

Episode 56RJ March 3, 2024. When a red spot on the PurpleAir map connects the dots.

When a red spot on the PurpleAir map connects the dots. RAWSEP's editor compiles headlines about wood smoke pollution in order to educate <https://rawsepresidents.com> readers, educate listeners of RAWSEP podcasts and educate viewers of RAWSEP videos, about the effect of indoor residential wood burning on near neighbors, such as adverse health effects and early deaths. RAWSEP's editor relies on emails, giving her URLs of websites, and headlines, from Google Alerts based on relevant keywords such as wood smoke, PM2.5, et cetera. Then RAWSEP's editor also delves further to find excerpts from specific relevant headline news articles to comment on. Any of RAWSEP's readers could do the same. Just as downloads from multiple PurpleAir PM2.5 monitors could be done by any member of the public, and analysis of multiple hyperlocalized PurpleAir PM2.5 monitors could be done by any member of the public by using RAWSEP's template for analysis of PurpleAir data, in order to provide usable powerpoints to give as evidence of harm to local health authorities to show PM2.5 above NAAQS limits, in order to shut down indoor residential wood burners, one indoor residential wood stove at a time, if necessary. The level of detail of 432 10 minute periods in a 3 day period is generalized by the RAWSEP template to simple percent over a 3 day period including percent over a three day period at 9 micrograms per cubic meter in the yard of a near neighbor of an indoor residential wood burner, and from that lowest level, analysis goes up to 15, 25, 35, 45, 55, 65 and as high a percentage of PM2.5 in ambient air in the yard of a near neighbor as 75 micrograms per cubic meter. The template also automatically correlates PurpleAir data to the system used by United States Environmental Protection Agency (E P A) Maps of Smoke and Fire using the simple mathematical formula  $(PA \times 0.514) + 1.804$  for all ten minute periods downloaded for each monitor. RAWSEP has provided videos that show how any member of the public can download multiple hyperlocalized monitors' data and analyze that data together to provide comparisons between nearby monitors in a hyperlocalized area to show evidence of what and where the source of PM2.5 pollution is coming from, most often an indoor residential wood burner, in a residential area. RAWSEP would like to provide more outreach to teach people how to use these PurpleAir downloads to make real changes for the better in residential communities. The first way to reach out to RAWSEP is to email [rawsepresidents@gmail.com](mailto:rawsepresidents@gmail.com) RAWSEP's editor usually expects to publicize news that has already happened, and reinforce that news with real time evidence of air pollution from indoor residential wood burning via downloads from hyperlocalized PurpleAir PM2.5 monitors. RAWSEP's editor did not expect the news to intersect directly with PurpleAir downloads. However, in the last few weeks a red spot on the PurpleAir map has connected, twice, directly with mundane news stories that RAWSEP also included as part of a routine news compilation and further delved into, providing excerpts from those two news stories. First, RAWSEP was looking into the levels of PM2.5 existing in war torn Ukraine, and wondered if that would show up in downloads of PurpleAir sensor data in that area over time. Yes, Kiev, Ukraine has 4 PurpleAir sensors that show disturbing levels of PM2.5 and in looking at that data RAWSEP's editor noticed a hotspot for PM2.5, a red dot in Milan, Italy. Second, RAWSEP was looking into the levels of PM2.5 existing in Maine, as RAWSEP has done since October 2023, and could not help noticing a persistent red dot in Rutland, Vermont consistently appearing nearby the Maine portion of the PurpleAir map. Two instances when a red spot on the PurpleAir map connected the dots. In late February, first, news articles from Milan, Italy, showed that environmental groups are thinking of suing the Mayor of Milan, Italy because of the high levels of PM2.5, and then, second, this week a news article showed the local council of Rutland, Vermont was discussing loosening regulation of Solo Stoves so that people in Rutland, as some council members elaborated, could enjoy the fun of burning sticks they pick up from their yards, without being bothered with facts about the adverse health effects on near neighbors of indoor residential wood burning emissions. In Rutland Vermont, the fire department was concerned about the effect of this loosening of regulations, the fire department predicting loosening of regulations would increase both the real air pollution as well as increase public disregard for the air pollution that wood burning emits. In RAWSEP's View Solo Stoves are like low tar cigarettes promoted by the Tobacco industry, which were later shown to have real adverse health effects despite the efforts of the Tobacco industry to confuse the issue. RAWSEP will be investigating what emissions Solo Stoves are responsible for in real life. For those who are reading this for the first time, and are somehow not yet informed and aware of the PM2.5 and CO2 emitted by wood burning, here are the facts that Residents Against Wood Smoke Emission Particulates routinely publicizes. Wood burning emissions are 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. Wood burning emits 2.8 times the PM2.5 and CO2 as the fossil fuel coal burning. Wood burning emits 450 times the PM2.5 as natural gas burning. The scientifically debunked, political construct of Carbon Neutrality of Wood Burning has provided cover for wood burners since at least 1988, hardly a longterm tradition, but a tradition of false information that has supported a method of home heating, wood burning, whose unnecessary use causes adverse health effects and early deaths, in RAWSEP's view, most importantly adverse health effects for near neighbors of indoor residential wood burners. Just don't burn wood to begin with. Just don't burn solid fuels. Sticks gathered from your yard can be composted to provide usable soil, soil which is not flammable. As one Rutland council member noted, many municipalities pick up salvaged wood (and presumably compost it for municipality use as soil). Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization, is writing a grant with the help of the Department of Energy to hand out free PurpleAir PM2.5 monitors to near neighbors of indoor residential wood burners, whose PM2.5 wood burning smoke enters the yards of near neighbors and sickens them. The second half of the grant is to provide a subsidy for the changeout of indoor residential wood stoves for Heat Pumps that work down to 40 degrees below zero (the Fahrenheit and Centigrade temperature scales briefly converge at 40 degrees below zero) and which run on electricity which has been available in all rural areas since rural electrification arrived in the United States by the end of the Second World War, over 75 years ago. RAWSEP expects that the true clean renewables, wind and solar, will increasingly power electrical grids in the United States, and wind and solar energy are now the lowest priced energy source in the United States. Wood burning pollutes the air and hastens climate change. Just don't burn wood. In 2024, Heat Pump rebates up to \$8,000 will be offered in the United States, based on a sliding income scale. In Wisconsin, those Heat Pump rebates will be offered by September 2024, and the RAWSEP Heat Pump subsidies for Wood Stove Exchange for a Heat Pump are planned to supplement the Federal Heat Pump rebate.