

Episode 560j January 4, 2024. Montreal PM2.5 & wood burning pizza ovens. Entrepreneurs see the writing on the wall.

In this Episode 560j, 1)Canada, Quebec, Montreal. 2)Washington State, Wenatchee (& Vancouver and 14 other communities) 3)Wisconsin, Milwaukee 4)The American Lung Association (ALA) 5)The United States National Institutes of Health (NIH) the seven top research papers on adverse health effects of wood burning in 2023, 6)Australia, Victoria, Melbourne, Yarraville. PurpleAir PM2.5 monitor network to detect vehicle exhaust PM2.5 7)7)Headlines.

1)Canada, Quebec, Montreal. RAWSEP View: Why go to the trouble of filtering the air pollution out and measuring the air pollution when you could stop the air pollution to begin with? Why not just stop using wood burning ovens for commercial pizza and bagel baking, and use the cleaner natural gas fired ovens? Excerpt from the article below “The draft regional bylaw that was to go to public consultation in May 2020, according to documents obtained by Families for Clean Air, would require businesses that wanted to cook food over wood fires to install a filtering device capable of reducing emissions by at least 85 per cent. The system would have to include sampling doors above and below the filtering device to allow for measurement of emissions reductions. Owners would have to keep documentation on hand proving their ovens or appliances conform to the bylaw. Fines for breaking the bylaw would range from \$1,000 for a first infraction to \$12,000 for repeat offenders.” “Attempts by municipal authorities to ensure these businesses install and maintain effective air purifiers and filters to keep emissions to “safe” levels have largely failed. Enforcing emissions limits set out in a regional bylaw (Bylaw 90) has proven complex, resource intensive, costly, and ultimately ineffective.” RAWSEP View: Daniel Vézina of Families for Clean Air makes several incisive points about why people burn wood. People have a romanticized view of wood burning, forgetting that burning wood was a death sentence for many people in Victorian era Montreal, when wood burning was, regrettably, the only method of home heating. “We are too emotionally attached to this way of cooking, to this tradition, so that even when we are presented with the hard facts about how this is killing us and making us sick, our brains will not comprehend.” As people recently dealt with a deadly respiratory virus, COVID 19, wood burning PM2.5 pollution made their suffering worse. (RAWSEP View: In Canada, the provincial, Quebec government is analogous to a State Government in the United States). He also called on the provincial (Quebec) government to take action to legislate a gradual phase out of wood burning in cities, since the issue is too important and too complex for municipal and town councils to handle one by one. RAWSEP View: New entrepreneurs saw the writing on the wall and installed gas powered ovens instead of wood burning ovens in the last few years. RAWSEP View: The sentence most relevant to RAWSEP in this Montreal article about regulation of wood burning commercial ovens, is that “Wood fires in residences are illegal even with certified appliances during smog warnings, unless there is a power outage of three hours or more.” To solve this problem in Quebec of PM2.5 pollution from wood burning for home heating, alternative clean home heating in the form of electric Heat Pumps should be extended to all rural areas. The article below goes on to state “But even Montreal’s 2018 home wood burning bylaw’s effectiveness is questionable. According to information obtained through an access to information request by Families for Clean Air, the city received 936 complaints about smoke and the use of non-compliant wood-burning fireplaces or stoves between 2018 and March 2023. Only 13 fines were levied over that period.” And “Montreal has restrictions on residential wood burning, which [came into force on Oct. 1, 2018](#). The bylaw forbids the installation or use of wood-burning appliances unless they are certified by the Environmental Protection Agency (EPA) or Canadian Standard (CSA/B415) to emit less than 2.5 grams of fine particulate per hour. Other municipalities on the island have adopted wood-burning bylaws, including Dollard-des-Ormeaux, Senneville, Ste-Anne-de-Bellevue, and most recently Westmount, where new restrictions come into force on Sept. 1, 2024. Some have bylaws that are similar to Montreal’s, others are less demanding in terms of emissions permitted, and still others have no restrictions at all. Part of the mandate of the CMM’s standing committee is to do an inventory of existing bylaws across the agglomeration.”

