

Episode 56SG March 25, 2024 PurpleAir PM2.5 Wisconsin Worst of the Worst Comparison.

2024 PurpleAir PM2.5 Wisconsin Worst of the Worst Comparison. How to make a Worst of the Worst Comparison, using the example of Wisconsin, from Residents Against Wood Smoke Emission Particulates (RAWSEPresidents), a 501c3 nonprofit organization which is writing a grant with the help of Expert Match at the Department of Energy to hand out PurpleAir PM2.5 monitors to any near neighbor of an indoor residential wood burner whose wood smoke enters the near neighbor's yard and sickens the near neighbor. RAWSEP's editor has been downloading PurpleAir PM2.5 data from first Madison, Wisconsin, then Dane County Wisconsin, and finally from all PurpleAir PM2.5 monitors in the State of Wisconsin since mid-October 2023 and putting the downloaded data and its analysis using United States Environmental Protection Agency National Ambient Air Quality Standards (EPA NAAQS) on the RAWSEPresidents sites as Excel Files, PDFs, PowerPoints, Spotify podcasts and Youtube videos. This had to be done every three days until this month of March 2024, when PurpleAir made downloads of longer periods of data collection again easily available to the public and to residents who own PurpleAir PM2.5 monitors. There was a period from August 2023 to March 2024 when data downloads of longer periods of data collection was not easily downloadable. Since March 2024 downloads of all time as well as yearly, monthly and weekly can be made by clicking on the Chart's top line of an individual monitor, and choosing the Averaging Period dropdown 1 year, for instance. How did RAWSEP's editor come up with a Worst of Worst Comparison, today, 3/25/2024? She had noticed that Chetek 2, and to a lesser extent Chetek 3, in Wisconsin were routinely Wisconsin's Worst of the Worst in March 2024, when Chetek 2 either appeared as a Purple or Red spot on the map or when the data analysis showed Chetek was in the quadruple or triple digits in data downloads of 10 minute periods in a 3 day period. Now that three day data collection can be a thing of the past, RAWSEP's editor did a data download of all time PM2.5 levels divided by year. Since the monitor named Elinor and Gary in Madison, Wisconsin has routinely been the Worst of the Worst for Dane County, RAWSEP's editor wanted to compare Chetek 2 to Elinor and Gary. She came up with this download which is evidence that since 2020 when Chetek 2 began using a PurpleAir PM2.5 monitor its annual PM2.5 level average for 2020 was 36, in 2021 was 36, for 2022 was 198, and for 2023 was 162. Since 2020 when Chetek 3 began using a PurpleAir PM2.5 monitor its annual PM2.5 level average for 2020 was 29, in 2021 was 32, for 2022 was 23, and for 2023 was 31. Since 2021 when the Elinor and Gary monitor in Madison began using a PurpleAir PM2.5 monitor its annual PM2.5 level average for 2021 was 41, for 2022 was 35, and for 2023 was 36. Since 2022 when the Lafollette High School monitor in Madison began using a PurpleAir PM2.5 monitor its annual PM2.5 level average for 2022 was only 21, and for 2023 was only 17. This shows that one average in the triple digits (Chetek 2) and another average in double digits up to 32 micrograms per cubic meter of PM2.5 (Chetek 3) were collected from two monitors close to each other in a rural area, at or near Chetek in Barron County in Northern Wisconsin. The third annual average in the lower 40s to mid 30s was collected from a monitor near the intersection of Elinor and Gary Street, with an indoor wood burner only 60 feet away, in Madison, Wisconsin, while a Madison monitor at a High School only 1.8 miles away, surrounded on two sides by a Golf Course, one side by a cemetery and one side by a street, thus shielded by distance from any nearby indoor residential wood burning emissions, collected data only in the low 20s to high teens. This demonstrates that PM2.5, particulates of 2.5 micrometer size, the perfect size to infiltrate the human lung, setting off a cascade of human health problems and early deaths, when the PM2.5 from wood burning is hyper-locally generated, can only be detected hyper-locally, such as from a PurpleAir PM2.5 monitor hanging from the eaves of a near neighbor of an indoor residential wood burner, whose wood smoke enters the yard of the near neighbor and sickens them. There are two main ways to detect PM2.5 air pollution, 1) by a resident-owned PurpleAir PM2.5 monitor or 2) by physically experiencing the incursion of wood smoke into one's yard or into one's residence if the residence is not tightly sealed or if a door or a window is opened. Near neighbors, of course, would prefer to detect PM2.5 pollution from PurpleAir PM2.5 monitors rather than physically experiencing the PM2.5 and its adverse health effects. Near neighbors would like the hyper-local data collected showing air pollution from PM2.5 wood smoke from a nearby indoor residential wood burner to be used as evidence to shut PM2.5 polluting indoor residential wood burning appliances down, one by one if necessary. This should be done by a complaint based system of local ordinances, state laws or federal laws, based on the evidence from PurpleAir PM2.5 monitors. PurpleAir PM2.5 monitors are already used on United States EPA AirNow Maps of Smoke and Fire, alongside EPA regulatory PM2.5 monitors, to inform the

Data layer:

