
Appendix Q - Public Comments Received

This appendix (Appendix Q) includes copies of the actual letters and emails received from the public during the public commenting period. Provided references (in red) direct the reader back to **Appendix P Public and Agency Comments on the Draft EA** where a summary of public and agency comments on the 2022 Draft EA can be found including Airport responses.

For additional public and agency information, see **Appendix O Public Hearing & Public and Agency Involvement** for details on the Public Hearing and agency coordination. See **Appendix R Agency Comments Received** for copies of the actual coordination letters received from local, state, and federal agencies during the agency review period with Airport references to individual comments.

1 PUBLIC HEARING

2

3 COUNCIL CHAMBERS

4

5 301 E. Huron Street

6

7 Ann Arbor, Michigan

8

9 Tuesday, December 13, 2022

10

11 5:30 p.m.

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1 KAI PETAINEN. I live in the Second
2 Ward in Ann Arbor. For the past two years I've
3 been flying quite a bit with my cousin. He has a
4 Piper Cherokee and so I've spent a lot of time
5 flying to general aviation airports mainly in
6 Ontario, but I assume ones in Michigan aren't that
7 much different. There's a whole culture with
8 flying to these places and seeing these places,
9 and it's rather neat and nice to see. But it's
10 important that runways are long enough. But my
11 cousin's a skilled pilot, but when you have -- the
12 longer you make the runway, the safer it is.
13 There's no two buts about that. You need to make
14 it safe.

15 And if you have an airport that has
16 students learning to fly, then, you know, they
17 might not have as much experience for flying and
18 stuff like that, and so it's important to have a
19 longer runway for them. You hope no accidents
20 happen, but in case accidents -- you know. It
21 just makes it safer. And so I think anything to
22 do to alleviate that, you know, make that safer
23 for people and stuff is important to do.

24 I mean the airport's not going to see
25 like jumbo jets or anything flying into there or

1 any anything like that, nothing huge like that.
2 Some of these people get worried about really big
3 planes. I don't see that happening or anything
4 like that. But, you know, in general, it's just
5 better to have a longer runway.

See Support Response #2.

6 Sometimes people complain about noise
7 and stuff like that, they don't want to see planes
8 or whatever. I live beside a railway and I knew
9 when I moved there that there'd be trains going
10 by, I knew there'd noise going by, and so I moved
11 there knowing full well that there would be noise.
12 And then, one of the people did construction on a
13 train at one point. I remember complaining, hey,
14 there's noise going on. People are like, well,
15 you chose to live beside it. I'm like, yeah, I
16 did.

17 So, you know, if you have people who
18 move there in the past ten years or something like
19 that in that area, it's like, well, you chose to
20 live near an airport. They've got to remember,
21 this is just general aviation type airport, it's
22 not like a -- this is not Detroit Metropolitan
23 Airport. It's not DTW or anything like that. But
24 anyway, I just wanted to voice my support for the
25 project to get this done because safety is

1 important, that building a long runway is much,
2 much better for safety.

3 JACKIE SPEEN: I live in Stonebridge,
4 very close to the airport. It's already too
5 crowded and too noisy. I oppose the expansion.
6 If they do want to expand the airport, what I
7 would like to see is that they go south of Saline
8 and create a new airport and turn this land into a
9 park that we could all enjoy.

See General Response #5.

10 JOAN HALL: I strenuously object to
11 this dangerous, horrible expansion, and
12 unnecessary runway expansion of the Ann Arbor
13 Airport. Willow Run is ten minutes down I94. If
14 you want to bring in humongous, dangerous jets, go
15 to Willow Run. And, if you insist on having one
16 not at Willow Run, go to south Saline where
17 there's a lot more land and you won't be impacting
18 neighborhoods where children play, where neighbors
19 walk their dogs every single day.

See General Responses #5
and #10.

20 Recently, there was an airplane that
21 lost an engine and had to do an emergency landing
22 in the field. Luckily, it was a small airplane,
23 so, not a horrible tragedy. But, if that had been
24 one of those huge, noisy jets, imagine what could
25 have happened.

See Safety/Health Response #2

1 This runway is unnecessary. It's
2 dangerous. We have thousands of geese almost year
3 round, not hundreds, thousands. I cannot even
4 count. I live on Boulder Pond, so my back yard is
5 the pond. My dog chases the geese away multiple
6 times a day from my yard. Hundreds and hundreds,
7 thousand of geese. And, it's not -- we all know
8 the danger that can happen if a goose gets into an
9 engine. We've seen it nationwide. So, I
10 strenuously object to this unneeded and dangerous
11 runway expansion. Thanks.

See Wildlife Response #1 and Safety/Health
Responses #1 and #8.

12 MARY TOWNSEND: I live in Stonebridge.
13 We live on the larger point. We at times have --
14 I have literally in our yard and neighbors on each
15 side, so three yards, I have literally counted 200
16 geese on the yards. Plus there are geese on other
17 yards and in the lake. So, I mean, the statement
18 that there are 75 to 100 geese is way
19 underestimated when we have migration.

See Wildlife Response #1 and Safety/Health
Responses #1 and #8.

20 And I find the noise really annoying.
21 I walk our dogs. And, especially the jets are
22 really annoying, and I don't understand who it is
23 that uses the airport that warrants our public
24 funding. It seems to me, it should be a private
25 enterprise, totally self-sustaining, and should be

1 someplace that is not going to impact other
2 people's property values, and comfort levels.
3 That's it.

See Noise Responses #1, #2, and #3.

4 PHIL HEMENWAY: So, I'm not in favor of
5 any airport expansion. Okay. So I'll just treat
6 you like a nice person, a good listener, and thank
7 you for that. I am against approval of this
8 expansion, and the reason is in summary. And, let
9 me say that I'm a former Planning Commissioner in
10 Augusta Township, Washtenaw County, and also
11 former Township Trustee. I've held elective
12 office for one term, and I'm also the Homeowners
13 Association President for Maple Creek Subdivision
14 that's located at the corner of Textile and Maple
15 Road, which is adjacent to the airport by a mile,
16 and this is a very nice place to live.
17 Consequently, a lot of people live there, at least
18 a dozen subdivisions west of the airport that are
19 very nice subdivisions where people live,
20 families, pools, decks, recreational fields,
21 parks, you name it. Nice place to live.

22 So I request a sit-down -- I'm going to
23 presume the City of Ann Arbor is the
24 decision-making authority. I request the City of
25 Ann Arbor to reject the airport expansion and

1 request additional resources to complete the
2 Environmental Assessment. My primary -- my
3 primary concern is the Environmental Assessment is
4 not complete. There's so much more work to do.
5 There's so many omissions, there's so many missing
6 pieces of information, and, in some cases,
7 information is inaccurate. I'll be polite.

8 So, in spite of the City of Ann Arbor
9 noise regulations, the City of Ann Arbor has noise
10 regulations that specifically address aircraft,
11 and the EA does not address any noise issues
12 outside of the airport proper and a little bit
13 outside of it, a little bit outside the fence, not
14 much. That's a glaring omission, because there's
15 thousands of people that live outside of the
16 airport and airplanes fly over our heads on a
17 daily basis. Daily basis. And the airport
18 traffic has significantly increased in the 20
19 years that I've lived there, 25 years. It's a
20 significant increase of traffic, and the EA does
21 not even in the slightest way address noise issue
22 created by aircraft that are right over my head.
23 And that's another thing is what altitude are they
24 flying? They're supposed to fly 1,300 and higher.
25 I doubt that. Not every airplane does.

See Noise Responses
#1, #2, #3, and #4.

1 Okay. So, there's a noise abatement
2 issue. The Environment Assessment does not fully
3 address wetlands disturbances which will require a
4 public hearing process and the correct permits
5 from the State of Michigan to allow citizen
6 involvement and public comment and a public
7 review. A comprehensive materials, hazardous
8 materials management plan is not included in the
9 EA, and there's thousands of gallons of aircraft
10 fuel and other kind of hazardous materials located
11 in the airport, and I do not see a comprehensive
12 materials hazardous materials management plan in
13 the EA, and it should be in there. Particularly,
14 and then also, that there's public and private
15 wells located on airport property or close by.
16 That makes it even more important that a hazardous
17 materials management plan needs to be part of the
18 Environmental Assessment.

See Noise Response #7

See Safety/Health
Response #13

See Water Resources/
Water Quality Response
#1

19 Okay. And the materials management
20 hazardous material management plan would include
21 periodic inspections and emergency mitigation plan
22 and training and associated equipment to address
23 hazardous material spills, comprehensive
24 compliance with local ordinances, not just the
25 City of Ann Arbor, but also Pittsfield Township,

1 because the airport resides on the border of the
2 City of Ann Arbor an Pittsfield Township. Both
3 municipalities are affected. So, I do not see any
4 evidence in the EA of compliance with local
5 ordinance, or even that there's local ordinances
6 in existence. It's all primarily compliance with
7 FAA which is federal law, FAA rules and
8 regulations, but there's federal, there's state,
9 there's City of Ann Arbor and there's Pittsfield
10 Township. All of those laws and ordinances need
11 to be complied with, not just federal.

See General Response
#24

12 And all these processes, particularly
13 zoning changes, etcetera, or anything else,
14 involve citizen involvement, because we're
15 citizens. As the United States of America, people
16 have the right to speak and address the government
17 with public comment periods.

18 Okay. Let's see. So, the rest of it
19 is in my written comments which I'll provide. I'm
20 also going to mail them in, and I'll be polite,
21 I've done this before, and sometimes comments have
22 a funny way of getting lost, particularly mine.

23 Okay. I'm just going through a couple
24 more things. Just a couple of things about noise.
25 The EA relies exclusively for noise, noise

1 generation, noise recording is computer modeling.
2 Computer modeling to address noise in this
3 situation is wholly inadequate, wholly inadequate.
4 You need more than a computer model. And I've
5 done computer models. I'm an engineering
6 consultant. I've done computer models, and
7 they're nice, but computer models are only a
8 simulation of presumed data. It's not real data,
9 it's presumed data, and it doesn't address real
10 life. And the airport and planes flying around is
11 real life. We need more data collected over and
12 above a computer model, computer simulation. Call
13 it what you want. I'll be polite. We need more
14 authentic and accurate data to address the very
15 serious problem that noise is at the Ann Arbor
16 Airport, not just at the airport, airspace
17 surrounding the airport.

See Noise Response #5

18 So, let's see. There's one more thing.
19 My experience as a homeowner, and I live on the
20 624 runway flight path. I sit on my deck. Planes
21 fly over my head, and I have to stop talking if
22 I'm out there with my wife, for instance, having a
23 cup of coffee, or whatever. I have to stop
24 talking because the airplane noise. If I was
25 talking to you on my deck, we'd have to take like

1 a ten or a 15 second break because the airplane
2 noise drowns that out. So, my guess is, I'm
3 thinking around 70 to 75 decibels. I'm not
4 sitting out there with a meter. But again, it's
5 not my job to record that data, it's the EA's job.
6 And talk to real life human beings. If you want
7 to know how loud the noise is, come out to my
8 deck. I'll get a cooler full of pop and we can
9 record data when the plane's flying over, and you
10 can see that I'm not making this stuff up.

See Noise Response #7

11 The study dates. Oh, yeah. The study
12 dates. A lot of the noise data comes from study
13 dates prior to 2015. So, it's 2022 folks, and
14 there's -- I didn't see any data for 2022. In
15 addition here, I put a graph on my paper. The
16 airport volume has increased significantly. I
17 made A graph. Come on. Where is it. There it
18 is. Again, you're unbiased, so we can look at my
19 graph. The graph is showing -- demonstrates
20 increasing traffic counts for the Ann Arbor
21 Airport Tower, and it's significant. It's about
22 roughly 10% year over year. That's a lot. Yep.
23 Repeat and consistent homeowner overflights. I've
24 been at pool parties at my neighborhood, Maple
25 Creek Sub, and whether it's a pool party, backyard

See Noise Response #6

1 barbecue, it's disturbing when an airplane flies
2 over your head and everybody stops, party stops
3 till the airplane goes by, and then it comes back
4 five or ten minutes later. And the reason is, and
5 you're an unbiased, friendly person, the students
6 and the practice pilots do touch and go. So it's
7 takeoff, land, takeoff, land. Well, they're
8 flying over our heads every six minutes and they
9 fly directly over our heads. They're not like
10 okay, we're going to go a little bit this way this
11 time. No. I'm sitting there, it's like six or
12 seven minutes later, right. It's like if I hold
13 my finger straight up, they fly right over my
14 fingernail. They're very precise and accurate
15 flying over our heads. And what's particularly
16 disturbing for me is there's, and I could go grab
17 that brochure right there and it says that they're
18 not supposed to do it. They're supposed to be a
19 friendly neighbor. Well, they're not. They don't
20 follow that brochure that's sitting on that lady's
21 desk. They don't follow it. And then there's an
22 airport rules and regulation thing on the website,
23 and I've got it in my written comments. You go
24 there, and that says the same thing, and they do
25 not follow their own regulations. They don't

1 follow their mission statement. They don't follow
2 the regulations. They don't follow their rules.
3 They don't, don't, don't, don't. And I know
4 because I live under that flight path. So don't,
5 friendly person listening, don't tell me what's
6 going on. I live there. Okay. I try to be
7 professional and polite. Thank you.

8 And there's -- not only is there City
9 of Ann Arbor noise ordinances, Pittsfield Township
10 noise ordinances. There's another group called
11 NBAA.ORG, Aircraft Operations Environmental
12 Sustainability Noise Abatement Program that tells
13 airports and pilots how to behave when they're
14 flying over residential areas, and they don't
15 follow this. They say they do, and they don't.

16 Yeah. In spite of clear directions in
17 the Ann Arbor Airport brochure, Ann Arbor Airport
18 mission statement, there's consistent
19 noncompliance from pilots for the following
20 request. There's three of them. Pattern and
21 altitude when possible. Some fly low, some fly
22 high. Some fly below what they're supposed to
23 fly. Please be mindful of multiple touch and go
24 landings, especially early mornings and evenings.
25 They don't do it. So, whoever's listening, you

See Noise Response #7

1 don't do it. Strive to preserve the quality of
2 the residential areas by maintaining a
3 community-friendly noise abatement policy. You
4 don't do it. What else?

5 So in conclusion, there's significant
6 defects and omissions in the environmental
7 assessment demonstrating that an expanded EA is
8 needed with additional data collection, citizen
9 involvement, and public comment period prior to
10 any airport expansion. Thank you for the
11 opportunity submit these objections, concerns, and
12 comments. And there's attachments.

13 And I'm going to say one more thing and
14 I'll give somebody else a shot. I sent a letter
15 to Matthew Kulhanek. So Matthew, you didn't
16 answer my letter. I sent it to you on 12 June '22
17 about pilot's flying over me and my wife when
18 we're out walking. They did it five times in a
19 row, one, two, three, four, five. Flew right over
20 my head. I wrote you a letter. You never
21 answered. I wrote an email to Ann Arbor, the
22 airport, airport.annarbor.gov.org. You didn't
23 answer my email, and you didn't answer my phone
24 call. I did three things, and you didn't answer
25 the three things, not one of them. So, so much

1 for being a good neighbor.

2 Okay. Allow me to thank our friendly
3 stenographer. She's a wonderful woman, and thank
4 you for listening to me. Thank you. Thank you.
5 Thank you.

6 LANCE SIMPSON: I'm here from
7 Stonebridge Community Association, but also as a
8 resident of Stonebridge to state my objection to
9 this proposed airport -- well airport-runway
10 extension primarily on two grounds. One, it
11 greatly increases the hazard level of an airplane
12 striking geese and coming down in our
13 neighborhood. There have already been two
14 reported emergency landings in and around the Ann
15 Arbor Municipal Airport. One of them in 2006
16 resulted in the airplane landing on the golf
17 course, which was a good thing. Unfortunately,
18 the larger airplanes, if they're coming in and out
19 at lower elevation, and the reason they would be
20 lower is because the runway would be extended
21 closer to our neighborhood. The possibility of
22 them striking geese, which we have by the hundreds
23 on certain days, is very high. And,
24 unfortunately, a pilot would not have any time to
25 respond and properly land, especially if it was

See Wildlife Response #1 and
Safety/Health Responses #1
and #8.

1 jet powered. So, we consider that an unnecessary
2 hazard that is not justified by any possible
3 economic benefit, especially when one considers
4 that Willow Run Airport is only ten miles away and
5 is fully equipped and also has proper control
6 facilities to handle larger aircraft and round the
7 clock operations.

8 Another one I would oppose -- let me
9 gave a second point regarding that specific
10 project, and that is the noise levels. The noise
11 is a squared function, so when we're half the
12 distance from the noise source, we perceive four
13 times the sound level. That's just a matter of
14 physics. And, so, when aircraft take off, let's
15 say, 700 feet closer to us, they're going to be
16 much, much lower and, therefore, much, much
17 louder.

See Noise Responses #1, #2, and #3.

18 And then finally, if we do have more
19 traffic, especially larger machines and all the,
20 how shall we say, fueling and possible deicing and
21 everything, I wonder if the City of Ann Arbor has
22 considered possible contamination to their water
23 source which a good portion of which comes from
24 below that airport.

See Water Resources/Water Quality
Response #1

25 CLAIRE DAHL: I am here speaking

1 against the airport expansion. I live in the
2 Stonebridge neighborhood, of course, and I am very
3 supportive air travel and aircraft. I think it's
4 fun to see the small airplanes go over. They just
5 come and go. I see the color. I think of people
6 happily practicing doing their landing and
7 takeoffs and all that. I'm a volunteer out of
8 Willow Run -- well, Yankee Air Museum which is on
9 the grounds of Will Run. I feel that any larger
10 jets can use Willow Run. It is 17 minutes from my
11 front door to the Willow Run Airport. That's all.
12 Bigger than that, they can use Detroit. They do
13 not need to make it louder for us in the middle of
14 the night. And, I assume some of these are fat
15 cats who are flying their jets in for U of M
16 games, so, it wouldn't be all the time, but it
17 would be frequently enough that we don't need it.
18 I feel that if they really have to bring in more
19 things to Ann Arbor, they should use Willow Run or
20 Detroit.
21 I worry about the safety if somebody
22 were to overrun that extra runway too close to
23 State Street, too close to the golf course where
24 hundreds of houses are. I worry about the
25 incredible number of geese in the area, and we all

See General Responses #5
and #10

1 know what happens when a bird runs into
2 an airplane. I mean our cornfields and our ponds
3 and our yards are loaded with geese year round. I
4 worry about the exhaust, the runoff, the, really
5 the drainage of the airport because of Ann Arbor.
6 We already have problems with our river with the
7 dioxin issue. And now what if we have spills?
8 What if we have this? What happens to all of
9 their water and their refuse? I mean do we have
10 to pick it all up? Do we have to drink it?
11 Whatever.

See Wildlife Response #1 and Safety/Health
Responses #1 and #8, and Water Resources/
Water Quality Responses #1 and #3

12 So, I don't know what else I can say
13 except I am very much against it. We've lived
14 here for now 42 years, not in this house, but
15 we've lived in Ann Arbor for 42. This house,
16 we've been there for five years. And, like I
17 said, I'm supportive of the small airports because
18 I think it's great for Ann Arbor to have a small
19 one. Ann Arbor does not need to have the biggest
20 of everything all the time. These people can use
21 two airports that are literally minutes away.

22 DAN HORN: I'd like to register my
23 objection to the proposed expansion of the runway.
24 My reasons are primarily safety concerns about
25 incoming and out-coming aircraft traffic flying

1 even lower than what it is now over the
2 Stonebridge Community south of Lohr Road. And
3 also concerned about the contemplated, expected
4 increase in jet traffic, and the noise, and
5 exhaust pollution, and the general safety of the
6 community in and around the Ann Arbor-Pittsfield
7 Township area around the airport. That ought to
8 be enough.

See Noise Response #1 and Safety/Health Responses #6 and #14, and
Air Quality Response #1

9 MICHAEL LEE: I am not in the direct
10 flight path of the Ann Arbor Airport, but I am --
11 my house is positioned in such a way that flights
12 on training missions or training patterns go right
13 over my house repetitively.

14 I have three main issues that I want to
15 vocalize to get on the record. One, is the fact
16 that the Ann Arbor Airport is not in the City of
17 Ann Arbor city limits. To me, is part of the main
18 problem here. They don't have any skin in the
19 game. Any noise, or altitude issues, or safety
20 issues are really not felt by them because of the
21 remoteness of the airport to Ann Arbor city
22 limits. So, I don't feel they have any
23 credibility to even voice for or against this
24 whole project.

See General Response #11

25 Number two. I have tracked altitude

1 data and noise data measurements. I have it.
2 I've shared it with the Airport manager. The
3 violations of FAA rules and regulations are
4 serious. I have tried to file complaints with the
5 FAA. They have not successfully gone through. I
6 met two very nice people here today from the FAA.
7 They've given me their contact information, so I'm
8 going to try to break that logjam. But, my
9 concern relative altitude and noise is that if the
10 airport cannot manage the current issue, if they
11 put bigger aircraft or heavier aircraft or
12 whatever they're planning to do, they won't be
13 able to manage it. They can't manage the current
14 situation.

15 Third, and final point. The interface
16 with Matt Kulhanek, the manager, I've talked to
17 him on the phone a number of times. He's very
18 polite. He'll take my calls. He'll explain
19 things to me. Zero action has resulted. Nothing
20 has changed. He's given me these FAA contact
21 websites that don't work. I'm trying to fix that
22 on my own. I alerted Mr. Kulhanek tonight to the
23 fact that the websites he's given me are not
24 functioning. He was not aware of that. So, my
25 plan is, once I successfully work through this

See General Response #12

1 with the FAA, I'm going to share it with him.

2 Thank you for letting me do this.

3 SHASHANK KAUSHAL: So, there are tons
4 of questions which have remained unanswered for
5 me. I'm not entirely sure what the advantage in
6 terms of the increase in operations is and what
7 the economic benefit of that is. A lot of this
8 doesn't seem to be presented in terms of how it
9 affects, you know, people in Ann Arbor. It
10 only -- all the examples have been shared from the
11 point of view from people who have businesses who
12 are currently running like at whatever capacity
13 that might be, but not from like, you know, people
14 who live around Ann Arbor or, you know, anywhere
15 close to this project.

See Financial/Economic Response #4

16 It also seems like the FAA regulations
17 are being followed, but not in any practical
18 terms. One example for that would be, you know,
19 the air pollution, you know, conversation. It
20 seems like it won't go up above three decibels so
21 it's all good, but the real impact of that decibel
22 increase is not really factored. So, none of the
23 changes are factored in terms of either benefit
24 for Ann Arbor as a whole. I don't know anybody
25 who owns planes and uses it like even from a

See Air Quality Responses #1 and #3

1 business point of view, so it's difficult to
2 understand what is Ann Arbor getting out of it
3 really. And, I think it just makes it very
4 difficult for me to say yes or no to that. The
5 easy thing seems to be no, but like I'm not really
6 sure if, you know, Ann Arbor is missing out on
7 something significant with this airport, right?

8 There are some other things that are
9 missing. Like I don't really understand what the
10 mitigating points are if the cost of the project,
11 which is currently slated at three and a half
12 million or so, if it increases, what happens then,
13 right? I already mentioned the ROI.

See Financial/Economic Response #5

14 The other thing that I'm unclear on
15 through the project it seems like, you know, the
16 sparrow who could be sort of affected. Deer will
17 be culled quite a bit. But, I'm not really sure
18 what happens after the project ends, right? Like
19 do we monitor, you know, the migration patterns,
20 and stuff like that, to see if there's a healthy
21 sort of existence?

See Wildlife Responses #1 and #2

22 The other bit which is unclear is, you
23 know, in terms of Ann Arbor's carbon free goals.
24 How will this construction, you know, all the
25 added traffic affect it. So, it just seems like

1 I'm not quite sure if the City's goals on a lot of
2 things are actually being reflected here, you
3 know, in a good way.

4 And I'd say the last bit is that it
5 doesn't give me enough data to, you know, really
6 make up my mind. It just seems like, you know,
7 that we're doing this because we can do it
8 potentially, but no real clear answer there. So
9 that would be my thoughts.

10 MICHELLE ANZALDI: I oppose the Ann
11 Arbor Airport expansion. It does not serve a
12 purpose, and it will have a negative impact on
13 Pittsfield Township residents, period. Put a
14 period on that. Thank you.

See General Response #13

15 MARGARET ANDERSON: Our biggest
16 concern, one of our -- our biggest concern about
17 this is jets. The jet that's there and build it
18 longer and more jets can come. Right now there's
19 no, no -- for the jet, there's no blackout time.
20 So, 24/7. The jet can come in at 2 in the
21 morning, 3 in the morning right over the houses.
22 It's not like a Boston Airport where people have
23 to get a redeye from San Francisco so they're not
24 landing in Boston at 2 in the morning. There are
25 blackout periods. This is a 24/7. And the single

1 event sound of a jet coming in low is way, way
2 louder than some of those averages when they show
3 the noise impact.

4 So, the 24/7 aspect of it and the
5 potential for more jets. And the jet can come in
6 now, a \$3 million grant will let that jet have a
7 couple more passengers because it can put on more
8 fuel. Who is really benefiting for this \$3
9 million when Willow Run's right there. This is in
10 the middle of a growing residential area. Pulte
11 has put in like three, you know, three new housing
12 things with several hundred houses right around it
13 within right over the water of the lake and the
14 golf course. It just seems to be impacting -- \$3
15 million is just letting one jet put a few more
16 passengers on it, and keep coming in 24/7 and have
17 his other jet, or more jets come in. That's the
18 biggest concern. And the safety. The safety of
19 those jets coming in, and what happens when they
20 have an accident? Who's -- we don't have -- we're
21 not Willow Run with the quick response with all
22 the stuff if there's a jet accident. The
23 infrastructures at Willow Run, more jets being
24 able to carry more fuel and being able to take off
25 a little bit coming closer to our house is a

1 serious danger concern. All of us are afraid when
2 you see those things coming in. Pilot error.

3 Thank you very much.

See Noise Responses #1, #2, and #3 and
General Responses #5 and #10

4 HANS MASING: I'm a pilot that flies
5 out of Ann Arbor. I own a small aircraft there,
6 and this extension proposal solves a number of
7 safety issues that we run into, the first of which
8 is that in the current configuration of the
9 runway, the control tower is unable to have a
10 clear view of the end of runway 224. A number of
11 aircrafts often stack up there and it becomes, I
12 don't know if I want to say cluster F on the
13 record, but, right, it becomes a cluster and it's
14 a hazard to safety of operations.

See Support Response #3

15 Additionally, as I'm sure others have
16 already said, and I believe it even says in the
17 report, aircraft currently operating on the field
18 often cannot leave with a full payload, and that
19 also is a safety issue, especially on longer
20 flights and longer legs.

21 So that said, I understand the
22 emotional concern that people have around this,
23 but I guess the last thing I would add is that the
24 modern jets that would be operating out of the
25 field are quieter and faster than the jets were 20

1 years ago, and, so, therefore, while there may be
2 a few more jet operations, I am confident that the
3 total noise impact will not be significant. I
4 believe the studies show that. That's it. I
5 appreciate it.

See Support Response #4

6 CHRIS DiVIRGILIO: It's mind boggling
7 to me that this city which claims to value
8 sustainability and equity as much as it does is
9 still considering this expansion after years of
10 opposition. What do I mean? In my mind, and the
11 minds of many others, this is about one thing,
12 lengthening the runway so that private jet
13 passengers are not inconvenienced. When I say
14 inconvenienced, I mean mere inconvenience. The
15 current runway is sufficient for nearly all of the
16 airport's current flight operations. On a few
17 days each year the runway is either too hot or too
18 wet for full capacity operation for a limited
19 number of planes. On those days, jets have two
20 options, one, carry less weight, meaning fewer
21 people, or two, divert to Willow Run which has
22 longer runways. Willow Run is less than 15
23 minutes by car from Ann Arbor Airport. We're
24 talking about saving 15 minutes for a few, very,
25 very few extremely privileged members of this

1 community. So that's the minor inconvenience
2 factor that supposedly justifies the expansion.
3 It's not safety. The FAA has already rejected
4 that argument, as you all know.

5 On the other hand, we have
6 sustainability and equity. I'll start with
7 sustainability. Anybody who's paying attention
8 understands the climate crisis we're facing. Most
9 people also understand the disproportionate carbon
10 footprint of private jet air travel versus flying
11 commercial, or other modes of transportation.

12 This very community has adopted many
13 resolutions in the past several years intended to
14 promote sustainability and bring Ann Arbor closer
15 to carbon neutrality, or at least do our part to
16 mitigate climate change. It's a bit of a head
17 scratcher that at the same time we would be
18 speaking out of the other side of our collective
19 mouths seeking to turn our hobby aviation airport
20 into a jetport hub for private air travel.

21 To be clear, I'm not anti-private jet.
22 When used appropriately, they serve an important
23 purpose, but that doesn't mean Ann Arbor needs to
24 cater to them, especially when another viable
25 option already exists less than 15 minutes away.

See Air Quality Response
#3, General Responses #5,
#10, and #14

1 Now, let's talk about equity. The vast
2 majority of this community is not using this
3 airport. The small number of recreational hobby
4 aviators don't need this expansion for their tiny
5 planes. The very, very few private jet owners and
6 passengers who seek this expansion for their
7 convenience will impose upon the surrounding
8 communities and neighborhoods untold and
9 disproportionate burdens, extreme noise, safety
10 risks, pollution, and economic harm in the form of
11 reduced property values. The neighborhoods under
12 the landing path to the northeast, notably
13 Georgetown where I grew up, as well as those under
14 the takeoff path to the southwest where I live
15 now, will see a drastic increase in noise,
16 increased risk, and additional localized air
17 pollution from exhaust. These burdens will be
18 carried by thousands of residents of Ann Arbor and
19 the Townships of Pittsfield, Lodi, and Scio for
20 the benefit of a very few.

21 Some will say that expansion will not
22 pose a risk of any creased traffic, noise,
23 etcetera. Others will say expansion is necessary
24 to support a growing economic ecosystem in Ann
25 Arbor. Both of these cannot be true together. We

See Noise Responses #1, #2,
and #3, Air Quality Response
#3, and Financial/Economic
Response #2

1 have Willow Run. Willow Run is sufficient, but if
2 there was another option to save 15 minutes, who
3 wouldn't take it. If you build it, they will
4 come. Thank you.

See General Responses #5 and #10

5 OSCAR WU: So, I guess my main concern
6 is going to be -- is the noise effect. And I
7 understand that they did the analysis which shows
8 that the impact of the project would be a two
9 decibel on average increase from 58 to 60, and so
10 that didn't sound like very much to me. But, then
11 when he explained that two decibels, you know, the
12 difference between 50 and 68 is only about three
13 percent. But, in terms of actual noise levels, he
14 explained that that would actually be much higher
15 because ten decibels is a hundred percent increase
16 in noise. So, to me, that means a two decibel
17 increase is probably somewhere on the order of
18 twenty percent of more increase in noise, which is
19 quite substantial. So, that would be my main
20 concern that the noise levels are going to
21 increase by about twenty percent versus what they
22 are now.

See Noise Responses #5, #6, and #7

23 (The meeting was concluded at 7:00 p.m.)

24

25

1 CERTIFICATE OF NOTARY

2

3 STATE OF MICHIGAN)

4) SS

5 COUNTY OF JACKSON)

6

7 I, Melinda R. Womack, Certified

8 Shorthand Reporter, a Notary Public in and for the

9 above county and state, do hereby certify that the

10 above deposition was taken before me at the time and

11 place hereinbefore set forth; that the witness was by

12 me first duly sworn to testify to the truth, and

13 nothing but the truth, that the foregoing questions

14 asked and answers made by the witness were duly

15 recorded by me stenographically and reduced to

16 computer transcription; that this is a true, full and

17 correct transcript of my stenographic notes so taken;

18 and that I am not related to, nor of counsel to either

19 party nor interested in the event of this cause.

20

21



22 Melinda R. Womack, CSR-3611

23 Notary Public,

24 Jackson County, Michigan

25 My Commission expires: 06-22-2025

Hearing
12/13/2022

\$	6	aircraft 7:10,22 8:9 13:11 16:6,14 17:3 18:25 20:11 25:5,17
\$3 24:6,8,14	60 29:9	aircrafts 25:11
1	624 10:20	airplane 4:20,22 7:25 10:24 11:1 12:1,3 15:11,16 18:2
1,300 7:24	68 29:12	airplanes 7:16 15:18 17:4
10% 11:22	7	airport 2:15 3:20,21,23 4:4,6, 8,13 5:23 6:5,15,18,25 7:12, 16,17 8:11,15 9:1 10:10,16,17 11:16,21 12:22 13:17 14:10, 22 15:9,15 16:4,24 17:1,11 18:5 19:7,10,16,21 20:2,10 22:7 23:11,22 26:23 27:19 28:3
100 5:18	70 11:3	airport's 2:24 26:16
12 14:16	700 16:15	airport-runway 15:9
15 11:1 26:22,24 27:25 29:2	75 5:18 11:3	airport.annarbor.gov.org. 14:22
17 17:10	7:00 29:23	airports 2:5 13:13 18:17,21
2	A	airspace 10:16
2 23:20,24	abatement 8:1 13:12 14:3	alerted 20:22
20 7:18 25:25	accident 24:20,22	alleviate 2:22
200 5:15	accidents 2:19,20	altitude 7:23 13:21 19:19,25 20:9
2006 15:15	accurate 10:14 12:14	America 9:15
2015 11:13	action 20:19	analysis 29:7
2022 11:13,14	actual 29:13	ANDERSON 23:15
22 14:16	add 25:23	Ann 2:2 4:12 6:23,25 7:8,9 8:25 9:2,9 10:15 11:20 13:9, 17 14:21 15:14 16:21 17:19 18:5,15,18,19 19:6,10,16,17, 21 21:9,14,24 22:2,6,23 23:10 25:5 26:23 27:14,23 28:18,24
224 25:10	added 22:25	annoying 5:20,22
24/7 23:20,25 24:4,16	addition 11:15	anti-private 27:21
25 7:19	additional 7:1 14:8 28:16	ANZALDI 23:10
3	Additionally 25:15	appropriately 27:22
3 23:21	address 7:10,11,21 8:3,22 9:16 10:2,9,14	approval 6:7
4	adjacent 6:15	
42 18:14,15	adopted 27:12	
5	advantage 21:5	
50 29:12	affect 22:25	
58 29:9	affected 9:3 22:16	
	affects 21:9	
	afraid 25:1	
	air 17:3,8 21:19 27:10,20 28:16	

Arbor 2:2 4:12 6:23,25 7:8,9
8:25 9:2,9 10:15 11:20 13:9,
17 14:21 15:15 16:21 17:19
18:5,15,18,19 19:10,16,17,21
21:9,14,24 22:2,6 23:11 25:5
26:23 27:14,23 28:18,25

Arbor's 22:23

Arbor-pittsfield 19:6

area 3:19 17:25 19:7 24:10

areas 13:14 14:2

argument 27:4

aspect 24:4

assessment 7:2,3 8:2,18 14:7

Association 6:13 15:7

assume 2:6 17:14

attachments 14:12

attention 27:7

Augusta 6:10

authentic 10:14

authority 6:24

average 29:9

averages 24:2

aviation 2:5 3:21 27:19

aviators 28:4

aware 20:24

B

back 5:4 12:3

backyard 11:25

barbecue 12:1

basis 7:17

behave 13:13

beings 11:6

benefit 16:3 21:7,23 28:20

benefiting 24:8

big 3:2

bigger 17:12 20:11

biggest 18:19 23:15,16 24:18

bird 18:1

bit 2:3 7:12,13 12:10 22:17,22
23:4 24:25 27:16

blackout 23:19,25

boggling 26:6

border 9:1

Boston 23:22,24

Boulder 5:4

break 11:1 20:8

bring 4:14 17:18 27:14

brochure 12:17,20 13:17

build 23:17 29:3

building 4:1

burdens 28:9,17

business 22:1

businesses 21:11

but 2:13

C

call 10:12 14:24

called 13:10

calls 20:18

capacity 21:12 26:18

car 26:23

carbon 22:23 27:9,15

carried 28:18

carry 24:24 26:20

case 2:20

cases 7:6

cater 27:24

cats 17:15

change 27:16

changed 20:20

chases 5:5

Cherokee 2:4

children 4:18

chose 3:15,19

CHRIS 26:6

citizen 8:5 9:14 14:8

citizens 9:15

city 6:23,24 7:8,9 8:25 9:2,9
13:8 16:21 19:16,17,21 26:7

City's 23:1

claims 26:7

CLAIRE 16:25

clear 13:16 23:8 25:10 27:21

climate 27:8,16

clock 16:7

close 4:4 8:15 17:22,23 21:15

closer 15:21 16:15 24:25
27:14

cluster 25:12,13

coffee 10:23

collected 10:11

collection 14:8

collective 27:18

color 17:5

comfort 6:2

comment 8:6 9:17 14:9

comments 9:19,21 12:23
14:12

commercial 27:11

Commissioner 6:9

communities 28:8

community 15:7 19:2,6 27:1,
12 28:2

community-friendly 14:3

complain 3:6
complaining 3:13
complaints 20:4
complete 7:1,4
compliance 8:24 9:4,6
complied 9:11
comprehensive 8:7,11,23
computer 10:1,2,4,5,6,7,12
concern 7:3 20:9 23:16 24:18
25:1,22 29:5,20
concerned 19:3
concerns 14:11 18:24
concluded 29:23
conclusion 14:5
confident 26:2
configuration 25:8
considered 16:22
considers 16:3
consistent 11:23 13:18
construction 3:12 22:24
consultant 10:6
contact 20:7,20
contamination 16:22
contemplated 19:3
control 16:5 25:9
convenience 28:7
conversation 21:19
cooler 11:8
corner 6:14
cornfields 18:2
correct 8:4
cost 22:10
count 5:4
counted 5:15

counts 11:20
County 6:10
couple 9:23,24 24:7
cousin 2:3
cousin's 2:11
creased 28:22
create 4:8
created 7:22
credibility 19:23
Creek 6:13 11:25
crisis 27:8
crowded 4:5
culled 22:17
culture 2:7
cup 10:23
current 20:10,13 25:8 26:15,
16

D

DAHL 16:25
daily 7:17
DAN 18:22
danger 5:8 25:1
dangerous 4:11,14 5:2,10
data 10:8,9,11,14 11:5,9,12,14
14:8 20:1 23:5
dates 11:11,12,13
day 4:19 5:6
days 15:23 26:17,19
decibel 21:21 29:9,16
decibels 11:3 21:20 29:11,15
decision-making 6:24
deck 10:20,25 11:8
decks 6:20
Deer 22:16

defects 14:6
deicing 16:20
demonstrates 11:19
demonstrating 14:7
desk 12:21
Detroit 3:22 17:12,20
difference 29:12
difficult 22:1,4
dioxin 18:7
direct 19:9
directions 13:16
directly 12:9
disproportionate 27:9 28:9
distance 16:12
disturbances 8:3
disturbing 12:1,16
divert 26:21
Divirgilio 26:6
dog 5:5
dogs 4:19 5:21
door 17:11
doubt 7:25
dozen 6:18
drainage 18:5
drastic 28:15
drink 18:10
drowns 11:2
DTW 3:23

E

EA 7:11,20 8:9,13 9:4,25 14:7
EA's 11:5
early 13:24
easy 22:5

economic 16:3 21:7 28:10,24
ecosystem 28:24
effect 29:6
elective 6:11
elevation 15:19
email 14:21,23
emergency 4:21 8:21 15:14
emotional 25:22
end 25:10
ends 22:18
engine 4:21 5:9
engineering 10:5
enjoy 4:9
enterprise 5:25
Environment 8:2
environmental 7:2,3 8:18
13:11 14:6
equipment 8:22
equipped 16:5
equity 26:8 27:6 28:1
error 25:2
etcetera 9:13 28:23
evenings 13:24
event 24:1
evidence 9:4
examples 21:10
exclusively 9:25
exhaust 18:4 19:5 28:17
existence 9:6 22:21
exists 27:25
expand 4:6
expanded 14:7
expansion 4:5,11,12 5:11 6:5,
8,25 14:10 17:1 18:23 23:11
26:9 27:2 28:4,6,21,23

expected 19:3
experience 2:17 10:19
explain 20:18
explained 29:11,14
extended 15:20
extension 15:10 25:6
extra 17:22
extreme 28:9
extremely 26:25

F

FAA 9:7 20:3,5,6,20 21:1,16
27:3
facilities 16:6
facing 27:8
fact 19:15 20:23
factor 27:2
factored 21:22,23
families 6:20
faster 25:25
fat 17:14
favor 6:4
federal 9:7,8,11
feel 17:9,18 19:22
feet 16:15
felt 19:20
fence 7:13
fewer 26:20
field 4:22 25:17,25
fields 6:20
file 20:4
final 20:15
finally 16:18
find 5:20

finger 12:13
fingernail 12:14
fix 20:21
Flew 14:19
flies 12:1 25:4
flight 10:20 13:4 19:10 26:16
flights 19:11 25:20
fly 2:16 7:16,24 10:21 12:9,13
13:21,22,23
flying 2:3,5,8,17,25 7:24 10:10
11:9 12:8,15 13:14 14:17
17:15 18:25 27:10

folks 11:13
follow 12:20,21,25 13:1,2,15
footprint 27:10
form 28:10
Francisco 23:23
free 22:23
frequently 17:17
friendly 12:5,19 13:5 15:2
front 17:11
fuel 8:10 24:8,24
fueling 16:20
full 3:11 11:8 25:18 26:18
fully 8:2 16:5
fun 17:4
function 16:11
functioning 20:24
funding 5:24
funny 9:22

G

gallons 8:9
game 19:19
games 17:16

gave 16:9
geese 5:2,5,7,16,18 15:12,22
17:25 18:3
general 2:5 3:4,21 19:5
generation 10:1
Georgetown 28:13
give 14:14 23:5
glaring 7:14
goals 22:23 23:1
golf 15:16 17:23 24:14
good 6:6 15:1,17 16:23 21:21
23:3
goose 5:8
government 9:16
grab 12:16
grant 24:6
graph 11:15,17,19
great 18:18
greatly 15:11
grew 28:13
grounds 15:10 17:9
group 13:10
growing 24:10 28:24
guess 11:2 25:23 29:5

H

half 16:11 22:11
HALL 4:10
hand 27:5
handle 16:6
HANS 25:4
happen 2:20 5:8
happened 4:25
happening 3:3
happily 17:6

harm 28:10
hazard 15:11 16:2 25:14
hazardous 8:7,10,12,16,20,23
He'll 20:18
head 7:22 10:21 12:2 14:20
27:16
heads 7:16 12:8,9,15
healthy 22:20
hearing 8:4
heavier 20:11
held 6:11
HEMENWAY 6:4
hey 3:13
high 13:22 15:23
higher 7:24 29:14
hobby 27:19 28:3
hold 12:12
homeowner 10:19 11:23
Homeowners 6:12
hope 2:19
HORN 18:22
horrible 4:11,23
hot 26:17
house 18:14,15 19:11,13
24:25
houses 17:24 23:21 24:12
housing 24:11
hub 27:20
huge 3:1 4:24
human 11:6
humongous 4:14
hundred 24:12 29:15
hundreds 5:3,6 15:22 17:24

I

I94 4:13
imagine 4:24
impact 6:1 21:21 23:12 24:3
26:3 29:8
impacting 4:17 24:14
important 2:10,18,23 4:1 8:16
27:22
impose 28:7
inaccurate 7:7
inadequate 10:3
include 8:20
included 8:8
incoming 18:25
inconvenience 26:14 27:1
inconvenienced 26:13,14
increase 7:20 19:4 21:6,22
28:15 29:9,15,17,18,21
increased 7:18 11:16 28:16
increases 15:11 22:12
increasing 11:20
incredible 17:25
information 7:6,7 20:7
infrastructures 24:23
insist 4:15
inspections 8:21
instance 10:22
intended 27:13
interface 20:15
involve 9:14
involvement 8:6 9:14 14:9
issue 7:21 8:2 18:7 20:10
25:19
issues 7:11 19:14,19,20 25:7

J

JACKIE 4:3
jet 16:1 19:4 23:17,19,20 24:1,
5,6,15,17,22 26:2,12 27:10,21
28:5
jetport 27:20
jets 2:25 4:14,24 5:21 17:10,
15 23:17,18 24:5,17,19,23
25:24,25 26:19
JOAN 4:10
job 11:5
jumbo 2:25
June 14:16
justified 16:2
justifies 27:2

K

KAI 2:1
KAUSHAL 21:3
kind 8:10
knew 3:8,10
knowing 3:11
Kulhanek 14:15 20:16,22

L

lady's 12:20
lake 5:17 24:13
LANCE 15:6
land 4:8,17 12:7 15:25
landing 4:21 15:16 17:6 23:24
28:12
landings 13:24 15:14
larger 5:13 15:18 16:6,19 17:9
law 9:7
laws 9:10

learning 2:16
leave 25:18
LEE 19:9
legs 25:20
lengthening 26:12
letter 14:14,16,20
letting 21:2 24:15
level 15:11 16:13
levels 6:2 16:10 29:13,20
life 10:10,11 11:6
limited 26:18
limits 19:17,22
listener 6:6
listening 13:5,25 15:4
literally 5:14,15 18:21
live 2:1 3:8,15,20 4:3 5:4,12,
13 6:16,17,19,21 7:15 10:19
13:4,6 17:1 21:14 28:14
lived 7:19 18:13,15
loaded 18:3
local 8:24 9:4,5
localized 28:16
located 6:14 8:10,15
Lodi 28:19
logjam 20:8
Lohr 19:2
long 2:10 4:1
longer 2:12,19 3:5 23:18
25:19,20 26:22
lost 4:21 9:22
lot 2:4 4:17 6:17 11:12,22 21:7
23:1
loud 11:7
louder 16:17 17:13 24:2
low 13:21 24:1

lower 15:19,20 16:16 19:1
Luckily 4:22

M

machines 16:19
made 11:17
mail 9:20
main 19:14,17 29:5,19
maintaining 14:2
majority 28:2
make 2:12,13,22 17:13 23:6
makes 2:21 8:16 22:3
making 11:10
manage 20:10,13
management 8:8,12,17,19,20
manager 20:2,16
Maple 6:13,14 11:24
MARGARET 23:15
MARY 5:12
MASING 25:4
material 8:20,23
materials 8:7,8,10,12,17,19
Matt 20:16
matter 16:13
Matthew 14:15
meaning 26:20
means 29:16
measurements 20:1
meeting 29:23
members 26:25
mentioned 22:13
mere 26:14
met 20:6
meter 11:4

Hearing
12/13/2022

Metropolitan 3:22
MICHAEL 19:9
MICHELLE 23:10
Michigan 2:6 8:5
middle 17:13 24:10
migration 5:19 22:19
mile 6:15
miles 16:4
million 22:12 24:6,9,15
mind 23:6 26:6,10
mindful 13:23
minds 26:11
mine 9:22
minor 27:1
minutes 4:13 12:4,8,12 17:10
18:21 26:23,24 27:25 29:2
missing 7:5 22:6,9
mission 13:1,18
missions 19:12
mitigate 27:16
mitigating 22:10
mitigation 8:21
model 10:4,12
modeling 10:1,2
models 10:5,6,7
modern 25:24
modes 27:11
monitor 22:19
morning 23:21,24
mornings 13:24
mouths 27:19
move 3:18
moved 3:9,10
multiple 5:5 13:23

Municipal 15:15
municipalities 9:3
Museum 17:8

N

nationwide 5:9
NBAA.ORG 13:11
neat 2:9
needed 14:8
negative 23:12
neighbor 12:19 15:1
neighborhood 11:24 15:13,21
17:2
neighborhoods 4:18 28:8,11
neighbors 4:18 5:14
neutrality 27:15
nice 2:9 6:6,16,19,21 10:7
20:6
night 17:14
noise 3:6,10,11,14 5:20 7:9,
11,21 8:1 9:24,25 10:1,2,15,
24 11:2,7,12 13:9,10,12 14:3
16:10,12 19:4,19 20:1,9 24:3
26:3 28:9,15,22 29:6,13,16,
18,20
noisy 4:5,24
noncompliance 13:19
northeast 28:12
notably 28:12
number 17:25 19:25 20:17
25:6,10 26:19 28:3

O

object 4:10 5:10
objection 15:8 18:23
objections 14:11

office 6:12
omission 7:14
omissions 7:5 14:6
Ontario 2:6
operating 25:17,24
operation 26:18
operations 13:11 16:7 21:6
25:14 26:2,16
opportunity 14:11
oppose 4:5 16:8 23:10
opposition 26:10
option 27:25 29:2
options 26:20
order 29:17
ordinance 9:5
ordinances 8:24 9:5,10 13:9,
10
OSCAR 29:5
out-coming 18:25
overflights 11:23
overrun 17:22
owners 28:5
owns 21:25

P

p.m. 29:23
paper 11:15
park 4:9
parks 6:21
part 8:17 19:17 27:15
parties 11:24
party 11:25 12:2
passengers 24:7,16 26:13
28:6
past 2:2 3:18 27:13

path 10:20 13:4 19:10 28:12,
14
Pattern 13:20
patterns 19:12 22:19
paying 27:7
payload 25:18
people 2:23 3:2,6,12,14,17
6:17,19 7:15 9:15 17:5 18:20
20:6 21:9,11,13 23:22 25:22
26:21 27:9
people's 6:2
perceive 16:12
percent 29:13,15,18,21
period 14:9 23:13,14
periodic 8:21
periods 9:17 23:25
permits 8:4
person 6:6 12:5 13:5
PETAINEN 2:1
PHIL 6:4
phone 14:23 20:17
physics 16:14
pick 18:10
pieces 7:6
pilot 2:11 15:24 25:2,4
pilot's 14:17
pilots 12:6 13:13,19
Piper 2:4
Pittsfield 8:25 9:2,9 13:9
23:13 28:19
place 6:16,21
places 2:8
plan 8:8,12,17,20,21 20:25
plane's 11:9
planes 3:3,7 10:10,20 21:25
26:19 28:5

planning 6:9 20:12
play 4:18
point 3:13 5:13 16:9 20:15
21:11 22:1
points 22:10
policy 14:3
polite 7:7 9:20 10:13 13:7
20:18
pollution 19:5 21:19 28:10,17
pond 5:4,5
ponds 18:2
pool 11:24,25
pools 6:20
pop 11:8
portion 16:23
pose 28:22
positioned 19:11
possibility 15:21
potential 24:5
potentially 23:8
powered 16:1
practical 21:17
practice 12:6
practicing 17:6
precise 12:14
presented 21:8
preserve 14:1
President 6:13
presume 6:23
presumed 10:8,9
primarily 9:6 15:10 18:24
primary 7:2,3
prior 11:13 14:9
private 5:24 8:14 26:12 27:10,
20 28:5

privileged 26:25
problem 10:15 19:18
problems 18:6
process 8:4
processes 9:12
professional 13:7
Program 13:12
project 3:25 16:10 19:24
21:15 22:10,15,18 29:8
promote 27:14
proper 7:12 16:5
properly 15:25
property 6:2 8:15 28:11
proposal 25:6
proposed 15:9 18:23
provide 9:19
public 5:23 8:4,6,14 9:17 14:9
Pulte 24:10
purpose 23:12 27:23
put 11:15 20:11 23:13 24:7,11,
15

Q

quality 14:1
questions 21:4
quick 24:21
quieter 25:25

R

railway 3:8
real 10:8,9,11 11:6 21:21 23:8
reason 6:8 12:4 15:19
reasons 18:24
Recently 4:20
record 11:5,9 19:15 25:13

recording 10:1
recreational 6:20 28:3
redeye 23:23
reduced 28:11
reflected 23:2
refuse 18:9
register 18:22
regulation 12:22
regulations 7:9,10 9:8 12:25
13:2 20:3 21:16
reject 6:25
rejected 27:3
relative 20:9
relies 9:25
remained 21:4
remember 3:13,20
remoteness 19:21
Repeat 11:23
repetitively 19:13
report 25:17
reported 15:14
request 6:22,24 7:1 13:20
require 8:3
resident 15:8
residential 13:14 14:2 24:10
residents 23:13 28:18
resides 9:1
resolutions 27:13
resources 7:1
respond 15:25
response 24:21
rest 9:18
resulted 15:16 20:19
review 8:7

risk 28:16,22
risks 28:10
river 18:6
Road 6:15 19:2
ROI 22:13
roughly 11:22
round 5:3 16:6 18:3
row 14:19
rules 9:7 12:22 13:2 20:3
run 4:13,15,16 16:4 17:8,9,10,
11,19 24:21,23 25:7 26:21,22
29:1
Run's 24:9
running 21:12
runoff 18:4
runs 18:1
runway 2:12,19 3:5 4:1,12 5:1,
11 10:20 15:20 17:22 18:23
25:9,10 26:12,15,17
runways 2:10 26:22

S

safe 2:14
safer 2:12,21,22
safety 3:25 4:2 17:21 18:24
19:5,19 24:18 25:7,14,19 27:3
28:9
Saline 4:7,16
San 23:23
save 29:2
saving 26:24
Scio 28:19
scratcher 27:17
seek 28:6
seeking 27:19
self-sustaining 5:25

serve 23:11 27:22
share 21:1
shared 20:2 21:10
SHASHANK 21:3
shot 14:14
show 24:2 26:4
showing 11:19
shows 29:7
side 5:15 27:18
significant 7:20 11:21 14:5
22:7 26:3
significantly 7:18 11:16
SIMPSON 15:6
simulation 10:8,12
single 4:19 23:25
sit 10:20
sit-down 6:22
sitting 11:4 12:11,20
situation 10:3 20:14
skilled 2:11
skin 19:18
slated 22:11
slightest 7:21
small 4:22 17:4 18:17,18 25:5
28:3
solves 25:6
someplace 6:1
sort 22:16,21
sound 16:13 24:1 29:10
source 16:12,23
south 4:7,16 19:2
southwest 28:14
sparrow 22:16
speak 9:16
speaking 16:25 27:18

Hearing
12/13/2022

specific 16:9
specifically 7:10
SPEEN 4:3
spent 2:4
spills 8:23 18:7
spite 7:8 13:16
squared 16:11
stack 25:11
start 27:6
state 8:5 9:8 15:8 17:23
statement 5:17 13:1,18
States 9:15
stenographer 15:3
Stonebridge 4:3 5:12 15:7,8
17:2 19:2
stop 10:21,23
stops 12:2
straight 12:13
Street 17:23
strenuously 4:10 5:10
striking 15:12,22
Strive 14:1
students 2:16 12:5
studies 26:4
study 11:11,12
stuff 2:18,23 3:7 11:10 22:20
24:22
Subdivision 6:13
subdivisions 6:18,19
submit 14:11
substantial 29:19
successfully 20:5,25
sufficient 26:15 29:1
summary 6:8
support 3:24 28:24

supportive 17:3 18:17
supposed 7:24 12:18 13:22
supposedly 27:2
surrounding 10:17 28:7
sustainability 13:12 26:8
27:6,7,14

T

takeoff 12:7 28:14
takeoffs 17:7
talk 11:6 28:1
talked 20:16
talking 10:21,24,25 26:24
tells 13:12
ten 3:18 4:13 11:1 12:4 16:4
29:15
term 6:12
terms 21:6,8,18,23 22:23
29:13
Textile 6:14
there'd 3:9,10
thing 7:23 10:18 12:22,24
14:13 15:17 22:5,14 25:23
26:11
things 9:24 14:24,25 17:19
20:19 22:8 23:2 24:12 25:2
thinking 11:3
thoughts 23:9
thousand 5:7
thousands 5:2,3 7:15 8:9
28:18
till 12:3
time 2:4 12:11 15:24 17:16
18:20 23:19 27:17
times 5:6,13 14:18 16:13
20:17
tiny 28:4

today 20:6
tonight 20:22
tons 21:3
total 26:3
totally 5:25
touch 12:6 13:23
tower 11:21 25:9
TOWNSEND 5:12
Township 6:10,11 8:25 9:2,10
13:9 19:7 23:13
Townships 28:19
tracked 19:25
traffic 7:18,20 11:20 16:19
18:25 19:4 22:25 28:22
tragedy 4:23
train 3:13
training 8:22 19:12
trains 3:9
transportation 27:11
travel 17:3 27:10,20
treat 6:5
true 28:25
Trustee 6:11
turn 4:8 27:19
twenty 29:18,21
type 3:21

U

unable 25:9
unanswered 21:4
unbiased 11:18 12:5
unclear 22:14,22
underestimated 5:19
understand 5:22 22:2,9 25:21
27:9 29:7

understands 27:8
United 9:15
unnecessary 4:12 5:1 16:1
unneded 5:10
untold 28:8

V

values 6:2 28:11
vast 28:1
versus 27:10 29:21
viable 27:24
view 21:11 22:1 25:10
violations 20:3
vocalize 19:15
voice 3:24 19:23
volume 11:16
volunteer 17:7

W

walk 4:19 5:21
walking 14:18
wanted 3:24
Ward 2:2
warrants 5:23
Washtenaw 6:10
water 16:22 18:9 24:13
website 12:22
websites 20:21,23
weight 26:20
wells 8:15
west 6:18
wet 26:18
wetlands 8:3
whoever's 13:25

wholly 10:3
wife 10:22 14:17
Willow 4:13,15,16 16:4 17:8,
10,11,19 24:9,21,23 26:21,22
29:1
woman 15:3
wonderful 15:3
work 7:4 20:21,25
worried 3:2
worry 17:21,24 18:4
written 9:19 12:23
wrote 14:20,21
WU 29:5

Y

Yankee 17:8
yard 5:4,6,14
yards 5:15,16,17 18:3
year 5:2 11:22 18:3 26:17
years 2:2 3:18 7:19 18:14,16
26:1,9 27:13

Z

zoning 9:13

Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mikulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Name: DONALD DEATRICK

Organization: SELF

Address: 4879 LONE OAK COURT

Telephone: _____ E-Mail: DDEATRICK@LIVE.COM

Comments: REGARDING THE STUDY'S NOISE LEVELS,

FOR THE CONSULTANT THE STUDY USED
"MODELS" APPROVED BY THE FAA, YOU MUST USE
ACTUAL READINGS, BECAUSE THE PILOTS IN AND OUT
OF ANN ARBOR AIRPORT DO NOT FOLLOW OR ADHERE TO
FAA APPROVED CRITERIA. SPECIFICALLY, TOUCH AND GO
PILOT FLY TO LOW, VERY LOW, SOME UNDER 200-
350 FEET. IVE A RECORD OF THESE LOW LEVEL
PLANES, THEREFORE, THE MODELS USED IN THIS
STUDY ARE NOT VALID.

See Noise
Responses #7 and #9

(Please attach an additional sheet or use back of form if necessary)



Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mjkulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Name: Rosemarie Rowney

Organization: _____

Address: 4879 Lone Oak Ct, Ann Arbor, MI 48108

Telephone: (734) 213-0929 E-Mail: RRowney@comcast.net

Comments: I am opposed to the airport expansion, because...

① Ann Arbor's efforts to curb emissions to Net Zero would require the Airport to halt airport expansion.

② Potential for well contamination - the three wells on the Airport property are vulnerable to aviation fuel spills; these wells provide 20% of AA's water supply already endangered by PFAS & Dioxin

③ There is LEAD in aviation fuel

④ "Touch and goes" account for a large % of take offs & landings

⑤ Willow Run Airport is open for larger planes

⑥ Expansion will benefit only one person - AvFuel.

