Reopening Your Pool After a Wildfire

Wildfire may impact pool water, basins, and associated facilities with structural and equipment damage, fire, smoke, ash, soot, chemicals, and water from fire suppression systems or firefighting. Impacts from power outages and boil water advisories must also be addressed.

If you are also reopening one of the below listed types of facilities, please see further direction under “Wildfire Recovery Resources” at www.albertahealthservices.ca/eph/Page14085.aspx:

- Social Care Facilities (Child Care and Adult Care Facilities)
- Food Establishments
- Personal Services

Work with your insurance company agent to determine what information is needed and what actions to take to get your facility ready to operate. They may also recommend accredited restoration and cleaning contractors for your situation.

Below are steps that should be followed once it is SAFE to enter the premises.

1. **Protect yourself**
   - Wear protective personal equipment (PPE) as appropriate. Follow current respiratory protection guidelines appropriate for your situation.
     
     Further information is available from Alberta Labour (available at https://work.alberta.ca/occupational-health-safety/fort-mcmurray-wildfires.html).
   - Use a flashlight to look for hazards. If you detect or suspect any source of heat or smoke, notify the fire department immediately.
   - Watch for hazards, including:
     - Slip, trip and fall hazards from unstable structures, or wet and slippery surfaces;
     - Sharp objects such as metal pieces, concrete or wood;
     - Ash, soot and demolition dust
     - Hazardous materials such as pool treatment chemicals, cleaning products, pesticides, paint, batteries, and fuel containers which have been partially damaged or destroyed.
     - Gas cylinders (chlorine, propane, etc.)
2. **Be careful when near fire retardants and fire residues**

- Fire retardant contains ammonia which can
  - sting eyes, cuts, scratches or sunburnt skin
  - irritate intact skin
  - cause coughing/wheezing
  - cause gastrointestinal symptoms such as nausea, vomiting and diarrhea if ingested.

- Soot and ash can cause symptoms including:
  - eye and skin irritation
  - respiratory issues

  These symptoms may be significant depending on the type of soot/ash, amount of exposure, and underlying respiratory conditions.

- Smoke can irritate the skin, nose, throat, lungs and eyes and can cause coughing and wheezing. For more information on health effects from wildfire smoke, please see [Wildfire Smoke and Your Health](http://www.albertahealthservices.ca/assets/wf/eph/wf-eh-wildfire-smoke-and-your-health.pdf) available at

- Flush your eyes thoroughly with water and/or skin thoroughly with water and a gentle soap solution if contact with fire retardant, soot, ash or smoke.

- If you have respiratory symptoms such as coughing, move away from the area, take any prescription inhalers as directed, and if you are having trouble breathing, seek medical attention promptly.

3. **Check your utilities**

- Check that electricity, hot and cold running water, sewage system, and gas utilities are in proper working order. If you are not sure if the utilities are safe to use, contact your utility provider.

- Do not try to use any electrical equipment (appliances, motors, pumps, etc.) that may have come in contact with fire, water, or fire retardant until they have been checked and cleared for use by a qualified professional.

- You may wish to contact the manufacturer of affected pool equipment for further instructions.
4. **Use your water supply safely**

- Flush all hot and cold water-using fixtures by running the tap for five minutes. If your service connection is long or complex, consider flushing for a longer period of time.


- Complete the steps indicated in Section 7 **Pool Basins** (page 6) to treat any pools that received affected water during the boil water advisory. This procedure can be completed while the boil water advisory is still in effect and you may be permitted to open.

- Once the boil water advisory is lifted:
  - Remove all aerator or screen devices from faucets.
  - Flush all hot and cold water-using fixtures and faucets by running them for five minutes. If your service connection is long or complex, consider flushing for a longer period of time. This step must be completed even if you flushed your system prior to the boil water advisory being lifted.
  - Clean and disinfect all surfaces and equipment that have been in contact with tap water during the boil water advisory.
  - Ensure all equipment with tap water line connections are drained, flushed, cleaned, and disinfected according to the manufacturer’s recommendations.
  - Flush, drain, clean and disinfect potable water cisterns that contained the affected water source.
  - Run water softeners through a regeneration cycle according to the manufacturer’s recommendations.
  - Replace the filters on any tap water filtration devices, and flush the fixture according to the manufacturer’s directions.
  - Hot water heaters and hot water heating systems may require some water to be drained to get rid of any sediment.
5. **Clean building and facilities**

- Use PPE as appropriate, such as masks, rubber gloves, rubber boots, long sleeved shirt and pants, to protect yourself from any unknown residues.
- All areas and equipment in the facility must be inspected and assessed by the operator. All areas and equipment affected by heat, ash, chemicals, smoke, soot, or water must repaired, replaced, cleaned and disinfected as appropriate.
- To clean areas impacted by soot or smoke damage, thoroughly wash facility interior surfaces such as floors, walls, counters, windows and ceilings with a mild detergent or other appropriate cleaning solution. Severe smoke damage may require additional attention. Contact your insurance company or a remediation company for further instruction.
- Take care with cleaning and disinfecting products used on and around the pool deck, as they may impact pool water quality. Direct rinse water into deck drains rather than into the pool basins.
- Structural components of the building (e.g., piping, ceiling, and HVAC system/ventilation systems) should be assessed for damage, and removed, repaired, or cleaned and disinfected as needed.
  - HVAC systems should be cleaned and restored by a professional.
- Mould growth is a concern if your facility has had water damage from fire suppression systems or firefighting activities. Quickly and thoroughly dry all wet surfaces and material. Absorbent items such as carpet, drywall, and insulation may need to be discarded. Further information on mould remediation, including appropriate PPE is available here: [Managing Indoor Mould](https://myhealth.alberta.ca/Alberta/Pages/mouldy-homes-buildings-managing-indoor-mould.aspx)
- If vacuuming ash particles, use a vacuum with a unit that has a “HEPA” air filter, and change the HEPA filter often.
- You can steam clean impacted cloth items such as carpets, drapes, curtains, or soft furniture. Change the water frequently.
- Launder or dry clean all affected clothing such as towels and uniforms. You may have to run numerous rinse cycles to extract all of the soot, ash, and smoke. Consider doing this laundering off-site using a machine tagged for heavy contaminants at a laundromat. These are usually marked as “oilers.”
6. **Outdoor areas**

