

WATER & OCEANS POLICY BRIEFING: FRESHWATER RESOURCES

Environment commissioner anticipates federal action to improve freshwater monitoring

Environmental policy analysts say undefined responsibilities and out of date risk assessments put Canada's freshwater at risk.

By CHRIS PLECASH

Environment Commissioner Scott Vaughan says he expects Environment Canada to follow through on implementing the recommendations in his 2010 annual report, and environmental policy analysts are stressing the need for the department to play a leading role in addressing serious threats to the country's freshwater resources.

"The federal government has the authority it needs to monitor water virtually wherever it wishes to monitor water," Mr. Vaughan told *The Hill Times* in an interview last week. "What it typically will do is work in collaboration with other jurisdictions to understand what those other jurisdictions are doing, and fill any gaps. That's really not what's been happening."

In his testimony to the House Environment and Sustainable Development Committee in December of last year, Mr. Vaughan questioned the federal government's capacity to monitor the quality and quantity of Canada's fresh water. "Environment Canada has been running the federal government's water monitoring programs for 40 years, yet it has not taken such basic steps as defining its responsibilities and responding to the threats to Canada's water resources that it itself has identified," he told the MPs.

Appointed by the Auditor General to assess the federal government's performance in environmental regulation, the Commissioner's 2010 Report on the Environment and Sustainable Development details the jurisdictional vagaries of Environment Canada's Fresh Water Quality Monitoring program.

Mr. Vaughan reported that the current system for collecting and assessing data on water quality and quantity within federal lands was unclear. He found that only 12 of 3,000 First Nations reserves were being monitored under the program, compared to 31 of 42 national parks and two of 54 national wildlife areas. In addition, the commissioner noted an inadequate response to water quality oversight around areas with growing populations and industries over the past decade.

Mr. Vaughan said that at the time of his office's audit, Environment Canada did not know who was monitoring water quality on the remaining 2,988 First Nations reserves.

"They did respond to our recommendations. They got clarity on what they're responsible for monitoring on First Nations reserves, and where monitoring would be justified," added Andrew Ferguson, who was the principal in developing the commissioner's report on freshwater management. "Generally, if they're taking a risk-based approach they need to assess where the highest risk exists, and target their resources to monitoring those risks."

Although the federal government is responding to poor water quality monitoring on First Nations reserves, Mr. Ferguson said it remains to be seen whether or not there is increased monitoring of water quality in areas undergoing rapid population and industry growth.

The commissioner's report recommended that Environment Canada take the lead in defining the responsibilities of the provinces and federal departments in monitoring water. Deputy Environment Minister Paul Boothe signed in agreement with the report's recommendations, and made an official commitment on behalf of Environment Canada to review the lands under federal jurisdiction and the roles and responsibilities of agencies in monitoring water quality on those lands.

Jurisdiction over Canada's freshwater resources is split between the federal government, charged with overseeing federal and boundary waters, fisheries, and navigation, and the provinces' responsibilities for managing ground and surface waters and legislating on supply, pollution, and hydro-electric damming. The fed and provinces share responsibility for interprovincial, agricultural, and health issues relating to water. The division of power is outlined over more than a dozen pieces of legislation, including the Canada Water Act, the Environmental Protection Act, and the Fisheries Act. While Environment Canada is the lead coordinator on water issues at the national level, several other federal agencies have a hand in monitoring fresh water, including Health Canada, Natural Resources Canada, Foreign Affairs and International Trade, Fisheries and Oceans, and Indian and Northern Affairs.

The environment commissioner also reported that Environment Canada lacked a clear strategy for responding to the impact of climate change on the natural distribution of freshwater resources throughout the country, and the resulting disruption

of biodiversity in freshwater bodies. Environment Canada agreed to take the leading role at the federal level in coordinating a response to the effects of climate change.

In 2006, then environment commissioner Johanne G  linas recommended that the government implement a national strategy to adapt to climate change. Soon after that report was released, Ms. G  linas was dismissed by Sheila Fraser, who stepped down as auditor general last week.

Four years later, the most recent assessment from the Environment Commissioner's Office stated, "[W]e noted that the government has not established clear priorities for addressing adaptation to a changing climate, and therefore, the need remains for a federal strategy and action plan. There is still no federal strategy and action plan for adaptation." The commissioner's report concluded that there was a need for Environment Canada to collaborate with federal agencies to renew efforts to establish and implement a federal strategy to respond to the effects of climate change.