⑦ CANADA Geese, CANADA Geese, CANADA Geese

(Please attach an additional sheet or use back of form if necessary)

See Air Quality Response #3, Water Resources/Water Quality Responses #1 and #3, Noise Responses #1 and #9, General Responses #5, #10, and #13, and Wildlife Response #1



Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mikulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Name: DONALD DEATRICK

Organization: SELF

Address: 4879 LONE OAK COURT

Telephone: _____ E-Mail: DDENTRICK@LIVE.COM

Comments: DONOT FIND WHERE THE STUDY
ADDRESS THE LARGE NUMBER OF GEES
NEAR THE SOUTH END OF THE RUNWAY, FOR THE
PAST FIVE YEAR THE GEES POPULATION
HAS INCREASED FROM 250 TO CURRENTLY,
2022, TO OVER 400 GEES, IN THE AREA
NEAR THE LOAR ROAD END OF THE RUNWAY
THE GEES COME THERE TO GLEAN
SOY BEANS AND CORN, TWICE I VIEWED
A NEAR COLLISION OF TWO PLANES WITH A GEESE.
ONE PILOT ALMOST CRASHED TRYING TO AVOID
A FLOCK OF 35 GEES, AS I WATCHED

(Please attach an additional sheet or use back of form if necessary)

TO ~~SHOCK~~ AT THE TURN THE
PILOT MADE TO AVOID A CRASH

See Safety/Health
Responses #1 and
#8 and Wildlife
Response #1

Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mjkulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Name: CARL KOERSCHNER
Organization: RESIDENT OF PITTSFIELD TOWNSHIP
Address: 5934 EAST HORIZONS CT., ANN ARBOR 48108
Telephone: 734 834 5178 E-Mail: carlkoerschner@gmail.com
Comments: _____

I AM OPPOSED TO THIS AIRPORT EXPANSION
FOR THESE REASONS:

① THIS EXPANSION WILL IMPACT THE FLIGHT
PATHS OF PLANES, WITH THEM FLYING
LOWER OVER RESIDENTIAL COMMUNITIES

② WILL OPEN UP THE AIRPORT FOR PLANES
WITH HEAVIER PAY LOADS INCREASING
THE POTENTIAL FOR ACCIDENTS

③ WILL BRING TRAFFIC TO THIS AIRPORT
THAT CURRENTLY USES WILLOW RUN

(Please attach an additional sheet or use back of form if necessary)

See Noise Response #1, Safety/Health Responses #6, #9, and #14, and Technical Response #4,



Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mikulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Name: Niall Holloway

Organization: Lohr Lake Village Condominium Association

Address: 5986 Lohr Lake Drive, Ann Arbor, MI, 48108

Telephone: 734-945-6349 E-Mail: holloway_paisley@comcast.net

Comments: As a resident in the flight path, I am not in favor of this proposal. If the concern is really about safety, then the planes should be using one of the much more capable airports nearby. I am not looking forward to more noise and decreased safety for the local residents on the ground.

See General Responses #5 and #10, and Noise Responses #1, #2, and #3.

(Please attach an additional sheet or use back of form if necessary)



Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mikulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Name: FRAIK WHELAN

Organization: _____

Address: 5429 PINNACLE RD 48108

Telephone: 734-945-3710 E-Mail: FBWHELAN@COMCAST.NET

Comments: CAN SEE NO JUSTIFICATION FOR

EXPANSION PER HOSTS I SPOKE TO

- NOT EXPECTING SIGNIFICANT INCREASE

IN VOLUME

- NOT EXPECTING LARGER PLANES

(I.E. MORE JETS) - THIS I DON'T BELIEVE

PROVIDED NO USABLE INFO ON EXPECTED

NOISE INCREASE & AVERAGE ND B PER

DAY IS MEANINGLESS. MOVING RUNWAY

720 FT CLOSER TO HOMES WILL CAUSE

SIGNIFICANT NOISE OVER RESIDENTIAL

AREA.

See Noise Responses #1, #2, and #3. (if form if necessary)



Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mikulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Name: Joe Hood

Organization: self

Address: 2079 S 7th St

Telephone: 734 272 8846 E-Mail: pe.hood@gmail.com

Comments: A rather nice and informative presentation of airport needs, thanks.

I support extending the runway, especially in the hot spot area # A1, near the beginning of runway 24.

See Support Response #20.

(Please attach an additional sheet or use back of form if necessary)



Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mjkulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Name: NIGEL HOLMES

Organization: _____

Address: 2780 EMBER WAY, ANN ARBOR 48104

Telephone: 734-604-6851 E-Mail: holmes25@gmail.com

Comments: I see how the preferred option is the best, but a better option is to have as-is. My objections are:

- 1/ Contrary to the spirit of the A2Zero initiative.
- 2/ ~~Based on~~ Need is based on projections that seem vague + unsubstantiated.
- 3/ Increased risk of water runoff causing groundwater contamination (loss of almost 2 acres of porous land)
- 4/ Noise impacts will increase

In conclusion, any expansion will be detrimental to quality of life for those living nearby, will negatively impact the environment, and will increase CO₂ emissions.

See Air Quality Response #3, Water Resources/Water Quality #1 and #3, and Noise Responses #1, #2, and #3

(Please attach an additional sheet of the back of form if necessary)



Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mjkulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Name: Deborah Des Jardins

Organization: Ann Arbor homeowner / resident

Address: 2648 Fenwick Ct

Telephone: 734/972-8566 E-Mail: d-desjardi@aol.com

Comments: _____

I am strongly opposed to this project! The airport is in a dense residential area and ~~there~~ the project will negatively impact the air quality and noise pollution is a concern.

I also disagree with this process. These comments should be given to the City Council. I believe the property value in the vicinity of the airport will decline. I strongly oppose this!

Again,

See Air Quality Response #1, and
Water Resources/Water Quality #1
and #3

(Please attach an additional sheet or use back of form if necessary)



Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mikulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Name: ROB SALEMI

Organization: STONE BRIDGE HOME OWNER

Address: 4717 SAWGRASS DR EAST

Telephone: 316-200-6290 E-Mail: RSALEMI222@GMAIL.COM

Comments: _____

1 THE AREA AROUND THE AIRPORT IS MORE RESIDENTIAL
NOT COMMERCIAL

2. THE NOISE ~~IS~~ CURRENTLY IS LOUD ESPECIALLY
WITH TRAINING - TOUCH & GOES

3 WILLOW RUN AIRPORT IS 10 MILES FROM HERE

4 THERE WAS NO ONE AT THIS PRESENTATION
WHO WAS NOT IN FAVOR OF THE EXPANSION

See General Responses #5, #10, and #24, and Noise Response #9.

(Please attach an additional sheet or use back of form if necessary)



Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mikulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Name: Concerned Resident

Organization: _____

Address: _____

Telephone: _____ E-Mail: _____

Comments: _____

Why would I leave comments for the
Airport mgr. who has a vested interest
in this project being approved? Where are
the Ann Arbor City Council Reps?

See General Response #16

(Please attach an additional sheet or use back of form if necessary)



Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mjkulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Name: Michelle Koerschner

See Financial/Economic Response #12, General Response #13

Organization: _____

Address: 5934 E. Horizons Ct.

Telephone: _____ E-Mail: mkoersch@gmail.com

Comments: _____

- The cost benefit analysis is missing from today's explanation/forum. What is the return on investment (cost of the project) vs. the incremental revenue generated?
- ~~was~~ The discussion today did not clearly identify who the benefactors are of the expansion? Is it just the ~~operat~~ owners of the aircraft? How does the community benefit from the airport extension?
- ~~I~~ was unclear if the ~~exp~~ increase in a length runway would allow a future increase in width without the same scrutiny and approval.

(Please attach an additional sheet or use back of form if necessary)

- I do not support the expansion of the runway length towards Lohr Rd.
- I do not support the portion of the project that improves visibility



Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mikulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Name: Ellen E. Forsman

Organization: Private Citizen

Address: 1694 Inverness Court ANN ARBOR, MI 48108

Telephone: 734-330-1243 E-Mail: ~~EForsman~~ efpolaska@yahoo.com

Comments: _____

I am completely opposed to extending the airport ^{runway}. The lives of thousands of people who live around the airport ~~to~~ would be negatively impacted by ~~the~~ larger aircraft that would be allowed to use the longer runway. A larger/heavier aircraft or a jet would have a devastating impact if it ~~was~~ ~~was~~ had to abort a take off or lost an engine on take off. It is also ridiculous to think the Pittsfield government does not have the ability to vote on this issue.

(Please attach an additional sheet or use back of form if necessary)

See Safety/Health Response #9



Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mjkulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Name: MARK MOKRIS

Organization: HOMEOWNER

Address: 2161

Telephone: 248-763-0381 E-Mail: MARK.MOKRIS@GMAIL.COM

Comments: _____

THE IDEA THAT WE ALREADY HAVE AIRCRAFT
LANDING THAT EXCEED THE CAPACITY OF
THE AIRPORT IS UNREALISTIC. THERE WILL ALWAYS
BE A LIMIT. THEY SHOULD NOT BE PERMITTED
TO LAND AT ~~THE~~ THE AIRPORT. LARGER
AIRCRAFT SHOULD GO TO WILLOW RUN
OR DTW PERIOD!

THERE IS NO JUSTIFICATION FOR THIS
EXPANSION!

(Please attach an additional sheet or use back of form if necessary)

See General Responses #5 and #10



Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mjkulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Name: B. Melanie M'Nicholas

Organization: Ann Arbor Resident

Address: 405 Eberwhite Blvd 48103

Telephone: 734-645-4972 E-Mail: mcaicholm@a2me.com

Comments: _____

Very much in favor of the runway extension. Safety in aviation is #1 concern & extending 6/24 will greatly improve safety of operations

ARB is extremely important with its positive impact on business, patient safety, & care (med flight) and commerce in the City of Ann Arbor.

See General Response #20

(Please attach an additional sheet or use back of form if necessary)



Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mikulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

See Noise Responses #1, #2, #5

Name: Joseph Wottrony

Organization: Home Owner

Address: 4477 Lake Forest Dr. East

Telephone: _____ E-Mail: _____

Comments: Noise generated now is annoying. If there

is a alternative 2 runway expansion, noise levels

will increase. I oppose your proposed runway

expansion. Your noise levels in your study are

"average" noise levels. Daytime noise is the worse

time for high noise levels. So averaging day

time noise with night time noise does not represent

the noise imposed on my property and others

as well. Your FAA noise analysis does not portray

actual noise levels to the residents in the area.

Daytime noise would reveal higher noise levels

that the neighborhood has to endure, much higher

than your study average noise levels.

(Please attach an additional sheet or use back of form if necessary)

Provide the actual noise levels so residents and elected officials can understand the actual noise impact now & for the proposed project.



Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mjkulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Name: Ken Garber

Organization: _____

Address: 28 Haverhill Ct, Ann Arbor

Telephone: (734) 741-6134 E-Mail: kengarber@prodigy.net

Comments: See attached typewritten comments.

See Air Quality Responses #1, #2, and #3

(Please attach an additional sheet or use back of form if necessary)



Thank you, Mr. Kulhanek. My name is Ken Garber, and I live at 28 Haverhill Court in Ann Arbor. Thank you for holding this hearing and for the opportunity to comment on the draft EA for the runway extension project. My comment is about climate, at several levels of concern. The EA completely dismisses climate as a factor. That's based on the claim that greenhouse gas emissions at the Arbor airport in 2019 were just 964 metric tons CO₂. This is a grossly misleading figure. First of all, the city is supposed to count more than CO₂. This EA modeled emissions using the AEDT, the Aviation Environmental Design Tool, which only counts CO₂, and only at the airport itself. The FAA's Guidance on using the AEDT states, that the "GHG evaluation should include the same emission sources that are included in the air quality analysis," specified by Appendix C of the Air Quality Handbook. That includes nitrous oxide (N₂O).

Appendix C notes that nitrous oxide, which converts to ozone in the troposphere, has 298 times the climate impact of CO₂ over a 100-year time span. Emissions must be reported in terms of CO₂ equivalents.

An even bigger problem is that the EA just considers aircraft emissions at the airport. No one is counting all those miles these planes fly between stops. These should at least be acknowledged. According to a 2021 study by Transport & Environment (1), private jets are on average 10 times more carbon intensive than commercial flights, and 40 times more than train travel. A private jet can emit 2 metric tons of CO₂ alone per hour. So the actual climate impact of the Ann Arbor airport as a destination for jets and turboprops is more than an order of magnitude higher than the EA estimate. In 2019 there were 1,476 trips here by jets and turboprops. Assuming an average trip distance of 250 miles, that comes to 369,000 miles. At the standard 4.9 kg CO₂ emissions per mile, that's 1.8 million kilograms CO₂, or 18,000 metric tons CO₂, almost 20 times your estimate.

And we're not taking into account upstream emissions from the extraction, refinement and transportation of jet fuel. We know that methane leakage along the gas supply chain, and CO₂ emissions from the fracking process, basically double the climate impact of jet fuel combustion.



We as a society have a collective responsibility for cutting aviation emissions. This EA says No, it's not our problem, because aviation accounts for only about 3% of total U.S. greenhouse gas emissions from human sources. But that's only if you count CO₂. Jet aircraft also emit nitrogen oxides, water vapor, aerosol from soot, and aerosol from sulfur, and they create contrail cirrus, all of which alter radiative forcing, magnifying the greenhouse effect. These effects are compounded because they mostly takes place at high altitude. Taking everything into account, the best science (2) estimates that aviation contributes roughly six percent of global emissions, not three percent.

And aviation is the single fastest-growing emissions sector of the economy. Until the COVID-19 pandemic, emissions from flights had been rising by 2.5% each year for the past two decades (3). They're now back on track. Aviation emissions are projected to triple over the next 30 years, exceeding total emissions over the entire history of flight, dating back to the Wright Brothers. This is massively unsustainable.

Aviation's growth has wiped out any decarbonization gains resulting from the adoption of electric vehicles. Almost two million more flights a year touch down at U.S. airports than twenty years ago. And it's a tiny proportion of the global population doing the damage. In 2018, one percent of the world's population was responsible for more than half of aviation-related carbon emissions (4). Instead of extending runway 6/24 to better handle jet and turbojet aircraft, we should instead ban such aircraft from using the Ann Arbor airport at all. Most private jet traffic is discretionary. Why should the rest of us tolerate the small number of wealthy individuals and companies who spew greenhouse gases into the troposphere at ten times the rate per passenger mile of commercial airlines, and 40 times the rate of train travel? France is considering a total ban on private jets, and recently banned several short-haul flights, where trains are a practical alternative.

I stand with NASA climate scientist Peter Kalmus, who was arrested in November at Charlotte/Douglas international airport in North Carolina after chaining himself to the airport access gate. This was part of a wave of airport protests across Europe and North America, during the COP27 summit in Egypt. Hundreds chained or glued themselves to airport facilities. Dr. Kalmus said this while waiting to be arrested: "There is no faster way to fry the planet than by flying in private jets, or even by flying in regular airplanes"... "We're on the verge of losing everything, and we're still acting like everything is normal."



In summary:

1. The FAA guidance requires counting of nitrous oxide emissions, not just carbon dioxide.
2. Aircraft emissions en route between ARB and other destinations should also be counted in this EA, or at least acknowledged and estimated.
3. These emission calculations should include the full range of non-CO₂ emissions.
4. Upstream methane and CO₂ emissions from jet fuel extraction and supply chain leaks should also be counted.
5. This EA should revise its estimate of aviation's contribution to global emissions from 3 percent to 6 percent, taking into account non-CO₂ effects and upstream emissions.
6. Aviation, collectively, has a responsibility to reduce global emissions. This requires disincentivizing luxury travel and unnecessary transport on private jets and turboprops. Therefore this runway extension proposal, which is designed to better accommodate such aircraft, should be removed from consideration on environmental grounds, specifically for climate impact.

References:

1. "Private jets: Can the super rich supercharge zero-emission aviation?" Andrew Murphy and Valentin Simon, *Transport & Environment*, April 2025.
2. Lee D.S. et al. *Atmospheric Environment* 244 (2021): 117834. "The contribution of global aviation to anthropogenic climate forcing for 2000 to 2018."
3. Kellbekken J. and Victor D.G. *Nature* 2022 Sep; 609(7928): 673-675. "A cleaner future for flight: aviation needs a radical redesign."
4. Gossling S. and Humpe A. "The global scale, distribution and growth of aviation: implications for climate change." *Global Environmental Change* 65 (2020), 102194.

Public Comment Form

Public Hearing – December 13, 2022

Please use this form to submit comments regarding the Environmental Assessment and proposed future development at the Ann Arbor Municipal Airport.

Please drop this form in the comment box or return by one of the methods listed below by Friday, January 13, 2023:

E-mail: Send a scanned copy of the form to Matthew Kulhanek at mikulhanek@a2gov.org

Mail: Mail this sheet to the following address:

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

See General Responses #3
and #13, Air Quality
Response #1, and Noise
Responses #1, #2, and #3

Name: Jordan De Padova

Organization: _____

Address: 2648 Fenwick Ct

Telephone: 734-881-4677 E-Mail: JordanSdep@gmail.com

Comments: I strongly object to the proposed infrastructure project at the Ann Arbor Airport. Considering the project would be publicly funded, it should benefit the people of the municipality. It doesn't. A small group of individuals with the resources to operate or travel on small, private passenger airplanes would ~~not~~ receive an airport renovation while the surrounding area suffers increased air traffic pollution, noise, construction and even potentially, the appropriation of surrounding land for the project.

(Please attach an additional sheet or use back of form if necessary)

* Brief continuation on back
↓



when I asked a representative of the
city's consulting firm what this
airport is used for I was told
that "some people will fly in for
Michigan football games," which
to me underscores the fact that
the project served an incredibly
small group of people in
a totally non-crucial way
but hurts everyone in the
surrounding area who benefit nothing.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, December 13, 2022 8:01 AM
To: William Ballard
Subject: FW: Opposition to Ann Arbor Airport Expansion

From: Adem Saglik <ademsaglik@gmail.com>
Sent: Tuesday, December 13, 2022 8:00 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: Opposition to Ann Arbor Airport Expansion

You don't often get email from ademsaglik@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Matt,

My name is Adem Saglik and I am a current resident of Stonebridge community which is located very close to the airport.

I am writing to express my strong objection to the ongoing Ann Arbor Airport Expansion proposal. I have very deep concerns in terms of safety to our community as well as impact of this proposal in the quality of life in our neighborhood which is already impacted by the excessive noise levels generated especially during spring and summer months.

The proposal will specifically allow aircraft to pass over Lohr Rd at 1/3 altitude vs current levels which will result in even further noise level for our community. In addition, we have grave concerns regarding safety as there is usually a significant number of canadian geese that are usually seen in the fields near the Lohr Rd area which will significantly increase potential bird strike with aircrafts. See Noise Response #1, Wildlife Response #1, and Safety/Health Response #1

I feel like we already suffer from the ongoing noise levels due to the airport and I don't want to see increased noise levels and further safety risks associated with this proposal.

Please stop this proposal as it offers no conceived benefits to the community and creates more potential safety issues for the people living around the airport. See General Response #1 and #13

Yours respectfully,
Adem Saglik
4783 St Andrews Ct
Ann Arbor, MI, 48108
734-494-0264

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 3, 2023 6:01 PM
To: William Ballard
Subject: FW: AA Airport Expansion

-----Original Message-----

From: AM K <amkerastas@hotmail.com>
Sent: Friday, December 23, 2022 8:54 PM
To: Airport (Public Services) <Airport@a2gov.org>
Subject: AA Airport Expansion

[You don't often get email from amkerastas@hotmail.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

We were unable to attend the public hearing earlier this month.

We would like to know if anyone suggesting this expansion, spent time at the homes of the people that have voiced their concerns to witness and hear the current concerns? And how the expansion may affect the lives of people?

I do live in a neighborhood the gets some noise from the airport and it has gotten worse over the years. I do not support any expansion. See Noise Response #1 and General Response #2

I think someone has suggested using Willow Run for bigger planes. And what is wrong with that??

See Technical Response #5 and #10

Sincerely,
AM Kerastas

Andrew R. McGill, Ph.D.
5221 Crooked Stick Drive
Ann Arbor, MI 48108
andymc@umich.edu

31 December 2022

Mr. Matthew Kulhanek
Manager, Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108
mjkulhanek@a2gov.org

Mr. Steve Houtteman
MDOT-Aeronautics
2700 Port Lansing Road
Lansing, MI 48906
houttemans@michigan.gov

Dear Messrs. Houtteman and Kulhanek:

I am writing to vehemently object to the proposed expansion of the Ann Arbor Municipal Airport. The proposed expansion is unnecessary and subjects citizens living in close proximity to the airport to serious danger. The combination of low-flying aircraft over a population center heavily populated with dangerous Canada geese, compounded by the likelihood of increased jet traffic, present the elements of a deadly accident in the making. This risk can only be avoided if the proposed expansion is rejected by the Michigan Department of Transportation – Aeronautics Division (MDOT-AERO) and the Ann Arbor City Council.

See General Response #3, Noise Response #3, Wildlife Response #1, and Safety/Health Responses #1, #6, and #14

The rationale for this conclusion is both summarized and detailed below.

EXECUTIVE SUMMARY

- The proposed runway extension would move ARB’s primary Runway 24 870 feet closer to Lohr Road, adding to the risks to residents near the end of the runway, who are not adequately protected by so-called “Runway Protection Zones.”
- The Second Revised Draft Environmental Assessment (SRDEA) has dropped prior claims, since the onset of the project in 2007, that the expansion was a “safety extension.” Since the FAA ruled that federal funds would not be available for such an expansion, the

See Safety/Health Response #2, #5, and #6

focus was shifted to “improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase over time.” [See Technical Response #1](#)

- However, of the four “critical aircraft” types identified by the SRDEA, three could operate 100% of the time on the existing 3,505-foot runway. Only the Cessna Citation Excel XLS jet, the type of aircraft owned and operated by AvFuel Corp., which dominates operations in this class, could suffer weight penalties on hot summer days, but could still operate at full weight 90% of the time, and at 100% capacity on most days. At most, only 48 operations per year of the Citation XLS class’s 263 annual operations (in 2019) could be impacted by hot weather – a miniscule .000628 of ARB’s total annual operations – hardly sufficient to justify the proposed expansion. [See Technical Response #2](#)
- Even worse, the SRDEA acknowledges that any expansion would likely attract more jet traffic, where larger and heavier aircraft pose additional risks in an area heavily populated by Canada geese. An earlier draft of the SRDEA also suggests that the University of Michigan’s six / seven home football weekends and Michigan International Speedway’s two annual NASCAR events bring increased aircraft activity to the area, and that “should Runway 6 / 24 be extended, additional aircraft activity could occur at ARB due to its proximity to special event venues.” However, the SRDEA contained no actual forecasts of such potential activity. [See Noise Response #3, Wildlife Response #1, Safety/Health Response #1, and Technical Response #3](#)
- However, a less sanitized draft version of the SRDEA, submitted to the Federal Aviation Administration (FAA) and reviewed by me under the Freedom of Information Act, suggests jet traffic could increase 10-fold if the runway is expanded, fundamentally changing the nature of a community airport “designed to serve primarily small piston-driven aircraft,” as the SRDEA claims, into a jetport. That outcome is untenable. And the only way to prevent that risky outcome is to not extend the current runway. [See Technical Response #4](#)
- Details contained in that earlier draft of the SRDEA projected an immediate tripling of annual jet operations if the ARB runway were extended to over 1,000 per year, with another 500-665 operations from jets, which currently utilize Willow Run Airport, possibly moving to an extended ARB on football weekends. That earlier draft SRDEA suggested up to 40% of the 9,313 annual small and medium jet operations at Willow Run “would likely shift to ARB if additional runway length were available,” thus increasing jet operations from the 360 in 2019 to upwards of 3,660 jet operations per year – ultimately turning ARB into a jetport. This is far beyond what most public officials believe they would be sanctioning in approving the proposed expansion. [See Technical Response #4](#)
- To temper any fears of such runway expansion, the final SRDEA omitted such jet growth claims and forecast, instead, that the operations of small turboprop and jet aircraft “will slowly increase over time.” [See Noise Response #3](#)

- Further complicating issues, because ARB is a municipal airport funded with federal dollars, any pilot who chooses can land at the airport, no matter the size of their aircraft – adding to the level of risk. Ann Arbor cannot regulate the type of aircraft that could utilize the field. See General Response #18
- The SRDEA acknowledges for the first time, albeit buried in Appendix K, the significant presence of Canada geese surrounding the airport, with a U.S. Department of Agriculture inspector observing 75-100 Canada geese at the airport, feeding in a tilled fallow field. The inspector also reported “flocks of 5 to 15 geese arrived on the airfield at different times. . . Geese were observed within 10 yards of the runway.” The inspector concluded that, “Canada geese are a real and present danger, and will need to be managed for the foreseeable future. KARB is surrounded by ideal resident / migratory Canada goose habitat.” However, the SRDEA presents no plan for such mitigation – and makes no mention of any risks posed by the Canada geese other than in this Appendix. See Wildlife Response #1 and Safety/Health Responses #1 and #8
- The Purpose and Need statement does not support the need for an extended runway. The SRDEA contends that aircraft that routinely use ARB suffer “undue concessions in reduced fuel, passengers, and / or cargo loads. . . diversions to other airports are also commonly needed when the runway surface is wet, or during summer months when higher temperatures reduce aircraft performance.” However, the SRDEA provides no actual data in support of the claimed concessions or diversions. The FAA noted, in response to an earlier draft of the SRDEA, that “the rate of users taking weight restrictions has not been documented,” and, “The inclusion of the contaminated runway length distances cannot be used to justify FAA funding requirements” for an extended runway. See Technical Responses #7 and #9
- The SRDEA stated an excess number of hot weather days at ARB. To justify the proposed expansion, the SRDEA identified 81 hot days in Ann Arbor, when temperatures exceeded 80 degrees (in 2019). However, aircraft performance charts included in the SRDEA suggest an industry standard for hot weather is 85 degrees, not 80 degrees. There were only 66 days in 2019 when the temperature exceeded 85 degrees. Thus, the SRDEA inflated the number of hot weather days by 25% by using the 80-degree threshold. See Technical Response #5
- The SRDEA alludes to connections between “many prominent businesses and institutions with the University of Michigan being the area’s largest employer. Manufacturing, health care, automotive, information technology, and biomedical research companies account for major employers surrounding the area” that often require “air transportation to bring workers, clients, suppliers, customers, and time sensitive parts / supplies to and from the region.” However no specific connection between those business needs and ARB was established in the SRDEA. It was merely an allusion. See Financial/Economic Response #1

- While the SRDEA projects a maximum of 84,336 ARB operations in 2039, it is interesting to note that the current 3,505-foot runway supported almost two-thirds more operations in 1999 – 134,554 -- suggesting the current runway is more than sufficient for the projected future, unless the true goal is to significantly change the nature of the small community airport into a jetport. See Technical Response #6
- Any ARB expansion is especially dangerous because, with jets being the primary source of increased operations, it raises the level of risk in an area heavily populated with Canada geese, which do not interact well with jet aircraft. See Noise Response #3, Wildlife Response #1, and Safety/Health Responses #1 and #8
- ARB also has certain conditions that can intensify the level of risk over other nearby airports: Instrument approaches and landings are not permitted at the airport. The control tower only operates part-time. Also, in winter, de-icing is not permitted on the airport, to protect the wells on the property that produce drinking water for the City of Ann Arbor. And ARB does not provide 24-hour on-site fire and rescue services. See Safety/Health Response #3
- The SRDEA does not acknowledge any potential risks to the three wells on airport property that supply about 20% of Ann Arbor’s drinking water, stating only that, “there are several water wells on ARB property, all of which are outside the proposed project area.” The SRDEA, however, contained extensive analysis of wetlands and streams in and around the property. But nothing in detail about the important drinking water wells! See Water Resources/Water Quality Response #1
- The noise problem around the airport would almost certainly increase. Even the very conservative FAA-required noise analysis conducted as part of the SRDEA concedes that the harmful 60-decible noise level would extend to “a residential area at the southwest corner of the airport.” See Noise Responses #1, #2, and #3
- The FAA requires the identification of environmental health risks to children. However, despite numerous scientific studies confirming the negative impact of aircraft noise on the neuropsychological development of children, the SRDEA does not discuss such threats, concluding, instead, that “the FAA has not established a significance threshold for impacts to children’s environmental health and safety. . .” See Noise Response #1 and Safety/Health Response #4

INTRODUCTION AND BACKGROUND

The City of Ann Arbor acquired the land where the airport sits as the Steere Water Farm in 1921 to utilize the wells on the property to supply water to the city. Today the wells on the property provide about 20% of the city’s drinking water. An airfield was not added until 1928, to recreationally serve post-World War I veterans who learned to fly in the war.

In the years since, Ann Arbor attempted to annex the airport from Pittsfield Township in 1976, but that effort was ruled illegal by the Washtenaw County Circuit Court the next year, which called it an “illegal enclave” of the city. Conflicts regarding the airport between Ann Arbor and Pittsfield have continued ever since.

Since then, the airport has pushed expansion efforts in the 1970s and 1980s, but both efforts were blocked by either the Ann Arbor City Council or the Michigan Legislature.

The current effort to expand the runway began in the planning stages in 2004, and was first brought before the Ann Arbor City Council in January 2007. The City of Ann Arbor proposes to extend the primary runway at Ann Arbor Municipal Airport from its current 3,505-foot length to a 4,225-foot runway, adding 720 feet to the western end of Runway 6 / 24. That plus the shift of 150 feet from the east to west end of the runway would bring aircraft 870 feet – the length of almost three football fields – closer to Lohr Road, where previous research shows aircraft would be landing only 93 feet above the rooftops of homes.

See Noise Response #1, Safety/Health Responses #2, #5, and #6

This proposal is dangerous and must be rejected.

On November 10, 2022, ARB airport officials issued their third federally required Environmental Assessment (EA) in a dozen years. The first two EAs were rejected by the FAA. The 2022 Second Revised Draft Environmental Assessment (SRDEA) discusses ARB officials’ rationale for the expansion, claiming it would improve the “operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase over time.”

See Technical Response #1

To support its claim, the SRDEA emphasizes the needs of four types of “critical aircraft” – two classes of jets and two classes of turboprops. However, rather than supporting the need for an expanded runway, detailed aircraft performance charts provided in an Appendix to the SRDEA for each model confirm that three of the four classes of “critical aircraft” could operate year-round without penalty at full weight on the existing 3,505-foot runway, and that aircraft in the fourth class – dominated by the Cessna Citation Excel XLS -- could operate at full weight 90% of the time and at 100% capacity on most days.

See Technical Response #2

The SRDEA goes on to argue, however, that the extended runway is necessary because weather conditions – especially wet runways – can require longer stopping distances for aircraft,

contending that such wet weather conditions existed at ARB an average of 192 days per year between 2010 and 2018. However, as the FAA made clear in comments on an earlier version of the SRDEA, reviewed under the Freedom of Information Act, wet runway conditions cannot be used to justify a runway expansion funded with federal dollars. [See Technical Response #9](#)

“The inclusion of the contaminated runway length distances cannot be used to justify runway length under FAA funding requirements,” the FAA said. “Safety is maintained by the pilot adjusting their mission (payload, etc.) to the available runway length, not by the addition of a longer runway.” The FAA went on to add that its Airport Improvement Program (AIP) “is not intended to provide sufficient runway length for ‘all’ normal considerations at an airport. . .in these circumstances, pilots are expected to calculate runway length needs and make adjustments needed for safety.”

However, in a not-so-subtle affront to the FAA, stressing that its authority is limited, the SRDEA goes on to distance the project from the authority of the FAA, which has blocked the hard-to-justify project for more than a dozen years. The SRDEA states that as one of 10 State Block Grant Program (SBGP) recipients, once federal funds are received by the State of Michigan, except for approving Airport Layout Plan (ALP) components and navigational aids, the FAA “has no control, responsibility, or discretion for the use of SBPG funds” and “does not retain funding for or approval of SBPG actions.” [See General Response #26](#)

In short, regardless of FAA regulations and opinions, once the federal funds are received as part of a block grant to fund the proposed ARB expansion, the Michigan Department of Transportation Aeronautics Division (MDOT-AERO) is free to ignore the FAA and award grants for the ARB project construction based on whatever unilateral criteria MDOT-AERO chooses -- whether the expansion is actually necessary or not, or whether the project’s Purpose and Need have been sufficiently justified.

The danger of the proposed expansion, especially near the heavily populated neighborhoods surrounding the airport, presents a safety risk to residents that far exceeds the minimal benefits from the expansion that would be gained by the Citation XLS class of jets, dominant among them, with 61% of the Citation XLS class operations, the jet of a single Cessna Citation Excel XLS operator, AvFuel Corp. Even worse, the expanded runway could – the SRDEA acknowledges likely would -- attract more larger and heavier jets, posing additional

risks in an area heavily populated with Canada geese, which do not interact well with jet aircraft, as several prominent national accidents have showcased.

See Noise Response #3, Wildlife Response #1, Safety/Health Responses #1, #2, #5, #6 and #14, Technical Response #2, and General Response #1

In addition, for the first time since the first ARB DEA was issued in 2010, airport officials finally acknowledged the significant presence of Canada geese in and around the airport. An SRDEA Appendix contains the report of an on-site U.S. Department of Agriculture inspector, who reported observing 75-100 Canada geese operating on the airport, feeding in a tilled fallow field. The inspector also reported that “flocks of 5 to 15 geese arrived on the airfield at different times. . . Geese were observed feeding within 10 yards of the runway.” As the Agriculture inspector concluded, “Canada geese are a real and present danger, and will need to be managed for the foreseeable future. KARB is surrounded by ideal resident / migratory Canada goose habitat.” The SRDEA, however, presents no plan for such mitigation. The SRDEA also makes no mention of any risks posed by the Canada geese.

See Wildlife Response #1 and Safety/Health Responses #1 and #8

In short, the proposed expansion would primarily benefit the owner of a single Cessna Citation Excel XLS jet, which could be hampered by high temperatures, at most, 18% of the time, potentially affecting only 29 of its 161 annual operations – and representing only a miniscule .00038 of ARB’s total annual operations in 2019. In the process, the expanded runway would likely attract larger and heavier jets to the airport, posing greater risks to residents living around the airport, in an area heavily populated with Canada geese – adding to the danger,

See Noise Response #3, Wildlife Response #1, Safety/Health Responses #1, #2, #5, #6 and #14, and Technical Response #2

As a result, objections contained in previous comments on the initial DEA and the revised RDEA remain unchanged: The risks of the proposed project far exceed any benefit that could result. The project poses serious risks to residents living around the airport, an area heavily populated by Canada geese, especially if the expanded runway attracts more jet traffic, as expected. The proposal also ignores the strong opposition by Pittsfield Charter Township, in which ARB is located, because of the risks posed by the project. In addition to which, sufficient Purpose and Need have not been established for the proposed expansion.

See Noise Response #3, Wildlife Response #1, Safety/Health Responses #1, #2, #5, #6, #7 and #14, Technical Responses #1, #7, and #14 and General Response #4.

PURPOSE AND NEED

For this section, see Noise Response #3, Technical Responses #1 through #9, and General Responses #3 and #14

The Purpose and Need section of an EA is intended to summarize the reasons for the proposed action and what the applicant expects to achieve as a result. The ARB SRDEA states

that the purpose of the proposed ARB runway extension is “to improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase over time.”

Upon analysis, however, the actual primary purpose of the extension is to serve one class of jet aircraft, the Cessna Citation Excel XLS class – dominated by a single Cessna Citation 56X-Excel XLS that frequently utilizes ARB. and, presumably, to attract many more jets, since performance requirements for eight additional jet models were provided in an Appendix to the SRDEA.

However, while a visually-impressive three inches thick and filled with data, upon closer analysis the SRDEA provides little in the way of new or convincing evidence to support the proposed expansion than did its significantly less comprehensive two prior DEA attempts.

For example, to justify the proposed extension, the SRDEA claimed that an analysis of current ARB operations found that, because of the current 3,505-foot runway length, for aircraft that routinely use ARB, “undue concessions in reduced fuel, passengers, and / or cargo loads are often needed. Diversions to other airports are also commonly needed when the runway surface is wet, or during summer months when higher temperatures reduce aircraft performance.” The SRDEA, however, provides no actual data in support of the claimed undue concessions or diversions.

However, the SRDEA does indicate that AvFuel, a Pittsfield Township-based national aviation fuel supplier that counts ARB as one of its customers, would be the primary beneficiary of any runway expansion as owner and operator of a single Cessna Citation XLS jet, which conducted 61% of the 2019 Citation-class ARB jet operations, and almost half (45%) of all 2019 ARB jet operations. AvFuel provided a letter of support in the SRDEA, claiming that, “most flights departing ARB require concessions to fuel and / or passenger loads with a stop for fuel before reaching their intended destination due to runway length limitations at ARB. When runway 6 / 24 is contaminated with snow or ice, AvFuel often needs to divert to another airport, which delays or cancels flight plans until pavement surface conditions at ARB improve, since braking distance is reduced when water, snow, or ice is present,” although no specific data on any such impacts were provided.

The ARB and AvFuel claims would appear to support the need for an expanded runway, except that, in response to an earlier draft of the SRDEA reviewed under the Freedom of Information Act, the FAA responded that, “it was taken out of context. . . [to] insinuate that there are users taking weight restrictions often. The rate of users taking weight restrictions has not been documented (at least in the justification report).” The FAA further commented that, “The inclusion of the contaminated runway length distances cannot be used to justify FAA funding requirements. . .”

In addition, a further analysis based on aircraft performance data provided in the SRDEA’s Runway Justification Analysis confirms that all of the Citation-class aircraft, including AvFuel’s Cessna Citation XLS jet, could operate more than 90% of the time on the existing 3,505-foot runway. The Citation XLS performance data shows only a 3,500-foot runway is required until temperatures exceed 85 degrees F., which would allow the AvFuel jet to operate at 90% capacity. Additionally, in response to claims of the need for a longer runway to combat wet runway conditions, the FAA noted that under such circumstances, “Safety is maintained by the pilot adjusting their mission (payload, etc.) to the available runway length, not by the addition of a longer runway.”

Even so, the SRDEA claims a runway extension is necessary to fully support the “critical” Category B II small turboprop and jet aircraft – specifically the Citation XLS class of jets and another jet class dominated by E 55P Phenom 300 jet, which combined for 360 ARB operations in 2019, and the turboprop class dominated by the Beechcraft King Air BE 20-B 350 and TBM 850 turboprops, which combined for 1,116 2019 ARB operations. The aircraft comprising the Citation XLS jet class include the Cessna Citation Excel XLS, Cessna Citation Sovereign, and Pilatus PC 24, among a half-dozen others, accounting for 263 ARB 2019 operations, according to the SRDEA; and, in the Phenom class, the E 55P Phenom 300 and Cessna Citation CJ4, accounting for 97 operations in 2019, the SRDEA reported.

Further analysis, based on aircraft performance charts provided in the SRDEA, shows that all jets in the Phenom class and aircraft in both turboprop classes could operate at full weight year-round on the current 3,505-foot runway, requiring at most a 3,365-foot runway. Only the Citation class of jets, dominated by AvFuel’s Cessna Citation XSL jet, would suffer runway-length penalties that the FAA could consider sufficient to justify runway expansion. Determining

the significance of such penalties requires a detailed examination of weather and aircraft performance data.

The SRDEA suggests several jet aircraft suffer runway penalties on the current 3,505-foot runway at ARB. Table 6-2 of the SRDEA's Runway Justification Study lists 11 jet aircraft that require as much as 4,390 feet for a full-weight takeoff. However, further analysis shows that six of the listed aircraft (Cessna Citation M2, Cessna Citation Mustang, Embraer Phenom 300, Eclipse 500, Pilatus PC-24, and Cirrus Vision SF50) can execute full-weight takeoffs on the current 3,505-foot runway. And of the five remaining jets (Cessna Citation CJ2, Cessna Citation CJ1, Cessna Citation II / Bravo, Cessna Citation Excel ELS, and Cessna Citation Sovereign), which beyond the Cessna Citation Excel ELS represented only 58 ARB 2019 operations, all could operate at 90% of full weight year-round on the current runway, as could the Citation XLS, and at 100% capacity on most days.

The SRDEA based its weather analysis in terms of temperature on the number of days where the ARB temperature exceeded 80 degrees F., claiming 81 such days in 2019. However, performance data charts provided in the SRDEA identify 85 degrees F. as the industry standard to determine hot weather operations. Thus, in 2019 there were 66 days in Ann Arbor when the temperature exceeded 85 degrees F., a number the SRDEA inflated by 25% by using the 80-degree threshold. Against the more appropriate 85-degree standard, the Citation XLS jet class could suffer heat-based penalties, at most, 18% of the time (66 / 365). Based on the Citation XLS class' 263 operations in 2019, theoretically 48 of such flights could have potentially suffered heat-based penalties – affecting just 18% (48 / 263) of the XLS class' total ARB operations, and only .000628 of ARB's total annual operations in 2019 – a miniscule number to justify such a significant and controversial runway expansion. And for the dominant Citation XLS operator, AvFuel, just 29 of such flights could have suffered weight penalties, only .00038 of ARB's total 2019 operations (29 / 76,430).

Against that 85-degree temperature standard, based on the performance data of aircraft charts contained in the SRDEA, all Citation XLS class jets, including the AvFuel jet, could operate at 90% of full weight on the current runway even under such extreme heat conditions, and with even more weight most other times. And all three of the other reference aircraft could operate at full weight on the current 3,505-foot runway 100% of the time.

To further support the claimed need for the extension, the SRDEA provides details on the 4,649 instrument flight rules (IFR) operations at ARB in 2019, indicating the aircraft involved required eliminating weight concessions that would allow aircraft to operate at greater capacity, thus resulting in a more efficient operating environment. However, further analysis of the supporting data showed that all but the 48 Citation XLS class jet flights, referenced above, of the 4,525 IFR airplane operations could be conducted on the current 3,505-foot runway without penalty.

The current 3,505-foot Runway 6 / 24 was originally “designed to serve primarily small piston-driven aircraft,” the SRDEA says. “However, the airport receives regular use by small turboprop aircraft and occasional business jet aircraft that require a longer runway to operate at a greater payload than they do today,” the SRDEA claims.

In support of the presumed need, and alluding to a connection between the airport and the Ann Arbor-area business community, the SRDEA also reported that the area surrounding Ann Arbor was home to “many prominent businesses and institutions with the University of Michigan being the area’s largest employer. Manufacturing, health care, automotive, information technology, and biomedical research companies account for major employers in the surrounding area.” The SRDEA went on to add that with many such technology-driven industries, “There is often a need for air transportation to bring workers, clients, suppliers, customers, and time sensitive parts / supplies to and from the region.” But as statisticians repeatedly remind, correlation does not necessarily represent causality. And, no data were provided to support the implied claims of any connection to or the vitality of ARB to support such vast economic and operational activity, save for particulars on the AvFuel XLS Citation jet. Thus, AvFuel would appear to be the principal beneficiary of any ARB runway expansion.

The SRDEA goes on to suggest that the University of Michigan’s six / seven home football weekends each year and the two annual NASCAR racing events at nearby Michigan International Speedway are examples that bring increased aircraft activity to airports in the region, suggesting that “should Runway 6 / 24 be extended, additional aircraft activity could occur at ARB due to its proximity to special event venues surrounding the Ann Arbor area.”

Even more, a less sanitized version of that statement, contained in an earlier draft of the SRDEA submitted to the FAA, reviewed under the Freedom of Information Act, projected an

immediate tripling of annual jet operations if the ARB runway were extended to over 1,000 operations per year, with another 500-665 operations from jets, which currently utilize nearby Willow Run Airport, possibly moving to an expanded ARB in a typical season of UM football weekends. That earlier draft SRDEA suggested that up to 40% of the current 9,313 annual small and medium jet operations at nearby Willow Run Airport “would likely shift to ARB if additional runway length were available,” thus increasing jet operations from the 360 in 2019 to upwards of 3,660 jet operations per year – a 10-fold increase, ultimately turning ARB into a jetport.

To temper any fears of such expansion, however, the final SRDEA omitted such data and went on to claim that future operations of small turboprop and jet aircraft “will slowly increase over time.” The final SRDEA indicated that the 360 jet operations in 2019 would increase to 462 by 2039, and that the 1,116 turbine-driven operations in 2019 would increase to 1,434 by 2039 – a combined growth rate of 1.4% per year.

However, as an indication of the expectation that an expanded runway would attract significantly more jets, the SRDEA includes detailed specifications, including runway takeoff requirements, for nine jet models among other aircraft -- aircraft ranging from the three-passenger Cessna Skylane 182 to nine-passenger jets including the Cessna Citation Excel XLS, Cessna Citation Sovereign, and Embraer Phenom 300, to large turboprop aircraft such as the 14-passenger Cessna 208 Caravan.

For the section below, see Noise Responses #1 and #3, Safety/Health Response #7, Technical Responses #1 and #6, and General Responses #3 and #25

PROJECT ORIGINALLY PROMOTED AS A ‘SAFETY EXTENSION’

Ever since the inception of the proposed runway expansion in 2007, ARB extension advocates have insisted that the purpose of the lengthened runway was twofold: (1) to provide added safety for pilots and passengers in the small, private aircraft that dominate airport operations, and (2) to provide improved visibility from the FAA control tower to the east end of Runway 24, where clear visibility is blocked by rows of airplane hangars.

Giving emphasis to these arguments, in every one of their more than a dozen appearances before the Ann Arbor City Council in the intervening 15 years, airport representatives always presented the airport expansion as a so-called “safety extension,” with use of the word “safety”

emphasized, presumably to promote favorable reactions from Council members who otherwise might not have been very knowledgeable about the airport or its proposed expansion. This despite the fact that the FAA argued in its May 2010 response to the first DEA, issued in February 2010, that safety was not an issue at ARB – and that, if it were, the airport would have been shut down. Further, in response to Ann Arbor’s arguments that the extension was necessary to prevent runway “overruns,” which had occurred in about a dozen incidents over the prior two decades, the FAA disagreed, emphasizing that such “overruns” were caused by pilot error, underscoring that the added runway length might have only exacerbated the incidents that took place.

Ann Arbor has also consistently contended that the lack of a line-of-sight from the FAA control tower to the end of Runway 24 presented a safety hazard, even though no accidents or incidents had ever been reported because of the line-of-sight issue. To remedy the condition, Ann Arbor proposed a shift of Runway 24 – removing 150 feet of operational runway from the east end of the runway and adding it to the west end of the runway, closer to residential areas. Such a move would provide a clear line-of-sight from the tower to the holding area for Runway 24.

Despite Ann Arbor’s steadfast arguments that the ARB runway extension was needed only because of these “safety-related” issues, expansion opponents contended from the start that any expansion would attract larger and heavier aircraft -- especially more jets -- to the airport, worsening the risk to the thousands of residents surrounding the airport and producing added noise and disruption from many new late-night and early-morning jet flights. In response, expansion advocates argued that the runway extension would not change the basic nature of the airport and that the added runway length would not be sufficient to attract more jet traffic.

Against that backdrop, the FAA responded that federal funds available under the Airport Improvement Act of 1982, as amended (49 USC, 47101, et. seq.) could not be granted for the so-called “safety extension” proposed by Ann Arbor, and that, while the line-of-sight improvement from the FAA tower to the east end of Runway 24 was a “benefit,” it alone did not provide justification for the use of federal funds to pay for the \$ 3.1 million proposed runway expansion project.

Thus, the ARB runway expansion became an unjustifiable crusade – a quest without a legitimate purpose or need.

Expansion advocates were forced to either abandon the project or find a new strategy for which federal funds could be justified to pay for the lion's share of the expansion. Ann Arbor, thus, abandoned its previous "safety" arguments – changing its runway justification purpose "to improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase over time."

While Ann Arbor argued that the expansion would permit the operations of all aircraft that regularly use the field without causing operational weight restrictions, the FAA responded that the statement was "taken out of context to indicate that the FAA standard is to design a runway without causing operational weight restrictions and insinuate that there are users taking weight restrictions. The rate of users taking weight restrictions has not been documented..." To add emphasis, the FAA pointed out that "safety is maintained by the pilot adjusting their mission (payload, etc.) to the available runway length, not by the addition of a longer runway. Runway length here is a capacity benefit to enable longer range / higher payload flights. Safety is a secondary benefit."

To support its claim of "steady" growth going forward, ARB used the 2019 base reference year, when ARB recorded 76,430 operations, according to the FAA. Since then, the airport was on path to again surpass 70,000 operations in 2022, with, according to the SRDEA, 78,654 operations projected for 2024, 80,546 operations in 2029, 82,421 in 2034, and 84,336 in 2039. The SRDEA reported that such growth represented a compound growth rate of less than one-half of one percent (.49%).

In contrast, interestingly, in terms of total annual operations using the existing 3,505-foot runway – without any extension – in 1999, ARB posted almost 63 % more operations (134,554), almost twice that of today, and about two-thirds more than the highest number of projected operations, now forecast for the future – for 2039 (84,336). This underscores the sufficiency of the current runway to effectively serve the volume of future projected operational needs at ARB, without any extension.

CANADA GEESE ACKNOWLEDGED FOR FIRST TIME

Any significant increase in ARB jet operations is especially troublesome, with jets being the primary aircraft adding operations to ARB, since the area around the airport is heavily populated with Canada geese, which do not interact well with jet aircraft – as evidenced by the storied emergency landing of a commercial jet in New York’s Hudson River after geese were ingested into the jet’s engines.

For the first time, the current SRDEA acknowledged – although deep in the document, buried in Appendix K – the presence of Canada geese in and around ARB. Previous DEAs had reported no sightings of Canada geese in or around the airport (DEA, 2010) or in “groups of 10 or less” (RDEA, 2017). However, the current SRDEA, while not mentioning Canada geese in the narrative of the document, contained the Appendix report from an on-site U.S. Department of Agriculture inspection, noting the potential hazard presented on the airport by deer and Canada geese, two of the three greatest animal threats to aircraft, according to the FAA.

The Agriculture Department inspector’s report noted sightings of 11 deer on the airport property, recommending added fencing as the No. 1 way of keeping deer off the airfield. The report also noted, with photographic evidence in support, with regard to Canada geese:

“During the morning and evening surveys 75-100 Canada geese were observed feeding in the tilled fallow field just north of the approach of runway 9 (sic). During the evening survey the geese occupied the approach of runway 9 (sic) from 18:30 until ten minutes after dark. During this time, flocks of 5 to 15 geese arrived on the airfield at different times. When leaving, the geese took flight and circled the airfield by first heading east before turning into the approach airspace for runway 9 (sic). Figure 5 shows geese leaving the airfield heading east before heading west. Geese were observed feeding within 10 yards of the runway.”

As the report concluded, “Canada geese are a real and present danger, and will need to be managed for the foreseeable future. KARB is surrounded by ideal resident / migratory Canada goose habitat.”

Even so, ARB's operators make no mention of the Canada goose risks in the SRDEA, placing far greater emphasis on addressing the deer risk on the airport, despite only two deer strike incidents on the airport in more than two decades. The reason may be that airport officials place far greater importance on things that impact their customers – pilots -- and things that could damage their airplanes while taxiing on airport grounds, as deer can do, rather than acknowledging the Canada goose risk problem, which threatens both aircraft in flight as well as the thousands of residents of the neighborhoods surrounding ARB, where the aircraft could crash.

For the section below, see Noise Response #3, Water Resources/Water Quality Response #1, and Safety/Health Response #3.

ARB INFRASTRUCTURE IMPOSES SIGNIFIANT RISKS

Further complicating issues, because ARB is a municipal airport funded with federal dollars, any pilot who chooses can land at the airport, no matter the size of their aircraft. Making matters worse, ARB does not have an Instrument Landing System (ILS), commonly used in jets, and is forbidden from providing instrument-assisted approaches in inclement weather, because of ARB's close proximity to Willow Run Airport.

Adding to the danger, ARB does not permit de-icing on the field in winter – in fear of contaminating the wells underlying the airport, which supply about 20% of the drinking water to residents of the City of Ann Arbor. Further, the FAA operates only a part-time control tower at ARB, and ARB does not provide fire and rescue services on the airport in case of emergency. In case of a major accident, the nearest fire station with the foam needed to effectively fight such major airplane fires is not located at the airport, but four miles away at Ann Arbor Fire Station No. 6.

The water wells, which are barely acknowledged in the SRDEA other than to state they are “outside the proposed project area,” have benefited the City of Ann Arbor for more than a century. And given the various environmental threats to the city's Huron River water supply, predominantly the upstream dumping of the poisonous chemical Dioxane into the river, the wells are a vital resource for the future of the city.

And while Pittsfield Township, which provides the airport's primary fire and rescue services, may be capable of adequately serving ARB with its current 300-400 jet operations per

year, it is a serious question whether such fire-rescue safety services could be sufficiently provided with jet traffic 10 times the current level, or more, with the larger and heavier aircraft involved carrying more passengers and fuel. This challenge is complicated with fires involving jet aircraft, which carry much larger payloads of jet fuel that burns hotter than the fuel from piston-driven aircraft. Thus, special equipment, training, and practice is required to battle such fires successfully -- equipment, training, and practice not currently part of the Pittsfield ARB fire-rescue training protocol, even though the need would be emergent given the expected substantial increase in jet traffic at ARB.

These issues all contribute to the inherent danger of expanding the primary runway at ARB, which could invite disaster under these circumstances.

For the section below, see Noise Responses #1 and #2, Air Quality Response #1, Water Resources/Water Quality Response #1, and Safety/Health Response #4, #11, #12, and #15

HEALTH RISKS TO CHILDREN AND PUBLIC SAFETY IGNORED

The proposed expansion potentially affects public health and safety and “possible effects on the human environment are highly uncertain or involve unique or unknown risks.” National Environmental Protection Act (NEPA) Regulation 40 C.F.R. 1508.27 requires such projects to be placed in context with the surrounding society so that the project’s impact on the affected region, the affected interests, and the locality can be properly evaluated. The SRDEA has failed to adequately address this aspect and must do so before the project can be approved.

The SRDEA also quotes FAA Order 1050.1F, which requires the identification of environmental health risks to children, specifying that, “Environmental health risks and safety risks include risks to health and safety that are attributable to products or substances that a child is likely to come in contact with or ingest, such as air, food, drinking water, recreational waters, soil, or products they might be exposed to.” While numerous respected scientific studies have documented the negative impact of noise, especially aircraft noise, on the neuropsychological development of children (Stansfeld & Clark, 2015; Seabl et al, 2015; Pujol et al, 2013; Klatte et al, 2013; Seabi et al, 2012; Stansfeld et al, 2010; Matheson et al, 2010; Kempen et al, 2010; Haralabdis et al, 2010; Haralabdis et al, 2008; Jarup et al, 2008; Nieman et al, 2006; Clark et al, 2006; Jarup et al, 2005; Stansfield et al, 2005; Turnovska et al, 2004; Kawada, 2004), the SRDEA does not discuss the impact of such serious threats, concluding, instead, that, “the FAA

has not established a significance threshold for impacts to children’s environmental health and safety. . .”

In addition, the project does not account for noise impact on the surrounding community. While airport operators have a statutory duty to protect the surrounding community, beyond acknowledging, based on the FAA’s noise simulation model, that the dangerous 60-decibel level would be exceeded in neighborhoods adjacent to the southwest corner of the airport, the SRDEA ignores the noise impact issue. Since the FAA’s noise model tends to understate actual noise levels, the 60-decibel level would almost certainly be exceeded in areas in close proximity to the airport. And residents already regularly complain about aircraft noise disrupting their everyday lives at the current level, which only promises to get worse if the runway were extended.

For the section below, see Safety/Health Responses #2, #5, #6, and #14

NEIGHBORHOOD SAFETY RISKS

In responding to numerous complaints based on the risks posed to neighborhoods surrounding ARB, the SRDEA relies on the sufficiency of FAA-mandated Runway Protection Zones (RPZs) around the airport – trapezoidal areas extending from the end of runways – a minimal standard. For example, the RPZs provided no benefit in the 2017 crash of a Cessna Citation 525 CJ4 at Spencer J. Hardy Airport (OZW) in nearby Howell, in Livingston County, just 20 miles northwest of Ann Arbor – destroying the aircraft and severely injuring the pilot with a broken back.

The pilot, who was the only one aboard the 10-passenger, twin-engine jet, apparently lost control on landing, skidding off the end of the runway, through a fence, across a road, striking a clump of trees 1,800 feet beyond the runway – tearing the wings from the fuselage and causing a fire. Witnesses helped the pilot from the wreckage before emergency crews could arrive. This is important because while the Livingston County airport runway is 5,000 feet long – 775 feet longer than the proposed ARB extended runway – the Cessna jet involved would have been more than capable of landing on an expanded ARB runway. And the RPZs frequently mentioned by regulators as protecting neighborhoods surrounding airports from the effects of potential aircraft accidents afforded no such benefits in Livingston County.

In fact, if a similar incident were to have occurred at an expanded ARB, with a high-speed jet crashing and skidding, it would have ended up across Lohr Road and into a row of houses before burning, which could have been deadly. Even so, rather than responding to public fears about the risks to people living around ARB, the SRDEA emphasizes only that its RPZs meet the FAA standard. Nothing more.

COMMUNITY OPPOSITION IGNORED

For the section below, see General Responses #2, #4, and #15 and Financial/Economic Response #2

In summarizing and responding to public comments on the previous 2017 RDEA, the 2022 SRDEA makes no mention of community opposition to the proposed expansion as represented in resolutions against the project passed by Pittsfield Township (multiple times) and Lodi Township. The SRDEA comment summary also makes no mention of Pittsfield’s prior objections to the project on legal and procedural grounds, as expressed in comments on prior ARB DEAs.

Ann Arbor, for example, has ignored resolutions against the project by neighboring communities, emphasizing the risks from Canada geese in areas surrounding the airport, with low-flying aircraft approaching the field, and given that 99% of aircraft currently based at ARB can operate at full weight on the current runway. Pittsfield and Lodi also expressed concern about protecting the property rights of citizens from degradation.

Ann Arbor has proceeded with the runway expansion despite opposition from the jurisdiction in which ARB is located (Pittsfield Township) and the jurisdiction adjacent (Lodi Township), in violation of NEPA Regulations and FAA Order 1050.1F. This action also violates Ann Arbor’s signed prior grant assurances, exposing the city to litigation liability and the potential loss of federal funding for ARB. Those grant assurances require the Ann Arbor action to be “consistent with local plans. . .for the development of the area surrounding the airport” and that the project give “fair consideration to the interests of communities in or near where the project may be located.” There is no evidence that this has been done.

The SRDEA comment summary also fails to mention that runway expansions such as the one proposed typically result in lost property values surrounding the airport: In this case, millions of dollars in annual tax revenue would likely be lost by local governments because of

reduced real estate values and, consequently, reduced property and school taxes based on assessed property values.

Extensive national research suggests house prices decline 9.2 % within a 2.5-mile band of an expanded airport runway and decline 5.7 % in the next 1.5-mile band (Judd & Winker, 2006). Research based on 2016 tax collections in only Pittsfield Township shows projected annual lost tax revenue of \$1.5 million to the Ann Arbor School District, \$1.4 million lost to the Saline School District, \$850,000 less for Pittsfield Township, and \$810,000 less for Washtenaw County. And that is without considering the impact of real estate located in nearby Lodi Township, the City of Saline (both of which would impact Saline School District revenues), or, most importantly, property in the City of Ann Arbor.

As a matter of public policy, this lost tax revenue should be juxtaposed against any public benefit that would come from extending the ARB runway in a proper cost-benefit analysis. However, this lost tax revenue has not been given proper consideration as an effect of the proposed runway expansion at ARB.