- Use PPE as appropriate, such as masks, rubber gloves, rubber boots, long sleeved shirt and pants, to protect yourself from any unknown residues.

- Wet down remaining fire debris. **Do not** wash the fire debris into the street.

- Scrape up fire ash and soot remaining on the property as much as possible, place it in plastic bags or other containers that will prevent it from being disturbed, and take it to a landfill.

- Use a hose, sprayer or pressure washer on the building exterior, parking lots, walkways, vehicles, and outdoor pool deck and deck furniture. Direct rinse water into deck drains rather than into the pool basins.

- Fire retardants can be toxic to fish, some plants and may make people and pets sick if ingested. They can also cause eye irritation, dry skin and sting cuts and scrapes on your skin.

  If you suspect outdoor areas were impacted by fire retardant chemicals:

  - Bleach or chlorinated products can react with some fire retardants to produce harmful and explosive gasses. Wash affected outdoor pool decks with a non-chlorinated cleaning product.

  - Wash down outdoor equipment and furniture with clean water and detergent to remove residual fire retardant.

  - Clean water and a razor blade tool will help to remove any sticky residue from windows and glass.

- Fuel-powered equipment (e.g. generators) should only be operated outside so as to prevent carbon monoxide exposure.

- If you have a private septic system, check the area around your system for damage, or leaks. Contact a plumber or plumbing inspector if you find damage to your septic system.
7. **Pool basins**

- For pools that suffered minimal to no impact from the wildfire, the main concern will be pool water that was not circulating or treated during times of power outage. If your pool was not circulating, harmful bacteria may have grown in the stagnant water, and could pose a health risk to your clients. The following procedure must be followed prior to re-opening to the public:
  - Remove any debris from the pool with a net. Vacuum the pool if necessary.
  - Superchlorinate your pool water to at least 10 ppm free chlorine.
  - Circulate the pool water for at least one (1) turn over period.
  - Rebalance the pool water chemistry.
  - Submit a bacteriological water sample.
  - Confirm with your local public health inspector that your bacteriological water sample was satisfactory.

- For pools that suffered significant impact from the wildfire, the pool water contamination concerns include debris, ash, soot, or chemicals. Ash and soot will add organic contaminants and chemicals such as carbon and phosphate to pool water. These will increase chlorine demand and interfere with pool water chemistry. Phosphate is a major nutrient - outdoor pools should be monitored for algae growth.

- Draining your pool is an option, however be cautious of hydrostatic pressure on the pool basin structure. This is especially important for in-ground pools in areas with a high water table, or if the pool has never been drained before. Hydrostatic pressure can cause heaving or cracking in the pool basin. A hydrostatic relief valve installation prevents this from happening. If the pool will be drained, you may wish to consult a pool service professional if hydrostatic pressure is a concern.
  - While draining, carefully observe the pool basin for any signs of damage. If damage is noted, stop draining and consult a pool service professional.
  - Remove debris from the pool basin floor.
  - Remove any remaining standing water using a wet vacuum or sump.
  - If soot or other debris remains on the basin walls or floor, a thorough cleaning with detergent may be required.
  - Refill the pool with potable water.
  - Chemically balance the water.
- Submit a bacteriological water sample.
- Confirm with your local public health inspector that your bacteriological water sample was satisfactory.

- If the pool will not be drained, follow these steps
  - Remove large debris from the pool basin, skimmers, and pump strainer basket. Cover the net with a cloth to assist in the removal of smaller particles.
  - Vacuum the pool if necessary.
  - Perform a backwash procedure as appropriate for your type of filter. Cartridge filters may need to be removed and inspected for damage before being installed.
  - If impact from ash and debris is minor, a clarifier may be added to aid in the filtration of suspended particles. Follow the manufacturer’s instructions.
  - If pool water clarity is difficult to correct, a flocculent may be needed to help remove the ash, soot and other fine particles. Follow the manufacturer's instructions. Usually flocculent is added to the pool while water is circulating, but bypassing the filter to allow the flocculent to form (3-4 hours). The pool is then turned off for 4-6 hours to let the flocculent settle. Once settled, the flocculent on the pool bottom can be vacuumed to waste.
  - Superchlorinate your pool water to at least 10 ppm free chlorine.
  - Circulate the pool water for at least one (1) turn over period.
  - Rebalance the pool water chemistry.
  - Submit a bacteriological water sample.
  - Confirm with your local public health inspector that your bacteriological water sample was satisfactory.

Contact Alberta Health Services, Environmental Public Health, North Zone at 780-513-7517 to arrange an inspection prior to reopening.

*For more information, please contact your nearest Environmental Public Health office.*

Edmonton Main Office 780-735-1800
Calgary Main Office 403-943-2288
Lethbridge Main Office 403-388-6689
Grande Prairie Main Office 780-513-7517
Red Deer Main Office 403-356-6366
www.ahs.ca/eph

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