

—TOWN OF—
MIDDLETON
Wisconsin

March 21, 2022

Middleton-Cross Plains Area School Board, Board of Education

c/o Bob Hesselbein, President

roberth@mcpasd.k12.wi.us

Dear President Hesselbein,

We are enclosing the final version of a Trinity Consulting chart and three modeling maps showing the lead emissions areas of three communities that are directly impacted by breathable airborne lead particles emitted by aircraft operating in and out of the City of Middleton's Morey Airport ("Morey Field" or "Morey Airport") on a daily basis.

A very small amount of lead in a child can cause serious and life-long injuries, and inhaling the small lead particles from the exhaust of general aviation aircraft gas can be even more damaging than lead from lined water pipes (<https://www.cdc.gov/niosh/topics/lead/health.html>).

Please review the recent Proceedings of the National Academy of Sciences Study analyzing the effect of lead from automobile gas on the IQ of nearly half of the nation's population born between 1951 and 1980 (*Half of US population exposed to adverse lead levels in early childhood*, McFarland, Hauer, and Reuben; available at: <https://www.sciencedaily.com/releases/2022/03/220307162011.htm>). You should also be aware of the fact that inhaled lead particles from general aviation gas exhaust is even more damaging than the lead particles in the exhaust of automobile gas (<https://www.cdc.gov/niosh/topics/lead/health.html>).

Middleton's Morey Airport is primarily a recreational facility. It provides no essential services to the Middleton area and per the WI DNR, its operations are responsible for 32% of the annual airborne lead emissions in Dane County, the second highest county in the State of Wisconsin.

The enclosed maps show the deposit of breathable airborne lead particles directly over eight schools and several parks and athletic fields in the Middleton-Cross Plains Area School District. The maps also indicate that some of the most significant airborne lead concentrations are in the most densely populated areas immediately east of the Airport. These areas include or will soon include affordable housing units and many families with young school age children.

Finally, we recommend you review two highly respected studies establishing the susceptibility of young children to lead poisoning when they live close to or have some regular contact with general aviation airports like Middleton's Morey Airport (Miranda Study available at: <https://ncbi.nlm.nih.gov/pmc/articles/PMC3230438/>; Zahran Study available at:

<https://news.sccgov.org/sites/g/files/exjcpb956/files/documents/RHV-Airborne-Lead-Study-Report.pdf>).

If Middleton's Morey Airport continues its current operations or expands those operations in any way, a large number of Middleton-Cross Plains Area school age children will inevitably suffer some degree of lead toxicity. Once that occurs, the medical science is very clear that it is too late to prevent some damage to that child's health. Primary prevention is the only defense (<https://www.cdc.gov/nceh/lead/prevention/default.htm>).

As School Board Members, your primary duty is the safety, health, and welfare of the students in your charge. This matter is being brought to your attention in specific detail and with sufficient references so that you may fully understand the significance of the current and continuing potential damage to children in the Middleton-Cross Plains community and take all steps available to you as a School Board to help reduce or stop this community wide risk.

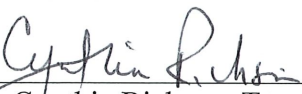
There are some steps the City of Middleton could immediately take to at least significantly reduce the deposit of breathable lead particles over many of the district schools. Those steps include:

1. Preclude all Morey Airport special fly-in events that invite aircraft from other areas of the state or country to fly lead producing airplanes to the Middleton area.
2. Stop all flight training at Morey Airport.
3. Institute a right-turn flight pattern to help keep airplanes away from many of the schools currently impacted.
4. Sell only unleaded gas at Morey Airport.
5. Refuse to approve any kind of expansion at Morey Airport.

These noted steps would not stop all the lead pollution from Morey Airport operations, but taken together they would significantly reduce the overall lead pollution over many schools and residences. Unfortunately, the City of Middleton to date has refused to take any of the above steps.

Any child in the Middleton-Cross Plains Area schools who suffers any amount of lead toxicity from Morey Airport operations is at an immediate distinct disadvantage with respect to children in the surrounding area school districts who are not exposed to breathable lead particles on a daily basis. This is a serious community health problem especially for the children in the area schools and the School Board should be at the forefront of helping to solve it.