For the section below, see Noise Response #3, Financial/Economic Response #11, and General Responses #5, #10

THE SRDEA ILLEGALLY AVOIDS ANALYZING WILLOW RUN ALTERNATIVE

The SRDEA did not properly consider Willow Run Airport as a viable alternative. If an alternative is reasonable (meets purpose and need) then it must be considered in an EA alongside the preferred alternative and the no action alternative. (Friends of Southeast's Future v. Morrison, 153 F.3d 1065 (9th Circuit, 1998). This was not done.

Located just 12 miles – and a 14-minute drive – from ARB, Willow Run provides what ARB could only wish to offer, and should have been given due consideration as an alternative. Willow Run provides longer runways than even an extended ARB – one at 7,543 feet and another at 5,000 feet – sufficient for even wide-bodied heavy jets, supported by a 24 / 7 FAA control tower, on-site, full-time fire and rescue services, and an on-site de-icing facility in winter months – all things demanded by most professional pilots that Ann Arbor cannot provide.

The Willow Run alternative must be thoroughly examined and was not.

RUNWAY APPROACH SLOPE UNCERTAIN

It is not clear from the SRDEA whether the previously proposed flattening of the approach slope to ARB's Runway 24 from the current 20:1 slope to the previously proposed 34:1 slope is still part of the plan. Previous EAs suggested the flatter slope would provide "an additional margin of safety" from ground-based obstacles. But, quite the contrary, the lower, flatter approach would expose aircraft to Canada geese at lower altitudes for a longer period of time, raising the potential risk of accidents, while providing no appreciable benefits.

See Wildlife Response #1 and Safety/Health Response #1.

This proposed change would actually worsen the high risk caused by Canada geese that inhabit the wetlands and agricultural areas east and west of the airport – especially given the likelihood of increased jet traffic a lengthened runway would attract. Thus, we hope this plan has been abandoned – and, if not, that it will be.

In conclusion, the proposed expansion, benefitting a miniscule .000628 of ARB's annual operations, cannot be justified to meet the stated Purpose and Need. Moreover, the extension would bring added risks to the lives and limbs of citizens living around the airport from low-flying jets in an area heavily populated with Canada geese and the in-flight danger that they pose. Additionally, the lengthened runway would serve as a magnet to attract substantially more jet traffic, which could increase 10-fold, fundamentally changing the nature of a small community airport into a jetport. The only way to ensure that increased jet traffic does not happen is to not extend the current runway. These issues -- compounded by the added health, safety, and noise risks -- make the proposed project untenable and, overall, an example of bad public policy. Willow Run can continue to meet the needs of pilots of jets and large twin-engine turboprop aircraft – and do so while enhancing, not degrading, public safety. This proposed expansion of ARB must be rejected.

Thank you for considering these important issues that argue against the proposed expansion.

Cordially,

Andrew R. McGill, Ph.D.

To: Mayor Christopher Taylor
Members of the Ann Arbor City Council

December 13,2022

The document before you, anachronistically titled an Environmental Assessment report, should be totally rejected as in conflict with the ecological concerns and protective actions recently undertaken by City, County, State and National governments to protect our environment against natural and governmental forces that threaten us all.

The document currently under consideration is the first step in a streamlined process targeted for the lengthening of the 6-24 runway at the Ann Arbor Municipal Airport—a proposed expansion that has been voted against four times in the past half century and just keeps coming back to vampiristic life—this time the stake must be firmly placed in its heart!

When the rural parcel of land in the region of State and Ellsworth Roads was bought by the City a century ago it was called the Steere Water Farm because the aquifer that flows under our County was so near the surface in that region. Wells were then drilled on the parcel and have been maintained there until the present day. That water source is of major ecological import and must be protected! Private aviation use occurred later and has always been of secondary importance.

[See Water Resources/Water Quality Response #1](#)

There are groundwater and upriver threats against city water quality at the present time. Our access to the aquifer through those Pittsfield Township area wells are a vital protection from such threats to the Huron River supply.

[See Water Resources/Water Quality Response #1](#)

When the runway was resurfaced in the late 70's, engineers discovered the land underneath was so unstable, due to water saturation, that tons of gravel had to be poured in before a hard surface could be reinstalled. I was the sole non-aviation member of the Airport Advisory Committee during that resurfacing project and read the reports from Washtenaw Engineering Company about the difficulties the high water table presented. My papers from that period have been donated to the University's Bentley Historical Museum, along with those of a fellow citizen member, the late William J. Pollard. Other past non-pilot members of the group, such as Winifred Wilmarth and the late Robert Gunn, have also studied this problem and rejected the notion of runway lengthening on this and other land use and ecological grounds. I don't believe there is non-aviation representation on the Airport Advisory Committee at the present time.

[See General Response #6](#)

Objections to the potential for environmental damage posed by private aviation recently led to protests at such locations as New Jersey's Teterboro Airport and Massachusetts's Hanscomb Field. This is no time for our City government to privilege the desires of a small number of airport users over the welfare and expressed wishes of the majority of Ann Arbor voters and taxpayers!

Barbara Perkins
1316 King George Blvd.
Ann Arbor, MI 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 5, 2023 1:28 PM
To: William Ballard
Subject: FW: Opposition to Ann Arbor Municipal Runway Extension

-----Original Message-----

From: K Brown <karander@gmail.com>
Sent: Thursday, January 05, 2023 10:48 AM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>; kathewun@aol.com
Subject: Opposition to Ann Arbor Municipal Runway Extension

[You don't often get email from karander@gmail.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

January 5, 2023

Dear Mr. Kulhanek,

We have become aware of the proposed runway extension at the Ann Arbor Municipal Airport in order to accommodate larger aircraft. We are writing to register opposition to the plan.

The aircraft and passenger handling capabilities at nearby Willow Run and Detroit Metro have served us and the Ann Arbor Community well in the past and appear to mitigate any need to service additional larger and heavier turboprop and jet traffic at the Ann Arbor Airport.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5, #10, and #22.

We lived south of the city for a time in the vicinity of the airport prior to becoming homeowners in Ann Arbor proper. The residential areas in the vicinity of the airport are attractive and provide an important housing option to those who work, shop, and recreate in Ann Arbor proper. We believe a runway extension would unquestionably attract additional jet aircraft and heavier turboprop traffic, increase noise levels above acceptable levels, and potentially impact the desirability of many of the nearby residential neighborhoods to the south of Ann Arbor. It is believed that a "Jetport" a mere 4 miles from downtown Ann Arbor could become a noise and safety nuisance to the entire Ann Arbor community.

See Noise Responses #1, #2 and #3 and Safety/Health Responses #2, #5, #6, #9, and #14.

We see minimal justification to save a small number of current ARB aircraft users (one ARB based jet) a few minutes of drive time from Willow Run or Detroit Metro while opening up the airport to a high probability of a noticeable increase in both heavier and jet aircraft usage.

See Noise Response #3, Financial/Economic Response #11, Technical Response #2, and General Responses #5, #10, and #22.

The benefits would be modest and accrue to a few and the costs could be quite significant and could accrue to many.

See Safety/Health Response #16, Financial/Economic Response #1, and General Responses #1 and #13

Respectfully,
Bert and Karen Brown
705 Gott Street
Ann Arbor, Michigan 48103 karander@gmail.com

Cc:
Steve Houtteman, Airport Planning & Environmental Unit, Michigan Department of Transportation-AERO

Sent from my iPhone

Irene & William Bushaw
2403 Quaker Ridge Dr.
Ann Arbor, MI 48108

December 12, 2022

See Noise Responses #1, #2 and #3 and Safety/Health Responses #2, #5, #6, #9, and #14.

Mr. Steve Houtteman
MDOT Aeronautics
2700 Port Lansing Rd.
Lansing, MI 48906

Dear Mr. Houtteman:

My wife and I are writing to communicate our opposition to the extension of the Ann Arbor Municipal Airport runway. We oppose this expansion because we believe it is a wasteful use of tax dollars and other airport generated revenue given the airport's proximity to the Willow Run Airport. Extending the runway would not benefit the business community or provide new services to multiple institutions of higher education located within Washtenaw County. It would however significantly increase noise pollution and introduce safety concerns.

See Noise Responses #1, #2, and #3, Safety/Health Responses #2, #5, #6, #9, #14, and #16, Financial/Economic Response #11, and General Responses #5, #10, and #22.

The current Ann Arbor Municipal Airport is home to 180 aircraft. It services many different aircraft including all B-II aircraft, single and multiple engine. The FAA control tower operates daily from 8:00 a.m. to 8:00 p.m. It is a well-used municipal airport given its current configuration.

Just 12 miles to the east, a 15-minute drive, is the Willow Run Airport. It is a comprehensive airport offering four runways, including an ILS all-weather runway, 24-hour rescue facilities, and 24-hour FAA tower operations. There are no curfew or noise restrictions at the airport, and it can handle aircraft up to and including the Boeing 757. Larger aircraft not able to utilize the Ann Arbor Municipal Airport can fly just a couple of minutes longer to utilize this very capable facility.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5, #10, and #22.

Given these facts, this proposal is unnecessary, but if approved, it does raise other concerns. The landing and takeoff of larger turboprop and jet aircraft at the Ann Arbor Airport would significantly increase the level of noise pollution that nearby residents already face, and increase the utilization of the airport by these larger aircraft during times when the FAA control tower is unmanned.

See General Response #3 and Noise Responses #1, #2, and #3.

In summary, we believe that an argument could be made in support of the lengthening of the runway at Ann Arbor Municipal Airport, noise pollution and safety notwithstanding, if the Willow Run Airport, in its current configuration, was not available to businesses and residents of Washtenaw and surrounding counties. Given Willow Run Airport's proximity and availability of services to support significantly larger aircraft, we believe this proposal is without merit and should be rejected.

Sincerely,



Irene & William Bushaw

CC: Mr. Matthew Kulhanek, Ann Arbor Municipal Airport
Ms. Kathe Wunderlich, Committee to Preserve Community Quality

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, December 14, 2022 9:00 AM
To: William Ballard
Subject: FW: Comments on Airport Expansion

From: Bill Wrobleski <billw@umich.edu>
Sent: Wednesday, December 14, 2022 8:34 AM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: kathewun@aol.com
Subject: Comments on Airport Expansion

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Mr. Houtteman and Mr. Kulhanek,

I am contacting you to express my opinion with regards to the expansion of the Ann Arbor Airport.

I am strongly against this proposal for many reasons, all of which I've seen echoed in recent media reports on the topic. I understand there will be benefits of expansion, but these benefits seem moderate, and are far outweighed by the negative impact on the community and environment.

See Safety/Health Response #16, Financial/Economic Response #1, General Responses #1 and #13.

I recognize that as a resident of Stonebridge, I will be particularly impacted by this expansion, but I've been against this expansion for as long as it has been discussed (I remember some early expansion discussions in the 1980s). Frankly, there are few, if any, local issues that raise as much concern and anxiety with me as this one. I strongly hope that you and the local leadership will choose to deny this expansion once again.

Thank you for taking my concerns into consideration, and thank you for your public service.

Bill Wrobleski
5126 Doral Ct.
Ann Arbor, MI 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, December 12, 2022 7:36 AM
To: William Ballard
Subject: FW: Ann Arbor Municipal Airport Expansion

From: Blake Bogart <blbogart@umich.edu>
Sent: Sunday, December 11, 2022 1:41 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: kathewun@aol.com
Subject: Ann Arbor Municipal Airport Expansion

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hello Mr. Kulhanek,
My wife and I reside in the Stonebridge subdivision adjacent to the Ann Arbor airport and strongly oppose expansion of the airport's runway and aircraft size allowance. [See Noise Response #3.](#)

The proposed changes would create increased sound pollution and greater safety risks related to bird strikes. Both of these changes would reduce our quality of life living next to the airport despite the increased airport size not providing any tangible benefits for the surrounding communities.

Please oppose this expansion measure.

[See Noise Responses #1, 2, and #3, Wildlife Comment #1, Safety/Health Responses #1, #8, and #16, General Responses #1 and #13, and Financial/Economic Response #1.](#)

Best Regards,
Blake Bogart

--
Blake Bogart
University of Michigan
MBA '20
BA Economics and Political Science '13
734-657-7922

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, December 19, 2022 7:10 AM
To: William Ballard
Subject: FW: Opposing the Ann Arbor Airport Expansion

From: Kelsey Brunner <keliz.brunner@gmail.com>
Sent: Sunday, December 18, 2022 3:08 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: Opposing the Ann Arbor Airport Expansion

You don't often get email from keliz.brunner@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hello Matthew,

As a resident directly below the current takeoff path for aircraft in Stonebridge's Monterey Court, I am writing to strongly advocate for **not expanding** the runway for the Ann Arbor airport.

After reading the 2022 Draft Environmental Assessment, it seems to minimize that a longer runway will allow heavier jet engine aircraft to travel over a heavily populated neighborhood. I can attest firsthand to the number of Canadian geese that flock in both my backyard and the golf course behind. Bringing more jets over a heavily populated area with a flocks of large birds seems like an accident waiting to happen and a foolish risk for our community.

See Noise Response #3, Wildlife Comment #1, and Safety/Health Responses #1 and #8.

Beyond safety, the noise pollution from aircraft often already exceeds 60 dbs. Many residents, including myself, have decibel meters and can attest to how frequent an occurrence this is during warm months of the year and how late at night this is during football season. Bringing more traffic, especially from jet engines, would greatly increase the frequency which is both a quality of life and health concern.

See Noise Responses #1, #2, #3.

Finally, I see very little positive value from such an expansion for the community of Ann Arbor. We have a wonderful commercial airport in DTW just 25 minutes away. According to [OfficialUSA.com](https://www.officialusa.com), Michigan has 221 public airports and 129 private airports as well. To me, this proposed expansion seems to save ~25 minutes of commute for only the most wealthy UofM alumni for game days at the direct expense of the community.

See Safety/Health Response #16, General Responses #1, #3, #13, and #14, and Financial/Economic Responses #1 and #11.

Thank you for listening to our concerns.

Brian Holaday & Kelsey Brunner

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, December 14, 2022 9:48 AM
To: William Ballard
Subject: FW: A2 Airport Expansion Comments

From: Brian Miller <brimiller01@comcast.net>
Sent: Wednesday, December 14, 2022 9:34 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: A2 Airport Expansion Comments

You don't often get email from brimiller01@comcast.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

I am against any expansion of the current runways at the Ann Arbor Airport. In my opinion, the only reason this is being considered is so that wealthy UofM alum can fly their private jets into town on football weekends. They already have Willow Run airport for that purpose. Living so close to the airport, I already hear every prop plane and helicopter taking off and landing at the A2 airport. On occasion I've even heard a random jet there. The jets are twice as loud and there's no real need to invite more of them to this airport.

See Noise Responses #1 and #3, Safety/Health Response #16, General Responses #1, #3, #5, #10, and #14, and Financial/Economic Response #11.

Add in the vast number of geese that fly into the field at the corner of Lohr and Ellsworth that would be a hazard for these faster jets taking off, and the danger of a jet crash to the neighborhoods right off the end of the runway.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

This is like so many things in this town; It's voted down multiple times but the issue never stays dead. How many times do we continue to have to say no?

- Brian Miller
3963 Bridle Pass
Ann Arbor, MI 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 3, 2023 6:13 PM
To: William Ballard
Subject: FW: ARB SRDEA Resident Comment
Attachments: 7902 (1).mp4

From: Carol Kaplan <kaplanhome@aol.com>
Sent: Wednesday, December 28, 2022 5:04 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov
Subject: ARB SRDEA Resident Comment

You don't often get email from kaplanhome@aol.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Kulhanek,

I am writing in opposition to the recently published SRDEA.

I was truly dismayed to find that the SRDEA does not ever take into account the SAFETY OF THE RESIDENTS of the multiple communities directly surrounding ARB. By moving Runway 6/24 870 feet southwest, larger planes and newly accommodated jets would be flying over houses at 93 feet, perhaps even lower, greatly enhancing the danger of tragic results to residents should an accident occur. There is NO indication that the "critical aircraft" types covered in this assessment are currently significantly hampered in their operations by the length of the existing runway, and I see no need established or proven for this expansion.

See Noise Responses #1 and #3, Safety/Health Responses #2, #5, #6, #7 and #14, Technical Response #7, and General Responses #3 and #14

This is particularly true in light of the fact that forecasts estimate 40% of Willow Run's operations might eventually shift to ARB. Willow Run Airport (YIP) is only 11 miles east of ARB, is more than well-equipped to handle these planes safely, and also has an operational 24-hour control tower and capability for de-icing, as well as on-airport firefighting support, none of which are available at ARB. It surely seems that for the jet aircrafts that "need" a longer runway, 11 miles is not much of an imposition on the pilots, particularly when juxtaposed against the safety of the dense population around ARB. These additional operations at ARB, combined with the additional "touch and goes" that will result from the increasing number of flight schools expected to be based at ARB, create substantial hazards to the residents of Pittsfield, Ann Arbor and Lodi Townships.

See Technical Response #4, Noise Responses #3, #7, and #9, Financial/Economic Response #11, and General Responses #5, #10, and #14.

SAFETY, Sir, should always be the prime concern. And there is no evidence that this expansion would add to safety for the pilots, while it would clearly increase the potential for dangerous, even deadly accidents to the people who live in the area.

See Safety/Health Responses #2, #5, #6, #7, #14 and #16.

Although the SRDEA does acknowledge the existence of Canada geese flocks in the area, there are NO steps outlined that would mitigate the very real danger of a crash due to a bird strike. Surrounded by ponds and a corn field, there are hundreds, if not thousands of geese at and around ARB, all with the potential to cause a disastrous accident.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

The below attached mp4 was taken by me when I was on my way to an Airport Advisory Committee meeting. A really loud noise attracted my attention, and there they were: a tremendous flock of low-flying geese DIRECTLY on the airfield. See for yourself.

I am hoping that MDOT will not approve this once-again flawed Environmental Assessment, and will FINALLY put to rest the ill-advised, unwarranted and unsafe 870 foot extension.

Thank you.

Carol D. Kaplan
1835 Prairie Dunes Ct S
Ann Arbor, MI 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, December 14, 2022 7:57 AM
To: William Ballard
Subject: FW: Proposed Expansion of the Ann Arbor Municipal Airport Runway

From: Carter Malcolm <cmalcolm@constructiveeating.com>
Sent: Tuesday, December 13, 2022 10:11 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; supervisor@pittsfield-mi.gov
Subject: Proposed Expansion of the Ann Arbor Municipal Airport Runway

You don't often get email from cmalcolm@constructiveeating.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Township Officials and Matt Kulhanek,

As a homeowner and the owner of a small business within the affected area, I am writing to express my outrage and disappointment over the proposed expansion of the Ann Arbor Municipal Airport runway. This is a shortsighted and dangerous proposal that will put the safety and wellbeing of our community at risk for negligible benefit.

Lengthening the runway will not only result in more traffic and larger planes flying dangerously close to our homes and businesses, but it will also increase the noise and air pollution. Furthermore, the city's claim that a longer runway will improve safety is questionable at best. As it stands, the airport has a good safety record and there is no evidence to suggest that a longer runway will reduce the number of runway overruns.

[See Noise Responses #1, #2 and #3, Air Quality Response #1, and Safety/Health Responses #2, #5, #6, #7, #14 and #16.](#)

The city should immediately halt this proposal and instead focus on ways to improve the airport without risking the safety and wellbeing of our community. This is not a decision that should be taken lightly, and I urge the city to reconsider pursuing this "pet project" before it does irreparable damage to our community.

I also FULLY support Pittsfield Township's public opinion in opposition to the Airport expansion; this represents the views of the vast majority of the residents although it is certainly in disharmony with the handful of private jet owners who are pushing the lengthening of the runway so that they can shave a few minutes off of their commute from Willow Run while degrading the lives of thousands of residents. [See General Responses #13 and #14](#)

Sincerely,
Carter Malcolm

Mr. Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

December 28, 2022

Dear Mr. Kulhanek:

We are writing about the proposed expansion of the Ann Arbor Municipal Airport. The proposal would lengthen the main runway by 720 feet. The size of aircraft permitted to land at the airport would be tripled to 70,000 pounds.

Simply put, we are strongly opposed to this expansion.

1) Aircraft would pass over Lohr Road (the eastern border of the Stonebridge community) at about one-third the altitude they currently do: about 100 feet. Noise levels would rise to double or triple what they are now. Airplane noise pollution is *already* a considerable irritant for residents of Stonebridge, where we live.

See Noise
Response #1.

2) Expansion would be pointless, since the Willow Run airport is close by and is well equipped to handle the larger airplanes that the expansion would accommodate.

3) Expansion would lead to increased CO2 emissions and affect Ann Arbor's air quality.

See Air Quality Response #1.

4) Water quality may be affected. There are four wells on airport property near the runway that provide 20% of Ann Arbor's water. The risk of a contamination event with larger aircraft would be increased.


See Water Resources/Water Quality Response #1.

5) The risk of a bird strike at the lower altitudes would be greatly increased. Many geese and swans inhabit the area around the airport.

See Wildlife Response #1 and
Safety/Health Responses #1 and #8.

For all these reasons, we oppose the proposed expansion. Thank you for your consideration of the above points.

Sincerely,



Chris & Georgiana Siehl
2200 Twin Islands Ct.
Ann Arbor, MI 48108
cmsiehl@gmail.com

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, December 13, 2022 7:42 AM
To: William Ballard
Subject: FW: Runway in A2 Airport support

-----Original Message-----

From: Chris G. Sellers <cgseller@gmail.com>
Sent: Monday, December 12, 2022 5:08 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Runway in A2 Airport support

[You don't often get email from cgseller@gmail.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

I would like to comment on the runway proposal.

A few things I would like to say,

1) I think it is great to do investment into infrastructure and the things that help support Ann Arbor being a destination for commerce and sustainability. As a model for growth and prosperity, I think we need to remind ourselves that things such as highways, airports, rail, and talent all contribute to that. [See Support Response #1.](#)

2) Keeping State St. growth in mind is wise, as well as any mass transit in the future.

3) While the Airport was there long before the residential and commercial areas, they are now part of the community and need to be factored in. [See General Response #7.](#)

4) I think it is valuable to have an education effort to share why the Airport is valuable and what happens here (or in other communities) because of the airport or where others do not have such an airport (as I imagine most residents will say there are two airports just down the road) [See General Response #8.](#)

I do wonder if there is a compromise that can give everyone some value. It may require more funding and maybe more participants needs to become part of the solution.

Extend the runway to the desired 2300 ft for safety and or compliance reasons.

Move the runway to the East instead of the West (removing it away from residential areas) Move State Street from its location to farther east and/or subterranean to create a safety zone to allow planes to bridge over the roadway.

I realize this will likely involve land acquisition of the Speedway station and maybe along Ellsworth, and also involve WCRC and likely drainage and environmental studies, but the benefits are that the residents get some safety in moving the runway away from their area, the Airport gets a longer runway, and the WCRC gets the ability to improve State. It may be more cost effective for the township to help contribute to some of the costs as the cost would likely be less than legal domain or annexation battled in court. [See General Response #9.](#)

I hope this helps and imagine some of this was already considered. Overall in support of your effort. No reply needed.

Thank you

Sellers
Saline Resident

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 3, 2023 5:57 PM
To: William Ballard
Subject: FW: Opposition to Ann Arbor Municipal Airport Expansion

-----Original Message-----

From: Claudette Brower <browerama@gmail.com>
Sent: Monday, January 02, 2023 11:20 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Opposition to Ann Arbor Municipal Airport Expansion

You don't often get email from browerama@gmail.com. Learn why this is important
<<https://aka.ms/LearnAboutSenderIdentification>>

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

As a resident of the Stonebridge Community, I write to you in strong opposition to the proposed Ann Arbor Municipal Airport expansion. Expansion requests have been rejected in the past and although the initiative name might be different, the content of the request continues to present several insurmountable dangers to my adjacent community.

The proximity of the runway expansion would cause aircraft to travel at a very low altitude over a main thoroughfare and many homes. Note that this is also an area where an increasing number of Canadian geese congregate. In addition, the noise level at this low altitude is projected to double or triple. Both the increased dangers and noise levels are not in alignment with the quality of life and the safety in my long present community of Stonebridge. I would like to emphasize that Pittsfield Township, where the expansion is proposed to occur, is in opposition to this proposal as there is NO acceptable justification for this request. In addition, the FAA has blocked the proposed expansion for 12 years.

See Noise Responses #1 and #3, Wildlife Response #1, Safety/Health Responses #1, #2, #5, #8 and #14, and General Responses #3, #13, and #14.

It is apparent that the long term goal is to allow larger aircraft to land at the Ann Arbor Municipal Airport. This despite the presence of Willow Run airport that according to Google Maps is less than 12 miles away from the Ann Arbor Airport and should be the airport of choice for larger aircraft and/or the need for longer runways.

See Noise Responses #3, Financial/Economic Response #11, and General Responses #5 and #10.

Thank you for taking my comments along with those of other residents and governing bodies into consideration by voting down this expansion proposal. We are depending on you to make the right decision as many of us will be impacted.

Thank you,
Claudette Brower
4603 Sawgrass Drive East
Ann Arbor, MI 48108

--

Claudette Brower
browerama@gmail.com <mailto:browerama@gmail.com>

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 5, 2023 1:29 PM
To: William Ballard
Subject: FW: Ann Arbor Airport Runway Extension

From: Colin Day <colinleslieday@gmail.com>
Sent: Thursday, January 05, 2023 10:28 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov
Cc: kathewun@aol.com
Subject: Ann Arbor Airport Runway Extension

You don't often get email from colinleslieday@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

4196 Boulder Pond Drive, Ann Arbor, MI 48108

January 5, 2023

Dear Mr. Kulhanek.

Re: Proposed Ann Arbor Airport Extension

As an economist, I think in terms of costs and benefits.

The costs of the proposed runway extension seem substantial: the actual construction cost, but especially the costs to all those living under the flight path in terms of considerable noise nuisance, pollution (jet engine exhaust) and reduced property values. Whether insurers will deem the risk of a crash sufficient to justify an increase in premiums for all people living under the flightpath is not something I can predict, but in any event there is clearly an increased risk of a more serious accident than would be caused by the crash of one of the light planes currently using the airport.

See Financial/Economic Responses #2 and #3, Noise Responses #1 and #3, Air Quality Response #1, and Safety/Health Responses #2, #5, #6, and #14.

On the benefit side, matters seem much more elusive. The one plane that currently uses the airport that would benefit from the lengthened runway could apparently, as a result of the extension, carry a slightly increased pay load. Unless the constraint that the current runway imposes on its payload is frequently operative, this seems a very small benefit and to just one company. On such occasions, the plane could fly out of Willow Run with its long runway. This would impose the mild inconvenience to the users of this plane of driving about 10 miles. Unless one puts an extreme valuation on their time, this inconvenience certainly does not weigh materially in the balance of costs and benefits.

See Technical Response #2 and General Responses #3, #5, and #14

Would Ann Arbor benefit significantly? Again Willow Run is close by and indeed closer than the Ann Arbor Airport for many of the businesses of the town that might on occasion need to fly in or out on heavier business jets. But the easy access to Detroit Airport is sufficient attraction when businesses are considering whether or not to locate in Ann Arbor.

See Noise Response #3, Financial/Economic Responses #1 and #11, and General Responses #5 and #10

In brief, there seem to be substantial costs in an extension to the airport runway that will fall in a large number of people, whereas the benefits seem very limited and to the advantage of one company. I would therefore argue that an

investment in an extension to the runway would have a negative return and would be a substantial mis-allocation of resources. [See General Response #13](#)

Let me add one final comment. I see that it was reported that: 'flocks of 5 to 15 geese arrived on the airfield at different times.' That might be true of the airfield itself, but in the field beside Lohr Rd directly under the flight path we see flocks of hundreds of Canada Geese. Fifteen would actually be about the smallest gathering to be seen. The Department of Agriculture inspector went onto say: 'Canada geese are a real and present danger, and will need to be managed for the foreseeable future [good luck with that!]. KARB is surrounded by ideal resident/migratory Canada goose habitat.' Ingesting a goose into the engine of a small business jet in take-off mode would be dire and again seriously raises the risk of such a plane crashing onto the houses of Stonebridge. [See Wildlife Response #1 and Safety/Health Responses #1 and #8.](#)

Sincerely

Colin Day (Dr.)

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 10, 2023 1:52 PM
To: William Ballard
Subject: FW: Opposition to Ann Arbor, MI airport expansion

From: cranmercom@gmail.com <cranmercom@gmail.com>
Sent: Tuesday, January 10, 2023 12:36 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Opposition to Ann Arbor, MI airport expansion

You don't often get email from cranmercom@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Kulhanek:

Please consider my comments concerning the proposed runway extension project for the Ann Arbor Airport. I am a resident of the Stonebridge residential subdivision and directly impacted (negatively) by an airport expansion. Washtenaw County and the surrounding area possess outstanding natural resources, including rich agricultural land, key watersheds, and clean air, which together comprise a living environment of unmatched value. Our landscape includes parkland, recreational fields, residences, fields, ponds, streams, and wetlands that sustain habitats and a rich diversity of plant and animal species. I tender my comments with these key factors in mind.

Summary

I request the City of Ann Arbor to reject the Airport Expansion and request additional resources to complete the EA (Environmental Assessment) for the following reasons:

- 1) In spite of City of Ann Arbor Noise Regulations the EA does not address the significant noise issues presented to the surrounding community from aircraft overflight events. [See Noise Responses #1, #2, and #3.](#)
- 2) The EA does not fully address wetlands disturbances which will require a public hearing process for any wetlands disturbance. [See Water Resources/Water Quality Response #2.](#)
- 3) A Comprehensive Hazardous Materials management plan for significant hazardous chemical storage present on site is needed. This would include periodic inspections, emergency mitigation training, and associated equipment.
- 4) Comprehensive compliance with local ordinances (Ann Arbor/Pittsfield Twp.) and citizen involvement that include public comments periods is needed. [See General Response #4.](#) [See Safety/Health Response #13.](#)

In conclusion there are significant defects and omissions in the EA, demonstrating that an expanded EA is needed with additional data collection, citizen involvement, and public comment period prior to any expansion approval.

Thank you for the opportunity to submit these objections, concerns, and comments.

Respectfully submitted, Gail Mitchell, 1729 Cypress Pointe Court, Ann Arbor, MI 48108, cranmercom@gmail.com

Detailed Comments

- 1) Noise: Computer modeling: Computer modeling is a wholly inadequate method to determine noise levels to homeowners in the affected area. The 65 DNL contour is approximate and in-accurate. An authentic determination

would involve actual calibrated noise level meters collecting (randomly, double blind) noise data in real time in the busiest traffic pattern areas. Computer modeling does not address variation in aircraft noise level, speed, frequency, or altitude. Ex: Faster quieter aircraft are less of a disturbance than the slower moving louder models. The FAA Methodology, although adopted, does address real life conditions, aircraft type variation, altitude variation, pattern variation, and data authenticity. The modeling coverage area only includes the airport and adjoining properties, affected subdivisions, listed above (page 1), are not included in the study and should be. Please see City of Ann Arbor Noise Ordinance for non-vehicular traffic. 9:360.2 See Noise Responses #1, #4, and #5 .

https://library.municode.com/mi/ann_arbor/codes/code_of_ordinances?nodeId=TITIXPORE_CH119NOCO_ARTINHINO
Noise pollution level determination involving unbiased person-person on-site home owner interviews are a much more precise and accurate method to determine actual noise levels, aircraft traffic volume, and how it affects humans on the ground. My experience as a homeowner (sitting on my deck) is approximately 70-75 dB noise level during an overflight event is a more accurate overflight noise indication. This noise level is loud enough to prevent conversation.

Study Dates: Any noise study or model dated prior to 2022 is outdated and nonrepresentative. As a homeowner in the affected area I can assure you that airplane traffic for 2022 has increased significantly. This is confirmed in the EA Justification study (page 8 of 38). See Noise Response #6.

PRH Graphical shown on Page 7 with conservative extrapolated data for years missing (2020-2023).

Repeated and Consistent Homeowner over flights: Over Flight: An airplane that flies directly (within a few yards) over a persons ground position. How many direct overflights (Innocuously labeled “events” in the study) in a one-hour period is considered normal? I have regularly observed from 3 overflights/hour to as many 15 overflights/hour by the same aircraft. I am a homeowner in the affected area which includes numerous actual observations. I suffer through this on a daily basis, particularly including weekends and legal holidays. Aircraft overflights on my home and others in my subdivision is planned, designed, and intentional, and follow a very narrow band of flight path. In spite of what the EA reports, traffic patterns are very consistent, very repeatable, and very disturbing. Often times there are two planes up simultaneously providing double the noise and double the disturbance. This is a detriment to backyard BBQs, Pool parties, Deck Parties, Volleyball parties, etc...as conversation stops when a noisy aircraft is directly overhead...only to return moments later. See Noise Responses #4, #7, and #9.

On occasion, aircraft use resident citizens walking on the ground as “dead reckoning targets” as some kind of game or practice exercise? See letters below dated 12JUN22. <https://www.a2gov.org/departments/fleet-facility/Airport/Documents/NABrochureFIN.pdf>

Although the AAAP claims “implementation” of a noise abatement program compliance should be demonstrated in a fact-based manner. The EA should require demonstration of compliance to the NBAA Noise Abatement Program in particular student “touch and gos” that create the most egregious noise events for local residents. Evidence of regular pilot training beyond “hanger posters” should be demonstrated. <https://nbaa.org/aircraft-operations/environmental-sustainability/noise-abatement-program/#close-in>

In spite of clear directions in the AAAP Brochure, AAAP Mission Statement, there is consistent non-compliance from pilots on the following request. “Recommended TRAFFIC PATTERN procedures: See Noise Responses #7 and #9.

- Pattern Altitude when possible. Reduce power as soon as practical.
- Please be mindful of multiple Touch-and-Go landings, especially early morning and evening.
- Strive to preserve the quality of our residential areas by maintaining a community friendly noise abatement policy

<https://www.a2gov.org/departments/fleet-facility/Airport/Documents/airport%20rules%20and%20regs%202013%20final.pdf>

2) The EA should include FULL compliance to Michigan Wetlands Protection Act and related regulations. (Section 4: Conclusions). This would include a more comprehensive Wetlands Impact study to evaluate the entire project scope for regulated wetlands before commencing work on site and additionally obtaining the necessary permits from the MDEQ before commencing activities in or around wetlands. Michigan’s Wetland Protection Act, which is now known as Part 303 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, authorizes the State of Michigan through its Michigan Department of Environmental Quality to oversee and regulate certain wetlands located in the state.

http://www.ewashtenaw.org/government/drain_commissioner/dc_webPermits_DesignStandards/dc_Rules/section-vi-areas-of-special-concern.pdf

Following a comprehensive Wetlands study a full public comment period is conducted with local review and public comment to allow citizen oversight. This is part of the Michigan Wetlands Protection Act process. The EA should additionally address full compliance to the Washtenaw County Grading/Soil Erosion Sedimentation Control Act. (Act 347 (now Part 91 of Act 451), 2018, including Rule 1703 Requirements <https://www.washtenaw.org/2442/Soil-Erosion-Requirements-Standards> and, http://www.michigan.gov/deq/0,4561,7-135-3313_3687-10801--,00.html

See Water Resources/Water Quality Response #2.

3) Hazardous Materials Management:

Please review the EA pages Hazardous Materials section. These are items of particular concern and indicate that the EA is incomplete in particular that both public and private water wells are present on the Airport property or close by. Additionally, the need for more study is indicated to address unknown legacy activities as described in section 4.9. Additionally, it should be noted that portions of this report are based on unverified information supplied to L&A by third-party sources. While efforts have been made to substantiate third-party information, L&A cannot guarantee its completeness or accuracy.

Specialized knowledge or experience related to the subject property or nearby properties was not provided.

Commonly known or reasonably ascertainable information about the subject property that would be indicative of releases or threatened releases was not provided.

Information of pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property was not provided. Additionally, information regarding notices from any governmental entity regarding possible violations of environmental laws or possible liability relating to hazardous substances or petroleum products was not provided.

See Water Resources/Water Quality Response #1 and Safety/Health Response #13.

Local Fire Authority 4.3.1 No response.

Local Health Department 4.3.2 No information, Local Building and Zoning 4.3.4 No response.

Soil staining and associated odors were observed during the closure inspection. Confirmatory soil samples were collected; however, laboratory results were not provided, nor was additional information on any remedial activities. As such, the historical waste management practices associated with aircraft service operations are unknown and may be a source of subsurface contamination... Therefore, the potential exists for a release to have occurred from the former USTs... and the former on-site septic field are unknown and may be a source of subsurface contamination... the potential exists for failure of the drainage systems (i.e. cracks, leaks) to have occurred over time...

4) This application is not exclusively an FAA undertaking. Public comment and involvement of affected communities is key. The EA should address and demonstrate compliance with local municipalities planning commissions oversight in the subject city and township for master plan compliance and zoning revisions, where required, local municipality ordinance compliance in affected areas that would include citizen review and a public comment period as in any other major undertaking in the state. See also CFR 150 Appendix A which recognizes local law.

<http://www.legislature.mi.gov/documents/mcl/pdf/mcl-Act-33-of-2008.pdf> See also <https://www.ecfr.gov/current/title-14/part-150/appendix-Appendix%20A%20to%20Part%20150>

The result of such findings and subsequent analysis should be fully documented and publicly disclosed as part of a comprehensive EA which would include citizen oversight and public comment period.

Emergency Response Preparedness and Capability for local first responders: The EA should include full evaluation and demonstration of emergency response capabilities for local fire department and first responder resources. According to the U.S. F.A.A. Airport Compliance Guidelines an emergency plan is required that establishes procedures for handling emergency events such as gas leaks, fires, and explosions, and that establishes protocols for communication and coordination with local fire, police, and public officials. Additional first responder training and funding for specialized equipment should be provided to address potential hazards and accidents.

See General Response #4.

https://www.faa.gov/airports/airport_safety/aircraft_rescue_fire_fighting

This communication is confidential and intended only for the person or entity to which it is addressed. If you are not the intended recipient, you are hereby notified that you have received this message in error and that any review, dissemination, distribution, or copying of this message including any attachments is strictly prohibited. Please notify the sender by reply mail, and delete this communication from your system. Failure to follow this process may be unlawful.



Virus-free www.avg.com

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, December 14, 2022 8:01 AM
To: William Ballard
Subject: FW: Feedback on Ann Arbor Airport Runway Extension

From: Damen provost <damenprovost@gmail.com>
Sent: Tuesday, December 13, 2022 5:01 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Feedback on Ann Arbor Airport Runway Extension

You don't often get email from damenprovost@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hello,

Thank you for soliciting feedback. I live and work in Ann Arbor and am opposed to a runway [extension](#) for two main reasons:

#1. Negative Impacts from Induced Demand: bigger runway = bigger private jets which goes directly against Ann Arbor's Feb 2020 [climate emergency declaration](#) and A2Zero goals. See recent article from the Guardian ([Expansion of English airports could threaten climate commitments](#)). This leads to point #2: See Noise Response #3 and Air Quality Response #3.

#2. Learn from others: Santa Monica CA recently paid \$3.5M to shorten their airport's runway from 5000' feet to 3500' ([link](#)). Why? From the article: *Reducing the length of the runway, officials said, will reduce jet traffic by 44 percent and bring "immediate relief to neighboring residents through reduced noise and pollution."* Let's learn from other municipalities who realize the negative impacts created by larger runways. See Noise Responses #1 and #3.

Respectfully,,

Damen Provost

Mr. Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, Michigan 48108

Dear Mr. Kulhanek,

I am writing to express my strong objections to the proposed expansion of the Ann Arbor Airport. While I understand that the expansion may bring economic benefits and convenience to a few, I am deeply concerned about the negative impacts it will have on the surrounding neighborhoods and the entire community.

Firstly, the expansion will significantly increase noise pollution in the area around the airport. As a resident living near the airport, I am already subjected to constant aircraft noise. As conditions are now, conversations cease until the plane flies over. The expansion will only amplify this problem, making it nearly impossible for us to enjoy peaceful and quiet living. The noise pollution will not only affect the quality of life of the residents, but it will also have negative effects on the health and well-being of the community. Noise abatement procedures have proved ineffective.

See Noise Responses #1 and #7.

Secondly, the expansion will pose safety risks to the surrounding neighborhoods. With an increase in aircraft traffic, there is a higher chance of accidents occurring, which could result in devastating consequences for the community. The risk of fire, explosions, and other emergencies will also increase, putting the lives and properties of the residents at risk. The number of geese that inhabit the airport surroundings adds to the safety risk.

See Wildlife Response #1 and Safety/Health Responses #1, #2, #5, #6, #8, and #14.

Furthermore, the benefits of the expansion will only be enjoyed by a few, while the rest of the community will have to bear the negative impacts. Willow Run airport is ten miles away and is capable of handling the largest planes making the need to stretch the limits of the Ann Arbor airport unnecessary. The expansion will not bring any significant benefits to the majority of the residents, while we will all have to endure the noise pollution and safety risks.

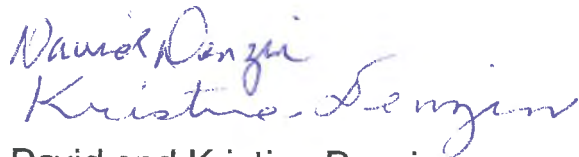
See General Responses #1 and #13, Noise Responses #1 and #3, Safety/Health Responses #2, #5, #6, and #14.

Ann Arbor should be a leader in climate change recognition and green living. We narrow streets for traffic calming and for bicycle traffic to encourage the use of human energy and lower green house gas production. We should not be encouraging the expansion of the carbon footprint of the airport. Already, too many leaded fuel byproducts are dumped on the community. Arbor should be discouraging aviation pollution particularly when it is not required for general community benefit.

See Air Quality Response #3.

In conclusion, I strongly object to the expansion of the Ann Arbor Airport. I urge the committee to consider the negative impacts it will have on the community and to find alternative solutions that will benefit everyone.

Sincerely,

Handwritten signature of David and Kristine Denzin in blue ink.

David and Kristine Denzin
5162 Doral Court
Ann Arbor, Michigan 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, January 4, 2023 2:19 PM
To: William Ballard
Subject: FW: Ann Arbor Airport Environmental Assessment

From: David Dickenson <dsdickenson@gmail.com>
Sent: Wednesday, January 04, 2023 12:23 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: Ann Arbor Airport Environmental Assessment

You don't often get email from dsdickenson@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Matthew Kulhanek,

Please allow me to comment on the Second Revised Draft Environmental Assessment (EA) for the proposed expansion of the Ann Arbor airport. I have been a resident of nearby Lohr Lake Village subdivision for the past 28 years. I consider the airport to have been a pretty good neighbor. While I have no objection to the airport optimizing its operations to continue to serve primarily small piston driven aircraft, I am adamantly opposed to the proposed expansion of Runway 6/24 for the following reasons:

- The purported need to extend the runway (because small turboprop aircraft and occasional business jet aircraft require a longer runway to operate at a greater payload than they do today) would benefit only a very small number of private and corporate users. [See Technical Response #2](#)
- Those same users have an very clear and reasonable alternative: Willow Run Airport. [See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.](#)
- The expansion would allow, in fact would be required to accommodate, larger and noisier aircraft beyond the four "critical aircraft" identified in the EA. [See Noise Response #3.](#)

I am at a loss to understand why the EA does not address the possibility of coordinating with Willow Run Airport to find ways to jointly improve operations. Indeed, in Appendix E (Early Agency Coordination) of the EA, a letter from the US Environmental Protection Agency dated June 3, 2019 recommended that alternatives be considered for the proposed project include surrounding airports. The EPA noted that they had recently received a request for construction from Willow Run Airport. The EPA stated "it is essential to demonstrate 1) how the Airport [Ann Arbor] and the Willow Run Airport fit into regional plans and 2) how proposed construction at the two airports complement each other, rather than provide duplicative services or services available at a nearby regional airport". I'd be interested to know what the response to the EPA was.

[See Noise Response #3, Financial/Economic Response #11, and General Responses #5, #10 and #22.](#)

The EA mentions that an additional benefit from the runway expansion would include a safety benefit derived from shifting the runway 150 feet thereby improving line of sight for Airport Traffic Control Tower personnel

(there is currently a blind spot in a section of the taxiway/runway). However, there is no reason why the runway shift couldn't be done without the runway expansion. In fact, it should be done if this a true safety concern. Alternatively, knock down or relocate the existing hangars that are obstructing the clear line of sight.

See Safety/Health Response #7.

I generally support efforts to optimize operations and expand economic opportunities in the Ann Arbor area. However, this proposal appears to benefit a very small number of private and business jets simply to move them 10 - 12 miles closer to their destination relative to landing at Willow Run. At the same time, it does so at the expense of hundreds of neighboring homes. The EA makes no attempt to quantify the benefits of users having "closer proximity to their corporate offices and business contacts" or the potential "positive impact on interstate commerce to the immediate Ann Arbor area through the removal of operational weight restrictions on critical category aircraft".

See Noise Response #3, Technical Response #2, Financial/Economic Responses #1 and #11, and General Responses #5, #10, and #13.

In reading Appendix N (Past Public Comments and Responses) of the EA, it's notable the volume of concerns and objections in comparison to the paltry number of comments in support.

In closing, in addition to the objections and concerns above, I share numerous other concerns raised by my neighbors regarding proximity of the extended runway to Stone Bridge, noise, air and water quality, and environmental. I ask that you reflect on the totality of concerns that will impact thousands of residents relative to the inconvenience posed to a handful of recreational and business pilots.

Thank you.

See Noise Responses #1,#2, and #3, Safety/Health Response #2 and #5, Air Quality Response #1, Water Resources/Water Quality Response #1, and General Response #13.

Sincerely,

David Dickenson
5731 Lakeshore Drive
Ann Arbor, MI 48108
734-730-9234

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 3, 2023 6:08 PM
To: William Ballard
Subject: FW: Opposition to the proposed Ann Arbor Airport Expansion

From: Dave Hartmann <dlhartma2n@gmail.com>
Sent: Saturday, December 31, 2022 11:51 AM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>; Eyer, Jen <JEyer@a2gov.org>; Akmon, Dharma <DAkmon@a2gov.org>
Cc: kathewun@aol.com
Subject: Opposition to the proposed Ann Arbor Airport Expansion

Some people who received this message don't often get email from dlhartma2n@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

My name is David Hartmann and currently reside at 2260 Twin Islands Ct., Ann Arbor, MI 48108. I am writing to strongly oppose the current proposal to expand the Ann Arbor Airport runway to accommodate larger aircraft. The reason for Ann Arbor Airport expansion is not apparent when weighed against environmental, economic, and safety impacts. The plan is also not forward-looking and consistent with Ann Arbor's Comprehensive Plan. [See General Response #15.](#)

I lived in the Georgetown neighborhood for 44 years before moving to Pittsfield township last year. I have firsthand experience with Ann Arbor Airport hobby and emergency air traffic as a resident and corporate jets as a frequent business traveler. Residents near the airport assume a higher environmental and safety risk than the larger Ann Arbor community and do not desire larger aircraft with lower safety margins than exist today. [See Noise Response #3 and General Response #13.](#)

As a former CEO and executive of businesses located in Ann Arbor, employing thousands of residents, I can state from experience that expanding the Ann Arbor Airport to accommodate larger private jets will not grow the Ann Arbor economy or improve local business efficiency. I flew on corporate jets often, sometimes weekly, to grow business globally. The commercial private pilots I flew with would not land at the expanded Ann Arbor Airport even if they could have given the safer and better-equipped choice of Willow Run facilities just 15 minutes away. The jets that will land at the expanded airport will be taking higher risks for minor passenger convenience. [See Noise Response #3, Financial/Economic Response #11, and General Response #10.](#)

Looking forward and considering future AA Airport needs, it would be more progressive to invest in future smaller/lighter aircraft needs that are designed to be environmentally friendly with higher safety margins. Continuing to invest in leaded fuel, loud, heavy, high CO2 emissions jet aircraft, and risking 20% of Ann Arbor's water wells to large accidental spills is not prudent and is not consistent with Ann Arbor's Comprehensive Plan. [See Noise Response #3, Air Quality Response #1, Water Resources/Water Quality Response #1, and General Response #15.](#)

Please reject this plan and ask Ann Arbor Airport management to bring forward a more progressive, forward-looking, plan that provides a safer, net positive, benefit for the community.

Sincerely, David Hartmann

--

Dave Hartmann
734-604-6026

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, January 4, 2023 7:30 AM
To: William Ballard
Subject: FW: Proposed Ann Arbor Airport Expansion

From: DeLancey Cook <delanceycook1@gmail.com>
Sent: Tuesday, January 03, 2023 12:05 PM
To: houttemans@michigan.gov; kathewun@aol.com; Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Proposed Ann Arbor Airport Expansion

You don't often get email from delanceycook1@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

To all this may concern:

My husband and I recently moved to Ann Arbor and purchased a home near the intersection of Lohr and Ellsworth Roads, across the cornfield from the airport.

While we have settled happily in this wonderful city, we feel anxious and fearful about the potential expansion of the Ann Arbor Airport.

Others will write and speak with far more expertise about scientific data, statistical analysis and research driven information relating to the proposed project.

I would like to address two more human concerns with regard to the proposed project.

I was born and raised in New York City.

Along with the rest of the nation, on January 5, 2009, I watched in both awe and horror as Captain Sully Sullenberger landed US Airways flight 1549 on the Hudson River after his plane collided with a flock of Canada geese. A former military pilot with 20,000 hours of flight time, Captain Sullenberger's highly skilled, professional response saved the lives of all 150 people on board without risking the safety of anyone on the ground.

On a daily basis, large flocks of Canada geese circle the skies around the Ann Arbor airport and land in the pond behind our home.

In spring, summer and fall, hundreds of geese commute several times a day between the corn fields adjacent to the airport and our pond.

It is concerning to observe how close they fly to the aircraft that are taking off or approaching for landing.

It is more a matter of when, not if, a bird strike will occur.

As a community, are we willing to take action that will increase the air traffic at Ann Arbor Airport and gamble that a less skilled pilot than Captain Sullenberger would be able to navigate a similar hit without jeopardizing the safety of the souls onboard and on the ground?

For many across the nation, the Miracle on the Hudson was a televised spectacle; for New Yorkers, it was real.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

The second issue that resonates personally is how the noise of incoming and outbound planes already impacts our quality of life.

Ann Arbor is a glorious, gorgeous place. With much anticipation, we moved across country to retire here. We bought a lovely home with a deck and a little garden. We hoped to sit outside, read a book, invite the family for picnics. We looked forward to playing with our grandchildren in the garden. We assumed that our windows would be wide open to take advantage of the fresh air. Our reality has been different.

Chatting with friends or family on our deck is challenging due to the noise from the planes overhead. We joke about it, but notice that out of town visitors are politely shocked.

While our young grandchildren enjoy pointing at the planes, the decibel level is concerning to all of us, so we gravitate indoors.

It is unpleasant to leave windows open due to the constant noise, so we close them and rely on fans and air conditioning.

Every bedroom has a white noise machine to mask the noise from air traffic that arrives or departs during the evening hours.

To date, the latest arrival or departure time has been 12:38 AM. [See Noise Response #1.](#)

There may be financial benefit to the city from the expansion, I am not in a position to judge.

Home owners in the vicinity of the airport are rightfully concerned that an increase in air traffic and noise will negatively impact property values and eventually, the tax base of the city. [See Financial/Economic Response #2.](#)

I am hopeful that the officials entrusted with evaluating this proposal will consider what is in the best interest, health and safety of the residents of our unique community.

Your vision for the future of Ann Arbor matters so much to all of us.

Thank you for your hard work and also for your consideration,

Respectfully yours,

DeLancey Cook

--
null

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, December 20, 2022 7:23 AM
To: William Ballard
Subject: FW: Opposition to the proposed expansion of Ann Arbor airport

Not sure what this one is but I thought I would send it anyways.

From: Carol Skala <carolskala54@gmail.com>
Sent: Monday, December 19, 2022 6:25 PM
To: rdarms17@gmail.com
Cc: houttemans@michigan.gov; kathewun@aol.com; Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Re: Opposition to the proposed expansion of Ann Arbor airport

You don't often get email from carolskala54@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Great letter Doug. Thanks for getting the Ball rolling. Merry Christmas!
Carol

On Mon, Dec 19, 2022 at 3:55 PM <rdarms17@gmail.com> wrote:

My name is R. Douglas Armstrong and I am a property owner residing at [2258 Twin Islands Ct., Ann Arbor, MI](#) 33408.

I am writing to voice my strong opposition to the airport runway and operational expansion of the Ann Arbor Municipal Airport.

The proposed airport expansion is frankly not necessary to the economic and social needs of the Ann Arbor and Saline areas. Instead this is massively detrimental to fundamental community issues and values, topped by the additional adverse safety issues and immediate devaluation of property value, and of course living desirability.

See General Responses #3 and #13, Financial/Economic Response #2, Wildlife Response #1, and Safety/Health Responses #1, #2, #5 #6, and #14.

As a past founder and CEO of an Ann Arbor public company, I can also state that the housing and support amenities offered by the communities in the southwest Ann Arbor and Saline geographies are an important component to recruitment of key personnel to our area. Protect – not damage – this key asset to our city.

See Financial/Economic Response #7.

In short, the SRDEA ignores key issues of adverse safety and damage to growing important residential areas, and addresses only limited examples of real benefit. I would be remiss if I didn't note the obvious that there is already a

community supportive airport – Willow Run Airport - that exists to provide all of the services and other needs of larger prop and jet planes noted in the SRDEA.

See Noise Response #3, General Responses #1, #10, and #13, Safety/Health Responses #1, #2, #5 #6, #14, and #16, and Financial/Economic Responses #1, #4, and #12

Sufficient “purpose and need” are not supported by the SREA; there is vastly insufficient support of real need for this detrimental project. Please take action to protect our community!

See Safety/Health Response #7 and General Responses #3 and #14.

Thank you for your attention to this important matter and your contributions in public service!

Regards,

Doug Armstrong

R. Douglas Armstrong, Ph.D.

734.223.8526

Rdarms17@gmail.com

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 3, 2023 6:12 PM
To: William Ballard
Subject: FW: Proposed runway extension opposition

-----Original Message-----

From: Elizabeth Michael <bettem@umich.edu>
Sent: Tuesday, January 03, 2023 3:29 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: kathewun@aol.com
Subject: Proposed runway extension opposition

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Mr. Kulhanek
Mr. Houtteman

My family resides at 4346 Lohr Road and we strongly oppose the proposed Ann Arbor Airport Expansion .

Extending the primary runway adds to the risk of all Lohr Road residents since runway length requirements are projected to steadily increase over time. [See Safety/Health Responses #2, #5, #6, and #14.](#)

SRDEA readily acknowledges that any expansion would readily attract more jet traffic in an area heavily populated by Canadian geese which are a real and present danger. We know that birds present safety issues with aircraft. Any ARB expansion is particularly dangerous because it raises the risk level in this area heavily populated with Canadian geese.

[See Noise Response #3, Wildlife Response #1, and Safety/Health Responses #1 and #8.](#)

Home football weekends and NASCAR events will bring more traffic to our area. In addition small operations at Willow Run would shift to ARB if additional runway length becomes available, thus more danger to the nearby residents.

[See Safety/Health Responses #2, #5, #6, and #14.](#)

Further, the noise level around the airport would surely increase in our residential area. That's not acceptable.

[See Noise Response #1.](#)

In closing, I will offer our family's strong opposition to the proposed Ann Arbor Airport Expansion, and hope you will listen to these concerns. Thank you.

Dr. Elizabeth B. Michael
4346 Lohr Road
Ann Arbor 48108-9532

Sent from my iPhone

1743 Monterey Court
Ann Arbor, MI 48108
December 27, 2022

Mr. Matthew Kulhanek
Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Subject: Proposed Expansion of the Ann Arbor Municipal Airport

Dear Mr. Kulhanek:

As a resident of the Stonebridge subdivision for the past twenty one years, I would like to express my very strong opposition to the proposed expansion of the primary runway at the Ann Arbor Municipal Airport 870 feet to the west and 870 feet closer to my home. This extension would enable larger jets to land at the airport but not before traveling at an exceedingly low altitude (i.e., 100 feet or less) directly above my house and at a decibel level that is not only hazardous to my family's health but also well above legally allowed limits.

See Noise Responses #1, #2, and #3, Safety/Health Responses #2, #5, #6, and #14.

I purchased my home in 2001 knowing that the municipal airport was close by and have grown to live with the frequent small airplanes which fly directly over my house on a regular basis, either following take-off from the airport or on approach for landing. In many cases, the planes circle over the subdivision multiple times over the course of an hour making it difficult to hear anything while they are doing so and creating a significant risk of a crash directly into the subdivision. I'm sure you are aware that a small plane made an emergency landing on the golf course in the subdivision in 2009 on the fairway of the 5th hole on the course at a location about 300 feet from my house. A larger plane in similar circumstances most likely would have crashed into several houses in Stonebridge.

See Noise Responses #7 and #9 and Safety/Health Responses #2, #5, #6, and #14.

While I recognize that the airport expansion might benefit a very small number of prospective airport users (I understand it would benefit well less than 0.0005% of airport users), the extension of the primary runway will have a significant negative impact on all residents of the Stonebridge subdivision due to the noise and potential hazards associated with larger planes flying directly over the neighborhood, including those piloted by individuals who might in some cases have limited experience. The increased size of aircraft will result in an exponential increase in noise levels. I know that my wife and I and many of our neighbors would not have moved into the subdivision had we known that an airport expansion was even possible, and it is quite frustrating that the airport, while located in Pittsfield Township, is under the jurisdiction of the City of Ann Arbor located several miles away to the north and which therefore will not be adversely impacted by the expansion.

See Technical Response #2, Noise Responses #1, #2, and #3, Safety/Health Response #9, and General Response #11.

Willow Run Airport is approximately 10 miles to the east and already handles larger aircraft. This airport

has a control tower that is manned 24 hours a day and also has de-icing equipment. The Ann Arbor airport has only daylight control tower operation and no de-icing capability, and it is really frightening to see and hear how many planes take off from and land at the airport at night when there is no control tower operation in place.

See Noise Response #3, Financial/Economic Response #11, General Response #10, and Safety/Health Response #3.

Additionally, the Ann Arbor airport sits on land that Ann Arbor originally purchased for the aquifer that supplies 20% of local drinking water. An increase in de-icing fluid and aviation fuel increases the risk of contaminating this important water supply.

See Water Resources/Water Quality Response #1.

I'd also like to emphasize that during migratory time periods in the fall and the spring there are literally hundreds of Canadian geese which frequent both the runway area and the field used for farming directly west of the airport and in the path of incoming and outgoing aircraft. These and other large birds are not only protected but also a significant hazard for airplanes.

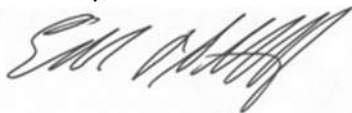
See Wildlife Response #1 and Safety/Health Responses #1 and #8

There are over 700 homes in the Stonebridge subdivision, and we are the largest subdivision in Pittsfield Township. The expansion of the airport will certainly have a significant negative impact on the health of our residents due to the exceedingly high noise levels (I have measured decibel levels approaching 80 dB outside my house with the current aircraft in operation at the airport; the noise from the addition of larger planes and jets will certainly exceed 90 to 100 dB, not to mention the zero margin for error if anything goes wrong on take-off or landing.

See Noise Responses #1, #2, #3 and Safety/Health Response #4.

I appreciate your thoughtful attention to this matter and your recognition of the significant danger to the community of the proposed expansion, particularly when there is an alternative airport for the larger aircraft only 10 miles away at Willow Run.

