

AUDIT AT A GLANCE

OVERSIGHT OF DAM SAFETY IN BRITISH COLUMBIA

Why we did this audit

- There are about 1,900 regulated dams that provide electricity, irrigation and flood control for the people of B.C.
- Dams are dangerous and must be properly maintained to minimize their risk of failing.
- Failures can be disastrous for people, the environment and property.
- Owners are responsible for the safety of their dams; the ministry oversees owner compliance.

Objective

To determine if the Ministry of Forests, Lands, Natural Resource Operations and Rural Development has effectively overseen the safety of dams in B.C.

Audit period: January 2019 to December 2020

Conclusion

The ministry has not effectively overseen the safety of dams in B.C. While it promoted dam owner compliance with regulatory requirements, it did not adequately verify or enforce compliance.

The ministry accepted our 9 recommendations to improve its oversight of dam safety, related to:

- informing all dam owners of their regulatory requirements
- improving processes to verify dam owner compliance
- improving monitoring of compliance and enforcement activities
- strengthening performance measures and targets

What we found

Promoting compliance

Ministry largely promoted dam owner compliance with regulatory safety requirements

- Information available to dam owners through website and workshops
- Annual mailouts to owners of higher-consequence dams
- Periodic audits of higher-consequence dams

Not all owners of lower-consequence dams understand responsibilities

- Ministry doesn't do outreach to low-consequence dam owners
- Training is voluntary so dam owners don't always understand their safety responsibilities

Recommendation 1

Verifying compliance

Ministry information on dams had gaps and inaccuracies

- At least 196 dams missing from records--ministry should have been regulating some of these dams
- No province-wide process to identify dams built without authorization
- 63% of dam records sampled lacked key information, such as emergency contact and dam height
- Information in records not always consistent with policies

Recommendation 2, Recommendation 3



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What we found (continued)

Verifying compliance (continued)

Ministry did not fully verify dam owner compliance with all key regulatory requirements

- Some key safety documents not reviewed
- In audit sample, 33% of operating manuals and 27% of dam emergency plans submitted to ministry not reviewed 3 or more years after submission
- 4 of 10 dam safety officers had backlog of reports to review on whether high-consequence dams are safe. Average time to accept safety reports was 20 months; some took 8 years
- 45% of dams in sample not audited on schedule
- Downstream risk from low-consequence dams not periodically re-assessed
- Ministry expectations unclear on how and when staff should review safety documents from dam owners
- Regional staff priorities compete with dam safety oversight

Recommendation 4, Recommendation 5, Recommendation 6

Enforcing compliance

Ministry did not consistently enforce regulatory requirements

- Many dams didn't meet regulatory requirements, and dam owners didn't make improvements to become compliant
- 87 high-risk dams with significant deficiencies had not fixed their safety problems for 7.5 years, on average
- Inadequate ministry tracking and follow-up on deficiencies
- Ineffective mechanisms to deter non-compliance

Recommendation 7, Recommendation 8

Monitoring program performance

Ministry did not adequately assess if program improved dam safety

- Inadequate measures and targets for making dams safer overall
- Lack of targets for 12 of 15 performance indicators

Recommendation 9

After reading the report, you may want to ask the following questions of government:

1. *What can the ministry do to further inform dam owners and the public about the importance of dam safety in their communities?*
 2. *Why haven't compliance and enforcement activities been more effective?*
 3. *What risks exist given that compliance and enforcement activities were not effective?*
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