Town Board, Town of Middleton


By: Cynthia Richson, Town Board, Chair

cc: Dana Monogue, Superintendent, Middleton-Cross Plains Area School District;
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Table 2-7. Estimated 2021 Lead Inventory and Piston Operations for C29

Month	Piston Operations	Pb Emissions (Grams)
January	2,429	4,649
February	2,591	4,960
March	3,340	6,393
April	3,226	6,176
May	3,572	6,838
June	3,781	7,237
July	4,154	7,953
August	3,815	7,303
September	3,591	6,874
October	3,508	6,716
November	3,525	6,747
December	2,721	5,208
Total	40,253	77,055

Figure 2-1. 2021 Monthly Lead (Pb) Emissions and Piston Operations

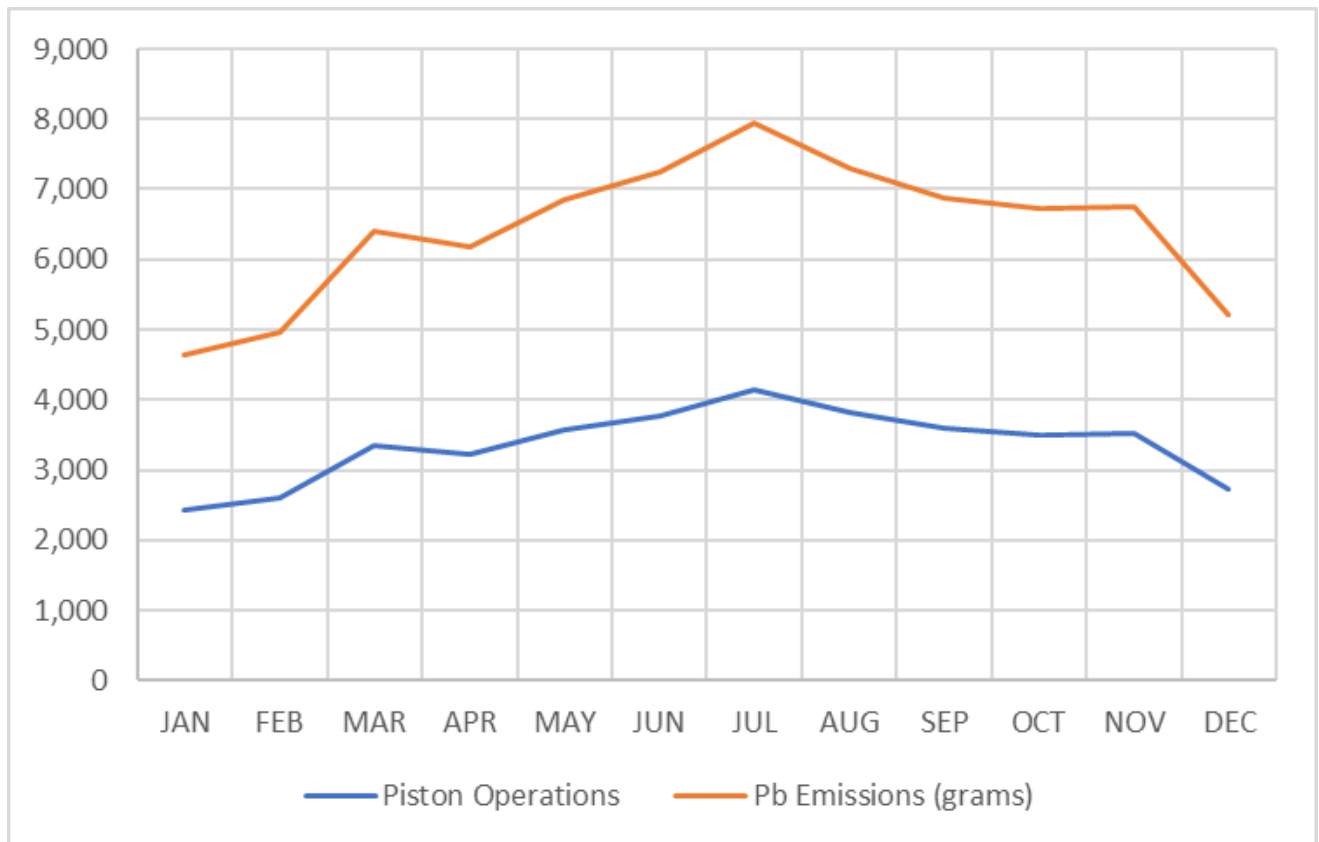
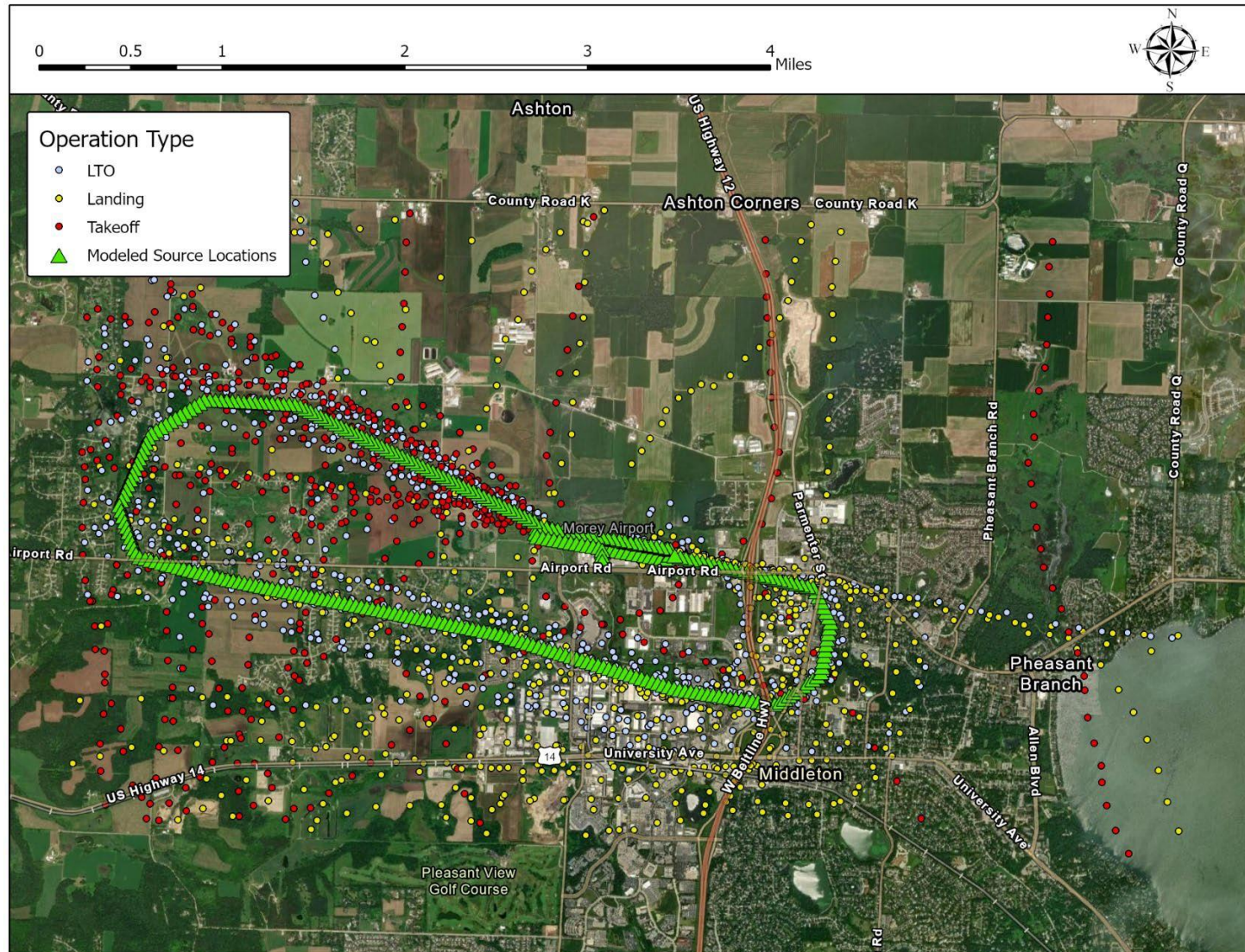