Sincerely,



Edward T. Steinhoff

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 10, 2023 11:22 AM
To: William Ballard
Subject: FW: Opposition to the Ann Arbor Airport Expansion

Importance: High

From: eforsyth7@gmail.com <eforsyth7@gmail.com>
Sent: Tuesday, January 10, 2023 11:15 AM
To: houttemans@michigan.gov
Cc: Kulhanek, Matthew <MKulhanek@a2gov.org>; kathewun@aol.com; supervisor@pittsfield-mi.gov
Subject: Opposition to the Ann Arbor Airport Expansion
Importance: High

You don't often get email from eforsyth7@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Houtteman,

See Noise Responses #1 and #3, Air Quality Response #1, Water Resources/Water Quality Response #1, Wildlife Response #1, Financial/Economic Responses #1 and #2, Safety/Health Responses #2,#5, #6, #7, #14, and #16, and General Responses #5 and #10

This letter is to express my sincere objection to the expansion of the Ann Arbor Municipal Airport. This unnecessary endeavor has far more negative consequences to the environment, to wildlife, to property values, and is a substantial safety risk to surrounding residents/businesses than the value derived. Frankly, the runway expansion is a complete waste of taxpayer dollars for something that has limited value considering that the Willow Run Airport is an established airport to serve the same purpose and is nearby underutilized resource. I have flown in and out of Willow Run several times on private jets. It is an acceptable, convenient local asset.

From an economic perspective, the Airport Expansion will most likely not have a positive economic impact for Ann Arbor and Pittsfield Township. Rather, it would be a serious negative impact on property values for businesses and homes near and around the Ann Arbor Airport. Prospective home buyers will be turned away by both the loud sounds but also the potential safety risks for themselves and their families. It may also encourage property developers to look in other locations.

See Noise Response #1, General Response #1, Financial/Economic Responses #2 and #4, and Safety/Health Responses #2,#5, #6, and #14.

The danger of the proposed expansion, especially near the heavily populated neighborhoods surrounding the airport, presents a real safety risk to residents that far exceeds the minimal benefits from the expansion that would be gained by the operations of a single Cessna Citation Excel XLS operator, AvFuel Corp. How absurd...the needs of one will exceed the needs of the many! Even worse, the expanded runway could potentially attract more larger and heavier jets, posing additional risks in an area heavily populated with Canada geese, which do not interact well with jet aircraft, as several prominent national accidents have showcased. Once again, why would we not invest in and more fully utilize Willow Run?

See Noise Response #3, Technical Response #2, General Responses #5, #10, and #13, Wildlife Response #1, and Safety/Health Responses #1, #2, #5, #6, and #14.

Government Officials as well as most residents observe a substantial population of Canada geese operating on the airport, feeding in a tilled fallow field to the west. These geese regularly feed within a few yards of the runway. These Canada geese are a real and present danger and will need to be managed for the foreseeable future, not only for the airplane crews but for the surrounding residents. Who will take responsibility for this should this Expansion be approved? All the documents that I have read on the Airport Expansion presents no plan for such mitigation. See Wildlife Response #1 and Safety/Health Responses #1 and #8.

In short, the proposed expansion would primarily benefit the owner of a single Cessna Citation Excel XLS, and is this really in the best interests of taxpayers, the use of taxpayer dollars, and most importantly taxpayer safety? I think NOT! The expanded runway could also likely attract larger and heavier jets to the airport, posing greater risks to residents living around the airport, and have a dramatic, negative impact on property values and property expansion.

Please **DO NOT** approve this project.

I am happy to discuss this matter with you further at your convenience. Please contact me by email and my home address is below.

Sincerely,

Elliot Forsyth
4870 Doral Dr.
Ann Arbor, MI 48108

Dave Clawson

From: houttemans
Sent: Tuesday, December 13, 2022 10:56 AM
To: Kulhanek, Matthew
Cc: William Ballard
Subject: FW: opposed to ann arbor airport expansion

And another....

From: Jawad-Makki, Farah (Farah) <fjmakki@med.umich.edu>
Sent: Monday, December 12, 2022 11:08 AM
To: Houtteman, Steve (MDOT) <HouttemanS@michigan.gov>
Subject: opposed to ann arbor airport expansion

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Mr. Houtteman,
I would like to add my and my husband's objection to the expansion of the Ann Arbor airport. My name is Farah Makki, and I live on 4299 Boulder pond drive.

Sincerely
Farah Makki, MS, PA-C

Electronic Mail is not secure, may not be read every day, and should not be used for urgent or sensitive issues

5140 Forest View Court
Ann Arbor, MI 48108
6 January 2023

Mr. Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Dear Mr. Kulhanek,

My wife and I are writing to submit comments about the Second Revised Draft Environmental Assessment for the Ann Arbor Airport. We live in the Stonebridge housing development and are totally opposed to any expansion of the Ann Arbor Airport. I am a retired Air Force pilot with 5000 hours of flying time and I firmly believe that the proposed expansion would be not only extremely detrimental to the surrounding communities but would also be unsafe.

The expansion appears to be for the convenience and profit of one commercial entity, AvFuel. Only one aircraft (Cessna Citation Excel XLS), which is owned by AvFuel, would have to reduce payloads or divert to another airport on days above 85 degrees or in inclement weather. The other three “critical aircraft” could operate on the existing 3,505 foot runway all the time. This hardly seems like adequate justification for such a major runway expansion. In addition, Willow Run is much better-equipped to handle aircraft during inclement weather having longer runways and instrument capability. And Willow Run is only 7 miles further than ARB from downtown Ann Arbor.

See Technical Response #2, Safety/Health Response #3, Noise Response #3, General Responses #5 and #10.

The proposed expansion also creates very unsafe flying conditions. Aircraft would be approaching the airport at less than 100 feet above homes! And sometimes aircraft take off in that direction and would have to climb very quickly to avoid homes. This allows for no errors. There are already inadequate Runway Protection Zones at ARB and this would make it much worse. In addition, Canada geese are a constant presence right next to the runway and sometimes on it! By steepening the approach slope, this puts aircraft in much closer proximity to the geese than they are now and the potential for a collision is much higher. It must also be considered that ARB does not permit instrument approaches and landings, the control tower only operates 12 hours a day, de-icing is not permitted and the airport does not provide 24-hour on-site fire and rescue services. These facts all combine to describe a very unsafe situation.

See Noise Response #1 and Safety/Health Responses #1, #2, #3, #5, #6, #8, and #14.

An earlier version of the SRDEA estimated a 10-fold increase in jet traffic if the runway is extended but the current SRDEA version downplays the likely increase. This appears to be an attempt to dishonestly allay community concerns about being inundated with the noise and disruption of jets landing. And, if there is a significant increase in traffic, the risks of accidents will be even higher. It seems that one of the purposes of the expansion would be to attract

more jet aircraft but this is in direct opposition to the wishes of the community. Very few people will benefit from the expansion and many will be harmed by it.

See Noise Responses #1 and #3 and General Response #13.

In addition to safety concerns, a runway expansion and increased jet traffic would greatly affect the noise level and quality of life of nearby residents. I know it has been stated that homebuyers knew the airport was nearby when they purchased their homes but now the homeowners are here BEFORE the expansion so I think they have a legitimate stake in the conversation. All the surrounding communities are opposed to the expansion. The very small benefit of a longer runway must be balanced against the health and well-being of thousands of nearby residents. Viewed from this perspective, there doesn't seem to be much justification for proceeding with the expansion.

See Noise Responses #1 and #3, Safety/Health Responses #7 and #16, and General Responses #1, #3, #7, #13, and #14

We do not believe this draft environmental assessment adequately addresses the issues surrounding the proposed expansion of ARB and believe it should be rejected. And after 12 years of trying to make a silk purse out of a sow's ear, we think the whole idea of expanding ARB should be dropped.

Sincerely,

Gary and Catherine Andrejak

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 5, 2023 7:26 AM
To: William Ballard
Subject: FW: Airport

From: gerlinda <gerlinda@frontier.com>
Sent: Wednesday, January 04, 2023 8:11 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Airport

You don't often get email from gerlinda@frontier.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Greetings

We live on Pinnacle and hear every plane coming and going. Around dinner we sometimes can't hear each other on the sundeck because NE PLANE AFTER ANOTHER IS TAKING OFF.

A further expansion would make us lose hundreds of thousands of \$ if we need to sell. Please prevent such a loss on our real estate.

[See Financial/Economic Response #2.](#)

Thank you

Dr. Gerlinda Melchiori on Pinnacle Ct.

Sent from my Verizon, Samsung Galaxy smartphone

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, December 13, 2022 7:38 AM
To: William Ballard
Subject: FW: Objection to the Ann Arbor Airport Expansion
Attachments: Grace Conner's Objection to the Ann Arbor Airport Expansion.pdf

From: grace conner <gaconner@hotmail.com>
Sent: Monday, December 12, 2022 7:40 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Fw: Objection to the Ann Arbor Airport Expansion

You don't often get email from gaconner@hotmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

From: grace conner
Sent: Monday, December 12, 2022 7:26 PM
To: mjkulhanek@a2gov.org <mjkulhanek@a2gov.org>; houttemans@michigan.gov <houttemans@michigan.gov>
Cc: Gregory Conner <gaconner1@gmail.com>; Kathewun@aol.com <kathewun@aol.com>
Subject: Objection to the Ann Arbor Airport Expansion

Mr. Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI, 48108
mjkulhanek@a2gov.org

To All the decision makers regarding the Ann Arbor Airport Expansion:

My family has lived at **4842 Lohr Rd** Ann Arbor MI 48108 since 1998. Our home's location puts us directly under the takeoff and landing path for the Ann Arbor Municipal Airport primary runway (see my Google screenshot).

The Airport, as it is now, became a great concern to me when, in 2009, a single engine plane had a power failure and made an emergency landing on the 5th hole of Stonebridge Golf Course less than 60 feet from my home (see photo). This happened as the original plan to expand the AA Airport runway to the west (where I live) was being discussed. Had the plane been larger and the pilot less skilled, I might not be writing about this to you today. Since then, I have had great concern that the AA Airport runway expansion might become a dangerous reality.

See Safety/Health Responses #2, #5, #6, and #14.

Another, more recent, occurrence was documented in a media release by Pittsfield Township Department of Public Safety on 09/11/22. This was described as an emergency landing of a two seat Cessna 152 in the field adjacent to the airport (used for farming corn and/or soybeans). Fortunately, neither the flight instructor, the student or the plane were injured /damaged.

See Safety/Health Responses #2, #5, #6, and #14.

This field is supposed to be our “runway protection zone” but will be shortened if the runway is extended. So a future emergency landing will be into Lohr Road traffic or my front yard or my neighbors homes.

Moving the airport’s primary runway about 870 feet closer to my home on Lohr Road may improve the operational utility of the airport but does not provide for the safety of my family and my neighbors as we do not feel adequately protected by any current or future, shorter “Runway Protection Zone”.

See Safety/Health Responses #2, #5, #6, and #14.

On October 5, 2021, the residents of Stonebridge, Lake Forest and Fox Glenn Communities all received a mailed dispatch from the Pittsfield Department of Public Safety regarding the rising number of complaints about small aircraft engine noise, circling and low altitude flight patterns, including “touch and go” landing and takeoffs and early morning or late evening/night air traffic. The letter said these were primarily coming from the 4 flight schools operating at the airport. FOUR FLIGHT SCHOOLS!! YIKES! Add inexperienced students to the mix with the larger planes that may use the proposed extended runway. The above- mentioned incident on 9/11/22 was one such occurrence. How many more “occurrences” might be in our future?

See Noise Responses #3, #7, and #9 and Safety/Health Responses #2, #5, and #9.

And then there are the birds..... Large flocks of Canadian geese, along with large gatherings of crows and wild turkeys live in the surrounding area. When the corn and soybean crops are harvested in the fall they all gather by the hundreds to feast but rest assured, they are here year round.

All it takes are a few coyotes (we have a local pack) or dogs to send these birds flying up in alarm as a jet takes off or comes in for a landing. With an increase in larger planes and jets, that is a disaster waiting to happen

See Noise Response #3, Wildlife Response #1, and Safety/Health Responses #1 and #8.

The potential for ground water contamination exists from fuel spills and/or crashes. There are nearby properties that still use wells for drinking water.

See Water Resources/Water Quality Response #1.

Noise levels would also increase. As it stands now, at certain times of day and evening you cannot have a conversation either in person or on the phone while outside that will be interrupted when planes pass over.

See Noise Response #1.

The Ann Arbor Airport runway expansion puts larger planes dangerously close to my home. Willow Run Airport allows these planes to come and go safely and is only 10 to 15 minutes away.

See Noise Responses #1 and #3, Safety/Health Responses #6 and #14, and General Responses #5 and #10.

I am writing in support of the Grass Roots Committee to Preserve Community Quality, Pittsfield Charter Township and all my concerned neighbors and against this new 2022 Second Revised Draft Environmental Assessment for the dangerous and unnecessary runway expansion at the Ann Arbor Municipal Airport.

I hope that we shut this down once and for all.

Feel free to contact me regarding my comments.

Sincerely,

Grace Conner

gaconner@hotmail.com

734-231-9987



My Home in relation to the Ann Arbor Airport



2009 Golf course emergency landing 5th fairway



Geese crossing Ellsworth Road



Geese feasting on corn in runway protection zone



Geese in runway protection zone near Lohr and Ellsworth Roads



Coyote looking for a goose meal on 5th fairway



Geese flying east towards primary runway

**Greg Conner's Comments on the Ann Arbor Airport Dangerous Runway Expansion Project, #3rd Proposal.
4842 Lohr Rd Ann Arbor 48108 (12/29/2022)**

Cc: Gregory Conner, gaconner1@gmail.com; kathewun@aol.com; mjkuhanek@a2gov.org; houttemans@michigan.gov; gaconner@hotmail.com;

Airport Opposition Summary: SAFETY FIRST !!!

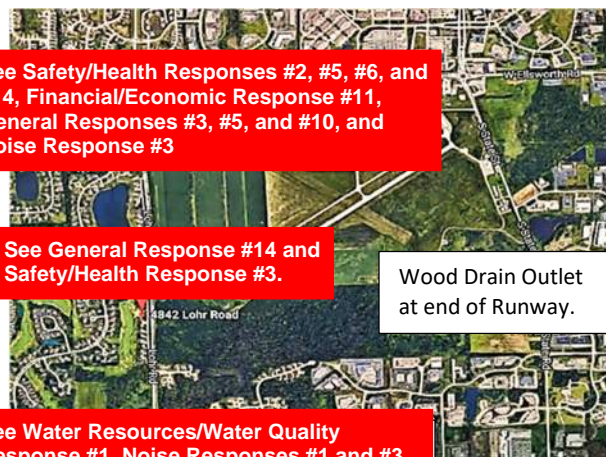
- **What's Safety Got to Do with the Airport Runway Expansion? Nothing! I oppose the Airport expansion for the third time because it makes no economic sense, and no runways need to be built at Willow Run! It would be safer NOT to expand the Runway.**
- **It is only for a few elite operators, and it endangers more people and property around the airport. The Stated goal is safety but there is no evidence to support that claim. Flying to or from WR is far safer than Ann Arbor!**
- **Given the safety risk pointed out below for groundwater contamination, lower clearance over homes on takeoffs and landings, more noise by heavier and bigger planes is not the neighborly behavior we expect from Ann Arbor. No risk assessment, such as Design Failure Effect Mode and Analysis was completed or published. Failure to Plan, is a Plan to Fail!**
- **No active DFMEA regarding past accidents and no Bird Control Plan except changing the once-a-year harvest and bird feeding of Corn and Soybeans to an all year long feast of Grass, UNSAFE!**
- **Grass. A food Source Geese eat all year long will make safety worse all year long, which is exactly the wrong thing to do to increase safety, just the opposite, increases accident potential.**
- **Just like the AA Airport Expansion Plans, the Bird Feeding plan is poorly thought out, and very problematic. The Runway expansion is a waste of Taxpayer Money, as Willow Run is already paid for. No additional Taxpayer money is required to extend Willow Run runways, as it handles just about any size of aircraft and already has long runways.**

1. São Paulo Brazil Tragic Airplane Accident!

"On the evening of July 17, 2007, an Airbus A320-233 overran the runway 35L at São Paulo Brazil during moderate rain and crashed into a nearby TAM Express Warehouse adjacent to a Shell filling (gas) station. The plane exploded on impact, killing all 187 passengers and crew on board and 12 people on the ground."

Remember the 2007 crash in Brazil where 187 people were killed and another 12 people on the ground? Well, that airport had a configuration where a gas station was at the end of the runway, just like we have with Ann Arbor Airport! Recall that almost all of the accidents at the AA Airport have happened at the Gas Station end of the Airport. Our corner Speedway Gas Station was expanded not that many years ago! It now has than more than double the number of pumps and is now just waiting for another Airport accident to happen at that corner.

We are wondering if the ANN ARBOR AIRPORT bothered to make an impact statement on the riskiness of adding so many more pumps at that Gas Station where many of the AA Airport's Airplane accidents have occurred? Since the Ann Arbor Airport is now so interested in Runway Safety, the gas station expansion would have been in the Airport's interest



See Financial/Economic Response #8, Safety/Health Responses #1 and #8. May 5! SB June 2009.

East Bound Geese Flying Over Airport Runway: **Cannot be Safe!** Geese at Annual Feeding Station Ag Field Soy/Corn!!



regarding “Critical Safety Matters” related to the Public Safety, and it should have offered public comment on the Gas Station’s Expansion Project. We believe the Brazil Fiery Crash in San Paulo where about 200 people were killed was around the same time or before the Ellsworth and State Speedway Gas Station new pump count was proposed for expansion! In any case, it does seem to be a relevant question, given the current “SAFETY” justification for the Airport Runway Expansion for the THIRD TIME! The argument again still seems to be about the safety of ADDITIONAL aircraft with higher payloads that would be better served at Willow Run with far less cost to US Taxpayers, as exactly no added runways would be required at the Willow Run Airport!

It seems that even with the proposed changes to Ann Arbor Airport, safety would not be improved but would be diminished! It seems the changes proposed would likely increase the risk of an accident as new planes and heavier planes mix in with inexperienced pilots from the 4 flight schools! This is a population mix that we currently do not have! **The changes proposed seem to be going from a stable situation to one of unknown safety risks. This means it is a downgrade in airport safety performance and higher risk in Ann Arbor, while there would be no problems if those planes simply went to Willow Run where no runway expansion is required! Do the country a favor and save taxpayers the needless expense of the Ann Arbor “Run-away” Expansion Project, use Willow Run instead. The taxpayers have already paid for Willow Run Airport, just use it.**

This seems to be about a special interest case, where safety conditions that only exist with the service of a very limited class of airplanes, and for small percentage of time. On that basis, the AA Airport Expansion argument makes No Sense! As heavier full tanked jets crashing into the extended and expanded Gas Station would be a worse condition than we have right now. But nothing seems to have been done by the AA Airport to stop the Gas Station Expansion, why not?

3. Geese, Soybeans, Corn, or Grass , Birds and Airplanes still Don’t Mix!

The agricultural land at the corner of Lohr and Ellsworth, is owned by the Airport. It was reported that the Airport may start to grow grass instead of Soybeans and Corn. Well, the geese like to eat Grass too, perhaps as much, or more than corn, and soybeans, since grass is available all year long! Just ask anyone who lives on a golf course!

We live on Stonebridge’s Fairway 5, the one where an airplane made an emergency landing in June 2009! The Canada Geese thrive on grass, it’s the first thing we see them eat after they are born. We have lived on the 5th Fairway since 1998, and the geese eat golf course grass all year long, so changing the bird’s menu to grass at the corner of Lohr and Ellsworth **shows a deep misunderstanding of Geese! You will simply be giving the birds more of what they eat all year long. Growing crops on the closest property to the airport demonstrates extreme incompetence in managing “bird strike safety” at the airport over a duration of 50 years, or more!** Changing the Ag property to grass to limit the bird population does just the opposite, there will be more birds there, and all year long! It is a safer practice to keep the crop rotation to soybeans and corn, **as the birds are only there after the crops are**

Geese Crossing, Stops Traffic as they go to AA Airport! From Ponds to Tree Nursery Area.



See Safety/Health Responses #2, #5, #6, and #14, Financial/Economic Response #11, General Responses #5 and #10, and Noise Response #3.



See Safety/Health Responses #2, #5, #6, #9, and #14, Financial/Economic Response #11, General Responses #5 and #10, and Noise Response #3.

Two Coyotes Stalk Geese on Fairway 5, C#2 in the Sand Trap. The Birds waited out the Coyotes!

See Technical Response #2, General Response #3, Noise Response #3



Ellsworth and Lohr Geese AA Annual Feeding Fest

harvested, not all year, as would happen if the fields were changed to grass all year! Just like the airport expansion “ your bird feeding program” needs further deep thought to improve safety for the whole metropolitan area.

Where is the plan to expand Airport Safety regarding Birds? In addition to Geese, Swan, there are Great Blue Herons, Red Tail Hawks, migrating Blue Birds, Turkeys and Hummingbirds, Crows, and Deer that can jump fences. In addition, there are Coyotes and Foxes to scatter them to the skies! Want to improve Airport Safety, then just STOP FEEDING THE BIRDS on Airport property!

4. Gyrocopters, Cargo Planes, and Fighter Jets!

What do all these things have in Common? Ear drum shattering NOISE! An Ann Arbor resident and former GM exec, **Bob Lutz purchased a Mig16 Russian fighter jet in 2010.** Where did it end up? You guessed it, **Ann Arbor Airport!** This jet could have easily been housed at the Willow Run Airport with his other jets, but it ended up in Ann Arbor Airport instead! This really showed the lack of Respect for the peace and quiet of the neighboring communities as, on many Saturday Mornings, at 7am Bob Lutz would fire up the jet and take off at Full Throttle like a “Bat Out of Hell”. It scared the crap out of everybody in Stonebridge and its surroundings. He took off at Full Wide-Open Throttle and it sounded like World War Three had started in Stonebridge! **It did not seem like a very neighborly thing to do, but more importantly, it did not seem like the Safest Thing to do! Yet, it continued for quite some time! Just like this issue on the Airport Runway Expansion. It seems hard to stop this obnoxious, bad behavior!**

So, it looks like well-to-do people, like **Lutz** and the **Av Fuel** owner have a special pull with the Ann Arbor Airport and its manager! Peace and Quiet and respect for neighbors have no meaning, **and more importantly, Safety seems to be the last thing on the list of Ann Arbor’s Airport Managements’ list of Priorities!** However, it seems the City of Ann Arbor is determined to expand its airport with lots of untrained rooky pilots flying in a bird and deer laden natural habitat. This seems to be the primary goal of the Ann Arbor Municipal Airport, in addition to satisfying a few rich patrons. The Airport Management should be ashamed of themselves!

The UoM jet by contrast is very careful to take off as quietly as you have ever heard a jet takeoff, they are very respectful of community peace and quiet! We need more neighbors like them!

5. The Gyrocopter from Hell!

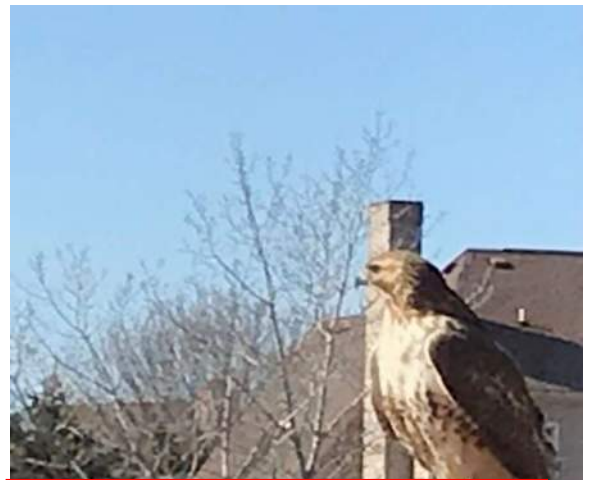
What about the Gyro Copter and the noise made by that thing that drones on and on. People have complained about this Gyro Copter as it has the most obnoxious sound you have ever heard. After many calls about loud noise that just doesn’t seem to fade away Matt told us in July of 2020 that the “touch and goes” of this copter would end but he would still be using the airport. **AAA made very weak efforts to quiet the Gyro Copter Owner down. It is still loud, and whiny! And, just like the airport runway expansion, the Gyrocopter will not go away!**

Look closely, there are birds on the Ground!

See Wildlife Response #1 and Health and Safety Responses #1 and #8



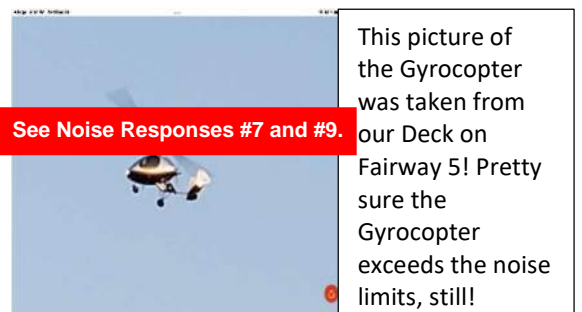
Airport Feeding of Geese in Takeoff Path!



See Technical Response #2, Noise Response #1, Wildlife Response #1, Safety/Health Responses #1, #2, #5, #6, #9, #8, and #14



Our favorite Red Tail Hawk at Stonebridge!



See Noise Responses #7 and #9.

This picture of the Gyrocopter was taken from our Deck on Fairway 5! Pretty sure the Gyrocopter exceeds the noise limits, still!

6. FLY-BYs from Hell!

There were **3 military cargo propjets**, three of them flying in formation that buzzed **Stonebridge and the Airport** in the past! Individually, they are louder than hell! They have the biggest props you have ever seen! It felt like we were at the Air Show! **We called the airport; they said those cargo prop jets were controlled by Detroit Metro Airport and there was nothing they could do about the Detroit Metro Controlled air space for these large planes! They buzzed the Ann Arbor Airport for some reason and flew off! Then it happened a second time! And another time after that. This is all very inexplicable because we were told that these planes cannot land at Ann Arbor Airport, because, you guessed it, the runways are too SHORT for these big planes! Well, what were they doing here buzzing an airport they cannot possibly land on? What would happen if during these maneuvers they needed to emergently land?**

Seems like another possible mishap for Ann Arbor Airport! Someone playing a sick joke on the Ann Arbor Airport, and its neighbors. **It seemed dangerous, risky, and unnecessary, just like the Ann Arbor Airport Expansion Project!**

7. Ground Water Contamination:

Ann Arbor Airport Aquifer and Drinking Water? What about potential contamination of the Ground Water in Pittsfield, due to contamination on a busier future longer runway AA Airport?

We believe that the city of Ann Arbor bought the property at State and Ellsworth for the Aquifer originally, as a supplemental clean water source. It certainly would be needed due to a myriad of issues associated with the Huron River which include the Gelman’s Plume that is moving underground toward the Huron River, a primary source of water for Ann Arbor. However, the Airport Aquifer, with all the proposed increased jet-fueled aircraft would add a new complexity, and arguably a new challenge to the protection of the ground water, adding new jet fuel chemical contaminants and damage to the water in the Pittsfield Aquifer! Having both Gasoline and more Jet Fueling operations contaminating water would certainly be a challenging mix to clean up! It is a known fact that many Airports in the US have contaminated ground water due to chemical cleaning of aircraft engines with cancer causing chemicals like Pease Air Force base in NH, and Camp Lejeune in NC, and many others!

However, while Pittsfield Township is on Detroit City water, there are still communities in Pittsfield that are on well and septic, one of them is just south of the Airport, Silo Ridge! So, the water sources at risk are not just those in Ann Arbor, or under Ann Arbor’s control, as Silo Ridge is in Pittsfield Township! Also, there are many homes, right next door to Stonebridge, in Lodi Township, that are on well and septic, like Travis Point. So, a new plume of contaminated Ground Water going west and south could affect a lot of other community’s fresh water sources, besides Ann Arbor’s! **We also do not wish, hope/want Ann Arbor’s water sources to become even more threatened by contamination, just as we hope that nightmarish runway expansion project traffic would go to Willow Run at no cost to anyone, and no more environmental damage! We hope you do too!**

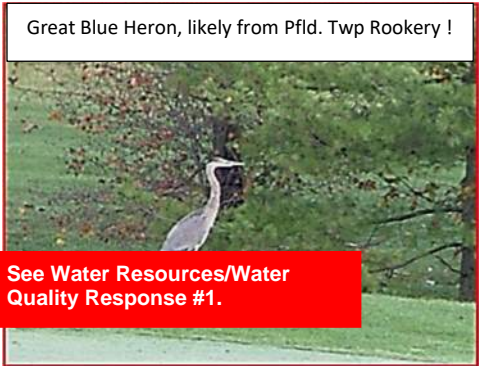
See Water Resources/Water Quality Responses #1 and #3, Financial/Economic Response #11, General Responses #5 and #10, and Noise Response #3.

Question:

Has a Design Failure Mode and Effects Analysis, DFMEA, ever been completed?

Has the AA Airport completed a Design Failure Mode and Effects Analysis, or a DFMEA, **which details each Failure Mode and assesses the probability of all identifiable Failure Modes with Frequency, Severity and Risk Ratings?**

See Safety/Health Response #10.



Unfortunately, in most cases the failing organization does not perform a DFMEA, until after serious loss of life disasters, many of them associated with the death of many people and at high expense! Like, for example, the Shuttle Explosion in 1986 and Columbia Disaster in Feb 1, 2003, killing 7 Astronauts. Or the Soyuz 11, June 71, 3-man crew lost, when capsule depressurized on re-entry.

Where is DFMEA for the Runway Expansion?! Anyone concerned with Safety would complete a DFMEA and make it available to the public. NASA Started using DFMEAs after the Challenger Blew up on takeoff! Hard to believe they learned about DFMEAs from the auto companies! Any organization concerned with risk would perform a DFMEA!

See Safety/Health Response #10.

Better to do it NOW before your next accident, than after. If you DO NOT have a DFMEA completed, then this tells us a lot about how serious you are about Airport Safety and Saving Lives at the Airport! Just like your Dangerous Bird Policies, you are programming the Ann Arbor Airport for unsafe operations and a high probability of DISASTERS. The DFMEA is meant to prevent accidents and disasters! But the Ann Arbor Airport should know this, as this Runway Expansion Fever, requires rethinking of the Risk to neighboring communities. Ann Arbor Airport should start by minimizing the bird attractants on and around the Airport grounds, as a part of its Safe Skies Policies. Then fully complete the DFMEA (see Wikipedia), to minimize accidents!

See Wildlife Response #1 and Safety/Health Responses #1, #8, and #10.

Contamination of ground water resources must be a horrific scare to the people of Ann Arbor. The Airport Runway Expansion is a continuing terrorizing nightmare to Pittsfield Township residents! It is equivalent to wondering if my next cup of coffee is going to be contaminated with a high dose of Dioxin. This is what people in Scio, Ann Arbor and Pittsfield could never imagine, a plume of Dioxin, a very toxic chemical contaminating ground water, moving toward the Huron River! Not that unthinkable now, is it?

See Water Resources/Water Quality Responses #1 and #3.

So, a community airport is pushing extremely hard for a Runway expansion under the guise of Safety for a certain class of Jet planes. Experts say these planes can fly with air density weight adjustments right now, with the current length runway, nearly 95% of the time. So why do we need a longer runway providing a more dangerous opportunity to spill and mix jet-fuel with gasoline on that property for less than 5% of the time? **Is this expense worth the risk of even one additional accident that destroys the life and/or homes of people living nearby? Is it worth the risk of not moving those jet planes to Willow Run Airport, at no added cost to Taxpayers?**

See Technical Response #2, Noise Response #3, Safety/Health Response #7, Financial/Economic #11, and General Responses #3, #5, #10, and #14.

The extended runway will no doubt bring planes closer to our rooftops as pilots will naturally pilot closer to the end of the runway for takeoffs and landings! This also makes it very likely that the noise from planes flying lower on takeoff, especially, will get louder, as the prevailing wind direction is from the west (over Stonebridge).

See Noise Response #1 and Safety/Health Responses #6 and #14.

You are risking further contamination of groundwater in areas or the townships you do not own! I do not believe that you have the moral right to pursue this risky path of action possibly destroying the ground water sources of Pittsfield Township neighborhoods, or Lodi Township's ground water, or Saline's or the moral right to continue to put our neighborhoods in danger with a longer runway just as Gelman had no right to pollute the ground water in Scio Township, and ultimately, surrounding areas! **In retrospect, just like Ann Arbor's lack of a "Bird Strike Safe-Skies Action Plan" more safety protocols should have been put into place. Let's NOT put Pittsfield Township and other surrounding communities in a similar Clean Ground Water jeopardy!**

See Water Resources/Water Quality Responses #1 and #3.

This really raises some serious Safety, Legal, and Moral issues with this Airport Expansion Project! Your goal is to provide a longer runway in Pittsfield Township that puts surrounding communities water at risk as well as possibly contaminating their clean water sources while also constructing a runway with the natural tendency to fly planes closer to our homes! Sorry, this is not our idea of a good safety tradeoff protocol, just the opposite, it is a nightmare! Especially considering you that you have done nothing to mediate the risks of birds strikes. **By continuing your "bird feeding farm" at the end of your runway, and tacitly approved of an expanded gas station with a lot of added pumps, (that you should have protested), given the proximity to the Airport operations, and a proclivity of accidents at that end of the runway, the AA Airport's lack of actions seems more like Safe-Skies-Negligence !**

See Water Resources/Water Quality Responses #1 and #3, Noise Response #1, and Safety/Health Responses #6, #8, and #14

It does appear that the Ann Arbor approach of railroading the Airport Expansion down the throat of your neighbors is not entirely safe, or cordial, or even completely informed of the complete dangers and risk being imposed on your

neighbors! What would be Ann Arbor's, and the Airport's Emergency Response to an airplane crash into homes, widespread ground water contamination in Pittsfield and Lodi and Saline or a Brazilian type of crash at Costco Gas, or the Gas Station across the street.

You are aware that The Wood Outlet, a drain at the end of current main runway, goes to the city of Saline. The aquifer at the Airport and the lakes in Stonebridge right next to the Airport Aquifer migrate underground to the Pittsfield Drain, which also goes to the Wood Outlet and the Saline River, the drinking water source in Saline! The Gelman DIOXIN Plume moves toward the Huron River and is contaminating other areas in Scio Township, and can affect many other communities, especially as it contaminates the Huron River. How many test wells will you drill in Pittsfield? How will you decontaminate the ground water, how will you remove deadly cancer-causing chemicals?! What insurance company would cover this risk? Answer, "Not one!"

See Water Resources/Water Quality Responses #1 and #3.

Where is the **Design Failure Mode Effects and Analysis (DFMEA)**, and has it been completed? If you don't know what a DFMEA is, then you really have not completed a Risk Assessment, for the runway expanded length, more Ground Water Contamination, increase risk of Crashes, Bird Strikes, breakdowns, and Airplanes taking off and landing closer to homes, or any other risk analysis!

See Safety/Health Response #10.

The Ann Arbor Airport Runway Expansion Proposal seems dangerous and unsafe environmentally. It endangers smaller aircraft flying out of the AA Airport, and more lives and homes! As unsafe as feeding wild geese Soybeans, Corn or Grass, at the end of your runway! It's like baiting a trap and waiting for something BAD to happen! **There is Deer, Coyotes, Foxes, Red Tail Hawks, Great Blue Herons, Ducks, Crows, Doves, Possums, Skunks, and a lot of Canada Geese, that can all get on to the Airport Property, then the Runway, and the flight path.** There are birds that fly through the area on their migratory paths, like the Orioles. There are a lot of ponds around the Stonebridge, and many other communities, and a lot of Geese. There are ponds just north of the Airport and a lot of Geese hang out there as well. In fact, there is also a Tree Nursery on the Airport Grounds, and birds use trees a lot! And the Wood Outlet is also an attraction to Geese, Ducks and other waterfowl! **Where is your Bird Strike Reduction Plan?**

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

Your expansion program is NOT about safety, it is about greed, at the expense of the community! And be damned to those who are victims of your poor planning, inadequate design, lack of real consideration to the costs of human life, property, and assessing the real risk of this project's failure, and costs to Taxpayers. **You ignore the obvious solution of using the bigger airport, Willow Run, which is the safer option! That cancels any added risk to Pittsfield and the surrounding communities that requires NO RUNWAY EXPANSION and NO EXTRA TAXPAYER COSTS! Already paid for!**

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

There are many contaminated sites in the US. A huge number of them are Airports and Army Bases being the more severely affected among them, and there are a lot of industrial brown sites. The US is paying out billions of Dollars to vets and others injured parties due to INJURIES from reckless negligence of government agencies. **We do not think Ann Arbor has enough money to self-insure the damage that could be done to Pittsfield homes, groundwater and the surrounding communities. Just like Gelman cannot protect Ann Arbor or any other downstream community from the Dioxin Spill! Especially the loss of Property Values!**

See Water Resources/Water Quality Responses #1 and #3 and Financial/Economic Response #2.

These are the reasons I oppose the Airport Runway expansion. Willow Run is less than 10 minutes from Pittsfield and already has long runways, and with arguably better access to most people's ultimate destination (Ann Arbor) and a lot more hangars, and bigger jet plane accommodations than Pittsfield, without spending a dime! Why don't you try Willow Run first?

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

Supplemental Note: GROUNDWATER and SUMP PUMPS !!!

Ground water height has an effect on whether or not ground water gets into your homes, especially via sump pumps. The ground water is down a bit this year, but in 2021 after the June 750Y big storm, the water table reached record levels and stayed high for 13 months. It set a record for High Water-Tables here, and this means your sump pump runs more often, or continuously! Contaminated sump water getting into your home through the Sump System, carrying volatile organic compounds can be very dangerous, and harmful to **health and safety**, and if it contains enough volatile solvent compounds like gasoline and/or jet-fuel and it gets into your home, it could ignite a fire, if near a furnace or a water heater providing a spark source and explodes. It has happened before in this country.

See Water Resources/Water Quality Responses #1 and #3.

“The Ann Arbor Airport is home to 190 Aircraft, and 60,000 operations per year Take offs and Landings.”

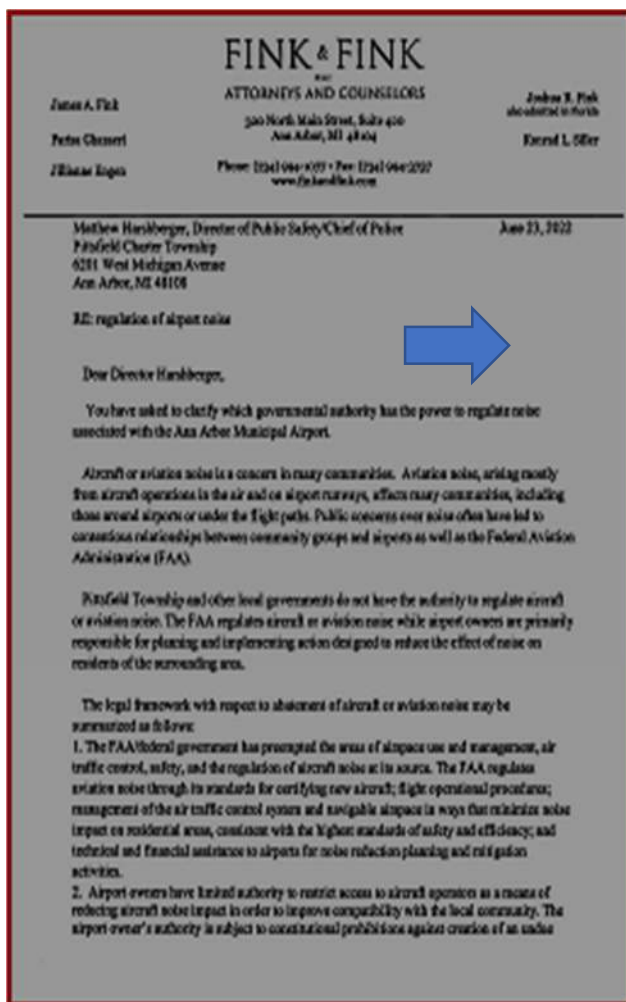
This means there are 60,000 opportunities for mishaps per year, fuel spills, and miscalculations, flying too close to homes, and birds, accidents happen here regularly. The last one in 2022 flying west. Luckily, no one was hurt **this time!**

Greg Conner

Stonebridge HOA Board
12/29/2022

 **Greg Conner_SCA Board- Stonebridge Airport Expansion#3 Resistance Statement.pdf**

The note BELOW from the Township webpage from AA City Attorneys, it says the Feds regulate noise and no one else, it’s under the Fed Commerce Clause. The AA Airport has also established noise abatement practices. Together, it means THAT they do Absolutely NOTHING! We really must deal with the Feds on everything else, like SAFETY! Which means nothing happens on this front! SAFETY IS MORE IMPORTANT THAN NOISE! BESIDES, YOU CANNOT HEAR ANYTHING IF YOU ARE DEAD FROM AN AIRPLANE CRASHING INTO YOUR HOME, AND IT BURNED DOWN! Of course, Safety is our Number One Concern! Noise is a quality-of-life issue, but you must be alive to know the difference!



Matthew Harshberger, Director of Public Safety/Chief of Police
Pittsfield Charter Township
6201 West Michigan Avenue
Ann Arbor, MI 48108

June 23, 2022

RE: regulation of airport noise

Dear Director Harshberger,

You have asked to clarify which governmental authority has the power to regulate noise associated with the Ann Arbor Municipal Airport.

Aircraft or aviation noise is a concern in many communities. Aviation noise, arising mostly from aircraft operations in the air and on airport runways, affects many communities, including those around airports or under the flight paths. Public concerns over noise often have led to contentious relationships between community groups and airports as well as the Federal Aviation Administration (FAA).

Pittsfield Township and other local governments do not have the authority to regulate aircraft or aviation noise. The FAA regulates aircraft or aviation noise while airport owners are primarily responsible for planning and implementing action designed to reduce the effect of noise on residents of the surrounding area.

burden on interstate and foreign commerce, and unreasonable, arbitrary, and unjust discriminatory rules that advance the local interest, other statutory requirements, and interference with exclusive federal regulatory responsibilities over safety and airspace management. The Ann Arbor Municipal Airport has established a set of noise abatement procedures intended to encourage aircraft operators to lower the noise impact upon the surrounding community. The Ann Arbor Municipal Airport's noise abatement procedures can be reviewed at <https://www.a2gov.org/departments/fleet-facility/Airport/Documents/NABrochureFIN.pdf>

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, December 5, 2022 2:45 PM
To: William Ballard
Subject: FW: Runway extension

From: Jack Edelstein <jejyed@gmail.com>
Sent: Thursday, December 01, 2022 9:32 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Runway extension

You don't often get email from jejyed@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

I wish to express my strong opposition to the proposed runway extension. There is already way too much airplane noise negatively affecting our quality of life.

[See Noise Response #1.](#)

Thanks

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 3, 2023 6:14 PM
To: William Ballard
Subject: FW: Airport Expansion...NO

From: Reynolds, Kelly <KReynolds@a2gov.org>
Sent: Thursday, December 22, 2022 6:32 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: jackiespeen@comcast.net
Subject: Fwd: Airport Expansion...NO

Please see the following forwarded message.
Happy holidays,
Kelly

Kelly Reynolds, Executive Assistant (she/her)
Ann Arbor Mayor's Office | Guy C. Larcom City Hall|301 E. Huron, 3rd Floor · Ann Arbor · MI · 48104
734.794.6165 (O) | Internal Extension 41602
kreynolds@a2gov.org | www.a2gov.org



Think Green! Please don't print this e-mail unless absolutely necessary.

A2 Be Safe. Everywhere. Everyone. Every day.
a2gov.org/A2BeSafe

From: Jackie Speen <jackiespeen@comcast.net>
Sent: Thursday, December 22, 2022 5:56 PM
To: Reynolds, Kelly <KReynolds@a2gov.org>
Subject: Airport Expansion...NO

[You don't often get email from jackiespeen@comcast.net. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hello,

I am against any expansion of the AA Airport. There are no good reasons to extend the airport, no value to our living condition, our economy or our community. And the risks are too great.

The disruption to the neighborhood communities alone should stop this pursuit.

See Safety/Health Responses #2, #5, #6, #7, #14, and #16, General Responses #1, #3, and #14, and Financial/Economic Response #1.

What benefit other than to expand hobby interests or a shorter ride to an athletic attraction? Hobbies and sports do not justify the harm this will inflict on our environment or tension it will bring to our residents.

See Noise Response #1, Water Resources/Water Quality Response #1, Air Quality Response #1, Wildlife Response #1, and General Responses #13 and #14.

If a larger airport is desired, find land further out and build the airport you are hoping for....yet again, what benefit

would this bring???? Willow Run is right down the road, 5 miles.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

It is crazy to consider expanding this airport.

Sincerely,

Jackie Speen

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 3, 2023 6:11 PM
To: William Ballard
Subject: FW: AirPort Expansion

From: Jackie Speen <jackiespeen@comcast.net>
Sent: Monday, January 02, 2023 3:35 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov
Subject: AirPort Expansion

You don't often get email from jackiespeen@comcast.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

To Ματthew ανδ Στεωε

Ι φιρμλν οπποσε ανν εξπανσιον οφ τηε Αιρπορτ ιν Ανν Αρβορ.

| The Purpose and Need statement does not support the need for an extended runway. The SRDEA contends that aircraft that routinely use ARB suffer “undue concessions in reduced fuel, passengers, and / or cargo loads. .diversions to other airports are also commonly needed when the runway surface is wet, or during summer months when higher temperatures reduce aircraft performance.” However, the SRDEA provides no actual data in support of the claimed concessions or diversions. The FAA noted, “the rate of users taking weight restrictions has not been documented,” and, “The inclusion of the contaminated runway length distances cannot be used to justify FAA funding requirements” for an extended runway.

[See Technical Responses #7 and #9](#)

| The SRDEA stated an excess number of hot weather days at ARB. To justify the proposed expansion, the SRDEA identified 81 hot days in Ann Arbor, when temperatures exceeded 80 degrees (in 2019). However, aircraft performance charts included in the SRDEA suggest an industry standard for hot weather is 85 degrees, not 80 degrees. There were only 66 days in 2019 when the temperature exceeded 85 degrees. Thus, the SRDEA inflated the number of hot weather days by 25% by using the 80-degree standard.

[See Technical Response #5](#)

| The SRDEA alludes to a connection between “many prominent business and institutions with the University of Michigan being the area’s largest employer. Manufacturing, health care, automotive, information technology, and biomedical research companies account for major employers surrounding the area” that often require “air transportation to bring workers, clients, suppliers, customers, and time sensitive parts / supplies to and from the region.” However no specific connection between those business needs and ARB was established in the SRDEA. It was merely an allusion.

[See Financial/Economic Response #1](#)

Upfront it is a great cost financially and in the long run it is of great cost in lost home value and taxation base. All the way around it is a BAD idea. You put us at risk for the convenience of a few with a very narrow agenda.

[See Financial/Economic Responses #2 and #3 and General Responses ##13 and 14.](#)

IF an expanded airport is needed. Move the airport further out which would also allow for a taller tower.

See General Response #5.

Most Adamantly

Jackie Speen

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, December 14, 2022 7:59 AM
To: William Ballard
Subject: FW: Airport expansion, No please

-----Original Message-----

From: Jackie Speen <jackiespeen@comcast.net>
Sent: Tuesday, December 13, 2022 10:10 PM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>; kathewun@aol.com
Subject: Airport expansion, No please

[You don't often get email from jackiespeen@comcast.net. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hello Friends

We all have concerns. Some folks excited with hope to expand the airport and play/work with planes more freely and some fearful of what the expansion will mean in everyday real terms.

I am fearful of what the expansion will bring. The harm to the environment (above ground and below), the noise, the smell, the lower home values, the traffic, etc.....

See Noise Responses #1 and #2, Wildlife Response #1, Water Resources/Water Quality Response #1, Air Quality Response #1, Financial/Economic Response #2, and General Response #19.

I live in Stonebridge, on the pond. A stones throw to the field adjacent to the airport. In every day terms, the noise alone is enough already. We do not need nor want any further noise. And I certainly do not want planes flying any lower than they already fly.

See Noise Responses #1 and #2 and Safety/Health Responses #6 and #14.

Twice I've had a short exchange with men who hope to expansion the airport. Both times I was told, "too bad," "you bought a house near an airport" "sell or live with it". That comment left me frustrated and angry. I felt like I was being shut down by a snotty teenager. Their follow up comments were "oh you must be frustrated/angry? Nice open conversation then." And they walked off. They decided I was upset and not listening to them. I could see they wanted to appear as if they wanted open communication, but they didn't. It wasn't even close to an open back and forth exchange. The conversation, if I can even call it that, was crazy. It wasn't a conversation at all. It was a stab at trying to make me defensive and stuck because of where I purchased my home. This is my home, it is not my hobby. I don't appreciate being bullied.

The logic used was nonsense. In truth, I could use that same, immature argument in reverse...."well, you put your hopes and dreams in an airport that is not big enough for you. Too bad for you." It is snotty and dismissive. " Follow your dreams somewhere else."

It leaves us all with an awful taste.

We have wonderful neighborhoods here surrounding this airport. And the community does not need, nor do we want a larger airport, we do not want larger more frequent planes. An increase in noise is intolerable. An increase in air traffic is intolerable.

[See Noise Responses #1, #2, and #3.](#)

If there is a group of flight enthusiasts that are dead set and deeply desiring of a larger runway and bigger planes, then I suggest that group find land that will be better suited for their need without disrupting an already established group of communities.

[See General Response #5.](#)

These are our HOMES. It is my/our place of peace and safety. I want to keep loving my neighborhood and my home!

And, if the airport closed, if it moved to another more suited sight and the land here used as a community benefit..... I'd be thrilled. Part of a nature preserve, a park, a place to walk and meet friends. Protecting the water below the grounds. I would welcome that.

Most Sincerely,

Jackie Speen

4337 BOULDER POND DR.



Lodi Township

Jan Godek, Supervisor
3755 Pleasant Lake Road
Ann Arbor, Michigan 48103

Telephone (734) 665-7583
Fax (734) 665-7982
Email jan@loditownshipmi.org

January 10, 2023

Matthew Kulhanek
801 Airport Drive
Ann Arbor MI 48108

Dear Mr. Kulhanek,

The proposed AAA expansion project was discussed at the Lodi Township Board of Trustee meeting held December 6, 2022.

Lively comments were made surrounding the proposed expansion and the impacts on Pittsfield Township and Lodi Township residents. Concerns were expressed regarding larger, heavier aircraft landing 93 feet above the rooftops of long-established subdivisions located in Pittsfield Township. The descent would begin lower in Lodi Township affecting subdivisions and large farming operations.

See Noise Responses #1 and #3 and Safety/Health Responses #6 and #14.

The U.S. Department of Agriculture has observed flocks of geese on the airfield and reports "flocks of 5-15 geese arrived on the runway at different times... Geese were observed within 10 yards of the runway." The USDA inspector concluded that, "Canada geese are a real and present danger, and will need to be managed for the foreseeable future future..." The SRDEA makes no mention of any risks posed by the Canada geese.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

It's anticipated that annual jet operations could at least triple if the runway is expanded. It has been suggested that aircraft currently using Willow Run could move to the Ann Arbor Airport greatly affecting the quality of life for residents in Pittsfield and Lodi Townships, this is unacceptable.

See Noise Response #3.

Several other concerns were brought forth, including the control tower operates part time, there is no de-icing permitted, instrument approaches and landings are not permitted. The proposed expansion of the primary runway poses serious risks to the residents living around the airport. The significant risks of the proposed project far exceed any benefit.

See Safety/Health Response #3 and General Responses #1 and #13.

Lodi Township strongly opposes the proposed runway expansion of the Ann Arbor Airport.

Respectfully,

Jan Godek
Lodi Township Supervisor

Dec. 13, 2022

Ladies & Gentlemen of Board,

This letter is written in opposition to any Arbor Airport Expansion. As property owner of 4375 Boulder Pond and spouse of deceased Developer Donald Cunningham.

As far as I can remember before the onslaught of Stonebridge the airport has tried to get the runway expanded. Thankfully, unsuccessful in their attempts. If index planned the any Arbor Airport should have expanded but it was not. People did not want a Yellow Fox airport 10 miles away.

I feel it will be detrimental to the area. Expansion will cause:

- A. Dramatic decrease in property values affecting township tax base.

See Financial/Economic Response #2.

- B. The effects of wild life, geese, birds etc. due to lower altitude.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

- C. Increase noise levels.

See Noise Responses #1, #2, and #3.

When my husband planned the land and sold it, was never a question that airport would remain current size.

I hope & pray that you will
take into effect the negative impact
on the community in order to
keep a few businesses.

Jane Cunningham
4375 Boulder Park
Ann Arbor, Mi.
48108

December 19, 2022

Dear Mr. Kulhanek,

We are writing this letter to oppose the proposed runway extension of the Ann Arbor airport.

As residents of Stonebridge we were aware of the airport when we purchased our home. At the time we did not object to the air traffic because it was mostly smaller aircraft. We now have jet aircraft which is much louder. Quite often if we are outdoors having a conversation we must stop talking until the aircraft passes. If they add more jets we may not be able to be outdoors at all.

See Noise Responses #1, #2, and #3.

The extended runway will bring more jets which will flying only 93 feet over our neighborhood. This is unacceptable. To add to the danger are the hundreds of Canada geese who congregate in the fields and ponds in the path of the runway and we all know geese and jet aircraft are a bad situation. This airport property is surrounded by residential and commercial properties which would be negatively impacted by the increased air traffic and the ground traffic accompanying it.

See Noise Responses #1 and #3, Wildlife Response #1, Safety/Health Responses #1 and #8, and General Responses #13 and #19.

Willow Run airport is just a few miles away and fully equipped to handle larger aircraft. It is our sincere hope that the airport will be considerate of the negative impact this expansion will have on the neighborhood.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

Sincerely,



Jay and Jacqueline Katz
1696 Inverness Court
Ann Arbor, Mi 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, January 9, 2023 3:46 PM
To: William Ballard
Subject: FW: AA Airport Expansion Concerns

From: Jeanette Mosey <jgmosey@yahoo.com>
Sent: Monday, January 09, 2023 3:12 PM
To: houttermans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: Kathewun@aol.com; Donald Proud <dproud2@comcast.net>
Subject: AA Airport Expansion Concerns

You don't often get email from jgmosey@yahoo.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Mr. Steve Houtteman and Mr. Matthew Kulhanek:

We want to make you aware of our continuing opposition to expanding the Ann Arbor Airport.

As a resident of the Stonbridge neighborhood, I am concerned with the following:

-- Where is the real need? Willow Run is only 10 miles away, has a 24/7 control tower (vs AA's 8 am - 8 pm; and offers de-icing services. See Noise Response #3, Safety/Health Response #7, General Responses #3, #5, #10, and #14.

-- The land where the AA Airport is located has an aquifer supplying 20% of local drinking water.

There would be an increased risk of contaminating this water supply with greater amounts of aviation fuel and de-icing of the longer runway/s. See Water Resources/Water Quality Response #1.

-- Larger aircraft flying lower than currently will increase noise levels, even with the voluntary noise abatement program. See Noise Responses #1 and #3.

-- Sizeable (more than 10 in a group) populations of Canada geese in Stonebridge present a risk to low-flying aircraft. See Wildlife Response #1 and Safety/Health Responses #1 and #8.

Thank you for consideration of our comments.

Jeanette Mosey & Donald Proud
4744 Sawgrass Dr E.
Ann Arbor MI 48108

cc: Ms. Kathe Wunderlich

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, December 13, 2022 10:46 AM
To: William Ballard
Subject: FW: Ann Arbor airport

From: Jeff Fleckenstein <jeffery.fleckenstein@gmail.com>
Sent: Tuesday, December 13, 2022 10:30 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: Leslie Fleck <lesfleck13@gmail.com>
Subject: Ann Arbor airport

You don't often get email from jeffery.fleckenstein@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Greetings Matt,

My name is Jeff Fleckenstein and I currently live (bought Sept. 2021) in the Silo Ridge neighborhood. I wanted to add our support for the proposal to expand the Ann Arbor Municipal runway as well as the other improvements.

I worked at Aviation Center between 1991 and 1998 and know how important the airport is to our community first hand. I am sure that there are probably many residents who also live in the vicinity of the airport who may oppose the proposal so I thought that it might be important for you to hear from a resident who supports the proposed changes.

I wish you a wonderful holiday and best of luck moving forward.

Jeff Fleckenstein
5554 Hearthstone Ct.
Ann Arbor, MI 48108
(828) 678-0012

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, December 15, 2022 7:24 AM
To: William Ballard
Subject: FW: Airport

-----Original Message-----

From: Jeffrey Hoffman <heartdochoffman@gmail.com>
Sent: Thursday, December 15, 2022 5:19 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Airport

[You don't often get email from heartdochoffman@gmail.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

I am strongly opposed to airport expansion as a member of Stonebridge's community. This will place runway closer to homes which will increase noise and danger. I believe it will also decrease property values in a nice high end community. There are many geese in that farm land as well as in STonebridge which could pose danger for low flying planes.

There is amply room available at Willow Run for larger planes and larger loads. This is very close to our community in distance. For most communities they would not have such an airport any closer. Therefore why do we need this facility enlarged so close to our residential community. If this is for convenience of large donors to attend sporting events that is a tragic use of funds. Willow Run is close enough.

Jeffrey K. Hoffman M.D. MPH. 4926 StAndrews Court. 9374167618

Sent from my iPad

See Noise Responses #1, #2, and #3, Wildlife Response #1, Safety/Health Responses #1, #2, #5, #6, #7, #8, and #14, Financial/Economic Response #2, and General Responses #3, #5, #10, and #14.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, December 14, 2022 8:02 AM
To: William Ballard
Subject: FW: public comment - proposed runway extension

-----Original Message-----

From: Jen Rosenberg <jenrosenberg@comcast.net>
Sent: Tuesday, December 13, 2022 2:27 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: public comment - proposed runway extension

[You don't often get email from jenrosenberg@comcast.net. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

To whom it may concern,

I am writing to offer comments on the proposed runway expansion at the Ann Arbor Municipal Airport. I am profoundly opposed to such an expansion. As a resident of the Georgetown neighborhood for over 20 years, the noise of overhead planes has gotten progressively worse. My assumption is that the expansion will allow for more traffic and larger planes and will only increase the noise pollution in the area. Ann Arbor is 20 short minutes from Detroit Metropolitan Airport. With such a large metropolitan airport so close by, there is no reason that more traffic and larger planes need to use to the Ann Arbor airport. This expansion is NOT in the public interest.

Sincerely,
Jennifer Rosenberg

See Noise Responses #1, #2, and #3, Financial/Economic Responses #1 and #11, and General Response #10.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 5, 2023 1:28 PM
To: William Ballard
Subject: FW: opposition to the airport expansion (Ann Arbor)

From: Jeong Kwon <jeongkwonh@gmail.com>
Sent: Thursday, January 05, 2023 11:22 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: kathewun@aol.com
Subject: opposition to the airport expansion (Ann Arbor)

You don't often get email from jeongkwonh@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hello, Mr. Matthew Kulhanek,

My name is Jeong Kwon and I live in the Stonebridge community, Ann Arbor. I moved here in 2014 with my wife, Sangrae, and two sons, Sungyu and Sunho. I love my house and the Stonebridge golf community very much because Stonebridge is a very nice place to walk with my wife and dog, Mali, seeing beautiful golf scenery. My wife and I feel real happiness when we walk together and we wish we could live here until I retire from my work.