Canada, Quebec, Montreal. [Clean air advocates want bylaw to phase out polluting wood-fired ovens | Montreal Gazette](#)

According to an assessment done by the city of Montreal in 2014, residential and commercial wood burning accounted for 42 per cent of fine particulates. Hearings are planned in 2024 on proposed island-wide rules to force restaurants and bakeries that cook over wood fires to reduce emissions. [Local News](#) Clean air advocates want bylaw to phase out polluting wood-fired ovens Hearings are planned in 2024 on proposed island-wide rules to force restaurants and bakeries that cook over wood fires to reduce emissions. Montreal Gazette. January 03, 2024. [33 Comments](#)

Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a nonprofit organization. Clean air advocates are hoping 2024 will be the year politicians in the Greater Montreal region [finally take long-promised action](#) to reduce the deadly pollution chugging from the smokestacks of businesses that cook food in wood-burning ovens or over charcoal. “We know that air pollution kills people,” said the executive director of Families for Clean Air, a group that advocates against wood burning in urban settings. “We know it



Daniel Vézina, executive director of Families for Clean Air, speaks with Le Trou bagel bakery owner Alexandra Grenier at her shop in Montreal Wednesday Dec. 20, 2023. When she opened her bakery five years ago, Genier chose to use a gas-fired oven instead of a traditional wood-burning one.

makes us sick and (makes sick people) sicker, and there is no safe level of exposure to air pollution. So we have to ask ourselves: how many lives destroyed by air pollution is socially acceptable just to maintain a dirty baking method from the past?” Wood burning is a major source of air pollution in Quebec, and the health effects of inhaling wood smoke are no joke. [A Health Canada study published last year](#) estimated home firewood burning alone caused 2,300 premature deaths in one year (2015) nationally, not to mention 1,300 cardiac and respiratory-related hospital admissions and emergency room visits, 9,300 child and 2,100 adult chronic bronchitis cases, 2.9 million restricted activity days and 5.9 million symptom days (including acute respiratory and asthma symptom days). In southern Quebec alone, home firewood burning contributed to 1,400 premature deaths in the study year, double the 700 premature deaths that were attributed to transportation sources. Wood smoke contains fine particulate matter (among other pollutants) that when inhaled can lodge deep in the lungs where it both causes and worsens lung diseases, asthma attacks, cardiovascular illnesses. and lung cancer. Montreal is home to more than 100 wood and charcoal-burning businesses — pizzerias, bagel bakeries and grill houses — and most are in densely populated residential areas. (Daniel Vézina, executive director of Families for Clean Air) argues that sensitivity to the interests of wood-burning businesses may have been misplaced. Most wood-burning businesses like pizzerias, bagel bakeries and chicken grill houses were takeout operations anyway, and so most continued to do a brisk business during the pandemic. Meanwhile, as Montrealers coped with a deadly respiratory virus, [wood smoke from these businesses was adding to their health woes](#). According to an assessment done by the city of Montreal in 2014, residential and commercial wood burning accounted for 42 per cent of fine particulate emissions (39 per cent and three per cent respectively), while 45 per cent of those emissions was attributed to transportation and 13 per cent to industrial sources. There were 70 wood-burning commercial ovens operating in Montreal at that time, and about 50,000 residential wood-burning stoves or fireplaces. “Taking into account these numbers, one wood-burning oven emits on average more than 100 residential wood-burning stoves or fireplaces, causing a significant local impact,” explains the public consultation guide prepared for the MMC in 2020. These commercial ovens cause significant impact in the neighborhoods where they operate, as [public health authorities have pointed out repeatedly](#). Vézina notes the city’s environment department lacks the resources to effectively enforce the bylaw. He also points out that the bylaw is based on EPA certification, which is problematic. A [report issued last February by the U.S. Environmental Protection Agency Office of the Inspector General](#) concluded the EPA’s “ineffective residential wood heater program puts human health and environment at risk for exposure to dangerous fine-particulate-matter pollution by allowing sales of wood heaters that may not meet emissions standards.” Daniel Vézina is hoping the upcoming public consultation on a proposed bylaw on commercial wood burning will be an opportunity to change some minds about wood burning in general. “There is a growing trend to romanticize wood-oven baking. Have we forgotten that Victorian-era bakers would die very young because of air pollution? Using wood-fired or charcoal ovens was a death sentence in the Victorian era and bakers would die at the age of 42 on average. The public health authorities have to step in. Cities cannot manage this issue alone.” He wants public health authorities to come up with campaigns to communicate the health risks related to wood smoke and to attack the positive image of wood-fired cooking. Montreal’s executive committee member responsible for the environment and a member of the MMC’s environment standing committee said the proposed bylaw has been amended since it was presented to the committee in 2020. “The control of particulate emissions from cooking appliances used in the commercial sector, including wood-burning ovens, is still planned. However, the pandemic slowed down the process. The 2020 regulatory project has been modified and will be proposed in early 2024 to the (MMC). Vézina is anxious to see whether the amended bylaw will be stronger or weaker than the one proposed in 2020. The owners of Montreal’s most popular bagel bakeries, have [told the Montreal Gazette in the past that the heat source makes no difference to the taste or texture of their bagels](#). Clients don’t notice a difference, they say, since it was never wood smoke that gave bagels their flavor. some of Montreal’s newer entrepreneurs have seen the writing on the wall. Le Trou opened in 2019 with a bagel oven fueled by natural gas. (The entrepreneur) said she chose to go gas instead of wood to avoid having to make expensive changes if the city later bans wood ovens. “At the time, there was a lot of talk about how their neighbours couldn’t take it anymore. So we thought, firstly, we want to be good neighbours. We were establishing ourselves in a very dense neighbourhood with lots of apartments and lots of people. We thought, ‘Do we really want to pollute?’ And also, what if in a year or two these ovens are banned? Le Trou, with gas fired ovens, was mentioned in a [recent article on Montreal in the New York Times](#). most clients don’t notice the fact there is no wood in the oven, since they see flames. she is proud to tell clients her ovens are more ecologically responsible. “You don’t want people saying once you open, ‘Oh it’s terrible since they’ve come. We can’t breathe. We can’t open our windows.’ That’s not great for your business plan.” Related Stories.