While Environment Canada agreed with the recommendations of commissioner's report, the shortcomings of the government's national approach to managing fresh water and responding to the influence of climate change have long been on the record. Canada's Framework on Water, developed in 2004 by assistant deputy ministers from 19 federal departments, identified "an emerging water crisis" the included increased water-borne illness, degraded biodiversity and an inadequate water infrastructure.

"Canada's ability to respond successfully to the challenges brought about by this crisis depends, in large part, on the ability of water managers and policy makers to resolve difficulties related to the current distribution of responsibilities and jurisdiction pertaining to water," according to the out of date report. "Responsibilities for water are often either shared between different levels of government or not well defined."

It's unlikely that the details of Mr. Vaughan's report came as a surprise to Environment Canada. Prior to the report's December release, the department released its sustainable development strategy in October 2010. The then-environment minister Jim Prentice, who has since been replaced by current Environment Minister Peter Kent (Thornhill,



Photograph by Jake Wright, *The Hill Times*

Action needed: Canada's Environment Commissioner Scott Vaughan. Canada needs a strategic response to the effects of climate change on freshwater quality and quantities.

Ont.), prefaced the strategy by stating, "To maintain our standard of living in the 21st century, Canada must address the important challenge of environmental sustainability. The issues are well known: we need to address climate change and air quality, maintain water quality and availability, and protect our natural heritage." The report goes on to state that water management is the shared responsibility of federal, provincial and municipal governments.

According to the strategy statement, Canada is home to seven per cent of worldwide fresh water. However, Canada is second only to the U.S. in per capita water consumption. The strategy, *Planning for a Sustainable Future*, emphasizes economically and ecologically responsible water consumption and identifies population growth and climate change as risks to the "long-term sustainability of our water resources."

"These are not new problems, they've known of long standing gaps in the state of Canada's Fresh Water Monitoring System for years, if not decades, and they've done their own internal evaluations on how much they would need in order to close those gaps," Mr. Vaughan told *The Hill Times* last week. "I think one of the positive points is that the government has made a commitment to an integrated approach through their sustainable development strategy. We'll wait to see their next steps in that direction."

The Conservatives' election platform promised to continue investing in drinking water and wastewater infrastructure. The Finance Department's initial budget, tabled in March, devoted \$5-million over two years to improving nearshore water and ecosystem health in the Great Lakes, and \$200-million over two years for managing chemicals.

In their op-ed for *The Hill Times* water and oceans policy briefing this week, Ad  le Hurley and Ralph Pentland of the Munk School's Program on Water Issues reiterate the environment commissioner's emphasis on the need for a strategic response to the effects of climate change on freshwater quality and quantities. They also echo Mr. Vaughan's concerns over an inadequate response in water monitoring around areas of expanding population and industry. As they note, the increasing concentration of pharmaceutical and cosmetic substances dispersed through the water-cycle has the potential to alter life at all levels.

In addition to these long-established threats, Ms. Hurley and Mr.

Pentland identify the uncertain effects of carbon capture and storage and shale gas extraction on the vast groundwater aquifers throughout North America. While distribution and availability of groundwater in Canada is indeterminate, Environment Canada estimates that 30 per cent of Canadians rely on aquifers as a source of domestic water.

According to Oliver Brandes, a senior researcher and associate director with the POLIS Project on Ecological Governance, the water issues identified by Ms. Hurley and Mr. Pentland are part of the wider problem of governance that the environment commissioner highlighted in his last report.

Mr. Brandes said that the federal government has yet to successfully balance its own strategies for managing freshwater with the subsidiary responsibilities of federal departments and the provinces. "Our decision making structures are really slow to react because they're entrenched and out of date," he observed. "They really don't take either the ecological component or the ecological scale into account."

Mr. Brandes identified a number of changes that would need to take place for the federal government to have an effective role in the management of fresh water. He stressed the need for the government to have the capacity to translate science into public policy, and repeated the environment commissioner's call for a clearly defined division of responsibilities throughout all levels of government.

"Constitutionally, we've identified a handful of areas where there's a clear role for the federal government, whether it's fisheries or navigation," Mr. Brandes stated. "They very rarely pursue their full jurisdiction, which actually has some teeth to get work done."

Despite the apparent incapacity of the federal government to effectively monitor freshwater resources, the environment commissioner expressed optimism that the government was acting on the recommendations of his office's last report.

"We're looking forward to the government's articulation of its next steps, maybe in the next couple of weeks," he said.

The next report from the environment commissioner will be released on October 14th, and will assess the cumulative environmental impact of Alberta's oil sands.

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