Unfortunately, there is a fly in the ointment. That's the airplane noise. Sometimes the noise occurs every five minutes all day long. Every five minutes I have to endure the roar if I stay at home. Besides, I have been working at home since the pandemic started. It's really hard to endure the airplane noise so I have changed my house windows to soundproof windows. It's better than before but still I am suffering from the noise.

Ann Arbor is a very good city to live with family so every year people are moving into Ann Arbor. When the municipal airport was built, not many people lived here. But now, the municipal airport is in the middle of where many families live. If the airport expands, my family, including lots of families that live in the stonebridge will suffer from the noise a lot. I hope you would consider this point seriously.

Thank you very much for reading this letter to the end.

[See Noise Responses #1, #2, and #3.](#)

Sincerely,

Jeong Kwon

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, December 15, 2022 7:23 AM
To: William Ballard
Subject: FW: Expansion of Ann Arbor airport

From: Jill Nabozny <jillnabozny@gmail.com>
Sent: Thursday, December 15, 2022 5:25 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Expansion of Ann Arbor airport

You don't often get email from jillnabozny@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hello,

Impact on surrounding wildlife, our ecosystems, the noise level, and overall quality of life for residents are all the reasons needed NOT to approve expanding the airport runways.

See Noise Responses #1, #2, and #3, Water Resources/Water Quality Response #1, Air Quality Response #1, Wildlife Response #1, and General Response #13.

Willow Run is available to handle the traffic and scale desired and ~~should be designated for that purpose.~~

As a resident of Pittsfield township I ask that the initiative to expand the airport be denied.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10

Thank you, Jill Nabozny

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, December 13, 2022 11:39 AM
To: William Ballard
Subject: FW: AA Airport Runway Expansion

From: J Doty <jkdoty1@gmail.com>
Sent: Tuesday, December 13, 2022 11:17 AM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Fwd: AA Airport Runway Expansion

You don't often get email from jkdoty1@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Date: December 13, 2022 at 10:50:12 AM EST
Cc: Joël Doty <doty2605@gmail.com>
Subject: AA Airport Runway Expansion

Steve Houtteman/Matthew Kulhanek,

We strongly OPPOSE this proposal to lengthen the runway for the following reasons:

1. Significant increase in noise and air pollution from larger aircraft and more takeoffs and landings.
2. Safety concerns for lower flying aircraft.
3. Economic benefit to greater Ann Arbor/Pittsfield Township has not been identified.
4. Willow Run airport is only 10 miles away. Apparently, much of the forecast increase in operations would be diverted from Willow Run, therefore unnecessary.
5. Housing values in Stonebridge(700 residences) and surrounding affected communities would likely decrease.

See Noise Responses #1, #2, and #3, Safety/Health Responses #6 and #14, Financial/Economic Responses #1, #2, #4, #11, and #12, and General Responses #1, #5, and #10.

We are Stonebridge residents on the runway directional glide path. The thought of more frequent and larger aircraft directly over our house is chilling. We already have to endure the nuisance of incessant “touch and go” takeoffs and landings from the pilot training flight schools, seven days a week. On any given day there are at least 3 planes circling the airport and flying over our house at low altitude about every 2-3 minutes. Our requests to minimize these and/or to regulate quieter landings to the northeast have been largely ignored.

See Noise Responses #3, #7, and #9.

Therefore, we respectfully request this proposal be REJECTED.

Joël and James Doty
1731 Monterey Ct
Ann Arbor, MI 48108

Sent from my iPad

January 4, 2023

Mr. Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Re: Ann Arbor Airport Runway Expansion
2022 SRDEA

Dear Mr. Kulhanek,

Based on the points noted below, the proposed runway expansion should be dropped from consideration. The increased risk to adjacent residents, as well the environment in general, are unacceptable and dangerous.

1. The proposed runway extension would move ARB's primary Runway (#24) 870 feet closer to Lohr Road, adding to the risks to residents near the end of the runway, which are not adequately protected by so-called "Runway Protection Zones." [See Safety/Health Responses #2, #5, and #6.](#)
2. The SRDEA has dropped prior claims, since the onset of the project in 2007, that the expansion was a "safety extension." Since the FAA ruled that federal funds would not be available for such an expansion, the focus was shifted to "improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase over time." [See Technical Response #1.](#)
3. However, of the four "critical aircraft" types identified by the SRDEA, three could operate 100% of the time on the existing 3,505-foot runway. Only the Cessna Citation Excel XLS, the type of aircraft owned and operated by AvFuel Corp., which dominates operations in this class, could suffer weight penalties on hot summer days, but could still operate at full weight 90% of the time, and at 100% capacity on most days. At most, only 48 operations per year of the Citation XLS class's 263 annual operations (in 2019) could be impacted by hot weather – a miniscule .00038 of ARB's total annual operations – hardly sufficient to justify the proposed expansion. [See Technical Response #2.](#)
4. The SRDEA acknowledges that any expansion would likely attract more jet traffic, where larger and heavier aircraft pose additional risks in an area heavily populated by Canada geese. [See Wildlife Response #1 and Safety/Health Responses #1 and #8.](#)
5. Further complicating issues, because ARB is a municipal airport funded with federal dollars, any pilot who chooses can land at the airport, no matter the size of their aircraft – adding to the level of risk. Ann Arbor cannot regulate the type of aircraft that could utilize the field. [See General Response #18.](#)
6. The SRDEA acknowledges for the first time the presence of Canada geese surrounding the airport, with a U.S. Department of Agriculture inspector observing 75-100 Canada geese at the airport, feeding in a tilled fallow field. The inspector also reported "flocks of 5 to 15

geese arrived on the airfield at different times. . . Geese were observed within 10 yards of the runway.” The inspector concluded that, “Canada geese are a real and present danger, and will need to be managed for the foreseeable future. KARB is surrounded by ideal resident / migratory Canada goose habitat.” However, the SRDEA presents no plan for such mitigation – and makes no mention of any risks posed by the Canada geese.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

7. The Purpose and Need statement does not support the need for an extended runway. The SRDEA contends that aircraft that routinely use ARB suffer “undue concessions in reduced fuel, passengers, and/or cargo loads. . . diversions to other airports are also commonly needed when the runway surface is wet, or during summer months when higher temperatures reduce aircraft performance.” However, the SRDEA provides no actual data in support of the claimed concessions or diversions. The FAA noted, “the rate of users taking weight restrictions has not been documented,” and, “The inclusion of the contaminated runway length distances cannot be used to justify FAA funding requirements” for an extended runway.

See Technical Responses #7 and #9.

8. The SRDEA stated an excess number of hot weather days at ARB. To justify the proposed expansion, the SRDEA identified 81 hot days in Ann Arbor, when temperatures exceeded 80 degrees (in 2019). However, aircraft performance charts included in the SRDEA suggest an industry standard for hot weather is 85 degrees, not 80 degrees. There were only 66 days in 2019 when the temperature exceeded 85 degrees. Thus, the SRDEA inflated the number of hot weather days by 25% by using the 80-degree standard.

See Technical Response #5.

9. The SRDEA alludes to a connection between “many prominent business and institutions with the University of Michigan being the area’s largest employer. Manufacturing, health care, automotive, information technology, and biomedical research companies account for major employers surrounding the area” that often require “air transportation to bring workers, clients, suppliers, customers, and time sensitive parts/supplies to and from the region.” However no specific connection between those business needs and ARB was established in the SRDEA. It was merely an allusion.

See Financial/Economic Response #1.

10. The SRDEA also suggests that the UM’s six to seven home football weekends and Michigan International Speedway’s two annual NASCAR events bring increased aircraft activity to the area, and that, should Runway 6/24 be extended, additional aircraft activity could occur at ARB due to its proximity to special event venues. However, the SRDEA contained no actual forecasts of such potential activity.

See Technical Response #3.

11. However, a less sanitized version of the SRDEA, contained in an earlier draft submitted to the FAA and reviewed under the Freedom of Information Act, projected an immediate tripling of annual jet operations if the ARB runway were extended to over 1,000 per year, with another 500-665 operations from jets, which currently utilize Willow Run Airport, possibly moving to an extended ARB on football weekends. That earlier draft SRDEA suggested up to 40% of the 9,313 annual small and medium jet operations at Willow Run “would likely shift to ARB if additional runway length were available,” thus increasing jet operations from the 360 in 2019 to upwards of 3,660 jet operations per year – ultimately turning ARB into a jetport.

See Technical Response #4.

12. To temper any fears of such runway expansion, the final SRDEA omitted such jet growth claims and forecast, instead, that the operations of small turboprop and jet aircraft “will slowly increase over time.”

See Noise Response #3.

13. While the SRDEA projects a maximum of ARB operations of 84,336 in 2039, it is interesting to note that the current 3,505-foot runway supported almost two-thirds more operations in 1999 – 134,554, suggesting the current runway is more than sufficient for the projected future.

See Technical Response #6.

14. Any ARB expansion is especially dangerous because, with jets being the primary source of increased operations, it raises the level of risk in an area heavily populated with Canada geese, which do not interact well with jet aircraft.

See Noise Response #3, Wildlife Response #1, and Safety/Health Responses #1 and #8.

15. ARB also has certain conditions that can increase the level of risk over other nearby airports: Instrument approaches and landings are not permitted at the airport. The control tower only operates part-time. Also, in winter, de-icing is not permitted on the airport, to protect the wells on the property that produce drinking water. And ARB does not provide 24-hour on-site fire and rescue services.

See Safety/Health Response #3.

16. The noise problem around the airport would almost certainly increase. Even the very conservative FAA-required noise analysis conducted as part of the SRDEA concedes that the harmful 60-decible noise level would extend to “a residential area at the southwest corner of the airport.”

See Noise Responses #1, #2, and #3.

17. The FAA requires the identification of environmental health risks to children. However, despite numerous scientific studies confirming the negative impact of aircraft noise on the neuropsychological development of children, the SRDEA does not discuss such threats, concluding, instead, that “the FAA has not established a significance threshold for impacts to children’s environmental health and safety. . .”

See Noise Response #1 and Safety/Health Response #4.

18. The SRDEA does not acknowledge any potential risks to the three wells on airport property that supply about 20% of Ann Arbor’s drinking water, stating only that, “there are several water wells on ARB property, all of which are outside the proposed project area.” The SRDEA, however, contained extensive analysis of wetlands and streams in and around the property. But nothing about the important drinking water wells.

See Water Resources/Water Quality Response #1.

Sincerely,



John H. Baratta
5953 Lohr Lake Drive
Ann Arbor, MI. 48108
jhbaratta@yahoo.com

cc: S. Houtteman, MDOT Aeronautics
K. Wunderlich

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 6, 2023 7:15 AM
To: William Ballard
Subject: FW: Opposition to the proposed Ann Arbor Airport expansion

From: John Dahl <jedwardd20@gmail.com>
Sent: Thursday, January 05, 2023 9:59 PM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>; Eyer, Jen <JEyer@a2gov.org>; Akmon, Dharma <DAkmon@a2gov.org>
Cc: kathewun@aol.com
Subject: Opposition to the proposed Ann Arbor Airport expansion

Some people who received this message don't often get email from jedwardd20@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Good evening,

I am writing to strongly oppose the current proposal to expand the Ann Arbor Airport runway to accommodate larger aircraft. The reason for the expansion is not a good idea when weighed against environmental, economic, and safety impacts.

It also is not forward-looking and consistent with Ann Arbor's

Comprehensive Plan.

See Noise Responses #1, #2, and #3, Wildlife Response #1, Water Resources/Water Quality Response #1, Air Quality Response #1, Financial/Economic Response #2, Safety/Health Responses #1, #2, #5, #6 and #14, and General Response #15.

I lived in the Georgetown neighborhood for 38 years before moving to Pittsfield township 5 years ago and the Stonebridge subdivision. I am well aware of the issues of the airport. We do not need and do not want this expansion. We have Willow Run facilities just 15 minutes away and that is a great airport to use for the larger jets. The noise and safety concerns of this proposal is a very bad idea and that is why it was rejected in the past.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

Please reject this dangerous plan as we need to have a safe community without any changes to the airport.

John Dahl

5196 Doral Ct.

Ann Arbor, Mi. 48108

734 395-3840

email is jedwardd20@gmail.com

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, December 14, 2022 3:16 PM
To: William Ballard
Subject: FW: Comment on ARB runway expansion

From: John Simpkins <john.simpkins@gmail.com>
Sent: Wednesday, December 14, 2022 1:28 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Comment on ARB runway expansion

You don't often get email from john.simpkins@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Kulhanek:

I am a city resident and am writing in to oppose the runway extension project at ARB as currently structured. It is surprising that this is back up for debate after multiple prior debates that resulted in clear and nearly unanimous opposition by community members and adjacent communities.

I agree that it is important to make safety improvements to the existing airport facilities and I fully endorse a runway shift away from State St. as well as the other safety-oriented aspects of this proposal like taxiway corrections. However, extending the runway by 720 feet to accommodate increased private jet traffic by the wealthiest members of society in the midst of a climate crisis and an underutilized nearby facility at Willow Run is not an appropriate use of taxpayer resources and the runway extension portion of this proposal should be rejected.

See Air Quality Responses #1 and #3, Noise Response #3, Safety/Health #16, Financial/Economic Responses #1 and #11, and General Responses #5 and #10.

The draft EA clearly states that the intent of this runway extension is to accommodate increased frequency of operation by business jets and turboprops: "The proposed action is needed because Runway 6/24 was designed to serve primarily small piston driven aircraft; however, the Airport receives regular use by small turboprop aircraft and occasional business jet aircraft that require a longer runway to operate at a greater payload than they do today."

See Noise Response #3, Safety/Health Response #7, and General Responses #3 and #14.

The EA further unequivocally shows a growth in ongoing noise impact and greenhouse gas emissions versus the no project option. Arguments in the justification study about their magnitude are not persuasive solely because they are considered de minimis by existing federal standards - Ann Arbor's citizens and policymakers have clearly stated our intent to lead the nation in the fight against climate change and to use our taxpayer resources to create a diverse, affordable, and desegregated city. This project uses our taxpayer resources actively to controvert those goals by allocating resources and space to a small, very affluent segment of society and commercial stakeholders.

See Noise Responses #1 and #2, Air Quality Responses #1 and #3, and General Response #1.

The City should stop using taxpayer resources to pursue this amenity that does not serve the vast majority of taxpayers and actively creates additional negative climate and noise impacts in our community.

See Noise Responses #1 and #2, Air Quality Responses #1 and #3, and General Response #1.

Best,
John Simpkins

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, January 9, 2023 8:05 AM
To: William Ballard
Subject: FW: Airport Expansion

From: Joe Briggs <joe.p.briggs@gmail.com>
Sent: Saturday, January 07, 2023 8:20 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: Airport Expansion

You don't often get email from joe.p.briggs@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Kulhanek,

My name is Joe Briggs, and I live in Pittsfield township at 2090 Prairie Dunes Ct. South.

Since I've lived here (15 years), I've seen many Airport Expansion proposals rise to the surface, all to be shot down by the FAA due to the obvious slanted analysis by consultants hired to push this unnecessary plan through.

I'm sure that you have received many emails highlighting the flaws in the current proposal, so I'm not going to go there.

What I would like to do is to express what I believe to be the elephant in the room, and that's that this proposed expansion would benefit a very few highly privileged individuals / corporations at a tremendous cost to the overall community who our public officials serve.

See General Responses #1 and #13.

I know that the current proposal will highlight airport safety, but that's easily achieved by maintaining the current aircraft limits. Any larger aircraft can easily use Willow run (perhaps 15 minutes further away than the AA airport), or Metro airport which is about 22 minutes away. There is no pressing need to expand the AA airport except to save these privileged individuals / corporations a 15 minute drive.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5, #10, and #14.

That is a very small benefit, but the cost to homeowners in the area is significant. Just park your car south of Metro airport and listen to the jets taking off - it's overwhelming, and has seriously diminished the desirability of those communities.

See Noise Response #1 and General Response #13.

Ann Arbor has always been a small community airport, and that was our assumption when we picked Stonebridge as our home. The cost to the many homeowners in this area overwhelms the very small benefit given to a very small group, and I encourage you to consider the community as a whole when making your decision regarding this expansion.

See General Responses #1 and #13.

Thank you for your time and attention to my thoughts.

Sincerely,

Joseph P Briggs

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, December 13, 2022 7:41 AM
To: William Ballard
Subject: FW: Objection to AA Municipal Airport Runway Expansion

From: Judith Cox <joeyandjudytm@yahoo.com>
Sent: Monday, December 12, 2022 5:15 PM
To: kathewun@aol.com; Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov
Subject: Objection to AA Municipal Airport Runway Expansion

You don't often get email from joeyandjudytm@yahoo.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

To: Steve Houtteman, MDOT-AERONAUTICS,
Matthew Kulhanek, Ann Arbor Municipal Airport
Kathe Wunderlich, Committee to Preserve Community Quality, Stonebridge

As a resident of the Stonebridge community adjacent to the Ann Arbor Municipal Airport, I am sending this email to **express my strong objection to the currently proposed expansion** of the runways. The safety of current and future residents should be held with the highest priority in any decision like this. I am not convinced that the increased risk is either mitigated nor worth the proposed benefits to the community.

My understanding of the current proposal is that the benefits of such an expansion are limited to the “operational utility of the airport” for 4 “critical aircraft”. With such an important project as this, one would expect to be able to find **plainly documented \$-based benefits** from operating such aircraft from this specific airport, when an adequately sized airport exists only 10 miles away at Willow Run. Why do the residents of Ann Arbor, Saline, Pittsfield Twp and other nearby communities benefit from this expansion? **How is that benefit manifested in additional business or other tangible outcomes?** Merely having these 4 “critical aircraft” continue when they are already able to operate there now under most conditions seems to leave out why they are “critical” and how the residents benefit from taking on more safety risk.

See Noise Response #3, Safety/Health Responses #2, #5, #6, #7, #14, #16, Technical Response #2, Financial/Economic Responses #1, #4, and #12, and General Responses #3, #5, #10, and #14.

I am sure you have been made aware, but there are clearly dozens of Canadian geese in the area surrounding the airport, including the field that is planted just west of the current runway. Extending the runway closer to that field seems like a risk that has yet to be mitigated by anything in the proposal. Having the runway closer to the flock of geese seems to **increase the overall risk to the residents** in and around the flight path, the altitude of which will now be even lower to the tops of several homes.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

As I am also sure you are aware, these risks have had real consequences for the current operation of this airport. I am aware of a **plane that came down** near the above-mentioned field, just this past year, and another plane that was forced to **land on the 5th fairway** of the Stonebridge Golf Course a few years ago.

See Safety/Health Responses #2, #5, #6, and #14.

The above issues are in addition to the overall likely increase in noise and annoyance that comes with having more, larger aircraft using the airport. While the **risk to our home values** in such an environment is minor compared to the potential safety risk, it goes without saying, lower property values drive lower tax revenue for the Township. Given that, has there been **any financial impact study that justifies the increased risk?** As I mentioned above, this proposal seems light on \$-based impacts (both benefits and costs).

See Noise Responses #1, #2, and #3, Financial/Economic Responses #2, #4, #9, and #12, and General Response #1.

At the end of the day, I have not seen any specific reason why Ann Arbor, Saline, and Pittsfield Twp are actually better off for expanding the runway. Please answer the basic question - **Who benefits, how and why? Taking on more risk in this situation seems seriously flawed.**

See Safety/Health Response #16, Financial/Economic Response #1, and General Responses #1 and #13.

Thank you for your consideration,
Joseph M Cox
1885 Stonebridge Dr N.

Sent from [Mail](#) for Windows

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 3, 2023 5:57 PM
To: William Ballard
Subject: FW: Opposed to Ann Arbor Airport runway expansion

-----Original Message-----

From: Joshua Cohen <joshcohenemail@gmail.com>
Sent: Wednesday, December 28, 2022 12:01 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: kathewun@aol.com
Subject: Opposed to Ann Arbor Airport runway expansion

You don't often get email from joshcohenemail@gmail.com. Learn why this is important
<<https://aka.ms/LearnAboutSenderIdentification>>

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

To: Matthew Kulhanek, Ann Arbor Municipal Airport

Dear Mr. Kulhanek:

I am opposed to expanding the runway at the Ann Arbor Municipal Airport.

The expansion is unnecessary. Nearby Willow Run Airport can already handle the larger aircraft that would be supported by the proposed longer runway at Ann Arbor.

See Noise Response #3, Safety/Health Response #7, General Responses #3, #5, #10, and #14.

The expansion would increase risk, due to lower altitudes over populated areas and increased chance of bird strikes. It would also increase noise levels for these populated areas and potentially decrease property values.

Sincerely,
Joshua Cohen

See Noise Responses #1 and #2, Wildlife Response #1, Financial/Economic Response #2, and Safety Health Responses #1, #6, #8 and #14

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, December 13, 2022 1:08 PM
To: William Ballard
Subject: FW: Against Airport Expansion

-----Original Message-----

From: Judy Nantau <jnantau@umich.edu>
Sent: Tuesday, December 13, 2022 12:31 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Against Airport Expansion

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

To Whom it may concern,

We are opposed to any expansion of the airport in any way, including adding or expanding runways. The airplane noise is already very disturbing and loud, as these little prop planes go round and round over and over again. Seems like they could practice going in different directions at least. [See Noise Responses #1, #2, #7, and #9.](#)

Judy L. Nantau
Deb Ballam
2483 Winged Foot Ct
Ann Arbor, MI 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, December 13, 2022 8:03 AM
To: William Ballard
Subject: FW: Ann Arbor Airport Expansion

-----Original Message-----

From: Karen Bertoia <karenbertoa@icloud.com>
Sent: Monday, December 12, 2022 11:06 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Ann Arbor Airport Expansion

[You don't often get email from karenbertoa@icloud.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Kulhanek:

I am a resident in Pittsfield Township in the Lohr Lake Village subdivision. I vehemently oppose the extension of the Ann Arbor airport. This change would bring air traffic closer to my back yard, literally, increase the number of flights which would in turn increase the noise level, and decrease safety for nearby residents.

See Noise Responses #1, #2, and #3 and Safety Health Responses #2, #5, #6, and #14.

I have lived here for 24 years, have made many investments to my home and property and this dramatic change would offset those improvements and reduce my property value. I was well aware of the airport's proximity when I purchased my home, but had this expansion occurred prior to my purchase, I would not have chosen this neighborhood to live in. This proposed change is not in the interest of nearby residents, and is certainly not vital to continue operations at the airport.

See Financial/Economic Response #2.

Please do not go forward with this proposal.

Sincerely,
Karen Garrett

Dave Clawson

From: houttemans
Sent: Wednesday, November 30, 2022 1:53 PM
To: kathewun@aol.com
Cc: kathewun@gmail.com; andymc@umich.edu; Kulhanek, Matthew; William Ballard; Reinke, Stan (MDOT)
Subject: RE: Ann Arbor Airport Draft EA Comments

Ms. Wunderlich,

Thank you for reaching out. We appreciate your interest in the project and in objectivity and fairness in the NEPA process.

You may certainly have citizens copy me on their public comment letters and I will ensure they are recorder, and responded to, as appropriate.

Please include me by copy and continue to send comments to Matt Kulhanek, Airport Manager.

Best Regards,
Steve

Steve Houtteman

Supervisor, Airport Planning & Environmental Unit
MDOT – Office of Aeronautics
Monday-Thursday 6:00a-4:30p
houttemans@michigan.gov
(616) 299-2654



From: kathewun@aol.com <kathewun@aol.com>
Sent: Saturday, November 26, 2022 9:19 PM
To: Houtteman, Steve (MDOT) <HouttemanS@michigan.gov>
Cc: kathewun@gmail.com; andymc@umich.edu
Subject: Ann Arbor Airport Draft EA Comments

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Mr. Steve Houtteman
Office of Aeronautics Michigan Department of Transportation
2700 Port Lansing Road Lansing, MI 48906
Email Address: HouttemanS@michigan.gov

Dear Mr. Houtteman,

I am writing regarding the current Draft Environmental Assessment issued on the proposed expansion of Ann Arbor Municipal Airport.

As I believe you are aware, the current plan calls for all public comments on this EA to be sent to Airport Manager Matthew Kulhanek. On the two prior EAs, comments were sent to MDOT AERO, not to the community proposing the expansion.

As a neutral third party, the perception of objectivity and fairness is much improved when comment letters are sent to you.

Because of this, I respectfully request that citizens writing public comment letters on the EA also copy you at MDOT AERO regarding their concerns, See General Response #13.

Please let me know if this would be acceptable to you.

Thank you,

Kathe Wunderlich
For the Committee to Preserve Community Quality

Kathe Wunderlich
kathewun@aol.com
734-944-9455

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, December 12, 2022 11:11 AM
To: William Ballard
Subject: FW: Airport expansion. Why?

From: Smith, Ken <Ken.Smith@dawnfoods.com>
Sent: Monday, December 12, 2022 8:52 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; Taylor, Christopher (Mayor) <CTaylor@a2gov.org>; kathewun@aol.com
Subject: Airport expansion. Why?

Some people who received this message don't often get email from ken.smith@dawnfoods.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear all, it is well documented that there is much opposition to extending Ann Arbor airport. As a nearby householder safety is a huge concern, our sub division is a high density one and in the flight path. More and bigger aircraft when there is ample large airports nearby is a ludicrous thought.

When prevailing weather conditions mean we are directly under the flight path let me tell you the noise means you can't hear your self think. This is with the small aircraft now!

See Noise Responses #1, #2, and #3, Safety/Health Responses #2, #5, #6, and #14, Financial/Economic Response #11, and General Responses #5 and #10.

I do find it disturbing that the 'Wet runway' issue was brought to the surface by the Freedom of Information act as opposed to transparency and smacks of an attitude that the important thing is to win the decision at whatever the cost. This is why there is a lack of faith in people who have leadership roles.

In today's world of Climate change and concerns about the environment, which has changed significantly since the idea was floated I urge you to think again. Airlines contribute 2.4% of Carbon dioxide emissions, how much more would that be with small aircraft included. Our cars are going electric, generation of electricity is moving away from fossil fuels, the Mayor of Ann Arbor (Christopher Taylor) supports the City becoming carbon neutral by 2030. How can this expansion be justified in the simplest of terms?

See Air Quality Responses #1 and #3.

Have Ann Arbor council asked for or predicted what off set is needed here? How will it be achieved?

Maybe draw up a plan for what the future of small aircraft travel or recreation looks like and have that plan drive it towards a more sustainable and planet friendly option. Encourage change for the better not simply more of the same.

I will encourage all I know to attend the meetings and write to you to state their beliefs.

Respectfully

KEN SMITH

Stonebridge resident.

Dave Clawson

From: houttemans
Sent: Tuesday, December 13, 2022 10:52 AM
To: Kulhanek, Matthew
Cc: William Ballard
Subject: RE: Ann Arbor Airport Expansion

Also, just a heads up, our Aero Staff Holiday Party is today, so Stan and I won't likely catch up to you guys for lunch, but we will be at City Hall early.

From: Kulhanek, Matthew <MJKulhanek@a2gov.org>
Sent: Tuesday, December 13, 2022 10:45 AM
To: Houtteman, Steve (MDOT) <HouttemanS@michigan.gov>
Cc: William Ballard <william.ballard@meadhunt.com>
Subject: RE: Ann Arbor Airport Expansion

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Thanks Steve, I had not seen this one.

Matt

From: Houtteman, Steve (MDOT) <HouttemanS@michigan.gov>
Sent: Tuesday, December 13, 2022 10:42 AM
To: Kulhanek, Matthew <MJKulhanek@a2gov.org>
Cc: William Ballard <william.ballard@meadhunt.com>
Subject: FW: Ann Arbor Airport Expansion

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Matt – It looked like maybe this one just came to me, forwarding just in case.

Thanks!

From: Dickinson, Kit <Kit.Dickinson@ADP.com>
Sent: Tuesday, December 13, 2022 10:05 AM
To: Houtteman, Steve (MDOT) <HouttemanS@michigan.gov>
Cc: kathewun@aol.com
Subject: Ann Arbor Airport Expansion

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Mr. Houtteman,

I am a resident of the Stonebridge neighborhood in Ann Arbor (Pittsfield Township) and work across from the airport. I understand there has been another proposal to expand the runway at the Ann Arbor Airport. As a regular flyer on Delta and nearby resident, I strongly oppose expanding the runway for the following reasons:

- 1) Having been on flights that have airstrikes with birds/geese, I've experienced the risk and need to quickly adjust course and return to airport. These situations require much more land to recover. The inevitable airstrike situations pose a significant risk to the neighborhoods surrounding the Ann Arbor airport that a runway extension will only exacerbate.
- 2) Willow Run airport is only 11 miles away and fully equipped to safely handle larger aircraft.
- 3) There is risk to people and wildlife in surrounding neighborhoods if fuel needs to be dropped during takeoff or landing
- 4) The expected noise and other pollutions with larger aircraft flying at lower altitudes will negatively impact people and wildlife near the airport

See Wildlife Response #1, Safety/Health Responses #1, #8, Financial/Economic Response #11, General Responses #5 and #10, Noise Responses #1, #2, and #3.

As a lifelong Ann Arbor resident I always appreciated how our smaller airport complements the larger, more equipped airports in close proximity (Willow Run / DTW). I see no economic or other benefits of extending the runway and only see risks to residents, wildlife, property values and increased noise.

Similar to prior proposals that were deemed to not be advantageous to the community I ask that you and the other decision makers decline this recent attempt to unnecessarily expand the Ann Arbor Airport runway.

Thanks for your consideration,

See Wildlife Response #1, Safety/Health Responses #1, #2, #5, #6, #8, #14 and #16, Financial/Economic Responses #1, #2, #4, #11, #12, General Responses #1, #5, #10 and #13, and Noise Responses #1, #2, and #3.



Kit Dickinson
 Operations Executive
IDI Integrated
 Design, Inc. @ ADP
 3772 Plaza Drive Suite 1,
 Ann Arbor, MI 48108
 C: 734-846-1942
Kit.Dickinson@adp.com
 □ □ □ □ □

This message and any attachments are intended only for the use of the addressee and may contain information that is privileged and confidential. If the reader of the message is not the intended recipient or an authorized representative of the intended recipient, you are hereby notified that any dissemination of this communication is strictly prohibited. If you have received this communication in error, notify the sender immediately by return email and delete the message and any attachments from your system.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, December 15, 2022 7:26 AM
To: William Ballard
Subject: FW: Runway extension

From: Klaus <klauskakau@gmail.com>
Sent: Wednesday, December 14, 2022 8:46 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Runway extension

You don't often get email from klauskakau@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Matt,

First and foremost I want to thank you for taking the time in reading this email regarding runway 24/6 extension. In this email I will list reasons why I'm **for** the expansion. But before I list these reasons I do feel that I must disclose the fact that we no longer keep our aircraft at KARB airport but we did use the airport as a base for 22 years!

My father who is the pilot and owner of the aircraft learned how to fly at the KARB airport in 1998 and quickly bought an airplane. Our aircraft lived at the Northeast T hangers for 22 years before moving to Georgia. We actually lived across the street from the airport (Stonebridge Subdivision) which made location location location very convenient for us. Thus we felt like an island in an ocean of neighbors who did not understand the usefulness of having KARB airport near by. When we bought our house in 1998 we knew about the airport and over the next 22 years we taught many neighbors the benefits of having an airport and actually took some flying! While not everyone likes the airport whenever we met one we typically just told them "airport was here first. You build your house and now deal with it"

But as promised here are the benefits of expansion of the runway in our eyes.

- Less flight diversions thus more money can fly into our airport.
- Longer runway means more fuel can be purchased which again means more money for airport.
- I'm aware people keep saying "they can land at Willow Run" but if they do this then Willow Run will keep the money and above all remember location location location. Business individuals love being closer to the point of business. So providing business users a longer runway also markets the airport as a friendly place to land and use for a business purpose.
- I've personally witnessed 3 emergency aborted takeoffs that used every inch of the runway (Piper Lance, Cessna 310 and a Lancair)
- Density altitude, my bedroom window had a 90% airport vantage point. I can't tell you how many times I've witnessed single engine, twins and jets use all of the runway. If I kept my window open I could actually hear the plane tires rolling over the runway grooving at an ever increasing speed only to lift off at the last minute.

See Support Comments #2, #5, and #6.

With all of this being said I appreciate your work and the maintenance crews as well.

Thank you and have a great day.

Klaus Azevedo



601 Pennsylvania Ave NW, Suite 250
Washington, D.C. 20001
T. 202-737-7950
F. 202-273-7951

www.aopa.org

January 4th, 2023

Ann Arbor Municipal Airport
Mr. Matthew Kulhanek, Airport Manager
801 Airport Drive
Ann Arbor, MI 48108

TRANSMITTED VIA ELECTRONIC MAIL TO: mjkulhanek@a2gov.org

RE: Public Comments – Ann Arbor Municipal Airport Environmental Assessment Runway 6-24 (November 2022)

AOPA, the world's largest aviation organization, is a strong advocate for safe, efficient, accessible, and sustainable airports. AOPA is supportive of the proposed action to re-align and lengthen runway 6-24 at Ann Arbor Municipal Airport (ARB).

The proposed action is a development entirely aimed at safety and efficiency upgrades for the airport. The development will offer enhancements to current operators of the airport and potentially attract more aeronautical users. There is no forecast, demand, or ability (due to FAA regulation) to commence scheduled commercial air service operations at ARB or operate "much larger aircraft" which has been a concern of detractors to this project. The development will only complement the operations of FAA-defined category B-II aircraft which are primarily comprised of turboprop and light jet aircraft. As technology evolves, jet and propeller-driven aircraft are becoming more eco-friendly, efficient, and quieter. See Support Comment #13.

AOPA has reviewed the Draft Environmental Assessment for ARB runway 6-24 extension and submits the following comments.

- **(Pages 1-2 and 1-3) 1.0 Purpose and Need**

AOPA agrees that ARB is a significant infrastructure and asset by its inclusion in the National Plan of Integrated Airport Systems (NPIAS) and agrees with the MDOT assessment that the airport should be developed to its fullest potential. The current state of the airport is lacking adequate safety and efficiency needs by the aeronautical users. Air Traffic Control's (ATC) "line of sight", a short primary runway, and inadequate runway safety areas (RSA's) are contributing issues.

See Support Comment #7.

- **(Page 1-6) 1.4 Airport Sponsor’s Proposed Project Action**

AOPA supports a runway (6-24) extension to 4,225 feet to meet the operational safety of the critical-use aircraft that operate at ARB. The other actions outlined in 1.4 are all designed to increase the safety of the airport and comply with pertinent sections of FAA AC 150/5300-13. B. AOPA supports airport sponsor actions that increase the safety of the airport and meet compliance standards outlined in the airport design manual.

See Support Comments #3 and #7.

- **(Page 1-7 thru 9) 1.5.1/ 1.5.2 Purpose and Need for the Proposed Action**

AOPA supports the reasoning behind the proposed action of a runway extension at ARB. The current runway creates operational safety and efficiency deficiencies. Current users of the airport are sometimes required to divert based on weather conditions or make compromises like fuel or passenger loading, which is an operational inefficiency costing valuable time or money. The airport is also losing valuable income if an operator cannot make fuel purchases or opts to use an airport further away. These concessions will ultimately affect the sustainability of ARB and on-airport service providers given the forecasted growth of aeronautical users.

The EA also includes a Runway Justification Study which indicates that B-II category aircraft operations are forecasted to increase over the next 15 years. These aircraft are the most demanding for the runway configuration, and a runway extension and RSA enhancements are critical for the continued safety and efficiency of the airport. The proposed runway re-alignment and extension, including improved geometry of taxiways, will enhance the visibility of ground operations by ATC staff. Line-of-sight visibility is critical to safe and efficient aircraft operations at the airport.

See Support Comments #3 and #7.

- **(Page 3-8) 3.4 Air Quality**

AOPA is fully supportive of transitioning to a fleet-wide unleaded piston aviation fuel. AOPA supports Ann Arbor’s commitment to transitioning to unleaded 100-octane aviation gasoline when it is available on the market. AOPA, along with over 200 industry partners is committed to a fleetwide solution by 2030. This initiative, known as the EAGLE (Eliminate Aviation Gas Lead Emissions) Initiative is working with the federal government to provide resources to make the safe transition to unleaded fuel. There is already an approved fuel, known as GAMI 100UL that will soon be available on the market, with more fuel vendors in the FAA certification process at this time. AOPA is willing to offer any resources available to assist the airport in making a safe transition to unleaded aviation fuels.

See Support Comment #8.

- **(Page 3-26) Noise and Noise Compatible Land Use**

The draft EA includes a noise analysis, designed to measure the impacts of aircraft noise on nearby residents, businesses, recreation areas, etc. The standard of 65 DNL, is used by FAA, USEPA, and the US Department of Housing and Urban Development as an industry standard. The noise was measured by electronic measuring devices approved by the FAA, and a “noise contour” map was published as part of the EA. It was found that the 65 DNL contour did not extend beyond the airport property boundary, and the 10-year forecasted

60 DNL contour was measured on a very small portion of the property to the west of Lohr Rd.

See Support Comment #9.

AOPA is a proponent of airports using every available resource to “be a good neighbor” when confronting noise issues. There are mitigating tactics available, such as noise abatement procedures for pilots to use when departing an airport, modifying traffic patterns (with FAA approval), and using technology to track and archive complaints. There is also technology available to airports to track aircraft in the vicinity of the airport, operations on the airport, aircraft that may be flying too low, or other diminishing actions that would compound the noise sensitivity issue. AOPA recommends that the ARB invests in airport operations tracking software based on ADS-B (Automatic Data Surveillance – Broadcasting) equipment to assist in verifying noise complaints. This data is to enhance awareness and complement any ATC-driven data. There are multiple vendors in this market (ex. Virtower, Invisible Intelligence), and they all use data already being collected by FAA and made available to the public. There is no indication that this runway extension will lead to an overwhelming change in noise or aircraft overflights.

Submitted Respectfully,

A handwritten signature in blue ink, appearing to read "Kyle Lewis", with a long horizontal stroke extending to the right.

Kyle Lewis
Great Lakes Regional Manager • Airports and State Advocacy
Aircraft Owners and Pilots Association
kyle.lewis@aopa.org

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, December 5, 2022 2:53 PM
To: William Ballard
Subject: FW: Opposition to the Ann Arbor Airport Expansion Proposal

From: nik <nik@congral.com>
Sent: Thursday, December 01, 2022 6:34 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com; Charles J (Chuck) Roeper <cjroeper@gmail.com>
Subject: Opposition to the Ann Arbor Airport Expansion Proposal

You don't often get email from nik@congral.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

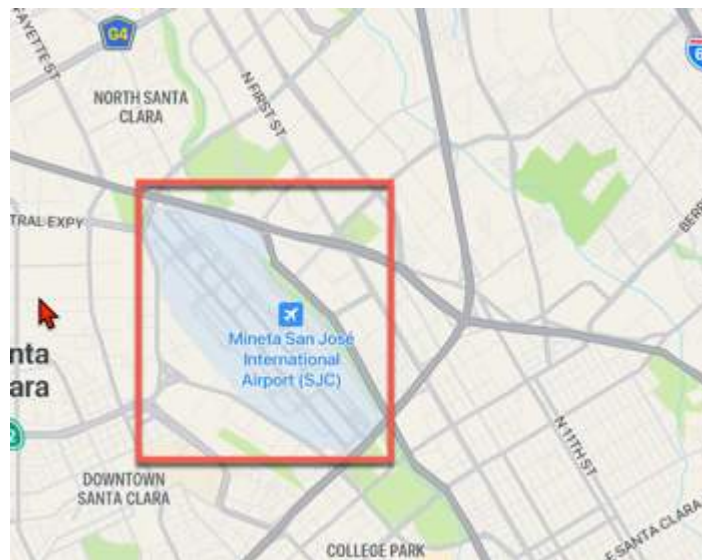
Dear Mr. Matthew Kulhanek and Mr. Steve Houtteman

This email is written to state my family's firm opposition to the Ann Arbor Airport proposed expansion. In addition to the set to terrific arguments speaking against this expansion, provided by Kathe Wunderlich, which I am attaching to the end of this email, I will mention a few of my own reasons, our neighborhood safety and peace being the most relevant. I am writing this in my own name as well as my spouse's (~~Lada Ivancic~~) who lives with me in 4855 Lone Oak Court, Ann Arbor, MI 48108.

~~See Noise Comments #1, #2, and #3 and Safety/Health Responses #2, #5, #6, and #14.~~

We bought our home 10 years ago, after very careful evaluation of many alternatives and the reasons for our decision were the natural beauty of the surrounding golf course and complete lack of any traffic noise. Even then, someone mentioned the proximity of the municipal airport as a potential for some noise. We spent several days evaluating this issue and concluded that it does not seem to be a serious source of noise at our home.

Now, realizing that the airport plans to be extended for 870 feet, precisely in the direction of our home, our reasons for purchase are changing dramatically. Previously I lived in San Jose, CA and remember vividly the intense discourse between the San Jose airport and the homeowners in North Santa Clara County exposed to continuous noise of jet planes taking off many times per hour



This airport was initially constructed in 1951 and by 1965 became 16th busiest towered airport in the United States. This “evolution” started by the proposal to extend the airport “just a little” and the extension was proposed towards the North Santa Clara County homes.

Just as I spent a few days “listening” to the airport noise pollution at my current home, I was curious long time ago to check the quality of life in North Santa Clara county (no I did not plan to buy a home there, I was just curious). I can honestly tell you that nobody keeps their windows open there, despite the wonderful weather in San Jose.

I am telling this story trying to prevent a similar mistake in the beautiful Ann Arbor, one of the best small cities to live in USA. As I lived in many places in our country, I can certainly attest to that - but would not be able to claim that if the airport gets the extension. Given San Jose airport history, very soon all homes west of the airport will be removed and Ann Arbor will have the 17th busiest towered airport in the United States.

See Noise Comments #1, #2, and #3.

Sincerely

Lada and Nikolaj Ivancic

P.S. Chuck Roeper is copied as he is the President of the Loan Oak Court homeowners association.

| The proposed runway extension would move ARB’s primary Runway 24 870 feet closer to Lohr Road, adding to the risks to residents near the end of the runway, which are not adequately protected by so-called “Runway Protection Zones.”

See Safety/Health Responses #2, #5, and #6.

| The SRDEA has dropped prior claims, since the onset of the project in 2007, that the expansion was a “safety extension.” Since the FAA ruled that federal funds would not be available for such an expansion, the focus was shifted to “improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase over time.”

See Technical Response #1.

| However, of the four “critical aircraft” types identified by the SRDEA, three could operate 100% of the time on the existing 3,505-foot runway. Only the Cessna Citation Excel XLS, the type of aircraft owned and operated by AvFuel Corp., which dominates operations in this class, could suffer weight penalties on hot summer days, but could still operate at full weight 90% of the time, and at 100% capacity on most days. At most, only 48 operations per year of the Citation XLS class’s 263 annual operations (in 2019) could be impacted by hot weather – a miniscule .00038 of ARB’s total annual operations – hardly sufficient to justify the proposed expansion.

See Technical Response #2.

| The SRDEA acknowledges that any expansion would likely attract more jet traffic, where larger and heavier aircraft pose additional risks in an area heavily populated by Canada geese.

See Noise Response #3, Wildlife Response #1, and Safety/Health Responses #1 and #8.

| Further complicating issues, because ARB is a municipal airport funded with federal dollars, any pilot who chooses can land at the airport, no matter the size of their aircraft – adding to the level of risk. Ann Arbor cannot regulate the type of aircraft that could utilize the field.

See General Response #18.

| The SRDEA acknowledges for the first time the presence of Canada geese surrounding the airport, with a U.S. Department of Agriculture inspector observing 75-100 Canada geese at the airport, feeding in a tilled fallow field. The inspector also reported “flocks of 5 to 15 geese arrived on the airfield at different times. . . Geese were observed within 10 yards of the runway.” The inspector concluded that, “Canada geese are a real and present danger, and will need to be managed for the foreseeable future. KARB is surrounded by ideal resident / migratory Canada goose habitat.” However, the SRDEA presents no plan for such mitigation – and makes no mention of any risks posed by the Canada geese.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

| The Purpose and Need statement does not support the need for an extended runway. The SRDEA contends that aircraft that routinely use ARB suffer “undue concessions in reduced fuel, passengers, and / or cargo loads. . .diversions to other airports are also commonly needed when the runway surface is wet, or during summer months when higher temperatures reduce aircraft performance.” However, the SRDEA provides no actual data in support of the claimed concessions or diversions. The FAA noted, “the rate of users taking weight restrictions has not been documented,” and, “The inclusion of the contaminated runway length distances cannot be used to justify FAA funding requirements” for an extended runway.

See Technical Responses #7 and #9.

| The SRDEA stated an excess number of hot weather days at ARB. To justify the proposed expansion, the SRDEA identified 81 hot days in Ann Arbor, when temperatures exceeded 80 degrees (in 2019). However, aircraft performance charts included in the SRDEA suggest an industry standard for hot weather is 85 degrees, not 80 degrees. There were only 66 days in 2019 when the temperature exceeded 85 degrees. Thus, the SRDEA inflated the number of hot weather days by 25% by using the 80-degree standard.

See Technical Response #5.

| The SRDEA alludes to a connection between “many prominent business and institutions with the University of Michigan being the area’s largest employer. Manufacturing, health care, automotive, information technology, and biomedical research

companies account for major employers surrounding the area” that often require “air transportation to bring workers, clients, suppliers, customers, and time sensitive parts / supplies to and from the region.” However no specific connection between those business needs and ARB was established in the SRDEA. It was merely an allusion.

See Financial/Economic Response #1.

| The SRDEA also suggests that the UM’s six / seven home football weekends and Michigan International Speedway two annual NASCAR events bring increased aircraft activity to the area, and that “should Runway 6 / 24 be extended, additional aircraft activity could occur at ARB due to its proximity to special event venues.” However, the SRDEA contained no actual forecasts of such potential activity.

See Technical Response #3.

| However, a less sanitized version of the SRDEA, contained in an earlier draft submitted to the FAA and reviewed under the Freedom of Information Act, projected an immediate tripling of annual jet operations if the ARB runway were extended to over 1,000 per year, with another 500-665 operations from jets, which currently utilize Willow Run Airport, possibly moving to an extended ARB on football weekends. That earlier draft SRDEA suggested up to 40% of the 9,313 annual small and medium jet operations at Willow Run “would likely shift to ARB if additional runway length were available,” thus increasing jet operations from the 360 in 2019 to upwards of 3,660 jet operations per year – ultimately turning ARB into a jetport. We cannot let that happen!

See Technical Response #4.

| To temper any fears of such runway expansion, the final SRDEA omitted such jet growth claims and forecast, instead, that the operations of small turboprop and jet aircraft “will slowly increase over time.”

See Noise Response #3.

| While the SRDEA projects a maximum of ARB operations of 84,336 in 2039, it is interesting to note that the current 3,505-foot runway supported almost two-thirds more operations in 1999 – 134,554, suggesting the current runway is more than sufficient for the projected future.

See Technical Response #6.

| Any ARB expansion is especially dangerous because, with jets being the primary source of increased operations, it raises the level of risk in an area heavily populated with Canada geese, which do not interact well with jet aircraft.

See Noise Response #3, Wildlife Response #1, and Safety/Health Responses #1 and #8.

| ARB also has certain conditions that can enhance the level of risk over other nearby airports: Instrument approaches and landings are not permitted at the airport. The control tower only operates part-time. Also, in winter, de-icing is not permitted on the airport, to protect the wells on the property that produce drinking water. And ARB does not provide 24-hour on-site fire and rescue services.

See Safety/Health Response #3.

| The noise problem around the airport would almost certainly increase. Even the very conservative FAA-required noise analysis conducted as part of the SRDEA concedes that the harmful 60-decibel noise level would extend to “a residential area at the southwest corner of the airport.”

See Noise Responses #1, #2, and #3.

| The FAA requires the identification of environmental health risks to children. However, despite numerous scientific studies confirming the negative impact of aircraft noise on the neuropsychological development of children, the SRDEA does not discuss such threats, concluding, instead, that “the FAA has not established a significance threshold for impacts to children’s environmental health and safety. . .”

See Noise Response #1 and Safety/Health Response #4.

| The SRDEA does not acknowledge any potential risks to the three wells on airport property that supply about 20% of Ann Arbor’s drinking water, stating only that, “there are several water wells on ARB property, all of which are outside the proposed project area.” The SRDEA, however, contained extensive analysis of wetlands and streams in and around the property. But nothing about the important drinking water wells!

See Water Resources/Water Quality Response #1.

January 9, 2023

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108
Email: mjkulhanek@a2gov.org

Mr. Steve Houtteman
MDOT-AERONAUTICS
2700 Port Lansing Road
Lansing, MI 48906
Email: houttemans@michigan.gov

Dear Mssrs. Kulhanek and Houtteman:

Please consider my comments seriously, as I am a degreed engineer and a former president of the Stonebridge Community Association, SCA. Stonebridge contains 709 homes just west of the Ann Arbor Municipal Airport.

There are several examples of spin and omission in the most recent Environmental Assessment (EA). The primary reasons that the Airport Expansion should NOT be built are:

1. Noise - At a recent information session, Mr. Kulhanek described one of the objectives was to handle more pilot training; more flights, more touch-and-go activities. This increase in activity will multiply the noise disruptions already experienced in area neighborhoods. [See Noise Responses #7 and #9.](#)

By increasing the length of the runway, each of these disruptions will occur at lower elevations and produce higher noise levels. Sound is a squared function - If the distance from the source is cut in half, the sound level rises by a factor of four. This contradicts the City of Ann Arbor policy that prohibits the use of gas-powered leaf blowers, due to their noise. [See Noise Responses #1 and #2.](#)

The result of such noise pollution will very likely result in reducing the value of the homes in Stonebridge. The reduction in property values has a knock-on effect, reducing the tax revenue going to Ann Arbor and Saline schools. This is hardly an economic benefit to the area. [See Financial/Economic Response #2.](#)

2. Hazard - On two reported occasions, there have been emergency landings at or near the Ann Arbor Municipal Airport. In 2006, an airplane was able to land on a fairway at the Stonebridge Golf Club, between houses.

By lengthening the runway, the aircraft will be at a lower elevation as they come over residential areas. Any loss of power will give the pilot much less time to react and find a safe landing zone. [See Safety/Health Responses #2, #5, and #6.](#)

Additionally, the EA does not acknowledge the increasing population of Canada Geese in the area. Lower elevations produce a much greater chance of a bird (goose) strike. The “Miracle on the Hudson” is an example of Canada Geese bringing down an Airbus A320. In that example the strike occurred at 3000 ft, giving the pilots time to react and plan. There will be no such time available to an aircraft suffering a similar strike at 200 ft. The consequences of such a strike will very likely include casualties on the ground as well as the aircraft occupants.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

3. Pollution - Current operations of older, single engine aircraft use leaded fuel. This lead is released into the air over the surrounding communities. It can negatively affect the health of those exposed, especially children. This has been demonstrated by health studies near heavily travelled roadways, which occurred before the unleaded fuel mandate.

By increasing the runway length and aircraft operations, there will be many more fueling operations, both leaded and unleaded. There are other chemicals used to service aircraft. Inevitably there are spills during the handling of these fuels and chemicals. The spills are rarely picked up, but rather washed away; they soak into the ground. Once again, the EA ignores the fact that 20% of the Ann Arbor Municipal Water supply comes from an aquifer beneath the airport. Tracking of the recent 1,4-dioxane spill show how pervasive chemical contamination can become in underground aquifers.

See Air Quality Response #1 and Water Resources/Water Quality Response #1.

For these reasons and the nearby presence of Willow Run Airport, lengthening the runway at the Ann Arbor Municipal Airport is impossible to justify. Willow Run provides more services, longer runways, enhanced safety, and round the clock operation. The notion of “critical aircraft” at the Ann Arbor Municipal Airport is just spin to save a 15 minute drive from Willow Run, while reducing the quality of life in Pittsfield Township and adding unnecessary hazards to the surrounding communities.

See Safety/Health Response #7 and General Responses #3, #5, #10, #13, and #14.

Respectfully,

Lance Simpson
1698 Cypress Pointe Ct
Ann Arbor, MI 48108
Email: ldsimpson44@yahoo.com

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, December 13, 2022 8:02 AM
To: William Ballard
Subject: FW: Airport expansion

-----Original Message-----

From: Larry & Mary <larandmar56@aol.com>
Sent: Monday, December 12, 2022 11:54 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Airport expansion

[You don't often get email from larandmar56@aol.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Unless the airport is a revenue generating operation for Ann Arbor, why should taxpayers subsidize an airport almost no one in the city uses and when Willow Run and Metro airports are so near. Be more transparent about the finances and airport operations as well as addressing the Pittsfield concerns. Who benefits from the expansion? Who is asking for it?

Why?

Larry Machacek
Ann Arbor

See Noise Response #3, Safety/Health Response #16, Financial/Economic Response #1, and General Responses #1, #5, #10 and #13.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, January 4, 2023 8:00 AM
To: William Ballard
Subject: FW: Airport expansion

From: Flahertyho <flahertyho@aol.com>
Sent: Saturday, December 24, 2022 9:38 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov; kathewun@aol.com; meflaherty85@gmail.com
Subject: Airport expansion

You don't often get email from flahertyho@aol.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr.
Kulhanek,

Dec. 24, 2022

I am writing to express my opposition to the proposed expansion of the Ann Arbor Airport. My opposition is based on both environmental and safety concerns. The Stonebridge golf course and residential residential community just west of the airport is home to many large birds including Canada geese, swans, ducks, great blue herons, vultures, hawks and owls. All these are and numerous enough to propose a significant risk to air traffic. Apart from the risk of collision the additional noise and air pollution would be a significant disruption to both wildlife and human residents. The required aviation fuel and potential deicing chemicals needed to service larger aircraft also pose a threat to surrounding ground water. The additional noise, air, and water pollution also pose a threat to surrounding property value. In light of the proximity to Willow Run airport which can already accommodate much larger aircraft I believe the proposed expansion of the Ann Arbor airport represents an unnecessary risk to the community and the environment.

Sincerely,

Laurence Ho, MD

See Noise Responses #1, #2, and #3, Wildlife Response #1, Air Quality Response #1, Water Resources/Water Quality Response #1, Safety/Health Responses #1 and #8, Financial/Economic Responses #2 and #11, and General Responses #5 and #10.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, January 9, 2023 1:06 PM
To: William Ballard
Subject: FW: Oppose ARB Expansion

From: Leslie Blackburn <leslieblackburn1@gmail.com>
Sent: Monday, January 09, 2023 12:32 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov
Cc: kathewun@aol.com
Subject: Oppose ARB Expansion

You don't often get email from leslieblackburn1@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

To: Matthew Kulhanek, Ann Arbor Municipal Airport, 801 Airport Drive, Ann Arbor, Michigan 48108, Steve Houtteman, MDOT-AERONAUTICS, 2700 Port Lansing Road, Lansing, MI 48906, and all who this concerns

I am writing to you to vehemently oppose the proposed expansion of the Ann Arbor airport.

I live two miles from ARB. Air traffic volumes and sizes of aircraft that use this airport are already far more than enough. Sound here is overwhelming already. At times we have to wait several minutes for waves of air traffic to pass before we can speak and be heard when gathering with friends in our backyard. [See Noise Responses #1 and #2.](#)

It continually blows my mind that we think that as humans we have the right to “more”, that development can simply continue to expand without respect to the balance of the interaction with the land, air, water, animals and plants. It’s not sustainable. Let’s slow down and allow right balance with the land. The airport as it currently exists is fully capable. Based on publicly available information, there is no gain described (in financial or any other terms) that could justify the dangers and degradation of our standard of living and the impact to the land that this expansion would incur.

[See Safety/Health Responses #7 and #16, Financial/Economic Responses #1 and #4, General Responses #1, #3, and #13.](#)

As a citizen of the state of Michigan – the Water Wonderland – it is beyond my comprehension how we could continue to expand the use of land that will be subject to increased water pollution – the Gelman plume and more recent hexavalent chrome leak into the Huron River *by the same company*, the Flint water crisis, the Kalamazoo River, the airforce bases? It is unconscionable to extend the ARB to allow increased jet traffic, which will inevitably lead to more jet fuel/de-icer/fire suppression chemicals in the ground, in the watershed. What few protective prohibitions exist today against those uses – they will be the next ‘barrier’ to fall, once those operations are expanded.

[See Water Resources/Water Quality Response #1 and Noise Response #3.](#)

The airport is safe just as it is, leave it that way. The overwhelming sound and vibrations felt though my body with existing volumes and sizes of aircraft are far more than enough as is - please do not add more. I would also advocate for reducing the traffic in the area so those of us living nearby can be at peace in our homes and bodies.

[See Noise Responses #1, #2, and #3.](#)

Geese - not only are the Canadian geese a “dangerous” concern for interaction with jets from a harm to aircraft and human perspective - think about the geese families themselves. These beings LIVE here, they have their own right to exist as well. How hard must it be to be a goose family and have jets smashing into you and your family in your own

home? To date, there has been no mitigation plan made public to address the proximity of the Canada Geese (and the inherent right of those creatures to exist!), and therefore one must assume that this risk, like the others, has not been sufficiently acknowledged, documented or treated. [See Wildlife Response #1 and Safety/Health Responses #1 and #8.](#)

Based on publicly available information of an early draft of the SRDEA, this proposal has projected an immediate tripling of annual jet operations and an additional likelihood of jet operations re-routing and increasing by TEN times, ultimately turning ARB into a jetport. This cannot happen! [See Noise Response #3.](#)

This proposed Ann Arbor airport expansion should be rejected permanently.

Leslie Blackburn
resident of Ann Arbor, Lodi Township on Anishinaabe land
owner and steward of land here

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 5, 2023 7:25 AM
To: William Ballard
Subject: FW: Airport expansion

-----Original Message-----

From: Linda Collins <Lyndac19@comcast.net>
Sent: Wednesday, January 04, 2023 9:30 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Airport expansion

[You don't often get email from lyndac19@comcast.net. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

As a resident of the Stonebridge Community, I write to protest the proposed Runway expansion of the Ann Arbor airport.

I consider this possible expansion a danger to myself and the residents in my community. See Noise Response #3 and Safety/Health Responses #2, #5, #6, and #14.
The chance that a crash of a larger aircraft carrying more fuel could produce enormous death and catastrophe.

The area is constantly inhabited by Canadian Geese sometimes in large flocks. The geese have been known to interfere with flights leading to crashes. See Wildlife Response #1 and Safety/Health Responses #1 and #8.

Noise pollution with jets would be terrible and pollution with airline fuel could contaminate the wells and ground water in the area. See Noise Responses #1, #2, and #3 and Water Resources/Water Quality Response #1.

Willow Run Airport is 20-30 minutes away which can continue to serve incoming jets.

For the above reasons, I strongly object to any lengthening of the runway.

Sincerely,

Linda Collins
4209 Boulder Pond Dr
Ann Arbor 48108

See Noise Response #3,
Financial/Economic Response #11,
and General Responses #5 and #10.

Sent from my iPhone

Dave Clawson

From: houttemans
Sent: Tuesday, December 13, 2022 10:55 AM
To: Kulhanek, Matthew
Cc: William Ballard
Subject: FW: Strong Opposition to Airport Expansion Plan

Another...

From: Lizhong Zhou <lizhongzhou@hotmail.com>
Sent: Monday, December 12, 2022 12:55 PM
To: Houtteman, Steve (MDOT) <HouttemanS@michigan.gov>
Subject: Strong Opposition to Airport Expansion Plan

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Dear Ms./Sir.