[Montreal's restrictions on residential wood burning comes into force on Oct. 1, 2018](#)

[Studies show wood smoke from businesses causing harm to residents' health](#)



A smoky haze from wildfires in Canada envelops the Statue of Liberty in Upper Bay on June 7, 2023, in New York City.

[City slow to act on wood-smoke pollution from bagel bakeries, pizzerias and chicken joints](#)

2) Washington State, Wenatchee and 15 other communities. Deaths two years earlier than average caused by (wood burning, wildfire) air pollution in the 16 areas. The study says other sources of particulate matter include silvicultural and prescribed burning, agricultural burning, and wood smoke associated with home heating. [Wenatchee Named Among 16 Areas In State With Risks From Poor Air](#) NewsRadio 560 KPQ. The study says other sources of particulate matter include silvicultural and prescribed burning, agricultural burning, and wood smoke associated with home heating. **Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a nonprofit organization.** Wenatchee and East Wenatchee are among 16 communities in Washington that are overburdened by environmental harms. A new [report](#) by the Washington State Department of Ecology say people in those communities are more likely to have negative health outcomes and die about two years earlier. The report is part of the department's effort to improve air quality in communities that are historically impacted by health, social, and environmental inequalities. It shows Wenatchee and East Wenatchee have an average of 12 days a year with unhealthy air quality, the most of any of the overburdened communities. The cities are most affected by fine particulate matter (PM2.5), which is most prevalent from August through October, during wildfire season. The Wenatchee and East Wenatchee communities have increasingly experienced more frequent wildfire smoke events. The study says the Department of Ecology will be examining the sources of pollution in Wenatchee and East Wenatchee in greater detail in future analyses. It notes that parts of the Wenatchee and East Wenatchee communities have high rates of poverty, asthma, uninsured populations, as well as a high proportion of children under age 18. Several schools, hospitals and healthcare clinics, long term care facilities, and migrant farmworker housing, all considered to be locations where occupants may be more vulnerable to the adverse effects of pollution exposure. The study acknowledges that mortality associated with long-term fine particulate matter (PM2.5) exposure is just one measure of many ways air quality impacts health in Wenatchee and East Wenatchee. The 16 communities singled out for being overburdened by environmental harms are located on both the east and west side of the Cascade Mountains: Everett. George and West Grant County.

South King County. Mattawa. Moxee Valley. Northeast Puyallup. North Seattle and Shoreline. South Seattle. Spokane and Spokane Valley. South and East Tacoma. Tri-Cities to Wallula. Vancouver. Wenatchee and East Wenatchee. East Yakima. Lower Yakima Valley. 5. WILDFIRE IS THE 5TH WEATHER SEASON IN WASHINGTON STATE Typically during the summer months, manmade and natural disaster wildfires break out all over Washington state. This leads to some experiencing severe breathing problems and skies turning red and thick with fire fog. Sometimes, wildfires from Canada drift over to parts of Washington state, too, causing some cities to experience a downward spiral in the breathable quality of air.

