

# Humans and nature pressuring Slave River

By JACK DANYLCHUK

Contaminants from oilsands mining, agriculture and natural sources are being found in the Slave River – some for the first time – according to a new federal study presented late last November to community groups in Fort Smith and Fort Resolution.

The media was excluded from the meetings with selected community members and the report was only made available after requests were sent to Aboriginal Affairs and Northern Development Canada, which has monitored the Slave River since 1990.

According to AANDC spokesperson Tricia Melander-Forde, the community groups were shown a 24-page summary and the full report – a hefty 319 pages of charts and analysis beside the 59-page baseline study report of 1998.

Melander-Forde said AANDC wanted to present the report to the communities before making it available to the broader public, so that they could “engage in open dialogue with scientists and department officials.”

The final page of the report summary includes the telephone numbers of its

authors and an invitation to call them for more information. That does not extend to media, Melander-Forde said: “Media requests come through our communications office.”

Unlike the ‘98 baseline study reporting polycyclic aromatic hydrocarbons (PAHs) probably came from eroding bitumen deposits, the latest study names oilsands mining in Alberta as a likely source for naphthenic acids and alkylated PAHs.

Previously, other studies found alkylated PAHs in mine tailings ponds, the Athabasca River and Lake Athabasca, but they were only detected downstream in the Slave River when AANDC scientists introduced a new testing method in 2007.

“These findings suggest that the PAH compounds have both atmospheric and riverine sources and may be a result of both natural discharges and increased industrial activity in the basin,” the report stated.

The study drew on water samples dating back to 1972, but is just one piece of the picture, and should be combined with results from other monitoring efforts to gain a

better understanding of the health of the Slave River, said authors Juanetta Sanderson and Andrea Czarnecki.

Like the baseline study, the latest report said hydrocarbon compounds are not present in concentrations high enough to cause health problems in humans, and are actually lower than a decade ago, but it raised other concerns.

The Slave River is burdened with the equivalent of 4,000 truckloads a day of sediment that is freighted with heavy metals such as arsenic and antimony – both linked to oilsands mining – and rising concentrations of phosphorus.

Levels of cadmium, iron, lead, mercury, copper and chromium were higher than recommended guidelines for the protection of aquatic life 25 to 100 per cent of the time, said the report, which noted marked increases in concentrations of contaminants during summer and fall when river levels are lower.

Record low water levels in 2010 were attributed to low snowpack throughout the watershed. Seasonal low water trends may be due to flow regulation by dams on the Peace, which accounts for 60

per cent of flow in the Slave – or it could be climate change, the authors said, recommending further study.

Phosphorous levels have increased steadily since 1974, to the point that scientists said the Slave River is “eutrophic” – slowly choking on plant growth fed by added nutrients that could be caused by runoff from agriculture and industry.

Agriculture has become more intensive over the past 30 years in the Peace and Athabasca basins; the cattle herd has doubled to a million animals, fertilizer applications increased by 500 per cent and spending on agricultural chemicals by 1,400 per cent, the report said.

“Erosion and runoff into surface waters, associated with land clearing for agricultural and removal of overburden for resource extraction, may also be contributing to these trends,” the report said.

The report recalled a 2011 water workshop in Fort Smith, where participants said there was more algae on rocks and in fishing nets in the Slave River, and denser growth of willows and other river plants along riverbanks.

“These important observations, shared by traditional land users, may be the result

of increasing phosphorus in the Slave River,” the report said.



## HEY ALBERTA, DO YOU KNOW A GREAT VOLUNTEER?

The Alberta Weekly Newspapers Association (AWNA) and Direct Energy are now accepting nominations for the **Alberta Volunteer Citizen of the Year Award** to recognize someone who goes above and beyond to help others in the community.

Nominations are open to all residents served by AWNA newspapers, with the award going to the person who most exemplifies the volunteer spirit. As a reward for giving so much, the winner will get a **\$1,000 cash prize** from Direct Energy and a **\$5,000 donation** to their community organization of choice. Pretty nice, right?

Submitting nominations is easy.

Just visit: [directenergy.com/vcoy](http://directenergy.com/vcoy) or [awna.com](http://awna.com) today.

Remember – nominations close **Sunday, March 31, 2013**.



© 2013 Direct Energy. All Rights Reserved. Direct Energy and the Lightning Bolt design are registered trademarks or trademarks of Direct Energy Marketing Limited in the United States and/or Canada used under license, as applicable.