Sterling Fire Protection

Winter readiness checklist

The October checks for sprinklers, fire alarm, backflow assemblies, pump rooms, tanks and private hydrants before an Edmonton winter.

CODE EDITION
NBC(AE) 2023, NFC(AE) 2023, NFPA 25-2017

REVIEWED
November 11, 2026

Pump room, tank and hydrants

- [ ] Test the pump room heater and its thermostat.
- [ ] On a diesel pump, test the engine heaters and the batteries.
- [ ] Test the tank heater and the low-temperature alarm before the heating season.
- [ ] Walk every private hydrant, check the drains and flag any that need pumping.
- [ ] Mark where the plow puts snow, and keep it off the hydrants.

NFPA 25 allows no more than 60 minutes for a dry-barrel hydrant to drain after use. Water left in a barrel through a -30°C night can crack it.

Backflow assembly

- [ ] Find where the assembly sits: often a mechanical room, a vault or a small heated enclosure at the service entrance.
- [ ] Check the heater and its thermostat in October. A heated room is only as good as its heater.
- [ ] Confirm there is a low-temperature alarm.

NBC(AE) 2023, 3.2.5.17, requires fire protection equipment in unheated areas to be protected from freezing.

Sprinklers and unheated corners

- [ ] Look at the spots wet pipe freezes first: a loading dock with a door left open, a failed unit heater, a vestibule, a parkade ramp.
- [ ] On dry and preaction systems, check valve room temperature daily in cold weather, or weekly where a low-temperature alarm is supervised.
- [ ] Do the full-flow trip of a dry system in September, not in a January cold snap, so water can drain from every low point.
- [ ] Where a space cannot be heated, ask whether a dry-pipe zone suits it.

A pipe can freeze without leaking. The split often shows itself on the thaw. Never thaw with an open flame.

Fire alarm

- [ ] Have the batteries tested. A battery at end of life is a common cause of trouble signals.
- [ ] Do not silence a trouble signal and forget it. Silencing the buzzer clears the noise, not the fault.

Edmonton design temperatures

- The code January design temperatures for Edmonton are -30°C at 2.5% and -33°C at 1%.
- The airport area has logged -45.9°C, on January 12, 2024.
- St. Albert and Leduc use -32°C (NBC(AE) 2023, Appendix C).

If a freeze-up happens, call 780.760.0806 at any hour.

Sources

1. National Building Code 2023 Alberta Edition, National Research Council Canada
   https://nrc-publications.canada.ca/eng/view/object/?id=0316d953-0d55-4311-af69-cad55efec499
2. National Fire Code 2023 Alberta Edition, National Research Council Canada
   https://nrc-publications.canada.ca/eng/view/object/?id=6c3e5cf6-8891-40e0-8b37-a78665c23f27
3. Hydrant Flow Testing, National Fire Sprinkler Association
   https://nfsa.org/2021/07/03/fire-hydrant-flow-testing/