3) Wisconsin, Milwaukee. RAWSEP View: This article about an art exhibit on soot (PM2.5), does not mention that much of the soot (PM2.5) we inhale is from indoor residential wood burning. This article does not mention that stopping indoor residential wood burning can stop PM2.5 emissions. This article suggests planting trees will help solve the problem of Pm2.5 emissions, when the most direct, the most relevant way to stop PM2.5 emissions is to stop indoor residential wood burning. The most relevant sentence in the article states that "(The artist) recognizes that policy changes and regulations will play a vital role." Although wood burning in general and indoor residential wood burning is not mentioned in this article. The conservation groups that the artist is allied with may be the no-nothing segment of conservation groups that want to continue their individual, delusional practice of wood burning. Some conservation groups support wood burning in spite of the adamant, inconvenient opposition of scientists to the political, unscientific theory of Carbon Neutrality of wood burning. Wood burning emits more PM2.5 and CO₂ than the fossil fuel coal burning. Wood burning emits 450 times the PM2.5 as the fossil fuel natural gas burning. Wood burning is 90% PM2.5, particulate matter of 2.5 micrometer size, the perfect size to infiltrate the human lung, setting off a cascade of human health problems and early deaths. We really don't need to be told indirectly, by looking at a magnified sculpture of a PM2.5 particle, that these facts are true. PurpleAir PM2.5 monitors provide real time measurements of the levels of PM2.5 in ambient air in the yards of near neighbors of indoor residential wood burners. When those PM2.5 levels exceed the Environmental Protection Agency's own National Ambient Air Quality Standards (NAAQS) the indoor residential wood burning appliance should be shut down, one wood stove by one wood stove, if necessary. But since 1988 wood stoves have been certified as safe by the EPA. But in February 2023 the Office of the Inspector General, watchdog of the EPA, stated in a report that the EPA's Wood Stove Certification program is "flawed", allowing most wood stoves manufactured and sold to be highly polluting. This "flaw" in the program was due to the lobbying of wood stove manufacturers and vendors, resulting in loopholes to even the lax standards of the EPA. Wood burning in itself is highly polluting. Just don't burn wood or other solid fuels to begin with. Wood burning emissions are hyper-localized, and PurpleAir PM2.5 monitors in the yards of near neighbors is a way to measure the pollution that has been overlooked



Wildfire is the 5th season in Wenatchee, Washington State.

