval of the project was granted based on mitigation that hasn't actually been implemented yet.

More than six years after regulators made these conclusions, the Athabasca River remains unprotected.

Delays undermine the industry's social licence

While it's promising to see some companies take voluntary actions to mitigate the impacts of their projects and continue to reduce per-barrel water use, such steps do not replace the need for the government to protect the environment by establishing an EBF that applies to all companies.

While many in the oilsands industry grumble about the length of the approval process for new projects, consider that the downstream communities and public interest intervenors consider the pace to be lightning fast compared to progress on environmental policies. It is common to have to wait years to see promises to protect the environment turn into policies—and by that point, significant damage may have already been done.

Whether it be water withdrawals from the Athabasca River, enforcement of tailings cleanup rules, or the protection of caribou or wetlands—the ongoing failure of governments to meaningfully address impacts and deliver on past commitments undermines the entire industry's recent efforts to secure the social licence to operate.

While the governments of Alberta and Canada talk a lot about responsible oilsands development, the delivery of solutions remains limited. Six years have passed since the Imperial panel recommended that a zero-withdrawal low-flow limit must be implemented to protect the Athabasca River, and two years have passed since the government's own deadline for implementing a new water management framework that protects the river during low-flow periods.

A balanced approach would allow the industry full access to river water but recognize cumulative effects and the need to protect the river during low flows. Although this approach is feasible, it has not been implemented.

As the world continues to look for evidence of environmental leadership in Canadian oilsands development, a major solution to one of the key issues of concern remains just out of reach. **OSR**

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