US EPA PM2.5 AQI i

Apply conversion: US EPA i

Averaging period (* = graph only): 1-Year* i

Base map type: Basic i

Use accessible colors when available: i

Show outside i, show inside i and show my i sensors

Reporting or modified within: All-time i

Show averages as rings: i

Show place names on top: i

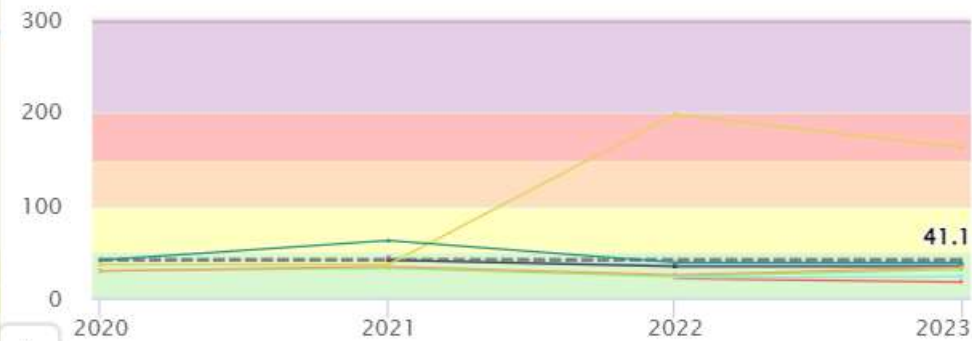
Experts tip: After choosing options, zoom and pan, bookmark the page or copy and share the url to open the map with those options pre-defined.



US EPA PM2.5 AQI (US EPA)

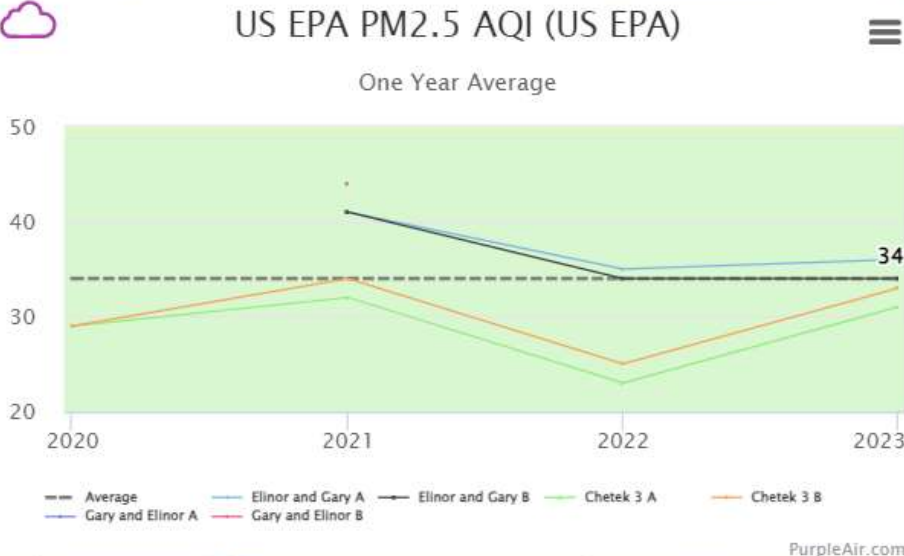


One Year Average



March 25th, 2024, 8:41:10 AM CDT

Click & drag to zoom. Shift + click & drag to pan. [How to use the graph.](#)



Verona

13

On March 25th, 2024, 7:22:51 AM CDT

One Week
Average US EPA
PM2.5 AQI (US
EPA) is now

13

0-50: Air quality is satisfactory, and air pollution poses little or no risk with 24 hours of exposure.

Now	10 Min	30 Min	1 hr	6 hr	1 Day	Week
4	4	4	4	10	14	13

Sensor: Elinor and Gary

A B ✓ 100% PA-II 7.02

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Become a community scientist.
Get your own outdoor sensor just like this one.

Town of

Data layer:

US EPA PM2.5 AQI

Apply conversion: US EPA

Averaging period (* = graph only): 1-Year*

Base map type: Basic

Use accessible colors when available:

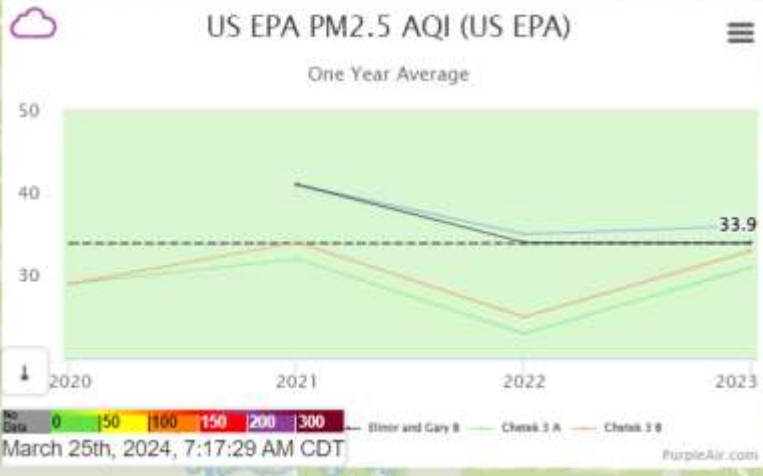
Show outside , show inside and show my sensors

Reporting or modified within: All-time

Show averages as rings:

Show place names on top:

Experts tip: After choosing options, zoom and pan, bookmark the page or copy and share the url to open the map with those options pre-defined.



On March 25th, 2024, 7:16:04 AM CDT

One Week
Average US EPA PM2.5 AQI (US EPA) is now **28**

0-50: Air quality is satisfactory, and air pollution poses little or no risk with 24 hours of exposure.

Now	10 Min	30 Min	1 hr	8 hr	1 Day	Week
91	46	41	40	39	30	28

Sensor: Chetek 3
A B ✓ 100% PA-II-SD 7.02
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Become a community scientist.
Get your own outdoor+SD sensor just like this one.