Episode 56MT December 9, 2023. PM2.5 Snapshot of Madison, Wisconsin shows the hyperlocalization of PM2.5 above NAAQS, \& a possible explanation is hyperlocalized indoor residential wood burning.

Madison Wisconsin Self-Selected PM2.5
monitoring by residents purchasing a PurpleAir PM2.5 monitor, possibly because they had an indoor residential wood burning neighbor. 3 day Average PM2.5 from 9:50AM 12/6/2023 to 10AM 12/9/2023 LaFollette High School is only above 12 micrograms per meter cubed, at 16. Lafollette's monitor is not near residential houses that could do indoor residential wood burning. Wexford Village is elder housing only above 12 micrograms per meter cubed. that is also not near residential houses that could do indoor residential wood burning. Elmside Circle is on the East Side of Madison and at 21 micrograms per meter cubed, near a cutoff measurement of 25 micrograms per meter cubed.. Sasy 7a is near Sasy $1,3 \& 6$ and Elmside Circle, and iat 20 micrograms per meter cubed is $15,7,16 \& 1$ below the other Sasy readings of Sasy 1, Sasy 3, Sasy $6 \&$ Elmside Circle. Hyper localizaton of PM2.5 monitors show that there is great variability of air quality within the small confines of Madison, Wisconsin, which is 77 square miiles of land. 18 PurpleAir PM2.5 Monitors in Madison. Wisconsin. 4 or $22 \%$ averaged above $12 \mathrm{ug} / \mathrm{m} 3$, 7 or $38 \%$ averaged above $25 \mathrm{ug} / \mathrm{m} 3,7$ or 38 averaged above $35 \mathrm{ug} / \mathrm{m} 3$ the 24 hour NAAQS limit over 3 days. LaFollette High School A: $16 \mathrm{ug} / \mathrm{m} 3$, LAWD4 A: $32 \mathrm{ug} / \mathrm{m} 3$, LAWD 7 A: $39 \mathrm{ug} / \mathrm{m} 3$, LAWD5 A: $33 \mathrm{ug} / \mathrm{me}, 950$ Clarence Ct A:35 ug/m3, Dudgeon-Monroe A: $35 \mathrm{ug} / \mathrm{m} 3$, $\quad$ LAWD6 A: $36 \mathrm{ug} / \mathrm{m} 3$, Faircrest A: $34 \mathrm{ug} / \mathrm{m} 3$, Wexford Village - Madison A: $19 \mathrm{ug} / \mathrm{m} 3$, LAWD2 A: $36 \mathrm{ug} / \mathrm{m} 3$, MNA WilMar Location A: $32 \mathrm{ug} / \mathrm{m} 3$, SASY 6 A: $28 \mathrm{ug} / \mathrm{m} 3$, SASY1A A: $35 \mathrm{ug} / \mathrm{m} 3$, Elmside Circle Park A: $21 \mathrm{ug} / \mathrm{m} 3$, Sasy7a A: $20 \mathrm{ug} / \mathrm{m} 3$, SASY 3b A: $27 \mathrm{ug} / \mathrm{m} 3$, GoPackOutside A: $28 \mathrm{ug} / \mathrm{m} 3$, Elinor and Gary A: $42 \mathrm{ug} / \mathrm{m} 3$

PM2.5 Readings (correlated to EPA Regulatory PM2.5 monitor data with a simple mathematical formula PA times 0.504 plus $1 / 8314$ ) average over 3 days to $5^{\text {th }}$ $\begin{array}{llllllllll}\text { decimal point. 16.79515 } & 32.51015 & 39.0639 & 33.26015 & 35.40265 & 35.4539 & 36.8014 & 34.41515 & 19.70765\end{array}$ $\begin{array}{llllllllll}36.3864 & 32.61515 & 28.7564 & 35.9939 & 21.21015 & 20.11515 & 27.3989 & 28.4764 & 42.0314\end{array}$

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