Figure 3-3. Modeled Source Locations Reference



4. AIR DISPERSION MODELING RESULTS

Modeling results are included in this section in Figure 3-1 and Figure 3-2. Figure 3-3 indicates during which season maximum monthly impacts occur. Points of interest are included in each figure and labeled with unique IDs. Table 3-1 includes a description for each point of interest along with maximum monthly and annual impacts as estimated by the AERMOD model for the receptor closest to each location. Even though the spring and summer months have higher emission rates, most receptors have highest impacts in the autumn and winter months due to calmer winds and weaker convective forces during those months.

Table 4-1. Points of Interest and Impacts from Nearest Receptors

ID	Description	Type	Max Season	µg/m ³	
				Monthly	Annual
1	Highwood Circle Estates	Homes	Autumn	0.0047	0.0017
2	Madison Montessori	School	Autumn	0.0011	0.0006
3	Sunset Ridge Elementary	School	Autumn	0.0014	0.0009
4	Primrose School of Middleton	School	Winter	0.0035	0.0015
5	Middleton Gymnastics Academy	Recreation	Winter	0.0121	0.0067
6	Ed Tallard Park	Park	Autumn	0.0019	0.0012
7	Northside Elementary School	School	Winter	0.0016	0.0006
8	Kromrey Middle School	School	Winter	0.0021	0.0010
9	Clark Street Community School	School	Winter	0.0028	0.0016
10	Clubhouse For Kids II	School	Autumn	0.0044	0.0018
11	Miramont Behavioral Health	Hospital	Autumn	0.0054	0.0024
12	Penni Klein Park	Park	Autumn	0.0024	0.0012
13	Middleton Firefighters Memorial Park	Park	Autumn	0.0077	0.0040
14	Firemen's Park	Park	Winter	0.0019	0.0009
15	Keva Sports Center	Recreation	Autumn	0.0144	0.0082
16	Hinrichs Family Farm Park	Park	Winter	0.0017	0.0008
17	Murphy Park	Park	Autumn	0.0047	0.0013
18	Hickory Woods Park	Park	Autumn	0.0021	0.0012
19	Summit Ridge Park	Park	Winter	0.0006	0.0003
20	Vosen Memorial Park	Park	Autumn	0.0009	0.0005
21	Settler's Prairie Park	Park	Autumn	0.0009	0.0005
22	Enchanted Valley Park	Park	Autumn	0.0004	0.0003

