

Management of Hazards and Emergencies in the Environment

I'd like to talk to you about our audit of the **Management of Hazards and Emergencies in the Environment**.

From 2017 to 2021, there were 85 significant events in Ontario from hazards impacting municipalities and other communities; 53 events related to floods and 22 related to forest fires.

There were 4,500 forest fires in Ontario from 2017 to 2021 affecting 1.44 million hectares of land. More than 90% were in Northwestern Ontario. In 2021/22, the Ministry of Natural Resources and Forestry incurred \$276 million dollars for emergency response, of which 90% was for emergency fire-fighting.

As of April 2022, there were 5,746 abandoned mine sites in Ontario containing hazards, with 57% of them located on privately held land, 40% on Crown land and 3% straddling both Crown and private land.

The Province owns about 400 of the 3,500 dams in Ontario and there are at least 27,000 oil and gas wells across Ontario.

Our audit assessed whether the Ministry of Natural Resources and Forestry and the Ministry of Mines have effective emergency management programs in place to protect the public, the environment and infrastructure against these hazards.

The audit found that greater clarification of roles and responsibilities for emergency response is needed between:

- the Natural Resources Ministry,
- the Provincial Emergency Management Office,
- local governments and
- communities.

The Natural Resources Ministry lacks basic information and resources needed for risk assessments and after-action reviews, and for keeping technical information updated.

The Mines Ministry has not rehabilitated the majority of 'known' abandoned mines in the province, and does not know the rehabilitation status of a further quarter of them.

Ontario's level of flood preparedness is lagging, partly because of gaps in flood mapping initiatives, which identify at-risk areas, meaning these areas are ill-equipped to respond. The province hasn't provided funding for floodplain mapping since 1993.

We noted that the Kashechewan First Nation, a community of 2,000 residents located on a floodplain in northeastern Ontario, declared flood emergencies in four consecutive years from 2017 to 2020, and underwent evacuations in three years from 2017 to 2019.

Time taken to respond to forest fires was often longer than the Ministry's 4-hour standard.

- In 2021, 5 of 25 districts took more than 4 hours to dispatch a fire crew.
- Dryden and Cochrane took 13.6 hours and 11.0 hours on average, respectively.

Our audit noted that only 15 of 144 municipalities in northern Ontario had a Wildfire Protection Plan in place and 63% of districts with a rating of 'extreme' or 'very high' risk of fire had no communities with Wildfire Protection Plans.

We further noted that after-action reports, to review and improve emergency response efforts, were not routinely done, as required by the Ministry Emergency Response Plan.

The Natural Resources Ministry had completed after-action reports for only 3 of the 7 floods it responded to from 2017-2021. Similarly, the Ministry completed after-action reports for only 2 of the 22 significant forest fires it responded to.

Findings on other hazards include that:

- Only 19% of the 27,000 oil and gas wells in the province had been inspected since 2005, and 38% of those inspections occurred over a decade ago.
- As well, only 31% of 316 Ministry-owned dams that will reach the end of their serviceable life within 20 years have been assessed; replacement cost is estimated at \$321 million dollars.

Further, the Natural Resources Ministry is not inspecting the roughly 1,050 privately-owned dams in Ontario and few abandoned mines are inspected; 72% were last inspected more than a decade ago and another 25% have no known inspection date.

Our audit noted that little progress has been made by the Ministry of Mines to rehabilitate 3,942 abandoned mine sites with hazards in Ontario. In fact, only 111 or 3% had been partially rehabilitated, 2,335 or 59% had not been rehabilitated at all, and the status of the remaining 1,496 or 38% was “unknown”.

Our report contains 30 recommendations, including:

That the Ministry of Natural Resources and Forestry

- Increase floodplain mapping efforts;
- Where fire response times based on alert levels are not met, identify and document the reasons for delays and take corrective action;
- Broaden the scope and adoption of FireSmart initiatives;
- Ensure after-action reviews of responses to floods and forest fires are routinely done and documented in a standardized and timely manner, and ensure corrective action is effective and timely;
- Update the district hazard identification and risk assessment every three years; and
- Update the Ministry’s technical guides and bulletins to ensure they reflect current scientific and technological advancements and best practices, and ensure they are made publicly available.

Also, we recommended that the Ministry of Mines:

- Determine the status of all abandoned mines and rehabilitate those with hazards.

To read this report, you can visit our website at www.auditor.on.ca