I'm a current Stonebridge resident. My house is 100 yards away from Lohr Rd and right on the path of the airport runway. The aircrafts pass over my house almost every day and I've been impacted by it since 2010 when I moved in. The noise is already very loud and I can't bear it any more with the current loud noise level. I absolutely will not tolerate even louder noise. Please take care of the environment and people's health and drop the airport expansion attempt.

See Noise Responses #1 and #2.

Thanks

Tony

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, December 22, 2022 2:23 PM
To: William Ballard
Subject: FW: Airport Expansion

-----Original Message-----

From: Louis Feurino <lwf3rd@aol.com>
Sent: Thursday, December 22, 2022 1:54 PM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: kathewun@aol.com
Subject: Airport Expansion

You don't often get email from lwf3rd@aol.com. Learn why this is important
<<https://aka.ms/LearnAboutSenderIdentification>>

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

To Whom It May Concern:

I'm writing in opposition to the expansion of the Ann Arbor Municipal Airport.

As a Stonebridge resident directly in the path of the airport, I can attest that it's already a serious source of noise pollution. Far beyond a nuisance, the planes disrupt the peace and quiet of the neighborhood and make conversations and relaxation impossible outside. Planes fly overhead literally every minute, causing my family to retreat indoors on pleasant days because we can't talk to one another when we're in our own backyard. This is already unacceptable and numerous noise complaints have been filed with minimal effect.

[See Noise Responses #1, #2, and #7.](#)

Expanding the airport to allow even louder planes to fly overhead would be ruinous, as the sound would likely penetrate to the inside of our home, which currently is our only sanctuary in the summer time. The summer should be our favorite season, but sadly we dread it. Touch-and-go landings are used for training from the four flight schools at the airport; dozens of circuits are therefore made hourly, each one resulting in two passes in the outbound and return leg. It's miserable.

[See Noise Responses #3, #7, #8 and #9.](#)

Far beyond merely asking that you refuse the airport's request to expand, I'd like to see more restrictions placed on the airport, including:

- 1) forbidding touch and go landings
- 2) allowing with the wind take-offs, so that planes don't always fly the same route directly over our houses
- 3) responding to the dozens of noise complaints as you would if it were your house being inundated with pollution

We have noise pollution statutes for a reason. Do they mean nothing? Why have them if our repeated complaints are disregarded, when they are put in place precisely to protect communities like ours?

See Noise Responses #7, #8 and #9.

I thank you for your thoughtful consideration.

Lous Feurino, MD
Stonebridge Resident

<<https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2F3071ec22-90e6-4482-ae7a-41fe449dd028.mailbutler.org%2Fp2%2Fcf38537f-024e-4171-b073-35957a492204%2Ffx.gif%3Fcontactid%3D907e77eb-5b3d-f81f-ee21-d6fc64073b68&data=05%7C01%7Cwilliam.ballard%40meadhunt.com%7C3b795e6a5303485c9b3708dae451e6a5%7Cb467145be9b54d22a13d8331f319ce09%7C0%7C0%7C638073337661333094%7CUnknown%7CTWFpbGZsb3d8eyJWljojMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikh1aWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=LBwyy611eGKAVZKbRSwoJTIUiLzXU29WxG8RiMg978%3D&reserved=0>>

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, January 4, 2023 7:59 AM
To: William Ballard
Subject: FW: Reasons for Protesting Expansion of Ann Arbor Municipal Airport
Attachments: Reasons for Not Expanding the A2 Airport.pdf

From: Marilynne Doolan <m734doolan@yahoo.com>
Sent: Monday, December 26, 2022 1:33 PM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>; kathewun@aol.com
Subject: Reasons for Protesting Expansion of Ann Arbor Municipal Airport

You don't often get email from m734doolan@yahoo.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hi Steve, Matthew & Kathe,

Here are my reasons for NOT expanding the Ann Arbor Airport.
I also am attaching it as a PDF if that makes it easier to read.

The expansion of the Ann Arbor Airport is a bad idea for several reasons:

- A) Health of the residents of Pittsfield Township.
- B) Health & safety of wildlife.
- C) Safety to Pilots.

Many of the residential developments surrounding the Ann Arbor Airport were built after the airport was established. So, acceptance of small aircraft is to be expected. However, larger planes and small jets are detrimental to the health of the nearby citizens. And here's why: The decibel level of small airplanes averages between 60-80. The decibel level of small jet engines is double that level. The 120-140 dB range is equivalent to the sound of chain saws; auto racing; firecrackers, and gunshots. This level can rupture eardrums. See Noise Responses #1, #2, and #3 and Safety/Health Responses #4, #11, #15.

Prolonged effects of a noisy environment can result in:

- 1) Respiratory Agitation
- 2) Racing pulse
- 3) High blood pressure
- 4) Headaches
- 5) Gastritis, colitis, and heart attacks.

[Source: www.iberdrola.com/sustainability]

A neighborhood on the west side of the airport is the Stonebridge community. Its striking feature is at the East entrance (off Lohr Road). Two sizable water features flank the roads leading into and out of the development. While it is a pleasant aesthetic, wildlife also finds harbor there. Hundreds of geese, ducks, and swans call this home, as well as the field on the east side of Lohr. They live there year-round. So, it is imperative to analyze the ecological impact of an expanded airport. See Wildlife Response #1.

While humans are affected by noise pollution, birds are mostly affected by the visual appearance of planes, until the noise level exceeds 90dB, then noise also plays into the picture. "In a study on a colony of terns, it was not until jet noise reached 90 and 95 dB that two and four percent, respectively, of the birds took to the air, and a further four percent

showed a fright reaction.” It then takes a while before these birds can calm down, but the interruptions affect food intake, migration, and breeding, which in turn impacts life expectancy and reproductive capacity.

[Source: www.fai.org/pgs 2-3]

See Noise Responses #1 and #2 and Wildlife Response #1.

Now, let’s also consider the safety of the pilots. “The Canada goose has been crowned as the third most lethal animal to aircraft behind deer and vultures.”

Source: www.SimpleFlying.com]

See Wildlife Response #1 and Health/Safety Responses #1 and #8.

This brings to light the argument that Willow Run Airport is the best logical site for any airport expansion. It is less than 20 minutes from Ann Arbor and is built to accommodate major airport facilities with 25,000 acres of developable land. The community supports the airport and provides incentives for companies to locate to their area.

[Source: <https://www.metroairport.com/business/development/master-plans/willow-run>]

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

I was under the impression that the people of Ann Arbor valued human health and safety, and environmental concerns. And it took precedence over commercial gain. I hope I am not wrong. To entertain the idea of expanding the Ann Arbor Airport for additional commercialism mocks the pretense that installing bike lanes and green spaces in the city is merely out of concern for the environment.

Please do not play this hypocritical game that can endanger human and animal life.

Regards,

Marde Doolan
Stonebridge Resident
4903 Doral Drive, Ann Arbor, MI 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 3, 2023 6:11 PM
To: William Ballard
Subject: FW: Ann Arbor Airport

From: Roubidoux, Marilyn (Marilyn) <roubidou@med.umich.edu>
Sent: Monday, January 02, 2023 7:37 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov
Subject: Ann Arbor Airport

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Kulhanek:

I am very upset about the proposed runway expansion of the Ann Arbor Airport (ARB), bringing runway 24 870 feet closer to Lohr Road and the adjacent residential areas. These are not adequately protected by “runway protection zones.” Expansion of the runway will allow larger, louder and more dangerous planes to land and take off from ARB.

See Noise Response #3 and Safety/Health Responses #2, #5, and #6.

The Second Revised Draft Environmental Assessment (SRDEA) now claims “meeting takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase over time.” They admit there will be more planes using the airport, not to mention allowing larger planes to use ARB. Since ARB is a municipal airport funded by federal dollars, any pilot can land at the airport, and the City of Ann Arbor will not be able to regulate the sizes of planes that can use it.

See Noise Response #3 and General Response #18.

The noise pollution is significant and is particularly harmful to children. Scientific studies confirm the negative impact of aircraft noise on the neuropsychological development of children, and the FAA requires identification of such risks. The SRDEA ignores those concerns by stating that the FAA has not yet established a threshold for those harmful impacts on children’s environmental health and safety.

See Noise Responses #1 and #2 and Safety/Health Response #4.

I am also concerned about the Canada geese that frequent the two ponds along Lohr Road, especially the south pond over which the planes fly. The geese also enjoy eating grain from the cornfields on the east side of Lohr Road. These are a real hazard to planes, especially the jets whose number would increase with a longer runway. (We don’t have a Hudson River on which a disabled plane could land.)

See Noise Response #3, Wildlife Response #1 and Safety/Health Responses #1 and #8.

There is another airport nearby, Willow Run, that could easily accommodate the planes that currently use ARB. Expanding ARB will negatively impact many residents in both Ann Arbor and Pittsfield Township for the benefit of the few. We can’t allow those who operate planes at ARB to adversely affect the growing communities in the surrounding areas!

See Noise Response #3, Financial/Economic Response #11, and General Responses #5, #10, and #13.

Sincerely,

Marilyn A. Roubidoux

Electronic Mail is not secure, may not be read every day, and should not be used for urgent or sensitive issues

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, January 4, 2023 7:29 AM
To: William Ballard
Subject: FW: Opposition to AA Airport Expansion

From: Mark Chung <touchdownusc@gmail.com>
Sent: Tuesday, January 03, 2023 12:08 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: Opposition to AA Airport Expansion

You don't often get email from touchdownusc@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Mr. Kulhanek,

I am writing to you and submitting this formal opposition to the proposed expansion of Ann Arbor Airport (ARB).

Based on my research and assessment of supporting facts, I conclude that the expansion of ARB is unjustified and will cause irreparable harm and pose unnecessary risks to the community.

What was once proposed under the "safety extension" narrative, the current expansion proposal shifts the narrative to enhance "operational utility." That said, facts show that of the four "critical aircraft" types identified by the SRDEA, three could operate 100% of the time on the existing 3,505-foot runway. Only the Cessna Citation Excel XLS, the type of aircraft owned and operated by AvFuel Corp., which dominates operations in this class, could suffer weight penalties on hot summer days, but could still operate at full weight 90% of the time, and at 100% capacity on most days. At most, only 48 operations per year of the Citation XLS class's 263 annual operations (in 2019) could be impacted by hot weather – a miniscule .00038 of ARB's total annual operations – insufficient to justify the proposed expansion. See Technical Response #2.

Further, the Purpose and Need statement does not support the need for an extended runway. The SRDEA contends that aircraft that routinely use ARB suffer "undue concessions in reduced fuel, passengers, and / or cargo loads. . .diversions to other airports are also commonly needed when the runway surface is wet, or during summer months when higher temperatures reduce aircraft performance." However, the SRDEA provides no actual data in support of the claimed concessions or diversions. The FAA noted, "the rate of users taking weight restrictions has not been documented," and, "The inclusion of the contaminated runway length distances cannot be used to justify FAA funding requirements" for an extended runway. See Technical Responses #7 and #9.

Lastly, the proposal mentions the need for many prominent businesses, U of M, and other employers that will often require air transportation but this argument is not convincing as from considering first-hand experience as well as referring to the proposal provides no realistic validation of this so-called need. This is a red herring argument. See Financial/Economic Response #1 and General Response #2.

In sum, I cannot think of any group of people in Ann Arbor as well as Washtenaw County at large that could benefit from this expansion. This proposal, if followed through, will likely benefit a miniscule, privileged population of this area but

present significant threat to safety and quality of life to the masses. Once again, I oppose this expansion and urge you to do the same.

See Safety/Health Responses #2, #5, #6, #14, and #16, Financial/Economic Response #1, and General Responses #1 and #13.

Sincerely,

Mark Chung

Ann Arbor Resident

Jan 5, 2023

Dear Mr. Kulhanek

I am writing this letter to express my concerns about the expansion of the Ann Arbor Municipal Airport.

The following information is to try to make you understand why we do not need expansion of the Ann Arbor Airport, and that there is a safer and better run facility at Willow Run:

Part 1. Let Willow Run, Run

The Ann Arbor Municipal Airport

As you know this airport was purchased by the City of Ann Arbor for its water rights in 1921. Currently Ann Arbor **gets 15% of its water** from this airport location. The area of the airport comprises **857 Acres**. The airport claims **75,200 aircraft operations a year or 206/day**. This number has fallen significantly over the past years. This number is a bit deceptive because these flights numbers count take off and landing practice flights, survival flights, aircraft pilot training flights, agriculture flights, advertising flights and some passenger flights. How many of these flights are airpilot training flights is not known.

The airport budget is \$800,000/year which comes from Ann Arbor. Ann Arbor gets money for this budget by charging hangar rentals and fuel tax charges at the Airport in Pittsfield Township.

The Airport is **3.6 miles from the Big House, and it is estimated to take 11 minutes to get to the Big House.**

The Airport has

- 2 run ways
- one a **3500x75ft concrete lane and a**
- **second 2750x110 grass lane that operates predominantly in the summer.**
- **No** rescue or firefighting facilities. Fire facilities are provided by the Pittsfield Township
- **Types of Airplanes**
- All B-II small aircraft are currently capable of operating on the existing 3,505 ft runway without weight restriction. However, larger airplanes (jets) already do use this B-II certified runway but with weight and fuel restrictions. Any extension to the runway will not change the operation of B-II classification aircraft but will allow larger aircraft (jets in the C-I and C-II categories) to land and operate out of the airport with full weight and fuel most days. It is clear that the extension of the runway is meant to lure larger aircraft to the airport. See Noise Response #3.
- The airport has two **FBOs(fixed-base operator)** that together offer fuel, general maintenance, aircraft parking, courtesy cars, pilot supplies, crew lounges, snooze rooms, showers, and more. The Ann Arbor City Council in late 2022 approved a plan to replace one of the FBOs with a new operator by voting to decline the current operator's lease at the airport. This new operator promises to increase flight training at ARB with more students and larger aircraft.
- The Ann Arbor Control Tower, operated by the FAA, provides air traffic control services daily from **8 am to 8 pm.**

- 150 T-hangars, 6 box hangars, a corporate hangar and 30 paved tie-down spaces on the terminal building ramp. The T-hangars vary by size, price, amenities and location. Tie down spaces are available for overnight stays and monthly rentals

For the section below on Willow Run, see Noise Response #3, Safety/Health Responses #3 and #7, Financial/Economic Response #11, and General Responses #3, #5, #10, and #14.

The Willow Run Airport

In contrast there is a **much larger airport** near Ann Arbor which is the **Willow Run Airport**. This airport comprises **2600 acres or 3.2 times the size of the Ann Arbor** municipal airport. This airport is **13.8 miles from the Big House and is estimated to take 19 min to get to the Ann Arbor Big House;**

The Willow Run Airport has 3 FBOs

It has 4 run ways- **including an ILS all-weather runway and cross wind runways plus**

7,543ft, Paved runway

7,292ft Paved runway

According to Airportia Willow Run reports the following statistics:

There are 652 flights on 162 different routes from Detroit Willow Run Airport, connecting YIP to 140 different cities in 5 different countries. The airport is an international, as well as national airport with both commercial flights and passenger flights. The airport boasts of the fact that it carries over **200,000,000 pounds** of freight each year with many objects for the car business and other hi tech Michigan businesses.

Willow Run, also known by IATA (International Air Transport Association) code YIP and ICAO (International Civil Aviation Organization) code KYIP, **offers flights from multiple airline carriers to many popular global destinations.** [Kalitta Charters](#) and [National Airlines](#) are based at Willow Run Airport.

It claims the following on the Willow Run web site.;

- Four runways, including an ILS all-weather runway and cross wind runways as noted above.
- **24-hour aircraft rescue fire fighting facilities**
- On-site weather bureau service
- Tower Operations: 24-hour FAA tower operations; no restrictions, non-directional beacon, instrument landing system, VHF omni-directional range and GPS
- Snow removal
- Monday-Friday 24-hour US Customs service

- FAA Flight Standards District Office
- Flight instruction
- Newly upgraded runways and taxiways
- **Low Fees** - With the most attractive landing fees in the region, Willow Run makes good economic sense
- Deicing facility

The airport has flight training schools that offer onsite flying clubs, aircraft rental services and pilot supplies. They have over 100 T hangar facilities for rent located in a secure environment. They have an ATP flight school, an ATP Airline Career Pilot Program which offers the industry-leading resources and professional training to become an airline pilot at a fixed cost in the shortest timeframe. They also have [Crosswinds Aviation](#)

Crosswinds Aviation is affiliated with Eastern Michigan University, which not only offers degree programs in Flight Technology but other aviation related disciplines as well. Anything from recreational to professional flight training is available at one convenient location, Willow Run Airport.

With three Fixed Base Operator (FBO) locations to serve you, Willow Run Airport can provide all the services necessary for flight operations. Fuel, deicing, aircraft cleaning and maintenance, catering, hotel reservations, and rental cars are just a few of the services available to you 24 hours a day, 7 days a week. You'll be impressed with the newly renovated, clean, and comfortable environment along with the personal, courteous attention that you'll experience-

Types of flights from Willow Run

	2012	2018 forecast			
Widebody Jets	17	0			
Narrowbody Jets	3,356	3,532			
Regional	2,151	2,256			
Business/Corporate Jets	8, 174	10,523			
Single Engine Prop	55,450	54,653			
Multi-Engine Prop	3,963	4,042			
Helicopter	182	214			
Military	269	0			
Total	73,604	75,220			

Comment: It is clear that the Willow Run Airport is properly set up for larger airplanes to fly and land safely. The airport has run multiple sound checks to see the effect on the existing population in the area and only one of the runways causes potential sound harm which is estimated to effect 45 residential sites including 100 people and 25 offices. No schools are effected by the noise. The other runways are

not over residential areas. One can see this report by going to;

https://www.metroairport.com/sites/default/files/business_documents/part150study/willow_run_airport_far_part_150_study_supplemental_final_june-2014-complete.pdf

This airport has several flight schools which are certified for larger flights as well as for maintenance of airplanes.

It seems unnecessary to enlarge the Ann Arbor airport runway basically to accommodate larger planes, especially when the airport lacks 24 hour Tower service and fire services, and especially when Willow Run has a wonderfully kept and highly functioning airport which is just 19 minutes from the Big House. In contrast the Ann Arbor airport is 11 minutes from the Big House. It seems unnecessary to enlarge our airport just to save 8 minutes of travel time to Ann Arbor. Also, Willow Run has a 24 hr FAA tower and twice as long runways, facilities for deicing and fire services as well as onsite custom services, car rental services and transportation services. They have been dealing with larger airlines safely and efficiently for many years. Their business has advisory boards from their community and has future plans to continue upgrading services for the community and detailed plans for noise abatement.

Part 2

For the Part 2 section below, see Water Resources/Water Quality Response #1 and Air Quality Response #1.

Lead in the Water Shed

Currently Ann Arbor gets 15% of its water from the airport which is over the water shed area. .

Does Ann Arbor Want Lead in its Drinking Water? And or is it okay that we have the lead in our fields ?

The lead Problem

Small single engine planes utilize leaded gasoline. in 1996 with the [passage of the Clean Air Act](#), leaded fuel is still used in the fleet of 170,000 piston-engine airplanes and helicopters .Leaded aviation fuel, or avgas, now makes up “the largest remaining aggregate source of lead emissions to air in the U.S.,” according to the [Environmental Protection Agency](#). The presence of this fuel means the areas near these airports are often inundated with tiny lead particles, according to a [2020 report from the EPA](#).

Lead, which is added to aviation fuel to boost octane and improve performance in piston-engine aircraft, is linked to miscarriage, low birth weight and premature birth. It can cause increased heart and respiratory diseases, neurological disturbances, convulsions, muscle weakness, paralysis and cancer, according to the U.S. Centers for Disease Control and Prevention and the United Nations Environmental Programme.

1.1 Use of Leaded Avgas in Piston-Engine Aircraft Emissions of lead from aircraft operating on leaded aviation gasoline (avgas) are the largest source of lead released into the atmosphere in the US, accounting for 62% of lead (456 tons) in the 2014 National Emissions Inventory (NEI) (USEPA 2016a). Leaded avgas is used in piston engine aircraft, of which there are approximately 140,000 in the US (FAA 2014) . These aircraft operate at most of the approximately 20,000 US airport facilities (approximately 13,000 of which are airports, while the remainder are heliports, balloon ports, and other facility types) (FAA 2017. Most piston-engine aircraft operations fall into the categories of either General Aviation (GA) or Air Taxi (AT) activity. GA is defined as the operation of civilian aircraft for purposes other than commercial, such as passenger or freight transport, including personal, business and instructional flying; AT is scheduled or on-demand services that carry limited payload and/or passengers (FAA 2012). Piston-engine aircraft rely on lead as an additive to avgas to help boost fuel octane and prevent engine knock, as well as prevent valve seat recession and subsequent loss of compression for engines without hardened valves.5 Lead is added to the fuel in the form of tetraethyl lead (TEL) along with ethylene dibromide, which acts as a lead scavenger to prevent lead deposits on valves and spark plugs. Currently one hundred octane low lead (100LL), which contains up to 2.12 grams of lead per gallon, is the most commonly used type of avgas in the US, although FAA survey data reports limited use of a leaded avgas containing 4.24 grams of lead

per gallon, known as “100 Octane,” and unleaded avgas (FAA 2015). Lead is not added to jet fuel, which is used in commercial aircraft, most military aircraft, and other turbine-engine aircraft.

The FAA and EPA have shown the following things about leaded gas near airports. Basically the closer one is to the fueling sites at an airport the higher the lead concentration in air and on the ground. Considering that the airport sits on top of a water shed area for 15% of the drinking water for the City of Ann Arbor, the more planes flying out of this airport will increase the lead going into the air and seeping into the water on any day. In the event of fuel spills even greater amounts of lead will seep into the water supply for Ann Arbor

1.2 Lead Concentrations in Air from Leaded Avgas Use in Piston-Engine Aircraft at Individual Airports
Lead emissions from piston-engine aircraft operating on leaded avgas increase concentrations of lead in air at and downwind of airports (Environment Canada 2000, Fine et al. 2010, Carr et al. 2011, Anchorage DHHS 2012, Feinberg et al. 2016). Gradient studies evaluating lead concentrations near airports where piston-engine aircraft operate indicate that concentrations of lead in air are one to two orders of magnitude higher at locations proximate to aircraft emissions compared to locations approximately 500- to 1000-meters downwind (Fine et al. 2010, USEPA 2010a, Carr et al. 2011, Feinberg et al. 2016). The most significant emissions in terms of ground-based activity, and therefore ground-level concentrations of lead in air, occur near the areas with greatest fuel consumption where the aircraft are stationary for a period of time (USEPA 2010a, Carr et al. 2011, ICF 2014, Feinberg et al. 2016). For piston-engine aircraft these areas are most commonly locations in which pilots conduct engine tests during run-up operations prior to take-off (i.e., magneto checks during the run-up operation mode). Run-up operations are typically conducted adjacent to the runway end from which aircraft take-off and the brakes are engaged so the aircraft is stationary. 6 As a result of the aircraft being stationary, duration of run-up, and high fuel consumption rate, emissions from run-up activity are the largest contributor to local maximum atmospheric lead concentrations; run-up emissions are estimated to contribute over 80% of the lead concentrations at and immediately downwind of the area where the run-up mode of operation occurs, even though this mode of operation does not have the highest fuel consumption rate. Hence, the area adjacent to the runway end at which run-up operations most frequently occur is identified here as the maximum impact site for lead concentrations.

<https://countyairports.sccgov.org/sites/g/files/exjcpb686/files/Model-extrapolated%20Est%20of%20Airbornn%20Lead%20Concentrations%20at%20US%20Airports.pdf>

For the Part 3 section below, see Air Quality Responses #1 and #3 and Noise Response #3.

Part 3. It's okay to have more Carbon in our community with the runway expansion, while Ann Arbor tries to reduce carbon emissions in their community : Hypocrisy

Carbon Foot Prints of Single engine and larger airplanes:

The world is trying to reduce our carbon footprint. Ann Arbor boasts that it is an enlightened city trying to become **carbon neutral**. However, what is good for Ann Arbor is not considered to be extended to the area around the airport which is located just south of Ann Arbor in Pittsfield Township. **Planes can be large consumers of gas** and can have varying efficiencies of their engines. Ann Arbor seems okay to increase bike lanes and to provide bikes to reduce emissions in their town, but is intent on letting our area, in which many residents live who work and eat and do business in Ann Arbor, be subjected to increases in **our carbon foot** print by increasing the flight runway which **will enable more large planes to take off and land and thus spew more carbon**. The following is a list of estimated air miles per gallon of standard single engine planes. You will note that as the planes get larger, their mpg goes down and their carbon footprint only gets larger.

Piston Singles



[Photo: Buzz Bot]

Mooney M20G: 15.8 nmpg

The Mooney M20 series was around for so long that not everyone agrees which model is the best. However, the 180-horse versions were famous for squeezing the most speed out of limited power.



[Photo: Douglas Mahn]

Cessna 172P: 15 nmpg

Being slow is among the many things for which the classic 172 is known. Fortunately, it uses very little fuel in the process, so its efficiency is still higher than for most GA airplanes.



[Courtesy: Cirrus Aircraft]

Cirrus SR20: 12.9 nmpg

The less-powerful Cirrus piston model is still no slouch. Stepping up to the brawnier SR22T would get you there faster but would also use more fuel per mile.

Piston Twins



[Photo: dtom]

Tecnam P2006T: 17.8 nmpg

Twin Rotax engines burning about four gallons per hour each help this twin post impressive fuel economy numbers. Many piston twins burn two to three times as much.



[Courtesy: Diamond Aircraft]

Diamond DA-62: 12.6 nmpg

Automotive-derived engines help this twin reach nearly 200 knots while burning only slightly more fuel than older twins with far less performance.



[Photo: KGG1951]

Piper PA44 Seminole: 12.2 nmpg

Long a standard for multiengine instruction at flight schools, the Seminole is still among the most economical twins although modern designs with advanced engines offer more speed for the same amount of fuel.

Turbine Singles



[FLYING Archives]

Daher TBM 900: 4.4 nmpg

The TBM burns about the same 70 gallons an hour as the Pilatus but scores better due to its higher cruise speed—just over 300 knots.



[FLYING Archives]

Pilatus PC-12 NG: 3.7 nmpg

Popular for charter service, business, and personal transport, the Pilatus posts attractive fuel economy figures, due mostly to its cruise speed of around 260 knots.



[Photo: Mark Wagner]

Quest Kodiak: 3.3 nmpg

Piston pilots have to brace themselves for a shock at the fuel pumps when transitioning to turbine power. Even a relatively economical utility model like the Kodiak burns 45 gallons per hour.

Turbine Twins



[Photo: Tibboh]

Piaggio P.180 Avanti: 3.3 nmpg

This unusual twin-pusher design from Italy is renowned for outpacing many jets while cutting costs. It also makes a unique sound passing overhead.



[Courtesy: Holland Aerolines]

Piper Cheyenne II: 3.2 nmpg

In the oldie-but-goodie category, Piper's turbine rework of its long-running Navajo still has a following, in part, because it represents a relatively inexpensive route to turboprop speeds.



[Courtesy: NASA]

Beechcraft King Air B200: 2.7 nmpg

Among the many King Air models, this is about the most economical to operate, burning just over 100 gallons of fuel per hour.

Light Jets

The following planes are more likely to be used when the airport runways are expanded. Their fuel mileage is very low, and they greatly increase the carbon footprint of our Pittsfield Township community. Ann Arbor doesn't like to increase its carbon footprint, but they seem to think it is alright to expand ours.



[FLYING Archives]

Cirrus SF50: 6.0 nmpg

It took a while to certify the unusual Cirrus single-engine jet, but many feel the wait was worth it in order to have a jet that nearly doubles the fuel economy of some turboprops.



[Courtesy: Honda Aircraft]

HondaJet HA-420: 4.2 nmpg

Honda definitely brought some of its economy-car experience to the jet market. Its HA-420 is among the fastest light jets but manages to keep the fuel burn reasonable.



[FLYING Archives]

Embraer Phenom 100: 4.0 nmpg

Embraer's decades of experience building economical military trainers and regional jets translated well to its Phenom series, which set a high bar in the small-jet category.

Midsized Jets



[Photo: Bradley Bormuth]

Cessna Citation II: 2.0 nmpg

Arguably the jet that started it all, at least for economy-minded operators, the Citation models from the 1980s continue to be among the least expensive to operate.



[FLYING Archives]

Gulfstream G200: 1.9 nmpg

With seats for eight, this long-running Gulfstream model has the range to make Atlantic crossings. It made its first flights in 1997.



[Courtesy: Privaria]

Hawker 900XP: 1.7 nmpg

This model, built from the late 2000s to the early teens, was popular for its roominess—comfortably seating eight—and its reasonable overall operating costs.

Author of the mileage estimates [Jonathan Welsh](#)

Jonathan Welsh is a private pilot who worked as a reporter, editor and columnist with the Wall Street Journal for 21 years, mostly covering the auto industry.

It is estimated that about 85% of the total fuel consumed by a single engine plane occurs during cruise flight, with around 10% used during taxi, takeoff and climb and about 5% consumed during descent.

Planes wait to take off with their engine going. They then start to taxi and have to use maximum energy to rise off the tarmac spewing leaded gas emissions onto the soil and concrete and into the air. It is the air in our neighborhood, but not in Ann Arbors neighborhood that is fouled by these planes, not to say anything about the constant noise they make. Our airport is unique because so many of the flights are touch and go landings to practice flying, mostly with inexperienced pilots. The expansion of the flight lanes and addition of more flight schools and larger planes will only increase the spewing of leaded gas, the noise levels and health risks which endanger those living near and around the airport.

While the airport plans to lower the use of leaded fuel, the use of old planes and practice planes will take many years before these will be replaced by new lead free planes. This plus all the carbon spewed by these planes makes our community unable to adequately reduce our carbon and noise and lead foot print.

Finally, I would like to remind MDOT that they are here to serve all of the taxpayers of Michigan fairly and objectively. MDOT does not merely serve as an advocate for ARB runway expansions for their airport constituents and cities such as Ann Arbor, but also for the betterment of life in the Community of Pittsfield. Our community with its many constituents have to live with the noise, carbon, lead pollution and danger of an airplane crashing near their homes every day. This seems so unnecessary when a very excellent and well run and historic airport (Willow Run) is so close to Ann Arbor and is an area which is far from most homes and workplaces and does not exist over a water shed area.

Thank You

Mark

Mark H. Kaplan MD
1835 Prairie Dunes Ct.
Professor Emeritus
University of Michigan
Michigan Medicine
Ann Arbor MI 48108



**Let Pittsfield
Township be
Green and Noise
Free for the
Centuries to
come**



Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

When I consider the proposed expansion of Ann Arbor Airport, my question is **"WHY?"**.

Why expand the Ann Arbor Airport when the area's needs for larger/faster passenger and cargo planes already are being served by Willow Run Airport, which is well equipped and less than 10 miles away?

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

Why expand the airport knowing that doing so will adversely affect the quality of life of scores of families living near the airport due to the higher noise levels inherent in the expected increase in air traffic flying over their homes at even lower altitudes than at present?

See Noise Responses #1, #2, and #3 and Safety/Health Responses #6 and #14.

Why expand the airport knowing that residential property values in surrounding neighborhoods will be adversely affected? Folks in those neighborhoods in good faith purchased their homes, maintained them to high standards over the years, and paid taxes to continuously improve their communities and schools. When they purchased their homes, those folks were aware that there was a small community airport in the area, but concluded that the effects of an airport that size would have minimal if any effects on their lives. They are still of that opinion.

See Financial/Economic Response #2.

Why consider lengthening the runway knowing that the migration patterns of large flocks of ducks, geese, and swans include stopovers in the fields located at the end of and around that runway. Many remain in the area for months, increasing the likelihood of bird/plane collisions that could endanger the lives of plane passengers, people on the ground now closer to the runway action, as well as to the unfortunate birds whose instincts have told them for decades that they belong there.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

Why, then, make this proposal? Here are a couple of possibilities:

- City, business, and university executives (and perhaps university athletic teams), are "inconvenienced" by having to drive the few extra miles from Ann Arbor Airport to Willow Run to access their private aircraft?
- Deep-pocket university alumni who fly to and from university events are "suffering" the same "inconvenience"?

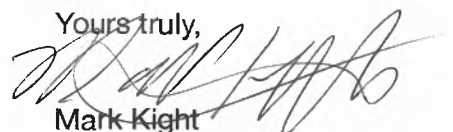
See General Response #14.

Let me be clear. If this proposal were in response to a verifiable national, state, or local emergency, it would be worth considering. Since this does not appear to be the case, I ask that the proposers determine and make known the **real** reasons **Why** this expansion is being proposed and weigh the value of those reasons against the predictable damage to the surrounding area.

See Safety/Health Responses #7 and #16, General Responses #3 and #14.

If, as I suspect, the proposal expansion does not meet the test, it should be permanently shelved, eliminating the need for the proposers to resurrect it every few years in the hope that the folks affected will become complacent and they can push it through.

Yours truly,



Mark Kight
1749 Stonebridge Drive South
Ann Arbor, MI 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, December 12, 2022 11:11 AM
To: William Ballard
Subject: FW: Support for Runway Expansion Fw: AIRPORT EXPANSION - TIME TO ACT - See email below mine

From: Mark Sockness <marksock@yahoo.com>
Sent: Monday, December 12, 2022 10:51 AM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Support for Runway Expansion Fw: AIRPORT EXPANSION - TIME TO ACT - See email below mine

You don't often get email from marksock@yahoo.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Gents,

Please read the email below mine/this one so that YOU can overcome the objections of Stonebridge Golf Community.

You will find the Stonebridge Community is misleading its residents like me.

The runway expansion will NOT negatively impact the value of the homes in Pittsfield Township and Stonebridge.

Buyers like ME know we live near the municipal airport and in the flight path of landings and take offs. Some of us enjoy the air traffic (with the exception of so very noisy older aircraft - very few).

Those that live on Lohr Road near the airport and within Stonebridge directly in line with airport know they bought a home at the end of the runway. They may have purchased their home at a slight discount to others or may have enjoyed a premium depending upon the Buyers interest in airplanes.

I like watching the airplanes take off and approach for landing. I enjoy identifying the aircraft and looking at their paint jobs.

More and larger planes will do not impact the fact that we live near an airport and the devalue our homes.

The idea that a plane will crash or fall from the sky is less likely than the Pittsfield homeowners being involved in a fatal auto accident or having their home catch fire from within. Pilots are trained for risks and do not want to fall out of the sky.

PLEASE WORK TO EXPAND THE RUNWAY FOR THE BETTERMENT OF THE ENTIRE COMMUNITY.

Thanks
Mark Sockness
Live near the airport
5285 Pinnacle Court
Ann Arbor, MI 48108

See Support Responses #10 and #12.

----- Forwarded Message -----

From: Stonebridge <hoa@stonebridgecommunity.org>
To: "markmssock@yahoo.com" <markmssock@yahoo.com>
Sent: Sunday, December 11, 2022 at 01:25:35 PM EST
Subject: AIRPORT EXPANSION - TIME TO ACT

Dear Stonebridge Resident,

The Ann Arbor Municipal Airport has tried for nearly 13 years to gain approval to expand the airport. The expansion proposes to:

Lengthen the main SW-NE runway by 720 ft in the direction of Stonebridge
Triple the size of aircraft permitted to use the airport to 70,000 lbs

See Noise Response #3.

They now have a third draft of the required Environmental Assessment published for comment. A summary of the EA study can be found on StonebridgeCommunity.org, under Proposed Airport Expansion. The previous two EA studies were rejected by the FAA.

The proposed expansion would result in the following for Stonebridge:

Aircraft would pass over Lohr Rd at 1/3 the altitude they currently do; about 100 ft.

See Noise Responses #1 and #2.

Due to the lower altitude and larger aircraft; noise levels would be double or triple what they are now.

The risk of a bird strike (goose or swan) at these lower altitudes is greatly increased.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

Stonebridge is joined by Pittsfield Township and Lodi Township in opposition to this expansion. The expansion is particularly pointless since Willow Run Airport is just 10 miles away and is fully equipped to safely handle the larger aircraft.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

Now is the time to make your voice heard, by:

- **Attend the MDOT-AERO public hearing in the Ann Arbor City Council Chamber, 5:30 to 8 pm Tuesday, December 13**
- **Write letters of opposition to the airport expansion no later than January 13. This is imperative. Send them to:**

Steve Houtteman, MDOT-AERONAUTICS, 2700 Port Lansing Road, Lansing, MI 48906. Email: houttemans@michigan.gov

Matthew Kulhanek, Ann Arbor Municipal Airport, 801 Airport Drive, Ann Arbor, Michigan 48108. Email: mjkulhanek@a2gov.org

CC to: Kathe Wunderlich, Committee to Preserve Community Quality, Stonebridge. Email: kathewun@aol.com

There will also be a public information meeting with the Committee to Preserve Community Quality, who will present a brief summary, discuss next steps, and answer your questions, Wednesday, December 14 at 6:30 pm at Pittsfield Township Hall, 6201 West Michigan Avenue, Ann Arbor, 48108. Points to make in your letters are available on StonebridgeCommunity.org, under Proposed Airport Expansion.

Sincerely,

Stonebridge Community Association

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, December 12, 2022 11:11 AM
To: William Ballard
Subject: FW: WANT TO SEE AIRPORT RUNWAY EXPANDED

From: Mark Sockness <marksock@yahoo.com>
Sent: Monday, December 12, 2022 10:27 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov
Subject: WANT TO SEE AIRPORT RUNWAY EXPANDED

You don't often get email from marksock@yahoo.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Gentlemen,

I would like to see the Ann Arbor Municipal Airport runway expanded by the 720 feet.

I live in the Stonebridge Golf Community. I know I am not the only one who would welcome the extension of the runway as proposed.

I see the extended runway improving safety, allowing larger aircraft to takeoff and land near area businesses and providing additional entertainment to area residents who like identify and watch planes takeoff and land at the A2 airport.

See Support Responses #2 and #3.

The Stonebridge Community and other nearby residents are being misinformed about this runway extension as folks are told the area will see/hear louder planes and face lower flying aircraft. I have countered these arguments with the fact that larger and heavier airplanes are more valuable than some of the trainers, old pushers, old radial engines currently flown out of the airport. These more valuable aircraft are often better maintained than older recreational aircraft using the airport today. Also, the larger planes whether prop or jet planes are generally quieter than the older recreational planes using the airport today. The larger and heavy tier planes often have a greater rate of climb and ability to reach 300 to 1000 feet above the ground faster and with less noise than older, smaller aircraft flying today.

See Support Response #11.

One BIG argument is that our land values will fall across the board with the expansion of the airport. This is not true as everyone living here today knows/knew there was an airport nearby with room for expansion. Several homes on Lohr road and within Stonebridge are in the immediate path of the NE-SW runway and it is likely these homeowners pay less for their home due to the airport and likely paid less for their home due to the airport traffic, noise and uncertainty of the empty lot and its expandability.

See Support Response #12.

Another scare tactic is stating that bird strikes are more likely to down an aircraft if the runway is extended. I find this false and alarming. The planes needing more runway are most often twin engines and jets that are quieter, have a greater ability to climb to altitude and are generally better maintained than most aircraft as they are more valuable and usually owned by a business or wealthy person.

See Support Response #11.

I WANT TO SEE THE AIRPORT RUNWAY EXTENDED.

Side benefit is that it will prevent future home development near the airport presevering the wetlands, open areas and placing less demand on our stress water and sewer systems.

Sincerely

Mark Sockness
Stonebridge and Pittsfield Resident
5285 Pinnacle Court
Ann Arbor, MI 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, December 12, 2022 7:34 AM
To: William Ballard
Subject: FW: Ann Arbor Airport

From: MARY LUCAS <MARYLUCAS@msn.com>
Sent: Saturday, December 10, 2022 12:01 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: Ann Arbor Airport

You don't often get email from marylucas@msn.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

RE: Ann Arbor Airport

Mr. Kulhanek:

I write this as a resident of Regents Park Court, across the street from the Stonebridge development near Ann Arbor Airport to ask you to turn down the proposal to extend the runway to accommodate jets.

[See Noise Response #3.](#)

Before moving back to the Ann Arbor area, I lived for many years five miles from Teterboro Airport in New Jersey and can attest to the history of the increase in sound as the airport became a popular takeoff for jets. When only small planes used the airport, there was very little noticeable sound in surrounding neighborhoods, but over the years that changed dramatically and the noise was very disturbing. Even when I moved eight miles farther away, jets leaving and landing at Teterboro could be heard as they approached and left the airport, sometimes so loud on a low approach that it sounded as if something were wrong with the planes.

[See Noise Responses #1, #2, and #3.](#)

It is only about eight miles from here to the center of Ann Arbor. If you build up the airport here, the sound will also be heard throughout Ann Arbor.

[See Noise Responses #1 and #2.](#)

Ann Arbor has grown exponentially in recent history with plans to increase housing. Ann Arbor is a mid-sized town with limited room for housing expansion in all four directions. There are several new housing developments in this area, including Lohr Road in Saline over which planes now approach. Eventually, it would not be surprising for continuous developments to exist between Ann Arbor and any of the small, nearby towns. It is a given that more housing will be built near the airport and this is at odds with building up the airport here. It would make more sense to just build an airport elsewhere, and Willow Run is nearby as it is. Why not update Willow Run? If you really want to be progressive, please plan for the housing future that will exist in ten or twenty years in this area, which plan supersedes the convenience of the few who want the convenience of nearby air transportation. Please benefit the majority of the people who live in the environs of Ann Arbor, not the few for whom this area is just a matter of convenience, not a place where they live.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5, #10, #13 and #14.

Once you allow jets into this airport, there will be no going back.

See Noise Response #3.

There are other arguments, like the water supply under the airport, air quality, and wildlife which are at odds with airport development here. Would you not agree that building up the airport here is negative in many ways?

See Wildlife Response #1, Water Resources/Water Quality Response #1, and Air Quality Response #1.

Mary Lucas

1365 Regents Park Court

Ann Arbor, MI 48108

cc: Mr. Steve Houtteman
Ms. Kathe Wunderlich



Pittsfield Charter Township

Department of Public Safety

6227 West Michigan Avenue, Ann Arbor, MI 48108

Phone: (734) 822-4911 • Fax: (734) 944-0744

Website: www.pittsfield-mi.gov

Matthew E. Harshberger

Director of Public Safety

Chief of Police

harshbergerm@pittsfield-mi.gov

(734) 822-4921

Sean Gleason

Fire Chief

gleasons@pittsfield-mi.gov

(734) 822-4926

Mandy Grewal, Supervisor

December 12, 2022

Mr. Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Re: Public Hearing for the Runway Extension Project at the Ann Arbor Municipal Airport

Dear Mr. Kulhanek,

As outlined in the Notice of Public Hearing for the proposed runway extension project, comments/statements can be submitted by email and/or mail to be included in the transcript of the public hearing. As Pittsfield Charter Township's representative on the Airport Advisory Committee, I wish to submit, on Pittsfield Township's behalf, opposition to the airport runway extension project, as previously documented in the two attached Pittsfield Township Board of Trustees' Resolutions #09-23 (March 24, 2009) and #17-21 (April 12, 2017). As cited in the notice of public hearing, I request that my letter and the two attached resolutions are included in the transcript of the public hearing.

Thank you.

Respectfully,

A handwritten signature in blue ink, appearing to read "M. Harshberger", is written over a horizontal line.

Matthew E. Harshberger,
Director of Public Safety

Attachments: PCT Res #09-23
PCT Res #17-21

**PITTSFIELD CHARTER TOWNSHIP
WASHTENAW COUNTY, MICHIGAN
RES #09-23**

**RESOLUTION OPPOSING PROPOSED EXPANSION OF THE ANN ARBOR
MUNICIPAL AIRPORT RUNWAY**

MARCH 24, 2009

Minutes of a Regular Meeting of the Township Board of Pittsfield Charter Township, Washtenaw County, Michigan, held at the Township Administration Building located at 6201 W. Michigan Avenue, in said Township, on the 24th day of March, at 6:30 p.m.

Members Present: Grewal, Israel, Scribner, Ferguson, Hunt, Krone, Yi.

Members Absent: None.

The following preamble and resolution were offered by Member Scribner and supported by Member Ferguson.

WHEREAS, the Ann Arbor airport is under the jurisdiction of the City of Ann Arbor and operated by an independent Authority and the land is located within Pittsfield Charter Township immediately adjacent to a residential area; and

WHEREAS, the existing width and length has not posed any substantial safety concerns in the past with only five incidents of landing mishaps out of a total of 600,000 landings in the past eight years; and

See Safety/Health Responses #7 and #16, General Responses #3 and #14.

WHEREAS, the proposed changes and expansion would shift the runway dangerously close to a busy township roadway (Lohr Road) and closer to dense residential subdivisions; and

See Safety/Health Responses #2, #5, #6, and #14.

WHEREAS, such a runway expansion will significantly increase air traffic volumes and noise pollution experienced by residential subdivisions in the vicinity of the Ann Arbor airport, thereby resulting in a decline of residential home property values; and

See Noise Responses #1 and #2 and
Financial/Economic Response #2.

WHEREAS, the City of Ann Arbor has not fully demonstrated the economic and safety justifications for undertaking the proposed runway expansion; and

See Safety/Health Responses #7 and #16, General Responses #1, #3, and #14, and Financial/Economic Responses #1, #4, and #12.

WHEREAS, the City of Ann Arbor appears to have not taken into consideration the negative safety implications such a runway expansion may impose on the surrounding residential subdivisions by expanding a runway closer to residential subdivisions

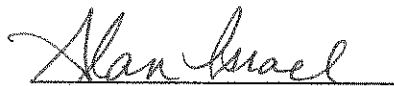
See Safety/Health Responses #2, #5, #6, and #14.

NOW THEREFORE BE IT RESOLVED, the Pittsfield Charter Township Board of Trustees urges the City of Ann Arbor to reconsider the merits of expanding the Ann Arbor Airport runway in light of the negative implications such an expansion would impose on the residents of Pittsfield Charter Township.

General Response #13.

AYES: Grewal, Israel, Scribner, Ferguson, Hunt, Krone, Yi.
NAYS: None.
ABSENT: None.
ABSTAIN: None.

RESOLUTION DECLARED ADOPTED.



Alan Israel, Clerk
Pittsfield Charter Township

DATED: March 24, 2009.

**PITTSFIELD CHARTER TOWNSHIP
WASHTENAW COUNTY, MICHIGAN
RES #17-21
RESOLUTION OPPOSING PROPOSED EXTENSION
OF THE ANN ARBOR MUNICIPAL AIRPORT RUNWAY**

April 12, 2017

At a Regular Meeting of the Township Board of Pittsfield Charter Township, Washtenaw County, Michigan, held at the Township Administration Building located at 6201 W. Michigan Avenue, in said Township, on the 12th day of April, 2017 at 6:30 p.m.

Present: Grewal, Anzaldi, Scribner, Edwards-Brown, Jaffer, Krone, Ralph.

Absent: None.

The following preamble and resolution were offered by Treasurer Scribner, and supported by Trustee Ralph.

WHEREAS, the Pittsfield Township Board of Trustees first adopted a resolution opposing the proposed runway expansion/extension on March 24, 2009 that expressed concerns centered around safety and decline in property values (Resolution #09-23); and

See Safety/Health Responses #2, #5, #6, and #14 and Financial/Economic Response #2.

WHEREAS, in the eight (8) years since the adoption of Resolution No. 09-23, Pittsfield Township has not only steadfastly opposed the runway extension, it has fostered a strong partnership with the Committee for Preserving Community Quality, established by Pittsfield Township residents also opposed to the runway extension at the Ann Arbor Municipal Airport; and

WHEREAS, it is readily apparent that any runway extension will increase the viability of passenger and commercial jet aircraft usage at the Ann Arbor Municipal Airport thereby not only significantly compromising public safety and property values but also increasing air pollution and potential groundwater contaminants and, furthermore, this extension will detract from the considerable monetary and community investments made in the last few years by Washtenaw County, Ann Arbor SPARK and others toward the revitalization of the east side of Washtenaw County, specifically in and around the Willow Run airport; and

See the following responses: Noise #3, Financial/Economic #2 and #11, General #5 and #10, Air Quality #1, Water Quality #1, Safety/Health #2, #5, #6, and #14.

WHEREAS, Pittsfield Township and the Committee for Preserving Community Quality have extensively and specifically documented (officially by way of responses to the Environment Assessments and otherwise) our reasons for opposing the runway extension, which include, but are not limited to: (1) planes landing to the East on an expanded runway just 93 feet over Pittsfield homes, posing danger to residents; (2) Ann Arbor has not justified a proper Purpose and Need for the expansion, and the minimum required operations for expansion have not been met; (3) the Environmental Assessments do not acknowledge the potential dangers resulting from the presence of large numbers of Canada geese surrounding the airport through much of the year; (4) the expansion would attract larger and heavier aircraft closer to the population center, likely in violation of the Pittsfield Noise Ordinance; (5) any pilot could land any type of plane – no matter how large -- at any time because it is a municipal airport funded with federal tax dollars; (6) and that these risks could pose dangers to the safety of water in wells located on airport property, for which the airport property was originally acquired almost a century ago for water rights, wells which provide drinking water to Ann Arbor and an aquifer that flows throughout Pittsfield Township; and

WHEREAS, the City of Ann Arbor has, despite the very significant safety and environmental concerns noted above, included the proposed runway extension in their capital improvement plan; and

See the following responses: Noise #1 and #3, Wildlife #1, Financial/Economic #2 and #11, General #3, #5, #10, #14, and General #18, Water Quality #1, Safety/Health #1, #2, #5, #6, #7, #8, #14, and #16.

WHEREAS, the second Environmental Assessment (conducted because of egregious flaws of the first one), that includes over 200 public comments with only seven (7) in support of the proposed extension, is currently in the review process by the Federal Aviation Administration; and

WHEREAS, the Pittsfield Township Board of Trustees wants to not only reiterate our continued and steadfast opposition to the runway expansion/extension, we want to expressly and officially request a test by the United States Environmental Protection Agency) (EPA) of the aquifer located at the Ann Arbor Municipal Airport, since the 2016 Ann Arbor Municipal Airport Draft Environmental does not report any water testing data; and

WHEREAS, the City of Ann Arbor has worked with the EPA to retroactively address water quality issues as related to the Dixoane Plume, Pittsfield Township would like to request the EPA to proactively address negative impacts to water quality (that is consumed by City of Ann Arbor and Pittsfield Township residents) that may result from the proposed extension of the runway at the Airport;

See Water Resources/Water Quality Response #1.

NOW THEREFORE BE IT RESOLVED, the Pittsfield Charter Township requests Congresswoman Debbie Dingell, State Senator Rebekah Warren, State Representative Adam Zemke and County Commissioner Felicia Brabec to advocate on this matter with the EPA and request that EPA conduct a test of the aquifer located at the Ann Arbor Municipal Airport; and

See Water Resources/Water Quality Response #1.

BE IT FURTHER RESOLVED that copies of this resolution shall be provided to Congresswoman Debbie Dingell, State Senator Rebekah Warren, State Representative Adam Zemke and County Commissioner Felicia Brabec, and City of Ann Arbor councilmembers.

ROLL CALL VOTE:


AYES: Grewal, Anzaldi, Scribner, Edwards-Brown, Jaffer, Krone, Ralph.

NAYS: None.

ABSENT: None.

ABSTAIN: None.

RESOLUTION DECLARED ADOPTED.



Mandy Grewal, Supervisor
Pittsfield Charter Township

DATED: April 13, 2017

CERTIFICATE

I, Michelle L. Anzaldi hereby certify that the foregoing is a true and complete copy of a resolution adopted by the Township Board of Pittsfield Charter Township, County of Washtenaw, State of Michigan, at a Regular Meeting held on April 12, 2017, and that said meeting was conducted and public notice of said meeting was given pursuant to and in full compliance with the Open Meetings Act, being Act 267, Public Acts of Michigan, 1976, and that the minutes of said meeting were kept and will be or have been made available as required by said Act.



Michelle L. Anzaldi, Clerk
Pittsfield Charter Township

DATED: April 12, 2017

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 10, 2023 11:22 AM
To: William Ballard
Subject: FW: Ann Arbor Airport Expansion

From: Michael Ribits <mribits@comcast.net>
Sent: Tuesday, January 10, 2023 11:06 AM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Ann Arbor Airport Expansion

You don't often get email from mribits@comcast.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Sorry if this is redundant, it was kicked back to me on my first attempt...

Gentlemen,

Plans to expand the Ann Arbor Airport appear to be dangerous, reckless and unnecessary. While I'm sure the best "paid for" analysts and engineers (that don't live near the airport and are unaffected by its' operation) will write reports and environmental assessments indicating it would be largely safe without too much added noise from extended runways and expanded operations, the simple facts and common sense differ. Lowering the margin for error in an ever more densely populated area, accepting bigger aircraft with larger noisier engines into a very tight landing and takeoff window with many nearby homes and a large population migratory birds, and disturbing the environment above a key supply of drinking water for the city, all suggest this is a bad idea... So bad, that if it proceeds, and should there be an accident, those involved in the decision making on this proposal should bear the weight of criminal negligence. Here are some key points to consider:

See Noise Responses #1, #2, and #3, Wildlife Response #1, Safety/Health Responses #1, #2, #5, #6, #8, and #14, and Water Resources/Water Quality Response #1.

- In the nearly 30 years since living very near to the airport, we know of two accidents outside of the airport fencing near the area just west of the airport (I'm sure there are more in and around the airport itself) . In one accident the pilot of a small disabled plane landed on the fairway of a golf hole that is part of the Stonebridge development. No one hurt and no significant damage. But what if that had been a larger aircraft needing more room? Then a few years ago, another small disabled aircraft lands in the soybean/corn field just outside the airport and across the road from the Stonebridge development. Again, no one hurt and minimal damage. But could a larger aircraft do the same when the size of that field will shrink in this proposal? Two accidents in thirty years and nobody hurt -- that's pretty safe.... or is it? Frankly, we'd say that's lucky and not safe enough.
See Safety/Health Responses #2, #5, #6, and #14.
- Autumn brings large numbers of migratory birds to Stonebridge (the golf course and neighborhood directly west of the airport across Lohr road). While there is a significant year-round population of geese in the area, harvest time and the golf course ponds provide layover accommodations for many of the traveling population. For the better part of two months, there are large numbers of birds, mostly geese, but also plenty of ducks and swans. We have attached a few pictures of the geese taken a few years ago just outside airport grounds. Look

at it slowly, blow it up and count the birds. How might they react to sound of jets engines and how do those engines handle a bird strike? We suggest the answer is not well. Now ask a pilot that's less than 500 feet above the ground what he's going to do when he's just had a bird strike and lost his power above a densely populated area. They'll likely answer "Pray".

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

- Increased airport operations require more of everything on the ground. More fuel, more firefighting equipment, more safety training and drills, more traffic, more retention ponds handling ever more waste runoff and more use of more environmentally unfriendly chemicals. Drinking water wells for the City of Ann Arbor are on airport property. The main supply of drinking water for the city is already being threatened by an underground carcinogenic chemical plume headed its way. Do the people of Ann Arbor know that their drinking water supply is about to come under further attack?

See Water Resources/Water Quality Response #1.

- What or Who is driving the expansion proposal for the Ann Arbor Airport? Clearly, the answer is not need. If the existing airport isn't big enough, Willow Run Airport, located 14 miles (20 minutes by car) from Ann Arbor City Center, is a good alternative for commercial and general aviation needs with four runways, a 24 hour FAA tower and U.S. Customs operations. If it's a safety issue because of obstructed views from the existing tower, then leveling buildings in the way would likely be a cheaper, less complicated solution to the problem than extending and reorienting the runway. If it's safety because the runway is still too short for existing traffic, then I contend that the safety of many more people outside the airport is more important than a few pilots using the airport for personal use. So again I ask, who's really behind this proposal? If it's the University and a few rich donors or alumni that want a shorter drive to campus and the football games, then I believe the safety of many outside the airport outweighs the convenience for a few that use it. If the answer is that the City needs it for future growth, then we would say they missed that window 30 years ago... it's just not located in a place to expand safely anymore.

See Noise Response #3, Safety/Health Responses #2, #5, #6, #7, #14, and #16, Financial/Economic Response #11, and General Responses #3, #5, #10, #14, #25.

While much time and effort has been spent to justify the expansion, we believe there are very few beneficiaries of the plan. Please consider all the points that are outlined above and those that many others have sent your way. The future health and safety of the many people depend on the common sense of individuals like yourselves prevailing and cancelling this effort once and for all.

Regards,

Michael Ribits and Nancy Ribits







Sent from my iPad

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, January 4, 2023 2:43 PM
To: William Ballard
Subject: FW: Public Statement - Strong Objection to proposed Ann Arbor Airport Expansion - Private Citizen

From: Michael Lee <mjlee_@hotmail.com>
Sent: Wednesday, January 04, 2023 10:24 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: City Council <CityCouncil@a2gov.org>; Taylor, Christopher (Mayor) <CTaylor@a2gov.org>; Hayner, Jeff <JHayner@a2gov.org>; Disch, Lisa <LDisch@a2gov.org>; Harrison, Cynthia <CHarrison@a2gov.org>; Song, Linh <LSong@a2gov.org>; Watson, Chris <CWatson@a2gov.org>; Radina, Travis <TRadina@a2gov.org>; Ghazi Edwin, Ayesha <AGhaziEdwin@a2gov.org>; Eyer, Jen <JEyer@a2gov.org>; Akmon, Dharma <DAkmon@a2gov.org>; Briggs, Erica <EBriggs@a2gov.org>; Cornell, Jenn <JCornell@a2gov.org>; kathewun@aol.com; Andrew McGill <andymc@umich.edu>; houttemans@michigan.gov <houttemans@michigan.gov>; lsmolciclerson@mlive.com <lsmolciclerson@mlive.com>; thewaterwaysboard@gmail.com; supervisor@pittsfield-mi.gov <supervisor@pittsfield-mi.gov>; clerk@pittsfield-mi.gov <clerk@pittsfield-mi.gov>; treasurer@pittsfield-mi.gov <treasurer@pittsfield-mi.gov>; edwards-brownl@pittsfield-mi.gov <edwards-brownl@pittsfield-mi.gov>; jaffery@pittsfield-mi.gov <jaffery@pittsfield-mi.gov>; kroneg@pittsfield-mi.gov <kroneg@pittsfield-mi.gov>; Urda-ThompsonA@pittsfield-mi.gov <Urda-ThompsonA@pittsfield-mi.gov>; Kathryn <ktee61@hotmail.com>; sandersc@washtenaw.org <sandersc@washtenaw.org>; pghuebner@gmail.com
Subject: Public Statement - Strong Objection to proposed Ann Arbor Airport Expansion - Private Citizen

Some people who received this message don't often get email from mjlee_@hotmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

To – MKulhanek@a2gov.org - Mr. Matt Kulhanek, Airport Manager
Cc – CityCouncil@a2gov.org – Ann Arbor City Council
ctaylor@a2gov.org – Ann Arbor Mayor
jhayner@a2gov.org – Ann Arbor City Council Member
ldisch@a2gov.org – Ann Arbor City Council Member
CHarrison@a2gov.org – Ann Arbor City Council Member
LSong@a2gov.org – Ann Arbor City Council Member
CWatson@a2gov.org – Ann Arbor City Council Member
tradina@a2gov.org – Ann Arbor City Council Member
AGhaziEdwin@a2gov.org – Ann Arbor City Council Member
JEyer@a2gov.org – Ann Arbor City Council Member
DAkmon@a2gov.org – Ann Arbor City Council Member
EBriggs@a2gov.org – Ann Arbor City Council Member
JCornell@a2gov.org – Ann Arbor City Council Member
kathewun@aol.com - Citizen
andymc@umich.edu - Citizen
houttemans@michigan.gov – MDOT rep
lsmolciclerson@mlive.com - Lucas Smolcic Larson – Ann Arbor News Reporter
thewaterwaysboard@gmail.com – The Waterways Subdivision Board

supervisor@pittsfield-mi.gov - supervisor@pittsfield-mi.gov
clerk@pittsfield-mi.gov - clerk@pittsfield-mi.gov
treasurer@pittsfield-mi.gov - treasurer@pittsfield-mi.gov
edwards-brownl@pittsfield-mi.gov - edwards-brownl@pittsfield-mi.gov
jaffery@pittsfield-mi.gov - jaffery@pittsfield-mi.gov
kroneg@pittsfield-mi.gov - kroneg@pittsfield-mi.gov
Urda-ThompsonA@pittsfield-mi.gov - Urda-ThompsonA@pittsfield-mi.gov
Ktlee61@hotmail.com – Citizen
pghuebner@gmail.com - Paul & Erika Huebner, Citizens
sandersc@washtenaw.org - Washtenaw County Commissioner Caroline Sanders

From – Michael J. Lee – Resident of Waterways Subdivision, Pittsfield Township

Subject – Public Statement – Strong Opposition to Proposed Ann Arbor Airport Expansion

I am a resident of 4793 Wildflower Ct., Ann Arbor, MI 48108. My home is in Pittsfield Township. I do not live in the direct take-off or landing flight path, but experience very frequent and very repetitive low altitude and very loud traffic from training patterns. We also hear very large planes take-off and land during the night, typically at 5:00AM. We have experienced numerous very low altitude encounters with aircraft at our home. My wife and I knew that there was an airport nearby when we purchased our home.