Figure 4-1. Max Monthly Impacts

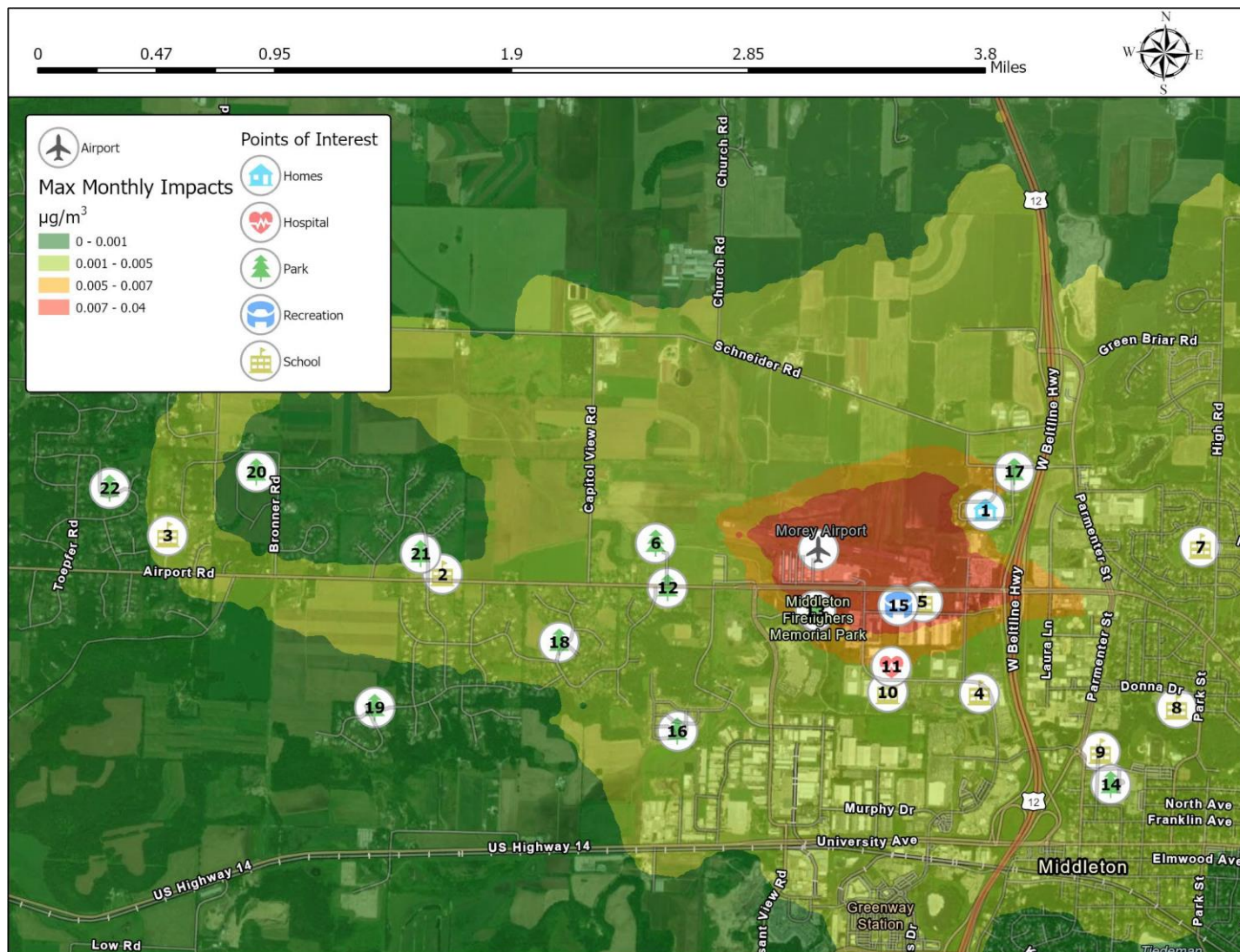


Figure 4-3. Maximum Monthly Impact Season