hyper-locally until recently. Connecticut. Yale University and Milwaukee, Wisconsin. Don't Sleep on Soot. https://yaleclimateconnections-org.translate.google/2023/11/dont-sleep-on-soot/?x_tr_sl=auto&x_tr_tl=en&x_tr_hl=en&x_tr_pto=wapp&fbclid=IwAR1ckf4nA8ws5WStOIPCqn-gaf6y0EGG0HrwbxIf-M13IAfQfCsDrdu9QGc (Soot) often degrades the immediate air quality in local neighborhoods or regions and [disproportionately harms](#) Black and Brown communities. [Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a nonprofit organization.](#) Working both in the lab and classroom at Marquette University in Milwaukee, the mechanical engineer has carved out a unique specialty studying the molecular processes and behaviors of soot, a byproduct of combustion. The particle is generated and launched into the atmosphere nearly every time a (RAWSEP inserts here, a wood burning appliance) fires up. Heavy exposure to soot is closely linked to cancer, respiratory diseases, and cardiovascular dysfunction. The World Health Organization has estimated that around 7 million people die annually due to exposure to polluted air, with [particulate matter and](#) black carbon — another term for soot — playing a significant role. (In Milwaukee's) at Marquette University's Haggerty Museum of Art, between a golf ball and a tennis ball in size, was a 3D-printed, enlarged model of an actual soot particle observed in Roy's lab. Hanging at eye level, they invited viewers to consider the sobering fact that we inhale these particles every day. "I could imagine the damage a microscopic particle that shape could do in a person's bloodstream," says a Wisconsin Department of Natural Resources air monitoring specialist who has partnered with Roy on projects. The exhibition, featuring an international artist and activist alongside student work, centered on a theme: "[We do not all breathe the same air.](#) the National Science Foundation last year issued him \$550,00 in a coveted CAREER grant for the [art exhibition](#), urban air walks, and lab work modeling soot dynamics and particles. For the public walks, Roy partnered with conservation groups and the Department of Natural Resources. Together they equipped Milwaukee residents with air sensors before strolling through urban spaces and parks. a state [air monitor near downtown Milwaukee](#) measures levels of PM2.5 which, when inhaled, can travel deep into the respiratory system and enter the bloodstream — contributing to premature death from heart or lung disease. (PM2.5) often degrades the immediate air quality in local neighborhoods or regions and [disproportionately harms](#) (RAWSEP adds, near neighbors of indoor residential wood burners). Trees and shrubs can clean the air. [planting trees and shrubs in your yard as clean-air barriers](#). plants with fine hairs or leaves with dense grooves and waxy surfaces. (The artist) recognizes that policy changes and regulations will play a vital role. [record-setting Canadian wildfires](#) (in June 2023) sent (wood burning) smoke (into the United States). (PM2.5) readings (went up to) dangerous levels for humans. (PM2.5) incidents carry acute, immediate risk to humans as well as a threat to our climate. A researcher at Colorado State University conducted [a benchmark, multiyear study](#) that demonstrated that black carbon carries twice the climate-warming impact as previously thought. (PM2.5 or) black carbon, along with methane, is the greatest [human-generated contributor to global warming](#) after carbon dioxide. (PM2.5) caused the famous Great Smog of London event in December 1952. (During the winter of 1952) London was in polluted darkness for nearly a week. The five-day emergency contributed to 4,000 deaths. "That actually kicked off the first Clean Air Act in the modern era".

4)The American Lung Association (ALA). https://www.lung.org/research/sota/health-risks?fbclid=IwAR1NsxPB2WHXtBSI5A9mAtc_fUL21YBV9wnOpXpDvxcya0c1Dv34T7QG9_o Years of scientific research have clearly established that particle pollution is a threat to human health at every stage of life, increasing the risk of premature birth, causing or worsening lung and heart disease, and shortening lives. Some groups of people are more at risk of illness and death than others, because they are more likely to be exposed, or are more vulnerable to health harm, or often both. Air pollution can harm children and adults in many ways Respiratory Wheezing and coughing. Shortness of breath. Asthma attacks. Worsening COPD. Lung cancer. Other. Premature death. Susceptibility to infections. Heart attacks and strokes. Impaired cognitive functioning. Metabolic disorders. Preterm births and low birth weight.

5)United States. National Institutes of Health (NIH) Environmental Factor. [2024: 2023 Papers of the Year - Environmental Factor](#) Indoor wood-burning from stoves and fireplaces is associated with the development of lung cancer among women in the U.S., according to researchers .. 1 of 7) [Environmental Factor - 2024: 2023 Papers of the Year](#)

Toxics 11(5):407. Indoor wood-burning may be linked to lung cancer in U.S. women Indoor wood-burning from stoves and fireplaces is associated with the development of lung cancer 2 of 7) <https://factor.niehs.nih.gov/2024/1/papers/papers-of-the-year>
[December 2023: Burn pits' complex emissions simulated in NIEHS](#)

were exposed to combustion of items ranging from plastic and Styrofoam to wood and paint. When we are burning hot, we tend to see a drop in the aerosol size, whereas the opposite 3 of 7) <https://factor.niehs.nih.gov/2023/12/feature/4-feature-pit-burn-research>
[November 2023: Three NIEHS scientists earned tenure in 2023](#)



A smoky haze from wildfires in Canada envelops the Statue of Liberty in Upper Bay on June 7, 2023, in New York City.

travel; many art forms such as wood working, painting, and sculpting; and because our society is currently burning fossil fuels to, in part, heat and cool 4 of 7)

<https://factor.niehs.nih.gov/2023/11/awards-recognition/tenured-2003>

[October 2023: Air pollution associated with increased breast](#)

It comes from numerous sources, such as motor vehicle exhaust, combustion processes (e.g., oil, coal), wood smoke/vegetation burning, and industrial emissions. Woman standing in 5 of 7) <https://factor.niehs.nih.gov/2023/10/papers/air-pollution-and-breast-cancer>