I am going to be as brief and direct as possible, to increase the potential that you will read this entire letter. I have already provided a recorded/transcribed comment at the Public Hearing at Ann Arbor City Hall on December 13, 2022, and I also appeared at the Pittsfield Township Council Meeting on December 14, 2022 and provided a comment during the public comment portion of the agenda. I have also filed formal complaints with the FAA, which I reference below. I will summarize my objections below –

Based on my own observations and interactions with the Airport Management Team, the current airport perimeter with current runway configuration is not safe, the airport is not a good neighbor, and it is not well managed. Providing more and larger aircraft to this entity, on this patch of property, and to the management team and management structure, and permitting it to operate on the current airport property with a larger runway, is a very bad decision. Additionally –

See Noise Response #3.

- 1) Significant safety issues - Aircraft approach and land very low above the Speedway Gas Station on State St. and Ellsworth, and take off very low above homes on Lohr Rd. This seems to obviously infer that the current airport and it's current use, doesn't safely fit on the existing property. Extending or expanding the airport or allowing still larger aircraft to operate there would not be safe. During my interactions with other residents, I learned about multiple recent safety events, including a plane going down this past summer in the cornfield along Lohr Rd.
 - a. The Airport did not make this public – why??
 - b. If the runway is extended, an event like this likely would have involved a house, personal injury, and private property damage!
 - c. Any events over the last 15 years, have been attributed to “pilot error”. With longer runways, and more and larger aircraft, “pilot error” will have a higher probability of impacting local residents and house structures. How is this OK? It defies logic, but must be answered by airport management, and the Ann Arbor Mayor and City Council. Despite the fact that the airport is not in the city limits, it is still Ann Arbor's responsibility. See Noise Response #3, Safety/Health Responses #2, #5, #6, and #14.
- 2) Significant altitude and noise violations - Training patterns from the Ann Arbor Airport flight schools are an obnoxious menace to the surrounding area, with frequent violations of FAA altitude regulations, and frequent noise in excess of FAA regulations. I have provided a copy of the data used in my complaints to the FAA as reference. Mr. Kulhanek has been directly contacted on numerous occasions and has done nothing to address it.
 - a. I use the FlightAware app on my phone to monitor altitude, tail numbers, and locations of planes. This has been a good resource for actual data to provide in complaints.
 - b. I also use the dB App on my phone to measure noise. I have recorded 85 dB inside of my home with the windows closed. This is real data from a person not on the direct take-off/landing path. It is directly opposed to the FAA standard and what has been used in the consultant's study for this proposal. The

FAA uses an average annual type noise level, which clearly includes night time data, and time when no planes are in the area; artificially reducing the actual noise level. Further, the consultant’s study only uses modeled data, and never cites any actual measured data from airport grounds or the surrounding area. This is deceptive at best, and purposeful/strategic at worst. The proposal reviewers should demand real physical and measured data from the surrounding area. I will offer the use of my property free of charge. See Noise Responses #1, #5, #7, and #9 and General Response #12.

- 3) Disingenuous and non-transparent motivations - Direct conversations that I have had with the Airport Manager, Mr. Kulhanek, an addressee on this letter, are polite, but have yielded no action or actionable responses. He seems to be a mouthpiece for the financial entities seeking to expand this airport. His motivations for expansion are not transparent, and should be questioned very rigorously by the City of Ann Arbor and any other stakeholders. Any financial benefits to the city of Ann Arbor are also not apparent. Requests, as part of this process, to send any and all comments to Mr. Kulhanek, seems ill-advised based on my interaction, and the total lack of reaction and lack of actionable responses. He is a defacto “fox watching the hen-house” on this matter. That is why I have copied a much larger distribution list. See General Response #12.
- 4) Major risk to Water Aquifer below the airport– Given the Dioxane Plume concerns to the north, adding further risk to the water sources for Ann Arbor, seem very ill-advised. The recent addition of a business that paints/restores aircraft at the airport will provide additional increased risk to the water resources surrounding the airport. See Water Resources/Water Quality Response #1.
- 5) Why not use Willow Run? Willow Run is a viable, ready, convenient alternative. The cost/benefit seems clear. All of the benefits at zero cost to the city of Ann Arbor. See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.
- 6) Climate/Green Policy – this proposed plan makes a mockery of the City of Ann Arbor’s green initiatives and climate propaganda. The risk to the water resources, additional noise above the already obnoxious and damaging noise levels, increased propagation of jet fuel usage, irreparable harm to the mental health of surrounding residents and our quality of life in the surrounding area, are in direct opposition to any green initiatives, and don’t indicate any care or concern for residents near to Ann Arbor, but outside of the city limits. Ann Arbor needs to truly understand and own what is happening at this airport and how it affects other citizens.

I strongly object to this proposal and request that any and all steps be taken to stop it from moving forward.

Sincerely,
Michael J. Lee
4793 Wildflower Ct.
Ann Arbor, MI
(734) 904-8756
mjlee@hotmail.com

See Noise Responses #1 and #2, Water Resources/Water Quality Response #1, Air Quality Responses #1 and #3, and Safety/Health Responses #4, #11, #12, and #15.

Attachment #1 - Data summary of Summer 2022 incidents at my home – items 10 and 11 were very alarming and unsafe, and item 8 was disruptive and unsettling to our household. Both resulted in phone calls to the Airport Manager. His phone logs can be used to verify the calls from me.

flightaware.com incidents - 4793 Wildflower Ct. Ann Arbor, MI 48108								
Date	Time	Tail Number	Major Concern	Additional concerns	Evidence available	Action planned	Request to ARB Management	
24-Jun-22	8:00AM	N6833Z	Repeating same pattern for extended period (on hour)	Excessive Noise and less than 500ft over my home	flightaware.com data and screenshots on my phone	Share with ARB Management	Communicate with this pilot and all pilots about repeating patterns and educate how to vary pattern	
28-Jun-22	4:54PM	N333JM	Less than 500 ft exactly over my home	unnecessary and inappropriate altitude	flightaware.com data and screenshots on my phone	Begin formal complaint to FAA	Formal communication to all pilots and personal reprimand of this pilot	
29-Jun-22	9:30PM	N6850F	Repeating same pattern for extended period (on hour), directly over my home	Excessive noise and nuisance	flightaware.com data and screenshots on my phone	Share with ARB Management	Communicate with this pilot and all pilots about repeating patterns and educate how to vary pattern	
29-Jun-22	9:20PM	N4571X	Repeating same pattern for extended period (30 minutes) directly over my home	Excessive noise and nuisance	flightaware.com data and screenshots on my phone	Share with ARB Management	Communicate with this pilot and all pilots about repeating patterns and educate how to vary pattern	
1-Jul-22	9:00AM	N6614B	Very Low Altitude (300-400ft) directly over my home and repeating pattern	Deliberate touch/go pattern repeating with no variation	flightaware.com data and screenshots on my phone	Begin formal complaint to FAA	Formal communication to all pilots and personal reprimand of this pilot	
2-Jul-22	9:02AM	N607E	Very Low Altitude (>500 ft)	Excessive noise	flightaware.com data and screenshots on my phone	Begin FAA formal complaint and advised Matt Kufner	Formal communication to all pilots and personal reprimand of this pilot	
2-Jul-22	1:19PM - 1:55PM	N6007V	Repeating pattern for extended period directly over my house - less than 500ft and excessive noise	Deliberate touch/go pattern repeating with no variation	flightaware.com data and screenshots on my phone	include in formal complaint	Formal communication to all pilots and personal reprimand of this pilot	
28-Aug-22	11:38AM	N7932M	Extreme excessive noise	Measured inside the house - 82dB with app on my phone - measured after being unable to carry on a conversation	screen shot of dB app on my phone	include in formal complaint	Request Airport to ask pilot to read / upgrade their exhaust equipment on this plane	
1-Sep-22	11:25AM	N6445Z	Very Low Altitude (400 ft) and very loud		flightaware.com data and screenshots on my phone	include in formal complaint	Formal communication to all pilots and personal reprimand of this pilot	
7-Sep-22	7:04PM	N7911H	Extremely Low Altitude (< 200 ft)	Very alarming and unsafe	Visually spotted and heard and captured on flightaware.com	include in formal complaint	Formal communication to all pilots and personal reprimand of this pilot	
7-Sep-22	7:06PM	N64944	Extremely Low Altitude (< 200 ft)	Very alarming and unsafe	Visually spotted and heard and captured on flightaware.com	include in formal complaint	Formal communication to all pilots and personal reprimand of this pilot	
9/18/2022	10:25AM	N8007Y	Low Altitude (400 ft)	Repeated pattern too low	flightaware.com data and screenshots on my phone	include in formal complaint	Formal communication to all pilots and personal reprimand of this pilot	

Sent from [Mail](#) for Windows

Dave Clawson

From: houttemans
Sent: Monday, December 19, 2022 9:23 AM
To: Kulhanek, Matthew
Cc: William Ballard
Subject: FW: Ann Arbor Airport Expansion

Our office can assist with the heavy lifting on this one.

Steve Houtteman

Supervisor, Airport Planning & Environmental Unit
MDOT – Office of Aeronautics
Monday-Thursday 6:00a-4:30p
houttemans@michigan.gov
(616) 299-2654



From: Lower, Elyse (MDOT) <LowerE1@michigan.gov>
Sent: Wednesday, December 14, 2022 12:58 PM
To: mkoersch@gmail.com
Cc: Houtteman, Steve (MDOT) <HouttemanS@michigan.gov>
Subject: RE: Ann Arbor Airport Expansion

Ms. Koerschner,

I am forwarding your request to Steve Houtteman from our office who will be able to help you.

Thank you,

Elyse Lower
Project Management Unit Supervisor
MDOT Office of Aeronautics
517-242-8050

From: mkoersch@gmail.com <mkoersch@gmail.com>
Sent: Tuesday, December 13, 2022 9:37 PM
To: Lower, Elyse (MDOT) <LowerE1@michigan.gov>
Subject: Ann Arbor Airport Expansion

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Ms. Lower,

I am interested learning more about the requests made for the FAA/State Block Grant Programs to fund the capital improvements at the Ann Arbor Airport (ARB). The capital improvements for ARB include extending the runway about 870 ft.

Public forums have provided detailed information regarding the project layout and design, however, the information regarding the request and prioritization for funding was not provided. I would appreciate your assistance in obtaining the documents used to make the funding requests for the project. See General Response #17.

Based upon some of the information on the MDOT Aeronautics Programming website, can you please share the following ARB expansion program information or provide me with instructions to obtain them:

- Narrative/Justification template from the sponsor
- Grant application (per the requirement: "FAA will require Michigan SBGP to submit a grant application for federal nonprimary entitlements (NPE) and federal state apportionment (SA) funding on a project-specific level based on approved consultant contract fees, bids, negotiated purchase agreements or approved administrative settlements).
- The 2022 Airport Compliance report cards

I appreciate your assistance.

Best regards,
Michelle Koerschner

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, December 14, 2022 8:34 AM
To: William Ballard
Subject: FW: Ann Arbor Airport Runway Expansion

From: Michael Prindle <prindlem@gmail.com>
Sent: Wednesday, December 14, 2022 8:30 AM
To: Ghazi Edwin, Ayesha <AGhaziEdwin@a2gov.org>; Radina, Travis <TRadina@a2gov.org>; Kulhanek, Matthew <MKulhanek@a2gov.org>; Taylor, Christopher (Mayor) <CTaylor@a2gov.org>
Subject: Ann Arbor Airport Runway Expansion

Some people who received this message don't often get email from prindlem@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hello Ann Arbor Leadership!

As a Ward 3 resident in the approach path for the Ann Arbor Airport, I am asking that Ann Arbor does not extend the runway at the airport. The larger planes are already disruptive when they fly over. Having more, and larger jets would be very disruptive to life on the ground in Ward 3. Also I would ask, who does the the extended runway benefit? It benefits the ultra wealthy private jet owners, while hurting the one of the last pockets of somewhat affordable housing left in Ann Arbor. Please do not push for this expansion. Willow Run Airport is just down the street.

Thank you for your leadership and service to the city!

See Noise Responses #1, #2, and #3, Financial/Economic Responses #1 and #11, Safety/Health Response #16, and General Responses #1, #5, #10, and #13.

Regards,

Mike Prindle

Dave Clawson

From: houttemans
Sent: Monday, December 19, 2022 9:24 AM
To: Kulhanek, Matthew
Cc: William Ballard
Subject: FW: Expansion of Ann Arbor Airport

FYI

Steve Houtteman

Supervisor, Airport Planning & Environmental Unit
MDOT – Office of Aeronautics
Monday-Thursday 6:00a-4:30p
houttemans@michigan.gov
(616) 299-2654



From: Mike Shahpurwala <mikeshahpur@gmail.com>
Sent: Wednesday, December 14, 2022 12:32 PM
To: Houtteman, Steve (MDOT) <HouttemanS@michigan.gov>
Subject: Expansion of Ann Arbor Airport

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Dear Mr Houtteman,

I am a resident of Stonebridge and would like to take this opportunity to raise my objection to the expansion of the Ann Arbor airport. The proposed expansion would greatly increase noise levels to double or triple to what they are now. In addition the risk of a bird strike will also be greatly increased as the planes would be flying at lower altitudes.

See Noise Responses #1 and #2, Wildlife Response #1, and Safety/Health Responses #1 and #8.

The present noise levels from planes flying over our subdivision is very disturbing and expansion of the airport will make it more difficult for all residents in Stonebridge and surrounding areas to live with the increase in noise level.

See Noise Responses #1, #2, and #3.

I am totally opposed to this expansion and would appreciate your consideration.

Thank You.

--

Mike Shahpurwala

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 3, 2023 6:12 PM
To: William Ballard
Subject: FW: Opposition to 2022 Draft Environmental Assessment

From: Michael Williams <mikewill@mac.com>
Sent: Monday, January 02, 2023 1:00 PM
To: houttemans@michigan.gov
Cc: Kulhanek, Matthew <MKulhanek@a2gov.org>; kathewun@aol.com; Tracey Roy <troy4986@gmail.com>
Subject: Opposition to 2022 Draft Environmental Assessment

You don't often get email from mikewill@mac.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Attention:

Matthew Kulhanek, Ann Arbor Municipal Airport, 801 Airport Drive, Ann Arbor, Michigan 48108
Steve Houtteman, MDOT-AERONAUTICS, 2700 Port Lansing Road, Lansing, MI 48906

We have lived on Lohr Road near the airport for 20 years and have witnessed increasing traffic of the years. This topic of expansion has arisen again and again over the years. We strongly oppose the expansion of the airport.

The proposed runway extension would move ARB's primary Runway 24 870 feet closer to Lohr Road, adding to the risks to residents near the end of the runway, which are not adequately protected by so-called "Runway Protection Zones."

[See Safety/Health Response #2, #5, and #6](#)

The SRDEA has dropped prior claims, since the onset of the project in 2007, that the expansion was a "safety extension." Since the FAA ruled that federal funds would not be available for such an expansion, the focus was shifted to "improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase over time."

[See Technical Response #1](#)

However, of the four "critical aircraft" types identified by the SRDEA, three could operate 100% of the time on the existing 3,505-foot runway. Only the Cessna Citation Excel XLS, the type of aircraft owned and operated by AvFuel Corp., which dominates operations in this class, could suffer weight penalties on hot summer days, but could still operate at full weight 90% of the time, and at 100% capacity on most days. At most, only 48 operations per year of the Citation XLS class's 263 annual operations (in 2019) could be impacted by hot weather – a miniscule .00038 of ARB's total annual operations – hardly sufficient to justify the proposed expansion.

[See Technical Response #2](#)

The SRDEA acknowledges that any expansion would likely attract more jet traffic, where larger and heavier aircraft pose additional risks in an area heavily populated by Canada geese.

[See Noise Response #3, Wildlife Response #1, and Safety/Health Response #1.](#)

Further complicating issues, because ARB is a municipal airport funded with federal dollars, any pilot who chooses can land at the airport, no matter the size of their aircraft – adding to the level of risk. Ann Arbor cannot regulate the type of aircraft that could utilize the field. [See General Response #18](#)

The SRDEA acknowledges for the first time the presence of Canada geese surrounding the airport, with a U.S. Department of Agriculture inspector observing 75-100 Canada geese at the airport, feeding in a tilled fallow field. The inspector also reported “flocks of 5 to 15 geese arrived on the airfield at different times. . . Geese were observed within 10 yards of the runway.” The inspector concluded that, “Canada geese are a real and present danger, and will need to be managed for the foreseeable future. KARB is surrounded by ideal resident / migratory Canada goose habitat.” However, the SRDEA presents no plan for such mitigation – and makes no mention of any risks posed by the Canada geese. [See Wildlife Response #1 and Safety/Health Responses #1 and #8](#)

The Purpose and Need statement does not support the need for an extended runway. The SRDEA contends that aircraft that routinely use ARB suffer “undue concessions in reduced fuel, passengers, and / or cargo loads. . . diversions to other airports are also commonly needed when the runway surface is wet, or during summer months when higher temperatures reduce aircraft performance.” However, the SRDEA provides no actual data in support of the claimed concessions or diversions. The FAA noted, “the rate of users taking weight restrictions has not been documented,” and, “The inclusion of the contaminated runway length distances cannot be used to justify FAA funding requirements” for an extended runway. [See Technical Responses #7 and #9](#)

The SRDEA stated an excess number of hot weather days at ARB. To justify the proposed expansion, the SRDEA identified 81 hot days in Ann Arbor, when temperatures exceeded 80 degrees (in 2019). However, aircraft performance charts included in the SRDEA suggest an industry standard for hot weather is 85 degrees, not 80 degrees. There were only 66 days in 2019 when the temperature exceeded 85 degrees. Thus, the SRDEA inflated the number of hot weather days by 25% by using the 80-degree standard. [See Technical Response #5](#)

The SRDEA alludes to a connection between “many prominent business and institutions with the University of Michigan being the area’s largest employer. Manufacturing, health care, automotive, information technology, and biomedical research companies account for major employers surrounding the area” that often require “air transportation to bring workers, clients, suppliers, customers, and time sensitive parts / supplies to and from the region.” However no specific connection between those business needs and ARB was established in the SRDEA. It was merely an allusion. [See Financial/Economic Response #1](#)

The SRDEA also suggests that the UM’s six / seven home football weekends and Michigan International Speedway two annual NASCAR events bring increased aircraft activity to the area, and that “should Runway 6 / 24 be extended, additional aircraft activity could occur at ARB due to its proximity to special event venues.” However, the SRDEA contained no actual forecasts of such potential activity. [See Technical Response #3.](#)

However, a less sanitized version of the SRDEA, contained in an earlier draft submitted to the FAA and reviewed under the Freedom of Information Act, projected an immediate tripling of annual jet operations if the ARB runway were extended to over 1,000 per year, with another 500-665 operations from jets, which currently utilize Willow Run Airport, possibly moving to an extended ARB on football weekends. That earlier draft SRDEA suggested up to 40% of the 9,313 annual small and medium jet operations at Willow Run “would likely shift to ARB if additional runway length were available,” thus increasing jet operations from the 360 in 2019 to upwards of 3,660 jet operations per year – ultimately turning ARB into a jetport. We cannot let that happen! [See Technical Response #4](#)

To temper any fears of such runway expansion, the final SRDEA omitted such jet growth claims and forecast, instead, that the operations of small turboprop and jet aircraft “will slowly increase over time.” [See Noise Response #3](#)

While the SRDEA projects a maximum of ARB operations of 84,336 in 2039, it is interesting to note that the current 3,505-foot runway supported almost two-thirds more operations in 1999 – 134,554, suggesting the current runway is more than sufficient for the projected future. [See Technical Response #6](#)

Any ARB expansion is especially dangerous because, with jets being the primary source of increased operations, it raises the level of risk in an area heavily populated with Canada geese, which do not interact well with jet aircraft.

See Noise Response #3, Wildlife Response #1, and Safety/Health Responses #1 and #8

ARB also has certain conditions that can enhance the level of risk over other nearby airports: Instrument approaches and landings are not permitted at the airport. The control tower only operates part-time. Also, in winter, de-icing is not permitted on the airport, to protect the wells on the property that produce drinking water. And ARB does not provide 24-hour on-site fire and rescue services.

See Safety/Health Response #3

The noise problem around the airport would almost certainly increase. Even the very conservative FAA-required noise analysis conducted as part of the SRDEA concedes that the harmful 60-decible noise level would extend to “a residential area at the southwest corner of the airport.”

See Noise Responses #1, #2, and #3

The FAA requires the identification of environmental health risks to children. However, despite numerous scientific studies confirming the negative impact of aircraft noise on the neuropsychological development of children, the SRDEA does not discuss such threats, concluding, instead, that “the FAA has not established a significance threshold for impacts to children’s environmental health and safety.”

See Noise Response #1 and Safety/Health Response #4

The SRDEA does not acknowledge any potential risks to the three wells on airport property that supply about 20% of Ann Arbor’s drinking water, stating only that, “there are several water wells on ARB property, all of which are outside the proposed project area.” The SRDEA, however, contained extensive analysis of wetlands and streams in and around the property. But nothing about the important drinking water wells!

See Water Resources/Water Quality Response #1

Thus, there is plenty to object to regarding the proposed expansion.

Thank you,

Mike Williams and Tracey Roy
4986 Lohr Road
Ann Arbor, MI 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, December 7, 2022 7:52 AM
To: William Ballard
Subject: FW: Fwd:2

From: kathewun@aol.com <kathewun@aol.com>
Sent: Tuesday, December 06, 2022 4:44 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Fw: Fwd:2

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

----- Forwarded Message -----

From: "phillismiki@comcast.net" <phillismiki@comcast.net>
To: "mikulhanek@a2gov.org" <mikulhanek@a2gov.org>
Cc: "HouttemanS@michigan.gov" <HouttemanS@michigan.gov>, "kathewun@aol.com" <kathewun@aol.com>
Sent: Tue, Dec 6, 2022 at 8:54 AM
Subject: Fwd:2
Ann Arbor Airport Expansion

Efforts to expand the Ann Arbor Airport resurface with tedious regularity. It is well known that expansion of the facility would benefit a few while jeopardizing the safety and comfort of thousands of residents, hundreds of homes, and commercial buildings in the Ann Arbor-Saline areas. See General Response #13.

General aviation accounts for 79% of aircraft accidents, and 72% are single-engine aircraft. The most common cause of accidents is pilot error -80%. Inclement weather is the cause of 12% of accidents.

To my knowledge, the airport has been involved in several fatal aircraft accidents in recent years.

I found that the Ann Arbor News report of a May 1973 crash with three fatalities provided important details.

In the 1973 crash, an aircraft departing AA Airport missed a home as well as Pattengill elementary school and Stone School nursery located to the Northeast of runway 6. It crashed due to an engine failure shortly after takeoff from runway 6. The plane ended in a residential yard less than a mile from the schools. In the forty-nine years following the fatal accident, the

residential population and commercial building areas surrounding the Ann Airport have expanded exponentially.

See Safety/Health Responses #2, #5, #6, and #14.

Safety of the aircraft using the Ann Arbor Airport, in particular during inclement weather, is stated to be one of the major reasons justifying the expansion of the main 24/6 runway. A significant majority of AA Airport use is centered on recreational general aviation. During periods of marginal flight conditions, most general aviation activity is naturally curtailed. For those who choose to fly under suboptimal weather conditions, Willow Run Airport with IFR operating facilities is a mere matter of a few minutes away by air. Additionally, on August 8, 2022, the federal government designated \$24,984,642 for the construction of an additional runway at Willow Run Airport.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

There are a few medium-sized multi-passenger corporate aircraft based at Ann Arbor Airport. They could and should take advantage of all that exists at Willow Run Airport without marginalizing the safety and comfort of surrounding residents and business occupants. Expansion of the main runways would most likely attract an added number of heavier aircraft. All the heavier aircraft could operate under much safer conditions out of Willow Run.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

Expanding runway 24 / 6 at the Ann Arbor Airport to improve the safety and convenience of a very few would jeopardize the safety and lives of thousands of citizens.

See General Response #14.

The **expansion of Ann Arbor Airport** runway 24 / 6, or any other improvements that might encourage an increase in use by heavy aircraft, **should not** be approved.

Respectfully,

Mikio H. Hiraga, M.D. (an aviation enthusiast)
4801 Doral Drive
Ann Arbor, Michigan

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, December 6, 2022 11:33 AM
To: William Ballard
Subject: FW: Ann Arbor Airport Expansion

From: Dunnick, N Reed <rdunnick@med.umich.edu>
Sent: Tuesday, December 06, 2022 9:15 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: 'houttemans@michigan.gov' <houttemans@michigan.gov>
Subject: Ann Arbor Airport Expansion

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Kulhanek:

I am writing to express my concern about the proposed runway expansion of the Ann Arbor Airport (ARB). This will bring the runway 870 feet closer to Lohr Road and the residential areas of Stonebridge, Regents Park, St James and Waterways. We have already had one plane make an emergency landing on the 5th fairway of the Stonebridge Golf Course. Expansion of the runway will allow larger, louder and more dangerous planes to land and take off from ARB.

See Noise Response #3 and Safety/Health Responses #2, #5, #6, and #14.

The Second Revised Draft Environmental Assessment (SRDEA) has shifted from its initial claims of improved safety to “meeting takeoff and landing runway length requirements.” This will allow larger planes to use ARB. SRDEA acknowledges that the expansion will attract more jet traffic, with larger and heavier planes. Since ARB is a municipal airport funded by federal dollars, any pilot can land at the airport regardless of the size of their plane. Thus, the City of Ann Arbor will not be able to regulate the sizes of planes that can use the airport.

See Noise Response #3, Technical Response #1, and General Response #18

The noise pollution is significant, and it is especially dangerous to children. Numerous studies confirm the negative impact of aircraft noise on the neuropsychological development of children, and the FAA requires identification of such risks. The SRDEA ignores those concerns, merely stating that the FAA has not yet established a threshold for those harmful impacts on children’s environmental health and safety.

See Noise Response #1 and Safety/Health Response #4

There are hundreds of Canada geese that frequent the two ponds along Lohr Road, especially the south pond over which the planes fly. The geese also enjoy eating grain from the cornfields on the east side of Lohr Road. These are a real hazard to planes, especially the jets whose number would increase with a longer runway.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

Water is an increasingly precious resource. Even in Michigan, we have had problems in providing safe water for residential use. To protect wells on the property that produce drinking water, ARB does not allow de-icing.

See Water Resources/Water Quality Response #1.

Are we allowing the few who operate planes at ARB to adversely affect the growing communities in the surrounding areas?

See General Response #13.

Sincerely,

N. Reed Dunnick, MD

Professor, University of Michigan

1703 Stonebridge Drive

Electronic Mail is not secure, may not be read every day, and should not be used for urgent or sensitive issues

Dave Clawson

From: houttemans
Sent: Monday, December 19, 2022 9:41 AM
To: Kulhanek, Matthew
Cc: William Ballard
Subject: FW:

FYI

Steve Houtteman

Supervisor, Airport Planning & Environmental Unit
MDOT – Office of Aeronautics
Monday-Thursday 6:00a-4:30p
houttemans@michigan.gov
(616) 299-2654



From: Nadeem Chaudhry <nadschaudhry@gmail.com>
Sent: Tuesday, December 13, 2022 2:01 PM
To: Houtteman, Steve (MDOT) <HouttemanS@michigan.gov>
Cc: kathewun@aol.com
Subject:

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Dear Mr. Houtteman,

This email is to express my disappointment for the proposed Ann Arbor Airport expansion. Several years ago, we had an accidental emergency landing on the golf course, and fortunately no one on the ground was hurt. We already have an abundance of airplanes taking off and landing at the airport during summer times. They do not observe the silent hours either. See Safety/Health Responses #2, #5, #6, and #14 and Noise Response #7.

With the proposed expansion, the planes will pose a severe and existential threat, by passing 100 feet overhead and noise pollution adding to the existing misery. Our property values will decline substantially, only to appease 1% who can afford to buy and fly planes. How fair is that?

See Noise Responses #1 and #2, Safety/Health Responses #2, #5, #6, and #14, Financial/Economic Response #2, and General Response #13.

While we are not opposed to progress, this proposal infringes upon our rights as concerned citizens for the safety of ordinary citizenry. See Safety/Health Responses #2, #5, #6, and #14.

Thanks,

Nadeem S Chaudhry
2005 Pebbleview Dr.
Ann Arbor, MI. 48108
M:734.834.2304

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, January 4, 2023 2:40 PM
To: William Ballard
Subject: FW: Oppose ARB airport expansion

From: Nancy Qin <nancyqin10@yahoo.com>
Sent: Wednesday, January 04, 2023 10:28 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov
Subject: Oppose ARB airport expansion

You don't often get email from nancyqin10@yahoo.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Mr. Matthew Kulhanek:

I oppose the proposed Ann Arbor Airport Expansion.

The proposed runway extension would move ARB's primary Runway 24 870 feet closer to Lohr Road, adding to the risks to residents near the end of the runway, which are not adequately protected by so-called "Runway Protection Zones." See Safety/Health Response #2, #5, and #6

The SRDEA has dropped prior claims, since the onset of the project in 2007, that the expansion was a "safety extension." Since the FAA ruled that federal funds would not be available for such an expansion, the focus was shifted to "improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase over time." See Technical Response #1

However, of the four "critical aircraft" types identified by the SRDEA, three could operate 100% of the time on the existing 3,505-foot runway. Only the Cessna Citation Excel XLS, the type of aircraft owned and operated by AvFuel Corp., which dominates operations in this class, could suffer weight penalties on hot summer days, but could still operate at full weight 90% of the time, and at 100% capacity on most days. At most, only 48 operations per year of the Citation XLS class's 263 annual operations (in 2019) could be impacted by hot weather – a miniscule .00038 of ARB's total annual operations – hardly sufficient to justify the proposed expansion. See Technical Response #2

The SRDEA acknowledges that any expansion would likely attract more jet traffic, where larger and heavier aircraft pose additional risks in an area heavily populated by Canada geese. [See Wildlife Response #1 and Safety/Health Responses #1 and #8.](#)

Further complicating issues, because ARB is a municipal airport funded with federal dollars, any pilot who chooses can land at the airport, no matter the size of their aircraft – adding to the level of risk. Ann Arbor cannot regulate the type of aircraft that could utilize the field. [See General Response #18](#)

The SRDEA acknowledges for the first time the presence of Canada geese surrounding the airport, with a U.S. Department of Agriculture inspector observing 75-100 Canada geese at the airport, feeding in a tilled fallow field. The inspector also reported “flocks of 5 to 15 geese arrived on the airfield at different times. . . Geese were observed within 10 yards of the runway.” The inspector concluded that, “Canada geese are a real and present danger, and will need to be managed for the foreseeable future. KARB is surrounded by ideal resident / migratory Canada goose habitat.” However, the SRDEA presents no plan for such mitigation – and makes no mention of any risks posed by the Canada geese.

[See Wildlife Response #1 and Safety/Health Responses #1 and #8](#)

The Purpose and Need statement does not support the need for an extended runway. The SRDEA contends that aircraft that routinely use ARB suffer “undue concessions in reduced fuel, passengers, and / or cargo loads. . . diversions to other airports are also commonly needed when the runway surface is wet, or during summer months when higher temperatures reduce aircraft performance.” However, the SRDEA provides no actual data in support of the claimed concessions or diversions. The FAA noted, “the rate of users taking weight restrictions has not been documented,” and, “The inclusion of the contaminated runway length distances cannot be used to justify FAA funding requirements” for an extended runway. [See Technical Responses #7 and #9](#)

The SRDEA stated an excess number of hot weather days at ARB. To justify the proposed expansion, the SRDEA identified 81 hot days in Ann Arbor, when temperatures exceeded 80 degrees (in 2019). However, aircraft performance charts included in the SRDEA suggest an industry standard for hot weather is 85 degrees, not 80 degrees. There were only 66 days in 2019 when the temperature exceeded 85 degrees. Thus, the SRDEA inflated the number of hot weather days by 25% by using the 80-degree standard. [See Technical Response #5](#)

The SRDEA alludes to a connection between “many prominent business and institutions with the University of Michigan being the area’s largest employer. Manufacturing, health care, automotive, information technology, and biomedical research companies account for major employers surrounding the area” that often require “air transportation to bring workers, clients, suppliers, customers, and time sensitive parts / supplies to and from the region.” However no specific connection between those business needs and ARB was established in the SRDEA. It was merely an allusion. [See Financial/Economic Response #1](#)

The SRDEA also suggests that the UM's six / seven home football weekends and Michigan International Speedway two annual NASCAR events bring increased aircraft activity to the area, and that "should Runway 6 / 24 be extended, additional aircraft activity could occur at ARB due to its proximity to special event venues." However, the SRDEA contained no actual forecasts of such potential activity. [See Technical Response #3.](#)

However, a less sanitized version of the SRDEA, contained in an earlier draft submitted to the FAA and reviewed under the Freedom of Information Act, projected an immediate tripling of annual jet operations if the ARB runway were extended to over 1,000 per year, with another 500-665 operations from jets, which currently utilize Willow Run Airport, possibly moving to an extended ARB on football weekends. That earlier draft SRDEA suggested up to 40% of the 9,313 annual small and medium jet operations at Willow Run "would likely shift to ARB if additional runway length were available," thus increasing jet operations from the 360 in 2019 to upwards of 3,660 jet operations per year – ultimately turning ARB into a jetport. We cannot let that happen! [See Technical Response #4](#)

To temper any fears of such runway expansion, the final SRDEA omitted such jet growth claims and forecast, instead, that the operations of small turboprop and jet aircraft "will slowly increase over time." [See Noise Response #3](#)

While the SRDEA projects a maximum of ARB operations of 84,336 in 2039, it is interesting to note that the current 3,505-foot runway supported almost two-thirds more operations in 1999 – 134,554, suggesting the current runway is more than sufficient for the projected future. [See Technical Response #6](#)

Any ARB expansion is especially dangerous because, with jets being the primary source of increased operations, it raises the level of risk in an area heavily populated with Canada geese, which do not interact well with jet aircraft.

[See Noise Response #3, Wildlife Response #1, and Safety/Health Responses #1 and #8](#)

ARB also has certain conditions that can enhance the level of risk over other nearby airports: Instrument approaches and landings are not permitted at the airport. The control tower only operates part-time. Also, in winter, de-icing is not permitted on the airport, to protect the wells on the property that produce drinking water. And ARB does not provide 24-hour on-site fire and rescue services. [See Safety/Health Response #3](#)

The noise problem around the airport would almost certainly increase. Even the very conservative FAA-required noise analysis conducted as part of the SRDEA concedes that the harmful 60-decible noise level would extend to "a residential area at the southwest corner of the airport." [See Noise Responses #1, #2, and #3](#)

The FAA requires the identification of environmental health risks to children. However, despite numerous scientific studies confirming the negative impact of aircraft noise on the neuropsychological development of children, the SRDEA does not discuss such threats, concluding, instead, that “the FAA has not established a significance threshold for impacts to children’s environmental health and safety. . .” [See Noise Response #1 and Safety/Health Response #4](#)

The SRDEA does not acknowledge any potential risks to the three wells on airport property that supply about 20% of Ann Arbor’s drinking water, stating only that, “there are several water wells on ARB property, all of which are outside the proposed project area.” The SRDEA, however, contained extensive analysis of wetlands and streams in and around the property. But nothing about the important drinking water wells! [See Water Resources/Water Quality Response #1](#)

I oppose the proposed Ann Arbor Airport Expansion!

Nan Ping Qin
At Ann Arbor

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, January 9, 2023 8:05 AM
To: William Ballard
Subject: FW: proposed Ann Arbor airport expansion

From: NANCY OGILVIE <nlogilvie@aol.com>
Sent: Friday, January 06, 2023 9:25 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov
Subject: proposed Ann Arbor airport expansion

You don't often get email from nlogilvie@aol.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

As a resident of Lodi Township, I am writing to express my strong opposition to the proposed expansion of the Ann Arbor airport. My reasons for opposition include:

- The proposed runway extension would move ARB's primary Runway 24 870 feet closer to Lohr Road, adding to the risks to residents near the end of the runway, which are not adequately protected by so-called "Runway Protection Zones." See Safety/Health Response #2, #5, and #6
- Of the four "critical aircraft" types identified by the SRDEA, three could operate 100% of the time on the existing 3,505-foot runway. Only the Cessna Citation Excel XLS, the type of aircraft owned and operated by AvFuel Corp., which dominates operations in this class, could suffer weight penalties on hot summer days, but could still operate at full weight 90% of the time, and at 100% capacity on most days. At most, only 48 operations per year of the Citation XLS class's 263 annual operations (in 2019) could be impacted by hot weather – a miniscule .00038 of ARB's total annual operations – hardly sufficient to justify the proposed expansion. See Technical Response #2
- The SRDEA acknowledges for the first time the presence of Canada geese surrounding the airport, with a U.S. Department of Agriculture inspector observing 75-100 Canada geese at the airport, feeding in a tilled fallow field. The inspector also reported "flocks of 5 to 15 geese arrived on the airfield at different times. . . Geese were observed within 10 yards of the runway." The inspector concluded that, "Canada geese are a real and present danger, and will need to be managed for the foreseeable future. KARB is surrounded by ideal resident /migratory Canada goose habitat." However, the SRDEA presents no plan for such mitigation – and makes no mention of any risks posed by the Canada geese. See Wildlife #1 and Safety/Health #1 and #8
- The Purpose and Need statement does not support the need for an extended runway. The SRDEA contends that aircraft that routinely use ARB suffer "undue concessions in reduced fuel, passengers, and / or cargo loads. . . diversions to other airports are also commonly needed when the runway surface is wet, or during summer months when higher temperatures reduce aircraft performance." However, the SRDEA provides no actual data in support of the claimed concessions or diversions. The FAA noted, "the rate of users taking weight restrictions

has not been documented,” and, “The inclusion of the contaminated runway length distances cannot be used to justify FAA funding requirements” for an extended runway.

- [See Technical Responses #7 and #9](#)
- The SRDEA stated an excess number of hot weather days at ARB. To justify the proposed expansion, the SRDEA identified 81 hot days in Ann Arbor, when temperatures exceeded 80 degrees (in 2019). However, aircraft performance charts included in the SRDEA suggest an industry standard for hot weather is 85 degrees, not 80 degrees. There were only 66 days in 2019 when the temperature exceeded 85 degrees. Thus, the SRDEA inflated the number of hot weather days by 25% by using the 80-degree standard. [See Technical Response #5](#)
- However, a less sanitized version of the SRDEA, contained in an earlier draft submitted to the FAA and reviewed under the Freedom of Information Act, projected an immediate tripling of annual jet operations if the ARB runway were extended to over 1,000 per year, with another 500-665 operations from jets, which currently utilize Willow Run Airport, possibly moving to an extended ARB on football weekends. That earlier draft SRDEA suggested up to 40% of the 9,313 annual small and medium jet operations at Willow Run “would likely shift to ARB if additional runway length were available,” thus increasing jet operations from the 360 in 2019 to upwards of 3,660 jet operations per year – ultimately turning ARB into a jetport. We cannot let that happen! [See Technical Response #4](#)
- To temper any fears of such runway expansion, the final SRDEA omitted such jet growth claims and forecast, instead, that the operations of small turboprop and jet aircraft “will slowly increase over time.” [See Noise Response #3](#)
- While the SRDEA projects a maximum of ARB operations of 84,336 in 2039, it is interesting to note that the current 3,505-foot runway supported almost two-thirds more operations in 1999 – 134,554, suggesting the current runway is more than sufficient for the projected future. [See Technical Response #6](#)
- ARB also has certain conditions that can enhance the level of risk over other nearby airports: Instrument approaches and landings are not permitted at the airport. The control tower only operates part-time. Also, in winter, de-icing is not permitted on the airport, to protect the wells on the property that produce drinking water. And ARB does not provide 24-hour on-site fire and rescue services. [See Safety/Health Response #3](#)
- The noise problem around the airport would almost certainly increase. Even the very conservative FAA-required noise analysis conducted as part of the SRDEA concedes that the harmful 60-decible noise level would extend to “a residential area at the southwest corner of the airport.” [See Noise Responses #1, #2, and #3](#)
- The FAA requires the identification of environmental health risks to children. However, despite numerous scientific studies confirming the negative impact of aircraft noise on the neuropsychological development of children, the SRDEA does not discuss such threats, concluding, instead, that “the FAA has not established a significance threshold for impacts to children’s environmental health and safety. . .” [See Noise Response #1 and Safety/Health Response #4](#)
- The SRDEA does not acknowledge any potential risks to the three wells on airport property that supply about 20% of Ann Arbor’s drinking water, stating only that, “there are several water wells on ARB property, all of which are outside the proposed project area.” The SRDEA, however, contained extensive analysis of wetlands and streams in and around the property. But nothing about the important drinking water wells! [See Water Resources/Water Quality Response #1](#)

Thus, there is plenty to object to regarding the proposed expansion. I urge you to oppose it also.

Nancy Ogilvie

nlogilvie@aol.com

Accepting what is changes everything!

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, December 12, 2022 7:37 AM
To: William Ballard
Subject: FW: Opposition to the AA expansion

From: Norbert <noschb@comcast.net>
Sent: Sunday, December 11, 2022 4:15 PM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: kathewun@aol.com
Subject: Opposition to the AA expansion

You don't often get email from noschb@comcast.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hello

I am opposing the extension due to following very concerning risks:

The proposed runway extension would move ARB's primary Runway 24 870 feet closer to Lohr Road, adding to the risks to residents near the end of the runway, which are not adequately protected by so-called "Runway Protection Zones." See Safety/Health Response #2, #5, and #6

The SRDEA has dropped prior claims, since the onset of the project in 2007, that the expansion was a "safety extension." Since the FAA ruled that federal funds would not be available for such an expansion, the focus was shifted to "improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase over time." See Technical Response #1

However, of the four "critical aircraft" types identified by the SRDEA, three could operate 100% of the time on the existing 3,505-foot runway. Only the Cessna Citation Excel XLS, the type of aircraft owned and operated by AvFuel Corp., which dominates operations in this class, could suffer weight penalties on hot summer days, but could still operate at full weight 90% of the time, and at 100% capacity on most days. At most, only 48 operations per year of the Citation XLS class's 263 annual operations (in 2019) could be impacted by hot weather – a miniscule .00038 of ARB's total annual operations – hardly sufficient to justify the proposed expansion. See Technical Response #2

The SRDEA acknowledges that any expansion would likely attract more jet traffic, where larger and heavier aircraft pose additional risks in an area heavily populated by Canada geese. [See Wildlife Response #1 and Safety/Health Responses #1 and #8.](#)

Further complicating issues, because ARB is a municipal airport funded with federal dollars, any pilot who chooses can land at the airport, no matter the size of their aircraft – adding to the level of risk. Ann Arbor cannot regulate the type of aircraft that could utilize the field. [See General Response #18](#)

The SRDEA acknowledges for the first time the presence of Canada geese surrounding the airport, with a U.S. Department of Agriculture inspector observing 75-100 Canada geese at the airport, feeding in a tilled fallow field. The inspector also reported “flocks of 5 to 15 geese arrived on the airfield at different times. . . Geese were observed within 10 yards of the runway.” The inspector concluded that, “Canada geese are a real and present danger, and will need to be managed for the foreseeable future. KARB is surrounded by ideal resident / migratory Canada goose habitat.” However, the SRDEA presents no plan for such mitigation – and makes no mention of any risks posed by the Canada geese.

[See Wildlife Response #1 and Safety/Health Responses #1 and #8](#)

The Purpose and Need statement does not support the need for an extended runway. The SRDEA contends that aircraft that routinely use ARB suffer “undue concessions in reduced fuel, passengers, and / or cargo loads. . . diversions to other airports are also commonly needed when the runway surface is wet, or during summer months when higher temperatures reduce aircraft performance.” However, the SRDEA provides no actual data in support of the claimed concessions or diversions. The FAA noted, “the rate of users taking weight restrictions has not been documented,” and, “The inclusion of the contaminated runway length distances cannot be used to justify FAA funding requirements” for an extended runway. [See Technical Responses #7 and #9](#)

The SRDEA stated an excess number of hot weather days at ARB. To justify the proposed expansion, the SRDEA identified 81 hot days in Ann Arbor, when temperatures exceeded 80 degrees (in 2019). However, aircraft performance charts included in the SRDEA suggest an industry standard for hot weather is 85 degrees, not 80 degrees. There were only 66 days in 2019 when the temperature exceeded 85 degrees. Thus, the SRDEA inflated the number of hot weather days by 25% by using the 80-degree standard. [See Technical Response #5](#)

The SRDEA alludes to a connection between “many prominent business and institutions with the University of Michigan being the area’s largest employer. Manufacturing, health care, automotive, information technology, and biomedical research companies account for major employers surrounding the area” that often require “air transportation to bring workers, clients, suppliers, customers, and time sensitive parts / supplies to and from the region.” However no specific connection between those business needs and ARB was established in the SRDEA. It was merely an allusion. [See Financial/Economic Response #1](#)

The SRDEA also suggests that the UM's six / seven home football weekends and Michigan International Speedway two annual NASCAR events bring increased aircraft activity to the area, and that "should Runway 6 / 24 be extended, additional aircraft activity could occur at ARB due to its proximity to special event venues." However, the SRDEA contained no actual forecasts of such potential activity. [See Technical Response #3.](#)

However, a less sanitized version of the SRDEA, contained in an earlier draft submitted to the FAA and reviewed under the Freedom of Information Act, projected an immediate tripling of annual jet operations if the ARB runway were extended to over 1,000 per year, with another 500-665 operations from jets, which currently utilize Willow Run Airport, possibly moving to an extended ARB on football weekends. That earlier draft SRDEA suggested up to 40% of the 9,313 annual small and medium jet operations at Willow Run "would likely shift to ARB if additional runway length were available," thus increasing jet operations from the 360 in 2019 to upwards of 3,660 jet operations per year – ultimately turning ARB into a jetport. We cannot let that happen! [See Technical Response #4](#)

To temper any fears of such runway expansion, the final SRDEA omitted such jet growth claims and forecast, instead, that the operations of small turboprop and jet aircraft "will slowly increase over time." [See Noise Response #3](#)

While the SRDEA projects a maximum of ARB operations of 84,336 in 2039, it is interesting to note that the current 3,505-foot runway supported almost two-thirds more operations in 1999 – 134,554, suggesting the current runway is more than sufficient for the projected future. [See Technical Response #6](#)

Any ARB expansion is especially dangerous because, with jets being the primary source of increased operations, it raises the level of risk in an area heavily populated with Canada geese, which do not interact well with jet aircraft. [See Noise Response #3, Wildlife Response #1, and Safety/Health Responses #1 and #8](#)

ARB also has certain conditions that can enhance the level of risk over other nearby airports: Instrument approaches and landings are not permitted at the airport. The control tower only operates part-time. Also, in winter, de-icing is not permitted on the airport, to protect the wells on the property that produce drinking water. And ARB does not provide 24-hour on-site fire and rescue services. [See Safety/Health Response #3](#)

The noise problem around the airport would almost certainly increase. Even the very conservative FAA-required noise analysis conducted as part of the SRDEA concedes that the harmful 60-decible noise level would extend to "a residential area at the southwest corner of the airport." [See Noise Responses #1, #2, and #3](#)

The FAA requires the identification of environmental health risks to children. However, despite numerous scientific studies confirming the negative impact of aircraft noise on the neuropsychological development of children, the SRDEA does not discuss such threats, concluding, instead, that “the FAA has not established a significance threshold for impacts to children’s environmental health and safety. . .” [See Noise Response #1 and Safety/Health Response #4](#)

The SRDEA does not acknowledge any potential risks to the three wells on airport property that supply about 20% of Ann Arbor’s drinking water, stating only that, “there are several water wells on ARB property, all of which are outside the proposed project area.” The SRDEA, however, contained extensive analysis of wetlands and streams in and around the property. But nothing about the important drinking water wells! [See Water Resources/Water Quality Response #1](#)

Thus, there is plenty to object to regarding the proposed expansion

Kind regards

Norbert Schneider

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, December 14, 2022 8:00 AM
To: William Ballard
Subject: FW: Resident of Pittsfield Township against the expansion of Ann Arbor airport runway

-----Original Message-----

From: Par Mesh <parsha.meshinchi@gmail.com>
Sent: Tuesday, December 13, 2022 7:42 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: Par Mesh <Parsha.Meshinchi@gmail.com>
Subject: Resident of Pittsfield Township against the expansion of Ann Arbor airport runway

[You don't often get email from parsha.meshinchi@gmail.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hello

I am resident of Pittsfield Township at 1486 W Greenfield CT, Ann Arbor and I am completely against the expansion of the Ann Arbor airport runway.

We already leave close to the airport runway and expanding it make the runway too close to our home. We already have noisy takeoffs at nights, days, and weekends, expansions of the runway will creat more travel, more noise, and hazardous environment for our neighborhood and our family.

I would like to request the extension of the Ann Arbor airport get rejected due to safety and comfort of residents.

Willow Run Airport should be used for the flights requires longer runway.

Best Regards,
Parsha Meshinchi

See Noise Responses #1, #2, and #3, Safety/Health Responses #2, #5, #6, and #14, Financial/Economic Response #11, and General Responses #5 and #10.

Sent from my iPhone

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, December 12, 2022 1:14 PM
To: William Ballard
Subject: FW: Ann Arbor Airport runway expansion

From: Kileny, Paul (Paul) <PKILENY@med.umich.edu>
Sent: Monday, December 12, 2022 12:52 PM
To: houtemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>; kathewun@aol.com; Kileny, Paul (Paul) <PKILENY@med.umich.edu>
Subject: Ann Arbor Airport runway expansion

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Houtemans, and Kulhanek,

I would like to take this opportunity to express my opposition to the planned extension of the Ann Arbor Airport runway 24-06. I am a resident of Stonebridge, a University of Michigan School of Medicine Professor Emeritus of Otolaryngology specializing in Audiology, and a former Air Traffic Controller. As such I have expertise in hearing loss, the effects of noise on hearing and other health issues, and also happen to have an understanding of aviation, and flight patterns. The extension of the runway East towards Stonebridge, and the addition of larger jet aircraft will result in low flying twin engine jets over Stonebridge on final approach. In addition to other hazards, this will result in significant damaging noise exposure to residents of Stonebridge, with adverse effects on hearing, and even cardiovascular effects. With a large jet with undercarriage down, and flaps extended flying over Stonebridge at say, 150 feet or less, noise levels generated by engines and airframe will routinely exceed 100 dB A, and could be a high as 130 dB. This would be an unacceptable, risky situation that could result in preventable injuries to residents, and even possible litigation. Therefore, I respectfully request to consider the cancelation of this project.

See Noise Responses #1, #2, and #3 and Safety/Health Responses #2, #5, #6, #11, #12, #14, and #15.

Dr. Paul R. Kileny, PhD, FASHA, FAAA, BC-IOM, BC-ABA

Professor and Director *Emeritus*
Audiology & Electrophysiology
Otolaryngology, Head-and-Neck Surgery, Michigan Medicine

Mailing address: 4890 Doral Drive, Ann Arbor, MI 48108
Tel: 734-646-6671



Electronic Mail is not secure, may not be read every day, and should not be used for urgent or sensitive issues

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, December 12, 2022 7:37 AM
To: William Ballard
Subject: FW: Ann Arbor Airport Expasion

From: Raj Sarkar <sarkar.raj@gmail.com>
Sent: Sunday, December 11, 2022 2:32 PM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: kathewun@aol.com
Subject: Ann Arbor Airport Expasion

You don't often get email from sarkar.raj@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hello,

As residents of Stonebride, we are deeply concerned and opposed to the efforts to expand the Ann Airport runway and allow larger aircraft to fly over our home. We are concerned about the safety impacts related to any potential issues (bird strikes, equipment failure, etc.) as well as the noise impacts for our children and living environment.

We would like our opposition recognized.

See Noise Responses #1, #2, and #3, Wildlife Response #1, and Safety/Health Responses #1, #2, #4, #5, #6, #8, and #14.

Regards,

Raj Sarkar

1878 Cypress Pointe Ct, Ann Arbor, MI 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, January 9, 2023 4:03 PM
To: William Ballard
Subject: FW: AA Airport Expansion

From: kathewun@aol.com <kathewun@aol.com>
Sent: Monday, January 09, 2023 4:01 PM
To: rgarg@emich.edu; Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov
Subject: Re: AA Airport Expansion

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Thank you so much for copying me on this letter.

After 40 years of sleep difficulties and many sleep clinics, (I'm 79.)I finally did a take-home study in my own bed through University of Michigan and found my extreme need for wearing a CPAP machine. I am now sleeping 7 to 10 hours almost every night. It's wonderful.

I don't have heart problems, and I'm so sorry that you do. But I'm sure the sleep clinic will be able to help you.
Best to you
kathe

[Sent from the all-new AOL app for Android](#)

On Thu, 5 Jan 2023 at 3:52 pm, Ramesh Garg
<rgarg@emich.edu> wrote:

Dear Mr. Matthew Kulhanek and Mr. Steve Houtteman,

Hope you had nice holidays and let me wish you a very Happy New Year. May the New Year bring you and your family all the good health and happiness.

My wife and I are senior citizens (I'm almost 80 now) and live in the Stonebridge subdivision. We have serious concerns about the expansion of the Ann Arbor airport landing strip. This would allow bigger airplanes to land right close to our home. We both have serious sleep problems and I'm, in fact, going through sleep therapy. Landing of bigger and more planes would cause serious disruption in our ability to get sleep. I have been having some serious heart issues and was advised to get sleep therapy to mitigate the risk. Now, I'm afraid that an expansion of the airport would put me at serious health risk.

See Noise Responses #1, #2, and #3 and Safety/Health Responses #11, #12 and #15.

If the expansion is being done to facilitate some Michigan alumni to land closer to the stadium, I think they can avail an helicopter shuttle from the Willow Run airport that would land them closer to the stadium. There are also other risks involved in case of any accident etc.

See Safety/Health Responses #2, #5, #6, and #14 and General Response #14.

Both my wife and I humbly request you to kindly overrule the request for expanding the AA airport. Thanks,

With regards,

Ramesh and Rita Garg
4531 Boulder Pond Drive,
Ann Arbor, MI 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 10, 2023 11:23 AM
To: William Ballard
Subject: FW: Airport Improvement Project
Attachments: solar_memo_021115.pdf

From: huntersofa2@aol.com <huntersofa2@aol.com>
Sent: Tuesday, January 10, 2023 10:58 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Airport Improvement Project

You don't often get email from huntersofa2@aol.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Mr. Kulhanek

The purpose of this email is to provide support for the Ann Arbor Airport Improvement Project.

I was a member of the Ann Arbor Airport Advisory Committee for over six years (2010-2015) representing the 4th Ward in Ann Arbor. I have been a Ward 4 resident since 1985 and have been both a military and civilian pilot since 1961.

While in the Air Force, I flew various fixed wing aircraft in the US and overseas. I was also trained to fly helicopters and completed a deployment in combat Special Operations in Vietnam.

I currently hold a multi-engine FAA Airline Transport Pilot certificate and fly as a volunteer B-17 "Flying Fortress" pilot for the Yankee Air Museum at the Willow Run Airport. I also own a small Cessna aircraft that I keep at ARB in a city-owned hangar. I have no ulterior motives on the recommended airport improvement program, as my personal aircraft will operate in and out of fields 1,000' long. I do have some facts to share. These facts are based on civil and military aviation experience over nearly seven decades.

I am thoroughly familiar with flight operations at the Ann Arbor Airport (ARB) and at the Willow Run Airport (YIP). There are significant operational differences between YIP and ARB.

One fact that I have learned over the years is that longer runways are safer. Always. Without exception. Ask any pilot. In addition, runway length has no bearing on the number of operations at an airport but is more closely related to a pilot's need and purpose to fly to or from a particular airport.

See Support Response #2.

On one side of this issue is a group of motivated individuals in Pittsfield Township who object to the project with emotional appeals on several fronts. Their opposition they say is based on perceived threats to "community quality" with no specific definition of that term.

Closely related to this issue is the fact that several years ago, Pittsfield Township elected officials and this group, with much local media coverage, retained a California aviation law firm to make a written appeal to the U.S. Secretary of Transportation to stop the project.

Without any local media follow-up coverage, this very expensive tax-payer funded appeal was judged by the Department of Transportation to be without merit and was denied and dismissed. To this day, the written opinion of the DOT has not been released to the public.

At the request of City Council in 2007, the AAC made safety improvement recommendations to the runway configuration. These recommended improvements were based on sound and demonstrable facts that have been reviewed and approved at several levels by MDOT and FAA. Incidentally, the AAC membership has always consisted of designated representatives from both Pittsfield and Lodi Townships. During the discussions when both the 2007 and 2008 Airport Layout Plans were deliberated, both Township designated representatives were continuously absent from scheduled meetings. Copies of the minutes of all meetings, however, were provided to officials at Lodi and Pittsfield Townships. This includes all AAC meetings between 2005 and 2008.

I will address just a few of the more relevant issues.

1. The runway improvement will cause bigger and louder jets to use the airport. There is no support for this argument and I refer you to the working group presentation to City Council in February 2016. Larger jets have been and will continue to use the Willow Run Airport for the following reasons:

- There are essential and critical required ground services for jet aircraft at the Willow Run Airport that are not available at ARB.
- 5,000' of runway length is required by insurance carriers for many corporate jets.
- Runways shorter than 5,000' cause excessive wear on expensive tires and brake systems for many corporate jets.
- At ARB there are very limited hangar facilities for corporate jet aircraft.

There are multiple corporate jets based at Willow Run that are owned and operated by Ann Arbor residents as well as the University of Michigan health system.

See Support Response #13.

