



**BE GREEN
BURN IT CLEAN.**

BEST PRACTICES FOR CLEANER WOOD BURNING

PRINCE GEORGE



IMPROVEMENT
ROUNDTABLE

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Whether you operate an old or new wood burning appliance, using clean wood burning techniques is essential to getting the most heat possible for your home. These practices will reduce your firewood consumption - which equals a lot of savings in your money, time, and work. Most importantly, these practices greatly reduce creosote build up, and the risk of a chimney fire in your home.

CHECK THE CHIMNEY

Grey or smelly smoke drifting from your chimney indicates incomplete combustion due to wet wood, not enough air, or a stove that's been overstuffing. Smoke is wasted heat!

- Ensure your fire is getting enough air — check that the air inlet is open wide enough to keep the fire burning hot.
- Open the air inlet fully whenever starting a fire or adding more wood.
- Don't overload the firebox with too much wood. Instead, refuel more often with batches of 3 or more pieces at a time for optimal burning.
- Chimney smoke should be almost invisible after the initial starting stage of the fire — especially when you are operating a newer technology stove.



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WHAT TO BURN

Stoves that are operated with properly dried firewood can increase the heat you get by up to 15%. Upgrading your old appliance to a new efficient one can save you 1/3 of the firewood you used to burn.

- Burn only clean, dry wood that's been dried for at least 6 months and has a moisture content under 20%, preferably around 15%.
- Burn wood that is split into pieces 10-15 cm in diameter. Pieces should be about 6 cm shorter than the firebox size.
- Never burn wet or green wood, household garbage such as plastic or cardboard, painted or treated wood, particleboard or plywood, driftwood, or glossy magazines. Burning garbage produces noxious fumes, could damage your stove, and violates the City of Prince George's Clean Air Bylaw.



WHEN TO BURN

Please consider your neighbors, and the City of Prince George's Clean Air Bylaw.

- Don't operate your wood burning appliance during an Air Quality Advisory, where possible.
- For current info on air quality, check www.bcairquality.ca and local news.
- Wood smoke contains small particles and chemicals that can be harmful to your health, particularly for those with respiratory conditions. Please consider your and your neighbors' health when you burn, especially on poor air quality days.



STEPS TO STARTING A CLEAN HOT FIRE

Always follow the manufacturer's instructions regarding lighting techniques for your wood burning appliance.

Here are some generally helpful tips:

- Place 5-10 sheets of individually crumpled newspaper sheets in the stove so that they cover the bottom of the firebox.
- Place 7-10 pieces of finely split (~1 inch diameter) dry kindling on top of the newspaper, arranging them in a way so that air can flow between the pieces.
- Open the air supply vent all the way.
- Open the front doors on the stove to get as much airflow as possible through the fire and up the chimney for the first several minutes. Don't leave the fire unattended while the stove door is open.
- Open a nearby window or door if possible for the first minute, to get a good draft going up the chimney.
- Light the paper in a few places. When all of the kindling has caught fire, add a few smaller pieces of firewood (2-3 inch diameter) and close the stove doors.
- Gradually increase the size of the pieces as the coals build up.
- As the wood becomes well charred and coals build up, you can start to decrease the air supply to the fire. Watch for signs of incomplete burning such as visible chimney smoke or long, lazy flames in the firebox.
- When re-stoking the fire, add at least 3 pieces of firewood at a time for optimal burning.



Photo credit: Eric Vance
US EPA



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MAINTAINING YOUR APPLIANCE AND CHIMNEY

Operating your stove properly with dry wood will minimize the amount of creosote build up in your chimney, but some creosote is still deposited during the startup phase of the fire.

- Creosote deposits on your chimney wall provide a highly combustible fuel for chimney fires if allowed to build up.
- Have your chimney inspected and cleaned at least once per year. Look for a chimney sweep or wood heating retailer certified by the Wood Energy Technical Training (WETT) program.



GATHERING AND DRYING YOUR OWN FIREWOOD

Firewood needs to be dried from its freshly cut moisture level to below 20%, preferably around 15%.

- Softwood that is **split and stacked** in a dry place takes **4-6 summer months** to dry to an acceptable moisture level.
- Stack the wood on lumber rails or pallets to get it up off the moist ground.
- Cover the top of the pile with tarps, metal or wood sheathing, to keep the rain off, but **leave the sides of the stack open** so the wood dries.
- Wood dries through its exposed grain surfaces, so even trees that have been laying dead **must be cut to length and split to dry fully in the middle**.
- Dry firewood often has checks (cracks) in the end grain, is much lighter in weight, and burns easily without smoldering. Use a moisture meter to check a piece of split wood before burning.
- Always store firewood outside of your home and transfer it inside in small batches; indoor storage can bring moulds and insects into your home.
- Don't store firewood against your house as it can attract pests and can be a fire hazard for your home.



Photo credit: PGAIR



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MORE INFORMATION

- Check the web for creative wood storage plans that you can build yourself. Local woodstove retailers also carry a variety of wood storage racks and covers.
- Check the classifieds section of the newspaper or call building stores to ask about getting free pallets to store your firewood on.
- Visit the Ministry of Environment website www.bcairquality.ca or check the local news to see whether there is an air quality advisory in effect for Prince George.
- For information on wood burning regulations in the City of Prince George, please contact City Hall at 250.561.7600 or check out the Clean Air Bylaw (Bylaw No. 8266, 2010).
- For information on the effects of air quality on persons with respiratory or cardiac illnesses please contact the Northern Health Authority at 250.565.2150 or check the Northern Health website at www.northernhealth.ca.

SUPPORTED BY:



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