[Environmental Factor - September 2023](#)

In-House Research Intramural papers of the month Indoor wood-burning may be linked to lung cancer in U.S. women How a protein and RNA team up to ensure normal fly development 6 of 7) <https://factor.niehs.nih.gov/2023/9>

[September 2023: Intramural Papers of the Month](#)

Intramural By Janelle Weaver and Meklit Daniel Indoor wood-burning may be linked to lung cancer in U.S. women Indoor wood-burning from stoves and fireplaces is associated with the 7 of 7) <https://factor.niehs.nih.gov/2023/9/papers/dir>

End of list of seven 2023 research papers on the adverse health effects of wood burning published by the National Institutes of Health in In the Environmental Factor Newsletter as of January 4, 2024.

6)Australia, Victoria, Melbourne, Yarraville. PurpleAir PM2.5 monitors set up to monitor exhaust, not intended to detect indoor residential wood burning. [Air monitors show startling results - Maribyrnong & Hobsons Bay | Star Weekly](#)

Mr. Yates has been monitoring PM 2.5, the major particulate in diesel exhaust. "I initially started setting them up out of interest to see what was. Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a nonprofit organization. Glen Yates, who has lived in Yarraville for 13 years, developed adult-onset asthma two years ago after always living a fit and healthy lifestyle. Three years ago Mr. Yates set up PurpleAir monitors, which monitor real air time quality allowing the user to monitor whichever values they wish.

Mr. Yates has been monitoring PM 2.5, the major particulate in diesel exhaust. "I initially started setting them up out of interest to see what was happening in the area. I put one outside my house and now I am slowly building a network to help the community understand toxins better," he said. "In the local area there will be six set up by the end of the month, three from me, three from other parties." Mr. Yates said the air quality outside varies from day to day, some days it meets health standards, other days it does not. The current global guidelines for PM2.5 as set down by the World Health Organisation (WHO) is five micrograms per cubic meter averaged over a year. The Australian guideline for PM2.5 is eight micrograms per cubic meter averaged over a year. Last weekend the air quality in Yarraville, as recorded by Mr. Yates, sat at 34-40 micrograms for the entire weekend. This is called an inversion layer where air quality was up to six times the Australian standard, posing a risk to asthma sufferers. "That's where people with asthma start to play up. Asthma is directly correlated and attributed to the air quality," Mr. Yates explained. "It can exacerbate asthma symptoms. Asthma sufferers need to have their Ventolin handy. "I often experience chest tightness, coughing and wheezing, it can feel like extreme hay fever with no relief." Mr. Yates recommends Yarraville residents, especially asthma sufferers, set up air purifiers in their homes. Air purifiers can be set to detect PM2.5 changes outside, so the house air can then be filtered and purified. "When PM2.5 levels are high outside doors and windows should be closed, anything that draws external air should be closed off, if you have air purifiers turn them on. "Every state school in the inner west has air purifiers, and any schools that have children with high risk asthma should be monitored." Locals can access the real time PurpleAir data though the website by selecting real time maps. "Anyone who wants to set up their own PurpleAir monitoring system can order it online. The more people that add these to the network the more visibility we all have." Mr. Yates is a member of the Maribyrnong Truck Action Group (MTAG) which is actively striving for low emission zones to be implemented. "We are not anti-truck, we just want to remove older dirtier trucks off the street with the support of the state government," he said. MTAG would like council to follow suit with other councils who have installed PurpleAir networks in their communities. "There is an issue and it needs to be sorted, council declared a health emergency and we haven't heard anything since."

Headlines. World. [Meteorological variability and predictive forecasting of atmospheric particulate pollution](#) Nature. Due to increasingly documented health effects associated with airborne particulate matter (PM) 2.5 times more (i.e., from 1.7% to 4.3%) (Fig. 4a) California, Lake Tahoe. [Planned prescribed fire operations returns to Lake Tahoe's north shore](#) South Tahoe Now. Pile burning involves burning slash piles that are constructed by hand or mechanical equipment. Smoke from prescribed burns, wildfire or wood burning. LAKE TAHOE, Calif./Nev. – The Tahoe Fire & Fuels Team (TFFT), will resume prescribed burning this week at Lake Tahoe, conditions and weather permitting. Smoke from these operations may be present throughout the Tahoe Basin and surrounding areas. Iowa, Des Moines. [An Iowa woman lost her husband and dog in a house fire - The Des Moines Register](#) Firefighters were able to retrieve Marvin from the



Glen Yates has set up several PurpleAir monitors around Maribyrnong to monitor the worsening air quality.

burning home, according to the release. wood-burning fireplace. Donna's longtime employer, the North Carolina, Washington County, Plymouth. [FIREFIGHTERS: Weyerhaeuser mill fire takes hours to clear - WITN](#) wood plant WASHINGTON COUNTY, North Carolina. Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a nonprofit organization. A lumber mill caught fire outside of Plymouth late Tuesday morning. Crews say the fire was burning the bottom area and tops of the facility. Weyerhaeuser's planer mill takes wood boards and turns them into finished construction lumber pieces. crews finished clearing the fire and left the facility around 6:30 p.m. Weyerhaeuser is a wood manufacturing company with three locations in the east. Their Plymouth location is home to a wood plant. Washington, Vancouver. [Vancouver among 16 communities most impacted by air pollution, according to new state report](#) The Columbian. PM 2.5 pollution levels went beyond the index used to rate air quality. (Amanda Cowan/The Columbian). Vancouver residents are more likely than Estonia, Maaleht Report. [Rescue board urges caution when heating the home during cold snap - news | ERR](#) A wood-burning fireplace. Source: Karin burning stoves (Puupliit), common in older wooden houses in particular. Based .. Rescue board urges caution when heating the home during cold snap [News ERR News January 3, 2024](#). Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a nonprofit organization. The arrival of a particularly cold snap is naturally accompanied by a desire to heat the home to as maximum and extent as possible, but this has to be done with care, agricultural weekly Maaleht reports. [The advice in the Maaleht piece](#) mostly concerns masonry heaters (Ahi), fireplaces and wood-burning stoves (Puupliit), common in older wooden houses in particular. Based on its experience, the Rescue Board (Päästeamet) finds that the rate of call-outs to house fires rises in inverse proportion to outdoor temperatures, while Indrek Laanepõld, head of safety at the authority's Western district center, recommends as a rule of them – less heating at any one time, but more frequently.

It is important to have a functioning smoke detector and carbon monoxide detector (closing the damper early can lead to a carbon monoxide build-up), while clothes etc. should never be draped over a radiator or heater to dry out. Temperatures as low as -30 degrees Celsius were reported overnight Tuesday to Wednesday as the ongoing cold snap which arrived with the New Year deepens further still. The Environment Agency (Keskkonnaagentuur) issued a weather warning on Tuesday as a result of the conditions. India. [Fog Causes 30% Increase In Pollutants, Over 14,000 Fatalities Recorded Every Year Due](#) English Jagran. Many previous studies have considered PM2.5 (particulate matter or aerosol with a diameter less than 2.5 micrometres) as the main pollutant. Because China. [Air quality improvements can strengthen China's food security - Nature](#) The 2019 Global Burden of Disease Study highlighted that surface ozone and fine particulate matter (PM2.5) pollution are leading factors contributing India, Mumbai. Air Purifiers for Hotels. January 2, 2023. [IHCL & IFC Announces Successful Completion of 9 Sustainable Cooling Projects](#) Travel Trends Today . The air purifier recorded notable improvements in the lobby air quality of the hotel, with observed reductions in PM 2.5 by over 95%. A BE-IoT [IHCL and IFC make strides in eco-friendly hospitality](#) ET Hospitality The air purifier recorded notable improvements in the lobby air quality of the hotel, with observed reductions in PM 2.5 by over 95 percent. A BE [IHCL completes sustainable cooling pilot projects across India - Hotel Management Network](#) Hotel Management Network As part of the pilot project, the hospitality group installed a fresh air purification system at Taj Palace in New Delhi, which reduced PM 2.5 levels .. India. [Arsonist involved in torching two-wheelers and shops arrested - Latest News - The Times of India](#) It mentions that all transport in Delhi, including cars, two-wheelers, and commercial vehicles, contributed an average of 14.74% to PM 2.5 pollution. India. [India's Disadvantaged Groups Face More Air Pollution - Eos.org](#) The researchers compared satellite-derived and estimated measurements of particulate matter smaller than 2.5 micrometers (PM2.5) among areas that had



A smoky haze from wildfires in Canada envelops the Statue of Liberty in Upper Bay on June 7, 2023, in New York City.