2. Aircraft will be lower over houses in Stonebridge. It is true that aircraft will be slightly lower when landing on Runway 06, but the difference will be so slight as to be undetectable without expensive equipment. Because of prevailing south-westerly winds (82% of the time), Runway 06 is used less than 20% of the time. The difference in the climb profile for most aircraft taking off over Stonebridge on the proposed shift of Runway 24 is around 10 feet lower according to those who did the calculations. Conversely, for airplanes departing to the northeast on Runway 06 over the 2nd and 3rd Wards, there will be an **increase in height over City residences** because aircraft will be departing about 950' further southwest of the City.

See Support Response #14.

I will interject a personal opinion here that I and many others have held from the outset of the protest to this much needed improvement. If it were somehow possible to complete this project "overnight" the impact on aircraft operations, noise, etc., would be undetectable and few, perhaps nobody, would ever perceive the difference.

That same opinion applies to any effect on Stonebridge housing values as proximity to the airport has most likely already been factored into these values.

3. **There might be fully loaded aircraft impacting residences.** I guess my take on this doomsday scenario is whether the runway is 3,500' or 4,225', **such events could happen with the current runway configuration, but they have not happened.** Please tell me if there might be a difference between a partially loaded and a fully loaded aircraft in terms of accident intensity?

Fortunately, such events have not taken place, but if one did occur it would not be related to runway length. At the February 2016 working group Andy McGill presented an emotional “blood on the schoolhouse wall” mental picture, referring to the 1970s accident near the Pattengill School. The accident in question was determined by the National Transportation Safety Board to be the result of pilot spatial disorientation followed by improper manipulation of flight controls. Translated: The aircraft entered the clouds and the pilot lost control; the weather was 600' overcast at the time with very low visibility. **The runway orientation and the 3,500' runway length had nothing to do with this unfortunate off-airport accident with fatalities.**

See Support Response #15.

4. The argument that “**Canadian geese to do not interact with jets**” is true but laughable. Bird strikes are a hazard at many airports and a bird strike is always a possibility for all and any aircraft regardless of the means of propulsion.

See Support Response #16.

The well-organized Pittsfield Township group, with township official support, has a history of animosity and extreme resentment towards the airport. I am not sure when it started or why. Several years ago when six larger box hangars were being constructed at the Ann Arbor airport, the familiar mantra of “more bigger and louder jets” was raised by Pittsfield Twp. as the reason the hangars were being built. Even though the hangars are large enough to contain a small corporate jet, no pure jet owners were attracted to rent them for reasons already stated above.

Just the opposite turned out to be the case. The larger heated modern hangars are now filled with smaller aircraft and local aviation businesses that provide many jobs to local residents. They do not contain larger and louder jets and have substantially increased hangar rental income for the airport enterprise fund. The hangars have been 100% occupied ever since construction. Incidentally, the manner of design and construction allows for an identical number of hangars to be built adjoining the existing hangars at a much lower cost because site preparation, a common wall, and utility infrastructures are complete.

We should not forget the questionable way high ranking elected officials in the Pittsfield Township administration killed a proposed DTE funded solar array project on city-owned airport property. In spite of being notified repeatedly regarding the project, officials claimed no knowledge of the project and disapproved it for that reason. Ample documentation exists as proof of this dishonest debacle. A memo from the City to Pittsfield Twp is attached.

Several years ago a fireworks display was planned at the airport to provide public entertainment. The plan involved Pittsfield Twp. officials and was initially approved by Pittsfield Twp. After two years of detailed planning by AAC members, Pittsfield Twp. inexplicably cancelled their approval of this project without giving an understandable reason.

The facts speak for themselves. Highly recommend approval of the project.

Ray Hunter
1601 Dicken Drive,
Ann Arbor, MI 48103

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, January 4, 2023 7:32 AM
To: William Ballard
Subject: FW: Ann Arbor Airport Expansion Project

From: rayjm@comcast.net <rayjm@comcast.net>
Sent: Tuesday, January 03, 2023 9:33 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: Ann Arbor Airport Expansion Project

You don't often get email from rayjm@comcast.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

I am writing as a resident of the Stonebridge Subdivision and as an opponent of the expansion of the Ann Arbor airport.

These are reasons why I oppose the expansion:

- The proposed runway extension would move the airport primary runway 870 feet closer to Lohr Road, adding to the risks to residents near the end of the runway, which are not adequately protected by so-called “Runway Protection Zones.” [See Safety/Health Responses #2, #5, #6, and #14.](#)
- We know that there is already a potential for accidents and equipment failure – there was such an incident just this past summer. Fortunately, there was adequate distance between the airport and the residential area that a major problem was avoided. [See Safety/Health Responses #2, #5, #6, and #14.](#)
- There are serious issues with the geese populations in this area, with their numbers growing constantly. These geese flocks create a risk of collision to the air traffic in the area and, therefore, to the residents who are in the pathway of potential accidents. [See Wildlife Response #1 and Safety/Health Responses #1 and #8.](#)
- This proposed expansion would benefit only a small number of aircraft types that would be able to be able to use an expanded runway. The “reward” is small and the “risk” is high. In addition, since Ann Arbor is a municipal airport funded with federal dollars, any pilot who chooses can land at the airport, no matter the size of their aircraft – adding to the level of risk. Ann Arbor cannot regulate the type of aircraft that could utilize the field. [See Technical Response #2 and General Response #18.](#)

Please do not allow this proposed expansion of the Ann Arbor Municipal Airport to proceed.

Thank you for your consideration.

Raymond J. Martini
4904 Lone Oak Ct.

Ann Arbor, MI 48108

January 3, 2023

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, January 4, 2023 7:31 AM
To: William Ballard
Subject: FW: ARB Expansion

From: Faerber, Rebecca (R.) <rfaerber@ford.com>
Sent: Tuesday, January 03, 2023 10:30 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov
Cc: kathewun@aol.com; leslieblackburn1@gmail.com
Subject: ARB Expansion

You don't often get email from rfaerber@ford.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

I am writing to you in strenuous objection to the proposed expansion of the ARB. Based on publicly available information, there is no gain described (in financial or any other terms) that could justify the dangers and degradation of our standard of living that this expansion would incur. See Safety/Health Responses #7 and #16 and General Responses #3 and #14.

Specifically, as a very-near resident to the airport, we are already subject to the noise and fuel pollution inherent in the current operations – the props and small jets that already fly overhead are enough. This expansion would invite a tripling of that jet traffic along with the intrinsically exponential risk of this growth. As a property owner, this expansion would devalue my standard of living as well as my home's value. See Noise Responses #1, #2, and #3, Air Quality Response #1, and Safety/Health Responses #2, #5, #6, and #14.

As a citizen of the state of Michigan – the Water Wonderland – it is beyond my comprehension how we could continue to expand the use of land that will be subject to increased water pollution – the Gelman plume, the Flint water crisis, the Kalamazoo River, the airforce bases? It is unconscionable to extend the ARB to allow increased jet traffic, which will inevitably lead to more jet fuel/de-icer/fire suppression chemicals in the ground, in the watershed. What few protective prohibitions exist today against those uses – they will be the next 'barrier' to fall, once those operations are expanded. See Noise Response #3 and Water Resources/Water Quality Response #1.

Also baffling to me is the non-treatment of the risks to the aircraft themselves - bird strikes are an incredibly serious issue. To date, there has been no mitigation plan made public to address the proximity of the Canada Geese (and the inherent right of those creatures to exist!), and therefore one must assume that this risk, like the others, has not been sufficiently acknowledged, documented or treated. See Wildlife Response #1 and Safety/Health Responses #1 and #8.

The ARB expansion should not be allowed to go forward.

Rebecca Faerber GICSP, CISA
Manufacturing Cyber Security Program Manager
She/Her/Hers ([what's this](#))



There is no innovation and creativity without failure. Period. *Brene Brown*

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 10, 2023 1:51 PM
To: William Ballard
Subject: FW: Airport Expansion Objection from Rebecca Forsyth
Attachments: Document_2023-01-10_114859.pdf; 2023-01-10_115445.pdf

Importance: High

From: eforsyth7@gmail.com <eforsyth7@gmail.com>
Sent: Tuesday, January 10, 2023 1:15 PM
To: houttemans@michigan.gov
Cc: Kulhanek, Matthew <MKulhanek@a2gov.org>; kathewun@aol.com; supervisor@pittsfield-mi.gov
Subject: Airport Expansion Objection from Rebecca Forsyth
Importance: High

You don't often get email from eforsyth7@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Houtteman;

This letter is to express my sincere objection to the expansion of the Ann Arbor Municipal Airport. This unnecessary endeavor has far more negative consequences to the environment, to wildlife, to property values, and a substantial safety risk to surrounding residents. In October 2021, a letter which is attached, was sent as a response to many Pittsfield township residents with noise level complaints. I also have noticed more noise pollution in my neighborhood over the last two or three years from low flying louder jet planes. I have lived here since Sept. 2022. Frankly, the runway expansion is a complete waste of taxpayer dollars for something that has limited value considering that the Willow Run Airport is an established airport to serve the same purpose and is nearby resource that is currently underutilized. In my opinion our infrastructure dollars can be used in other areas which are more critical than this. For example, the Washtenaw County drain system is undersized with insufficient maintenance to protect communities from flooding, as has happened in 2021.

See Noise Responses #1, #2, and #3, Wildlife Response #1, Financial/Economic Responses #2 and #11, Safety/Health Responses #2, #5, #6, and #14, and General Responses #5 and #10.

From an economic perspective, the Airport Expansion will most likely not have a positive economic impact for Ann Arbor and Pittsfield Township. Rather, it will most likely have a serious negative impact on property values for businesses and homes near and around the Ann Arbor Airport. Prospective homeowners will be turned away by both the loud sound but also the potential safety risks for themselves and their families. Just this year a mechanical failure caused a plane to make an emergency landing in the cornfield right across the street from the residential community that sit adjacent to the airport.

See Noise Responses #1, #2, and #3, Financial/Economic Response #2, and Safety/Health Responses #2, #5, #6, and #14.

The danger of the proposed expansion, especially near the heavily populated neighborhoods

surrounding the airport, presents a real safety risk to residents that far exceeds the minimal benefits from the expansion that would be gained by the Citation XLS class of jets, dominant among them, with 61% of the Citation XLS class operations, the operations of a single Cessna Citation Excel XLS operator, AvFuel Corp. How absurd! Even worse, the expanded runway may attract more larger and heavier jets, posing additional risks in an area heavily populated with Canada geese, which do not interact well with jet aircraft, as several prominent national accidents have showcased.

See Noise Response #3, Wildlife Response #1, Safety/Health Responses #1, #2, #5, #6, #8, and #14, and Technical Response #2.

Government Officials as well as most residents observe a substantial population of Canada geese operating on the airport, feeding in a tilled fallow field to the west. These geese regularly feed within a few yards of the runway. These Canada geese are a real and present danger and will need to be managed for the foreseeable future, not only for the airplane crews but for the surrounding residents. Who will take responsibility for this should this Expansion be approved? All the documents that I have read on the Airport Expansion presents no plan for such mitigation.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

In short, the proposed expansion would primarily benefit the owner of a single Cessna Citation Excel XLS and is this really in the best interests of taxpayers, the use of taxpayer dollars, and most importantly taxpayer safety. I think NOT! The expanded runway could also likely attract larger and heavier jets to the airport, posing greater risks to residents living around the airport, in an area heavily populated with Canada geese – adding to the danger.

See Noise Response #3, Wildlife Response #1, Safety/Health Responses #1, #2, #5, #6, #8, and #14, and Technical Response #2, and General Response #3.

The risks of the proposed project far exceed any benefit that could result. The project poses serious risks to residents living around the airport, an area heavily populated by Canada geese. Because of this, property values of the heavily populated surrounding area will likely and sharply decline.

See Wildlife Response #1, Financial/Economic Response #2, and Safety/Health Responses #1, #2, #5, #6, #8, and #14.

Please DO NOT approve this project.

Sincerely,

Rebecca Forsyth
4870 Doral Dr.
Ann Arbor, MI 48108

5345 Pinnacle Court
Ann Arbor, Michigan 48108

December 15, 2022

Mr. Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive, Ann Arbor, MI 48108

Dear Mr. Kulhanek,

I am commenting on the draft 2022 Environmental Assessment in opposition to the proposed runway extension at ARB as both a concerned Taxpayer and an Ann Arbor area resident.

The proposed runway extension appears to primarily address some modest drive time and loading convenience “needs” for a very limited number of current airport B-II type aircraft users. These modest benefits appear to be at substantial actual and possible consequential near term and longer term costs to the greater Ann Arbor community. Some of these costs are believed significant, somewhat uncontrollable, and possibly unintended.

See Technical Response #2 and General Responses #13 and #14.

The updated 2022 Environmental Assessment again appears to largely ignore the post and continued availability of, and reliance on, existing nearby regional capabilities at Willow Run and Detroit Metro. These alternate aircraft and passenger handling capabilities should be the basis of a “preferred do nothing” and cost effective alternative to runway extension at ARB.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

Observations & Conclusions

- A runway extension is likely to change the very profile of flight operations at ARB and negatively impact the desirability of nearby residential neighborhoods. The Assessment suggests many times that the runway extension purpose (Chapter 1.5.1) is centered on allowing current users to access and depart ARB with heavier loading in varied weather conditions. However, in addition to heavier loading by a few current ARB B-II aircraft users, an extended runway is an open invitation to significant additional use by even heavier aircraft with greater ranges not currently using ARB.
- Changes in SELs (Single Event Sound Exposure Levels) are very likely to be noticeable and troublesome in the vicinity of ARB and perhaps beyond. The Assessment acknowledges that the operation of more frequent and more heavily loaded aircraft will increase the noise profile in and around the airport. The commonly considered and averaged DNL (day-night average sound level) increase is conservatively modeled within acceptable industry standards using current and modestly growing traffic estimates. However, the FAA also acknowledges that SEL (single event sound exposure level) is a factor worthy of consideration. It remains largely uncertain how a runway extension to accommodate heavier loading would increase aircraft traffic, DNL, and SEL. **(See Graphic Page 3)**
- A taxpayer expense in excess of \$3 million is difficult to justify to simply provide modest drive time and/or loading convenience for a small number of current B-II ARB airport users. It appears from the 2019 airport usage data presented in table 5-1 on page 19 of the

See Noise Responses #1, #2, and #3.

See Noise Responses #1, #2, and #10.

Runway 6/24 Extension Justification Study together with Appendix A of the Study that a limited number of aircraft types are used to measure and meet the level of “critical” B-II aircraft status used to justify the extension “need.” The data in Appendix A indicates that only 4 B-II aircraft types accounted for more than 100 operations each for a total of 525 or 77% of the 679 total B-II aircraft operations in 2019 reflected in table 5-1. It is suspected that these 525 flight operations are not only associated with a limited number of aircraft types, but also with a very limited number of specific aircraft and operators. It also appears that not all of these 4 B-II aircraft types accounting for 525 of the “critical” B-II operations used to justify the extended runway actually require a runway extension for full loading.

See Technical Responses #2, #7 and #8 and General Responses #13 and #14.

- Nearby regional airport capabilities are already currently meeting the described ARB runway extension need.
 - B-II aircraft in need of a longer runway to accommodate heavier payloads, or in certain weather conditions, are already using and/or diverting to existing regional capabilities and the well-developed infrastructures available at nearby Willow Run Airport (13 miles driving and 10 miles by air from ARB), and reasonably nearby Detroit Metro Airport (24 driving miles from ARB).
 - This prior reliance over many years on regional capabilities to support the needs of heavier B-II aircraft provides solid support for strong consideration of a do nothing alternative relative to ARB runway extension.
- Willow Run and Detroit Metro very adequately meet the needs of any air traveler wishing to visit Ann Arbor for business or leisure. The Assessment vaguely suggests that ARB traffic and B-II aircraft loading capacity is important to the local economy. Sporting event traffic and general business needs are used as examples. I do not believe anyone seeking to visit Ann Arbor for business or leisure, or considering a residence, is deterred by the current length of the ARB runway.

See Noise Response #3, Safety/Health Responses #7 and #16, Financial/Economic Response #11, and General Responses #3, #5, #10, and #14.

Potential Negative Consequences of the Project

- Extension of the runway could, and likely would, change the very nature of ARB operations by expanding its capabilities for increased traffic by heavier aircraft with larger payloads and greater ranges.
 - Chapter 1.5.2 of the Assessment reads that *“The proposed action is needed because Runway 6/24 was designed to serve primarily small piston driven aircraft; however, the Airport receives regular use by small turboprop aircraft and occasional business jet aircraft that require a longer runway to operate at a greater payload than they do today.”*
 - However, in addition to accommodating greater payloads by existing users Page 10 of Appendix C of the 6/24 Runway Justification Study, dated February 2021 reads, *“It is logical to assume that some aircraft used by businesses in the community that are based at other nearby airports due to the existing length of Runway 6/24, may shift to ARB if additional runway length were provided, helping to justify its demand. Given the approximate 4-mile distance from downtown Ann Arbor, businesses and visitors to the Ann Arbor community would likely consider operating out of ARB instead of traveling to YIP or DTW if able to do so. The 20- and 35- minute drive times it can take to reach YIP and DTW from downtown Ann Arbor increases when congested traffic conditions are*

See Noise Response #3, Financial/Economic Response #11, and General Response #10.

present. As a result, it is reasonable to assume that operations at ARB will increase if Runway 6/24 were extended. "

See
Financial/Economic
Response #10, and
Noise Responses #1,
#2, and #3.

- An increased level of operations at ARB could require meaningful additional infrastructure investment and costs in the future to support increased requirements such as extended hours for operational support, tower support, emergency services, snow removal, and other requirements associated with a busier airport serving a greater number of heavier aircraft and additional passengers.
- Availability of ARB to heavier aircraft with greater ranges could also impact and expand the hours of flight arrivals, thus changing the timing and impact of SEL nighttime sound.
- Beyond the taxpayer dollar cost of a runway extension, there are probable and tangible costs associated with noise impacts that are difficult to quantify.
 - The Assessment acknowledges and estimates that an extended runway will increase sound levels in and around the airport. The ultimate actual noise impact remains largely indeterminable because the modeling of noise level impacts is subject to multiple variables including sound level, duration, frequency, time-of-day, and others, many of which relate to the type of aircraft, level of flight activity, and aircraft loading.
 - Reference to two brief FAA discussions of noise factors are informative and are provided here: https://www.faa.gov/regulations_policies/policy_guidance/noise/basics
<https://faabostonworkshops.com/project-information/aircraft-noise-overview/>
 - The DNL, an assessment standard which measures the Day-Night Average Noise Level, was calculated conservatively in the Assessment. When averaged over an entire year to derive an average noise level for an average day, the calculated level of DNL noise increase may appear modest to the casual observer.
 - However, also important to consider, and **perhaps more worrisome to the community adjacent to the airport is the SEL, Single Event Noise Level.**
 - SEL noise associated with a single event flight operation of a heavier aircraft on a busy day will without doubt be more noticeable, annoying, and troublesome.
 - The following graphic borrowed from the FAABostonWorkshops website is illustrative.

See Noise
Responses #1,
#2, #3, and #10.

Identical DNL Levels



- Although the estimated DNL may be within acceptable limits and reflected within the boundaries of the airport as calculated for the Assessment, the frequency of increased SEL noise that would be associated with a runway extension to accommodate heavier aircraft could be very impactful on the broader community as downtown Ann Arbor and downtown Saline are both less than 4 miles from ARB.
- The airport is adjacent to, and the runway extension points in the direction of, highly desirable residential neighborhoods that would likely be viewed as less desirable with the DNL and SEL noise impacts associated with the proposed runway extension.
- These difficult to model and forecast noise factors could impact the tax base values in the vicinity of the airport. The desirability of housing stock and suitability of the area for further residential development in the area of the airport should be a matter of concern for the entire greater Ann Arbor community. A review of the area around ARB using Google Earth highlights that the runway extension is near and points directly toward several residential neighborhoods that are important to making the Ann Arbor area a desirable place to reside.
- Noise is described as sound that is unwanted. In the case of the proposed ARB runway extension, the probable increase in unwanted sound is also considered unjustified and unneeded.

See
Financial/Economic
Response #2.

See Safety/Health Responses #7 and #16 and
General Responses #3 and #14.

Although the Assessment is focused on whether the runway extension **could be** accomplished within industry accepted impact standards, I believe the more important question to be addressed by reviewers and approvers is whether the runway extension **should be** completed given the meaningful actual and potential costs to the greater Ann Arbor community when compared to modest convenience gains for a limited number of current ARB B-II users.

See General Response #13.

Respectfully,

Richard Anderson

Richard Anderson
5345 Pinnacle Court
Ann Arbor, Michigan 48108
nhreflects@gmail.com

Copies to:

- Steve Houtteman, Airport Planning & Environmental Unit, Michigan Department of Transportation-AERO
 - houttemans@michigan.gov
- Matthew Kulhanek, Airport Manager, Ann Arbor Airport
 - mjkulhanek@a2gov.org
- kathewun@aol.com

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, December 7, 2022 7:54 AM
To: William Ballard
Subject: FW: Ann Arbor Airport proposed expansion/Draft Environment Assessment (EA)

-----Original Message-----

From: Robert Barber <barber.rw@gmail.com>
Sent: Tuesday, December 06, 2022 6:14 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathe wunderlich <kathewun@aol.com>
Subject: Ann Arbor Airport proposed expansion/Draft Environment Assessment (EA)

[You don't often get email from barber.rw@gmail.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Mr. Matthew Kulhanek
Ann Arbor Airport manager

Mr Kulhanek,

We are writing to register our opposition to the proposed airport expansion. My wife and I have lived close to the airport for the past 5+ years, during which air traffic has increased significantly - planes taking off and landing at very low altitude, directly over our home. Even with our windows closed, the noise is more than just noticeable. However, during the summer months, if we are out on our deck when a plane is flying overhead, we literally have to stop talking because although we're only sitting 2-3 ft apart, no one can hear anything due to the excessive noise. And to be clear, this is not just an occasional event. Especially on good weather days and most weekends, the air traffic is almost constant. A private pilot who uses the AA airport informed me there are four air flight training schools located at the airport, which generate a large number of 'touch and gos', most of which visibly appear to be flying at a very low altitude, over and over again, directly over our home.

See Noise Responses #7 and #9.

The view that expanding the airport runway might be valid ignores the obvious consequences of more planes flying over nearby homes at an even lower altitude. As a community government, the Ann Arbor city council, and you as its airport manager, are reasonably expected to have an obligation to consider and protect the well-being of area residents, which includes a right to reasonable peace and quiet, not to mention safety. The goose population on and around the Stonebridge golf course numbers in the triple digits - not double. Lowering the altitude that planes achieve when passing over nearby homes only increases the potential for disaster - from novice pilot error, lack of time to make a critical correction, as well as from the goose population, that would now be in much closer approximation to lower flying aircraft.

See Noise Responses #1 and #2, Wildlife Response #1, and Safety/Health Responses #1, #2, #5, #6, #8 and #14.

I believe you and I spoke a bit over a year ago when a military aircraft, I think you told me it was a C-17, flew 'just' over the tree tops as it passed over our house. At that time you told me that I was about the 100th person to call regarding that stunt, that you said was likely some hotshot showing off for his buddies, but assured me that it had not landed nor

taken off from the AA airport. That incident only reinforces our perspective that lengthening a runway so that larger, louder planes can use your facility doesn't make good sense, both from a safety or logistical perspective - especially in that Willow Run is only approx 10 miles away, and can handle more than anything an extended runway would allow here.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

Please put area residents' welfare above financial/political avarice.

Respectfully,
Robert and Sheryl Barber
5155 Doral Court
Ann Arbor, MI. 48108
734-649-4033

Sent from my iPad

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, December 21, 2022 1:54 PM
To: William Ballard
Subject: FW: Ann Arbor Airport Expansion

-----Original Message-----

From: Robert Morrow <a2rcmgm@gmail.com>
Sent: Wednesday, December 21, 2022 1:07 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Ann Arbor Airport Expansion

You don't often get email from a2rcmgm@gmail.com. Learn why this is important
<<https://aka.ms/LearnAboutSenderIdentification>>

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Mr. Matthew Kulhanek

Ann Arbor Municipal Airport

801 Airport Drive

Ann Arbor, Michigan 48108

Mr. Kulhanek,,

I want to express my opposition to the most recent attempt by the City of Ann Arbor to expand their airport deeper into the airspace of surrounding Pittsfield Township neighborhoods. Before examining the issues involved, I want to say that I find it somewhat hypocritical that Ann Arbor, a city that presents itself as having great concern for the quality of life of its residents as well as those of its "sister" cities around the world, continues to champion a project which poses an irreversible threat to the quality of life of neighboring Pittsfield Township residents airport close to the airport.

[See General Response #13.](#)

Consider the predictable effects of the proposed expansion:

- Increased air traffic, including more and larger propeller and jet aircraft flying over neighborhoods in the area.

[See Noise Response #3.](#)

- Increased noise levels because those aircraft would be permitted to fly over homes at altitudes 60% lower than at present, making enjoyable backyard barbecues or quiet evenings on the porch virtually impossible.

See Noise Responses #1 and #2.

- Increased ground traffic on roads serving the airport, roads that already are becoming strained by large businesses in the immediate area, businesses that contribute significantly to the local economy.

See General Response #19.

- And perhaps most important, this proposed incursion into neighborhood airspace would increase the risk of accidents, posing a threat at best to property and at worst to human lives.

See Safety/Health Responses #2, #5, #6, and #14.

What makes the proposed expansion even more questionable is the availability of Willow Run Airport just 10 miles away. This airport is IN PLACE AND CAPABLE OF MEETING PRESENT AND PROJECTED NEEDS without doing harm to neighborhoods and their residents.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

Yours truly,

Robert C.
Morrow
1749 Stonebridge Drive South
Arbor, MI 48108

Ann

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 3, 2023 6:05 PM
To: William Ballard
Subject: FW: Ann Arbor Airport Expansion

-----Original Message-----

From: Robin Lammers <robinmsu@icloud.com>
Sent: Monday, January 02, 2023 9:02 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Ann Arbor Airport Expansion

[You don't often get email from robinmsu@icloud.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

>>

>> Dear Mr. Kulhanek,

>>

>> My name is Robin Lammers and I live in Stonebridge which is a very large subdivision of a couple thousand residents adjacent to the Ann Arbor airport who could all be put in harms way. I am deeply concerned about the proposed expansion of this airport to accommodate larger aircraft when there is a perfectly suitable airport just eight minutes down the road at Willow Run!

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

>> It would be an entirely different situation if another airport already up and running weren't a mere 8 minutes down the road with the highway being readily accessible less than a mile from Ann Arbor airport! How many times are you able to park your car, like on a football Saturday, and still have to walk more than 10 minutes to reach your destination? Someone can surely park their airplane and drive 8-10 minutes to Ann Arbor! PLEASE!!

See General Response #14.

>>

>> Having just returned from a brief visit to New York City where I waited an hour in traffic each way to get to the airport, all I can think about is how spoiled are we in Ann Arbor that someone can't travel less than 10 minutes down the road to access a perfectly good airport! We are a subdivision with ponds and golf courses and ponds that house swans and geese, far too many geese, but species that inhabit our area that surround this airport that would pose a great hazard to large aircraft jeopardizing their safe travels and greatly threatening the homes a few yards, not miles, away.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

>>

>> Larger aircraft carry additional pollution threats from not only noise but potential fuel spill issues. Very near that airport are water tables people with wells access. On any given summer day, especially weekends, the noise interferes with my ability to enjoy my porch and yard. Those small planes fly low enough! I cannot imagine the situation with larger, noisier planes invading my space and the quiet enjoyment of my place of residence. I didn't pay this much to live in this neighborhood to be run out by larger, heavier aircraft!!! This is where I chose to retire and I am furious that this is even being considered.

See Noise Responses #1, #2, and #3 and Water Resources/Water Quality Response #1.

>>

>> I implore you NOT TO ALLOW THIS PROPOSED AIRPORT EXPANSION!

>>
>> Very Sincerely,
>>
>> Robin Lammers
>> 2355 Quaker Ridge Dr.
>> Ann Arbor, Mi 48108
>>
>>
>> Sent from my iPad

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, December 9, 2022 11:14 AM
To: William Ballard
Subject: FW: Ann Arbor Runway Extension

From: Ron Suddendorf <rsuddendor@aol.com>
Sent: Friday, December 09, 2022 10:17 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: kathewun@aol.com; houttemans@michigan.gov
Subject: Ann Arbor Runway Extension

You don't often get email from rsuddendor@aol.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Kulhanek:

I am writing to express my objection to the proposed Ann Arbor airport runway extension. There are many obvious concerns to the proposed runway extension with safety to residents living around the airport being the most serious. It is my understanding that the runway extension would allow more and heavier aircraft to use the airport. The heavier aircraft would fly very low over homes in the area, and a small error by the pilot could have deadly consequences for residents. This concern is amplified by the presence of large numbers of Canada geese in the area that create a dangerous environment for all aircraft using the airport.

See Noise Response #3, Wildlife Response #1, and Safety/Health Responses #1, #2, #5, #6, #8, and #14.

A second concern is the validity of the claim that a runway extension is needed. It appears that the justification forwarded for the extension is that four additional classes of aircraft could operate year round. However, from what I have read, three of those classes of aircraft can now fully operate at the airport without the runway extension and the fourth class can operate most days of the year without major restrictions. Added to this concern is that the runway would attract more and larger aircraft than is being suggested by the airport, thus increasing the likelihood of a serious accident. The assertion of need is also packaged with the suggestion that a runway extension would allow more flights into the airport for football games and other special activities as well as added business access. This last point is perplexing in that it suggests convenience for those wealthy enough to fly by private jet to six or seven football games a year or other special events is justification for risking the safety and welfare of residents living around the airport. Added access for businesses would also seem to be a moot point as the perfectly good Willow Run airport is only about fifteen minutes from Ann Arbor and offers better facilities than the Ann Arbor airport even with a runway extension.

See the following responses: Noise #3, Safety/Health #2, #5, #6, #7, #14, and #16, General #3, #5, #10 and #14, Financial/Economic #1, and Technical #2.

A third concern is the risk such expansion could cause to water wells on the airport property. From what I understand there are three wells on the airport property that supply drinking water to Ann Arbor. This is an especially troubling concern since the city of Ann Arbor is currently dealing with

dioxane contamination to its drinking water caused by inadequate oversight of the operations of a private company. This issue should be critically evaluated by experts in ground water contamination before further consideration of the proposed runway extension. See Water Resources/Water Quality Response #1.

Finally, it is peculiar that the city of Ann Arbor, which routinely cites environmental and climate damage caused by carbon emissions, would endorse an airport expansion that can only exacerbate manmade pollution caused by more and larger aircraft using the airport. Before proceeding with the runway expansion, the city should require the same carbon emission study and related abatement requirements it touts for other industries. See Noise Response #3 and Air Quality Responses #1 and #3.

Sincerely,

Ron and Sandra Suddendorf
1702 Inverness Ct.
Ann Arbor, MI 48108

December 30, 2022

Rosemarie Simon
4968 Lohr Road
Ann Arbor, MI, 48108
rosemariesimon@comcast.net
734-663-4207

To whom it may concern:

As stated in the FAA LAND USE COMPATIBILITY AND AIRPORTS GUIDELINES, “it is vitally important that airports operate in an environment that maximizes the compatibility of the airport with off-airport development...Airport and community planning processes are intertwined” The airport is obligated to, “Develop and implement a citizens’ public participation program, replete with appropriate processes and relevant information.” I believe the Ann Arbor City Airport has failed to meet this obligation to the citizenry. See General Response #4.

My first access to relevant information concerning the Airport Expansion was at Airport Expansion Hearing on January 26 2017. The material presented that evening compelled me to write this second letter. I am now resubmitting this letter for a third time as the issue of expanding the runway at the Ann Arbor City Airport has resurfaced.

First and foremost, I live across the street from the west end of the existing runway and therefore I am as vested in the safety of the Ann Arbor City Airport as all other parties. To that end I would like to see the present extension of the runway, 950 feet to the west, abandoned and the parties supporting the Airport expansion encouraged to design a win/win proposal that is as safe for the residential communities surrounding the airport as it is for the pilots using the airport. I learned on the evening of January 26 2017, that David Cantor created a different proposal to ensure air traffic safety that did not require the 950 foot western extension of the runway. I was told that plan was not approved by the FAA but was more of a win-win for residents. I am begging the Ann Arbor City council to ask the airport representatives to go back to the design table and develop a win-win proposal that will satisfy the FAA and the residential community. A proposal that will ensure the Ann Arbor City Airport operates “in an environment that maximizes the compatibility of the airport with off-airport development”.

In Section III of the Legislation and Federal Regulations Relating to Compatible Land Use Planning Guidelines it is stated that the airport has an obligation to utilize “the reasonable alternatives that would avoid or minimize adverse impacts or enhance the quality of the human environment.... In addition, EIS/EAs must consider the broader land use, social, and socioeconomic fabric of the communities surrounding an airport.” This guideline is not being followed. See General Response #20.

Second, I learned that presently, the end of the runway is 2000 feet from existing homes on Lohr Road on the west side of the airport. My home is one of those homes and already has sustained structural damage due to plane engine and we suffer from noise pollution, as phone conversations, yard conversations and television programming are interrupted and terminated by engine roar. The new runway diminishes that margin of safety of 2000 feet to 900 feet, from the

end of the runway to the front doors of homes on Lohr Road. I cannot believe that planes, especially double axel 70,000 pound planes can safely land or take off 900 feet from residential homes. Many counties in the United States have runway setback standards such as, “600 feet from the sides of the runway and 1,200 feet from the ends of the runway.” In my research, I found nothing less than 1,200 feet from the end of a runway to residential dwellings. This expansion violates that safety standard.

See Noise Response #3, Safety/Health Responses #2, #5, #6, and #14.

For example, in June of 2009, as reported by Art Aisner of the Ann Arbor News, “Steve Blackman was piloting a small plane. He was on approach to the Ann Arbor Airport and had good height. But the plane was sinking too fast to reach the closest runway. Blackman couldn't risk touching down on the road, especially with his 13-year-old grandson, Brad, aboard. Blackman guided the plane to a bouncy but safe landing on the 5th hole fairway of the Stonebridge Golf Course in Pittsfield Township at about 10:18 a.m. Tuesday. The course is barely a mile from the airport and is notorious among golfers for low-flying planes overhead, but Tuesday was the first time an airplane had to use the grounds for a runway, co-owner Jim Roland said.” This occurred directly behind my home. Just this year, Morgan Russ, Digital News Editor for Click On Detroit, published on September 11, 2022 that the “Pittsfield Township Police and Fire Departments were dispatched to the Ann Arbor Airport on Sunday afternoon, responding to a report of an airplane possibly crashing on the airport property. The airplane was located west of the main airport in a bean field on airport property. Further investigation revealed the airplane did not crash, but it did make an emergency landing in the field after losing power moments after taking off from the runway.” This happened directly in front of my home.

See Safety/Health Responses #2, #5, #6, and #14.

Third, this expansion has been billed as a safety measure, when in fact as stated by Matt the airport manager that evening, “Air traffic has decreased by 50% over the last 20 years. That statement begs the question is this expansion commerce motivated? Is the quality of residential life being sacrificed for economic gain? If so, I beg the council to represent their citizenry by rejecting this expansion, thereby, protecting residential property, the safety of home owners, preserving the quality of homelife, limiting noise pollution, and protecting the existing wildlife (the multitude of flocks of Canadian geese which inhabit the 8 surrounding ponds).

See the following responses: Noise #1 and #2, Wildlife #1, Safety/Health #2, #5, #6, #7, #14, and #16, General #3, #13, and #14, and Financial/Economic #2.

Forth, a study has determined that all of the surrounding residential property values will decrease minimally by 10% and that decrease will be reflected in a significant reduction in property tax revenue for the city of Ann Arbor. It also begs the question of “condemnation of property”. The runway expansion will take away value from all the surrounding residences. I believe the Ann Arbor City Council has a duty to protect our property values and the revenue stream that supports our city.

See Financial/Economic Response #2.

Fifth, the Aviation Safety and Noise Abatement Act of 1979 requires the following actions be taken:

- “Establishment of a single system of measuring noise, for which there is a highly reliable relationship between projected noise exposure and surveyed reactions of people to noise, to be uniformly applied in measuring the noise at airports and the areas surrounding airports;”

- “Establishment of a single system for determining exposure of individuals to noise which results from the operations of an airport and which includes, but is not limited to, noise intensity, duration, frequency, and time of occurrence; and”
- “Identification of land uses which are normally compatible with various exposures of individuals to noise.” See Noise Responses #1 and #2.

“Section 103 of the Act authorized the Secretary of the DOT to make grants for airport noise compatibility planning to minimize noise impacts on communities in and around airports. According to the ASNA, a noise compatibility program identifies measures that an airport owner has taken or has proposed for the reduction of existing incompatible land uses, and the prevention of additional incompatible land uses within the area covered by noise exposure maps. This effort should be designed to elicit meaningful responses from the general public regarding the status of land use planning around the airport.”

Results of a study of the projected noise exposure have not been reported and I have not received a survey regarding my reaction to noise. No one at the hearing presented the system used for measuring noise. No one from the airport has tried to elicit a meaningful response from the general public regarding the status of land use planning around the airport. The hearing on January 26th was a presentation of the airport’s plan, they were not interested in hearing the public’s response, they were there to defend their position. See Noise Response #11 and General Response #21.

Sixth, the National Environmental Policy Act (NEPA) of 1969 “established the fundamental commitment of the federal government to fully consider the effects of a proposed action on the human environment. It also set the basic requirements for the contents of a “detailed statement” (of impact) to be prepared for “major federal actions.” ...In terms of aviation, this would include, but not be limited to, such actions as approval of an Airport Layout Plan (ALP) revision, construction of a new runway, or a major runway extension. NEPA is the basic national charter for protection of the environment. NEPA declares it a national policy to “encourage productive and enjoyable harmony between man and the environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; and to enrich the understanding of the ecological systems and natural resources important to the Nation.” The profound impacts of man’s activities “on the interrelations of all components of the natural environment” are recognized (including urbanization, population growth, industrial expansion, and resource exploitation). The Act specifically declares that “governments, and other public and private organizations, use all practicable means and measures... to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.”

The airport manager referred to the Airport Expansion Plan as “impact-less” when in fact the opposite is true. The airport expansion will have negative environmental impacts that will result from the runway being extended 950 feet to the west accommodating larger planes. If this plan is implemented the negative impacts on residential structures, safety, quality of homelife, noise pollution and wildlife (large population of Canadian geese) will be significant. I do not believe there has been a full and fair disclosure of significant environmental impacts which negatively impacts the ability to make an informed decision.

See the following responses: Noise #1 and #2, Wildlife #1, Safety/Health #2, #5, #6, #14, and #16, General #13, and Financial/Economic #2.

Finally, the U.S. Department of Transportation Federal Aviation Administration in their Advisory Circular dated November 10, 1994, issue #AC 150/5300-13 states in Chapter 2, AIRPORT GEOMETRY:

“This chapter presents the airport geometric design standards and recommendations to ensure the safety, economy, efficiency, and longevity of an airport. 201. Coordination with the FAA and users of the airport should assist in determining the airport's immediate and long range functions which will best satisfy the needs of the community and traveling public. This involves determining the following: (1) The operating characteristics, sizes, and weights of the airplanes expected at the airport; (2) The airport reference code (ARC) resulting from (1); (3) The most demanding meteorological conditions in which airplanes will operate; (4) The volume and mix of operations; (5) The possible constraints on navigable airspace; and (6) The environmental and compatible landuse considerations associated with topography, residential development, schools, churches, hospitals, sites of public assembly, and the like. Runway location and orientation are paramount to airport safety, efficiency, economics, and environmental impact. Environmental Factors. In developing runways to be compatible with the airport environs, conduct environmental studies which consider the impact of existing and proposed land use and noise on nearby residents, air and water quality, wildlife, and historical/archeological features...g. Wildlife Hazards. In orienting runways, consider the relative locations of bird sanctuaries, sanitary landfills, or other areas that may attract large numbers of birds or wildlife. Where bird hazards exist, develop and implement bird control procedures to minimize such hazards.

The large number of Canadian geese that are attracted to the area by the many ponds are already a hazard to pilots. To bring the runway closer to the habitats of these birds is simply negligent.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

As an Ann Arbor city resident, a constituent of yours, and one of the taxpayers who adds to our city's revenue, I strongly object to the extension of the Ann Arbor city airport runway. This a poor plan that has ignored the significant negative impact this expansion will have on residential property (see below), noise pollution, safety of homeowners, quality of homelife and wildlife. There is no need to extend the runway to accommodate larger aircraft when a superb airfield alternative already exists – constructed with federal and state taxpayer dollars -- just eight air miles away at Willow Run for these larger aircraft, which makes any extension of the Ann Arbor field both unnecessary and wasteful. For that reason, I urge you to intervene and reject the Airport Expansion Plan.

Thank you for your prompt attention to this matter.

See Noise Responses #1, #2, and #3, Wildlife Response #1, Safety/Health Responses #2, #5, #6, #7, #14, and #16, and General Response #3, #5, #10, #13, and #14.

Sincerely,

Rosemarie Simon

Rosemarie Simon

PS: Attached is a picture of the structural damage to my home from plane engine vibrations. I have had this damage repaired four times.

(Below is a view of the upper most corner of my home, the top of a stairwell and cathedral ceiling, where the crack keeps reappearing.)



Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, January 9, 2023 8:05 AM
To: William Ballard
Subject: FW: Strenuous Objection to proposed Ann Arbor Airport Expansion

From: Stegalls <rstegall1@comcast.net>
Sent: Friday, January 06, 2023 12:58 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov
Subject: Strenuous Objection to proposed Ann Arbor Airport Expansion

You don't often get email from rstegall1@comcast.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

As residents of Stonebridge for over a decade, we strongly object to the subject proposed expansion. By now all the relevant objections have been raised multiple times and no responses to these objections mitigate the serious concerns this expansions raises – especially to the Stonebridge community which would be directly impacted very negatively. We implore you to drop this proposed expansion.

[See General Response #13.](#)

Russ and Denise Stegall
5501 Pinnacle Ct.
Ann Arbor, MI 48108
Rstegall1@comcast.net

Sent from [Mail](#) for Windows

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, December 14, 2022 3:16 PM
To: William Ballard
Subject: FW: Strong Objection to Ann Arbor Airport Expansion

-----Original Message-----

From: RDS <rstegall1@comcast.net>
Sent: Wednesday, December 14, 2022 1:12 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Strong Objection to Ann Arbor Airport Expansion

[You don't often get email from rstegall1@comcast.net. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

We were unable to attend the December 13th meeting regarding this subject, but we want to voice our strong objection to the proposed expansion. We reside in the Stonebridge subdivision, one of Ann Arbor/Pittsfield Township's premier residential communities.

We already experience frequent "flyovers" based on our proximity to the airport and know that the proposed expansion would result in increased activity over our condo. In short, we believe the proposed expansion would negatively impact our quality of life and quite likely our property values. With the availability of larger nearby airports in Ypsilanti (Willow Run) and Romulus (Detroit Metro) providing viable alternatives, we strongly urge you to not approve this proposed expansion.

Russ and Denise Stegall
5501 Pinnacle Ct.
Ann Arbor, MI 48108
rstegall1@comcast.net

See Noise Responses #1, #2, #3, and #7, General Responses #5, #10, and #13, and Financial Economic Responses #2 and #11.

Sent from my iPad

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 3, 2023 5:58 PM
To: William Ballard
Subject: FW: Letter of opposition Ann Arbor Airport runway 2022 Draft Environmental Assessment (EA)

-----Original Message-----

From: Ryan Meral <ryanmeral@gmail.com>
Sent: Tuesday, January 03, 2023 10:05 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov
Cc: kathewun@aol.com
Subject: Letter of opposition Ann Arbor Airport runway 2022 Draft Environmental Assessment (EA)

[You don't often get email from ryanmeral@gmail.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

To whom it may concern,

My name is Ryan Meral. I am an assistant professor of anesthesiology at the University of Michigan, as well as a resident of the Stonebridge neighborhood. I am writing in the strongest opposition to the proposed Ann Arbor Airport runway expansion.

My significant concern is regarding the health of my two children.

There are some serious concerns regarding the 2022 EA. As you know, the FAA requires the identification of environmental health risks to children. However, despite numerous scientific studies confirming the negative impact of aircraft noise on the neuropsychological development of children, the SRDEA does not discuss such threats, concluding, instead, that "the FAA has not established a significance threshold for impacts to children's environmental health and safety..."

[See Noise Response #1 and Safety/Health Response #4](#)

Even further, my other concern is regarding the air quality my children will be living in. I have copied two different links, one from the US House of Representatives Oversight committee entitled "Toxic Air: How Leaded Aviation Fuel is Poisoning America's Children"

(<https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Foversight.house.gov%2Flegislation%2Fhearings%2Ftoxic-air-how-leaded-aviation-fuel-is-poisoning-america-s-children&data=05%7C01%7Cwilliam.ballard%40meadhunt.com%7Cd4dee6f9c7c14013892c08daedddf424%7Cb467145be9b54d22a13d8331f319ce09%7C0%7C0%7C638083834799967286%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikl1haWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=z8NZuCdI%2FEdHXX0fegzQtoNomc2Lrel%2Bh94gJ8K8n%2FY%3D&reserved=0>)

as well as from The Hill entitled "EPA proposes deeming lead in aviation fuel a danger to public health"

(<https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fthehill.com%2Fpolicy%2Fenergy-environment%2F3677980-epa-proposes-deeming-lead-in-aviation-fuel-a-danger-to-public-health%2F&data=05%7C01%7Cwilliam.ballard%40meadhunt.com%7Cd4dee6f9c7c14013892c08daedddf424%7Cb467145be9b54d22a13d8331f319ce09%7C0%7C0%7C638083834799967286%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLj>)

AwMDAiLCJQJjoiV2luMzliLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=cM0FjHT498kdffaW5VUCm7GEqZTatsV3pcbmqSJlJ5o%3D&reserved=0).

Please note both of these articles were published within the last six months of 2022.

See Air Quality Response #1.

In conclusion, I again voice my strongest opposition to the proposal.

I would be happy to communicate further and answer any questions that may arise. Thank you so much for your time and consideration.

Sincerely,

Ryan Meral, MD
ryanmeral@gmail.com

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 3, 2023 6:06 PM
To: William Ballard
Subject: FW: Opposition to Proposed Ann Arbor expansion

From: Sally Twist <sjtwist@gmail.com>
Sent: Sunday, January 01, 2023 5:50 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Fwd: Opposition to Proposed Ann Arbor expansion

You don't often get email from sjtwist@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Begin forwarded message:

From: Sally Twist <sjtwist@gmail.com>
Date: January 1, 2023 at 5:28:35 PM EST
To: houttemans@michigan.gov, mjkulhanek@a2hov.org, JEyer@a2gov.org, DAkmon@a2gov.org
Subject: **Opposition to Proposed Ann Arbor expansion**

I am a resident of Pittsfield township and I am writing to strongly oppose the current proposal to expand the Ann Arbor Airport runway to accommodate larger aircraft. The reason for Ann Arbor Airport expansion is not apparent when weighed against environmental, economic, and safety impacts. The plan is also not forward-looking and consistent with Ann Arbor's Comprehensive Plan.

See Noise Response #3, Safety/Health Responses #7 and #16, and General Responses #3, #13, #14, and #15.

Safety, noise, air pollution, home values, Canadian geese and other fowl are just some of the concerns in this busy and populated area. I strongly recommend you do not approve this expansion.

SallyTwist

See Noise Responses #1 and #2, Air Quality Response #1, Wildlife #1, Safety/Health #1, #2, #5, #6, #8, and #14, and Financial/Economic #2.

2220 Twin Islands Ct.

Ann Arbor, MI 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, December 14, 2022 7:55 AM
To: William Ballard
Subject: FW: Runway Extension

From: sam galanis <sam.galanis@gmail.com>
Sent: Tuesday, December 13, 2022 1:41 PM
To: Airport (Public Services) <Airport@a2gov.org>
Subject: Runway Extension

You don't often get email from sam.galanis@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

We occasionally ferry U of M needy hospital patients to their home cities via Wings of Mercy flights. We ask that they be taken to Willow Run Airport for boarding because the 3,500' Ann Arbor runway does not meet our maximum safety requirements. We can "safely" take off, but for maximum safety, we need 4,000', as that is the distance needed if we lose an engine. Extending the runway will allow for safer operations and be positive for the community at large.

Respectfully submitted, Sam Galanis. P.S. Aircraft is N3RK

[See Support Responses #2 and #10.](#)

Dave Clawson

From: houttemans
Sent: Monday, December 19, 2022 9:10 AM
To: Kulhanek, Matthew
Cc: William Ballard
Subject: FW: Airport Expansion Health Detriments

FYI

From: Sandra Hillman <sandra.g.hillman@gmail.com>
Sent: Thursday, December 15, 2022 11:37 PM
To: Houtteman, Steve (MDOT) <HouttemanS@michigan.gov>
Subject: Airport Expansion Health Detriments

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Hello Mr. Houtteman,

I am writing to strongly oppose the airport expansion of the Ann Arbor Municipal Airport because of the elevated decibel levels and exacerbated noise levels that my family will be exposed to.

See Noise Responses #1 and #2.

We live in Stonebridge and already are impacted by the excessive noise of the current stream of lift offs and landings especially of the flight schools. My son has Autism and Sensory Processing Disorder and is highly sensitive to the elevated noise levels from the flights. He is so impacted that he refuses to go outside in the summer time frequently because he is afraid of hearing the plane noise which has grown increasingly just in the past two years. It seems that the flight patterns have become more prominent over our part of the subdivision and the noise even louder that we are often disturbed even while in the house. The decibel levels are so high outdoors, that it is impossible to communicate in conversation with someone who is within a few feet of another. It is no wonder that this is especially detrimental and excruciating to someone with elevated sensory processing issues.

See Noise Responses #1 and #2.

I urge you not to allow for expansion of the airport. It has a major negative effect on the quality of life of someone who is already disabled as well as on the rest of our family.

See General Response #13.

Best regards,

Sandra Giudici
2000 Pebbleview Dr.
Ann Arbor, MI 48108

Dave Clawson

From: Kulhanek, Matthew <MKKulhanek@a2gov.org>
Sent: Tuesday, December 20, 2022 1:17 PM
To: William Ballard
Subject: FW: Please Oppose Airport Expansion!

From: Sarah Kruger <sjkruger@umich.edu>
Sent: Tuesday, December 20, 2022 1:00 PM
To: Airport (Public Services) <Airport@a2gov.org>; Kulhanek, Matthew <MKKulhanek@a2gov.org>
Subject: Please Oppose Airport Expansion!

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Ann Arbor City Council Members,

I am writing to express my strongest objections to the proposed expansion of the Ann Arbor Municipal Airport and urge you to intervene in opposition of this proposal. I live off of Lohr Road and very close to the Ann Arbor Municipal Airport. The proposed expansion is a risk to local; safety, health, and wildlife.

The proposed runway expansion will increase heavier air traffic including jets and charters which will cause substantial noise and safety risks to the neighboring communities which surround the airport, as well as residents of Ann Arbor along the airport's primary flight path. There has already been a very near miss in June of 2009 in which a small aircraft was forced to make an emergency landing on a golf course thankfully no one was injured. There were two other mishaps since the expansion proposal, both of which caused injuries—one on the airport and one several miles south. Another example of this hazard is in nearby South Lyon, where a plane crashed into one of the densely populated surrounding neighborhoods and killed a family and destroyed 2 homes in January 2021.

See Noise Responses #1, #2, and #3 and Safety/Health Responses #2, #5, #6, and #14.

Operating an airport around such densely populated homes and business is already hazardous, especially with the volume of inexperienced pilots circling overhead doing trainings. Expanding the airport increases the risk of a fatal accident both by the runway being even closer to homes, but also in the increased volume of air traffic.

See Safety/Health Responses #2, #5, #6, #9, and #14.

I have many concerns related to environmental impacts not only for the homes and business that surround the airport, but also very much for local wildlife and wild paces. I have a well-water system as do many who live in this area surrounding the airport. I have great concerns about how the local water supply will be impacted. Additionally, I am very concerned about negative impacts on surrounding wetlands and wildlife. These wetlands serve as habitats for many animals, including many geese which we also know poses a substantial threat to air traffic and contributes to accidents. Larger planes and increased traffic will also negatively impact the air quality surrounding the airport.

See the following responses: Noise Response #3, Wildlife #1, Water Quality #1 and #2, Air Quality #1, and Safety/Health #1 and #8.

Noise from air traffic already impedes the quality of life for local residents. The planes are almost constant, they fly low and circle. They wake you in the middle of the night or in the early morning. They cause so much noise that if you are conversing with someone outside right next to you when they fly over you have to stop your conversation because it's so loud. The air traffic noise is a current annoyance that reduces quality of life for the surrounding residents which we try to live with, but increasing air traffic and having larger planes would make the noise unbearable.

See Noise Responses #1, #2, #3, #7, and #9.

As a local resident, a constituent of yours, and one of the taxpayers who would be paying for this airport extension, I strongly object to this proposal. This is a poor use of taxpayer monies and is harmful to our community. There is no

need for such an expansion as the Willow Run airport is able to accommodate larger aircraft and is only 8 air miles away. For all of the reasons I have detailed above, I strongly urge you to intervene in opposition of this proposal.

Sincerely,

Sarah Kruger

Address: 1399 Fieldstone Court, Ann Arbor, MI 48108

Ph: 734-323-7063

See Noise Response #3, Safety/Health Responses #7 and #16, Financial/Economic Response #11, and General Responses #3, #5, #10, and #14.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, December 16, 2022 1:38 PM
To: William Ballard
Subject: FW: airport expansion

From: Susan Choate <smchoate@umich.edu>
Sent: Friday, December 16, 2022 10:05 AM
To: JENNIFER MOBERG <smodin1@comcast.net>; Sharon Terry <shar672314@aol.com>; cakewilly80@yahoo.com; Dan Kohler <archdan@comcast.net>; Tracy Kohler <trakoh@comcast.net>; Kulhanek, Matthew <MKulhanek@a2gov.org>; Stephen Lynn <stephenclynn@gmail.com>
Subject: Fwd: airport expansion

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

----- Forwarded message -----

From: Susan Choate <smchoate@umich.edu>
Date: Fri, Dec 16, 2022 at 9:52 AM
Subject: airport expansion
To:

Public comment: We have lived at Textile and Lohr for 35 years and have found the airport to be a good neighbor. Since my husband was a night freight pilot flying out of Willow Run and Detroit Metro for most of that time, as well as owning a single engine private plane based at Ann Arbor Airport for several years, we are aware of the pros and cons of expansion. Amazon already has a warehouse near Metro, just a 30 minute drive away. Willow Run is already able to accommodate all sizes of aircraft just 20 minutes away. Opening the door at Ann Arbor Airport to commercial operations that often operate large aircraft at night is asking for a tremendous increase in noise 24/7. The expansion is unnecessary to maintain current operations in Ann Arbor.

We completely oppose the plan.

Sincerely,
Sue Choate

See Noise Responses #1, #2, and #3, Safety/Health Responses #7 and #16, Financial/Economic Response #11, and General Responses #3, #5, #10 and #14.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 3, 2023 5:56 PM
To: William Ballard
Subject: FW: ann arbor airport expansion

-----Original Message-----

From: Sue Wilkins <suedwilkins@gmail.com>
Sent: Wednesday, December 28, 2022 11:00 AM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>; kathewun@aol.com
Subject: ann arbor airport expansion

You don't often get email from suedwilkins@gmail.com. Learn why this is important
<<https://aka.ms/LearnAboutSenderIdentification>>

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

This is to let you know as a resident of the Stonebridge Community in Pittsfield Twp and am adamantly against any expansion of the airport. We certainly don't need the safety concerns or the added noise level that would come with this senseless project. As stated time and time again our peaceful community of Pittsfield Twp does not need this. Willow Run airport can handle all the needs the airport is seeking.
VOTE NO ON AIRPORT EXPANSION.

See Noise Responses #1, #2, and #3, Safety/Health Responses #2, #5, #6, and #14, Financial/Economic Response #11, and General Responses #5 and #10

SUGGESTED TALKING POINTS

These are some suggested talking points to help inform your comment letters on the Second Revised Draft Environmental Assessment (SRDEA).

- The proposed runway extension would move ARB's primary Runway 24 870 feet closer to Lohr Road, adding to the risks to residents near the end of the runway, which are not adequately protected by so-called "Runway Protection Zones."

See Safety/Health Response #2, #5, and #6

- The SRDEA has dropped prior claims, since the onset of the project in 2007, that the expansion was a "safety extension." Since the FAA ruled that federal funds would not be available for such an expansion, the focus was shifted to "improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase over time."

See Technical Response #1

- However, of the four "critical aircraft" types identified by the SRDEA, three could operate 100% of the time on the existing 3,505-foot runway. Only the Cessna Citation Excel XLS, the type of aircraft owned and operated by AvFuel Corp., which dominates operations in this class, could suffer weight penalties on hot summer days, but could still operate at full weight 90% of the time, and at 100% capacity on most days. At most, only 48 operations per year of the Citation XLS class's 263 annual operations (in 2019) could be impacted by hot weather – a miniscule .00038 of ARB's total annual operations – hardly sufficient to justify the proposed expansion.

See Technical Response #2

- The SRDEA acknowledges that any expansion would likely attract more jet traffic, where larger and heavier aircraft pose additional risks in an area heavily populated by Canada geese.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

- Further complicating issues, because ARB is a municipal airport funded with federal dollars, any pilot who chooses can land at the airport, no matter the size of their aircraft – adding to the level of risk. Ann Arbor cannot regulate the type of aircraft that could utilize the field.

See General Response #18

- The SRDEA acknowledges for the first time the presence of Canada geese surrounding the airport, with a U.S. Department of Agriculture inspector observing 75-100 Canada geese at the airport, feeding in a tilled fallow field. The inspector also reported "flocks of 5 to 15 geese arrived on the airfield at different times. . . Geese were observed within 10 yards of the runway." The inspector concluded that, "Canada geese are a real and present danger, and will need to be managed for the foreseeable future. KARB is surrounded by ideal resident / migratory Canada goose

habitat.” However, the SRDEA presents no plan for such mitigation – and makes no mention of any risks posed by the Canada geese.

See Wildlife Response #1 and Safety/Health Responses #1 and #8

- The Purpose and Need statement does not support the need for an extended runway. The SRDEA contends that aircraft that routinely use ARB suffer “undue concessions in reduced fuel, passengers, and / or cargo loads. . .diversions to other airports are also commonly needed when the runway surface is wet, or during summer months when higher temperatures reduce aircraft performance.” However, the SRDEA provides no actual data in support of the claimed concessions or diversions. The FAA noted, “the rate of users taking weight restrictions has not been documented,” and, “The inclusion of the contaminated runway length distances cannot be used to justify FAA funding requirements” for an extended runway.

See Technical Responses #7 and #9

- The SRDEA stated an excess number of hot weather days at ARB. To justify the proposed expansion, the SRDEA identified 81 hot days in Ann Arbor, when temperatures exceeded 80 degrees (in 2019). However, aircraft performance charts included in the SRDEA suggest an industry standard for hot weather is 85 degrees, not 80 degrees. There were only 66 days in 2019 when the temperature exceeded 85 degrees. Thus, the SRDEA inflated the number of hot weather days by 25% by using the 80-degree standard.

See Technical Response #5

- The SRDEA alludes to a connection between “many prominent business and institutions with the University of Michigan being the area’s largest employer. Manufacturing, health care, automotive, information technology, and biomedical research companies account for major employers surrounding the area” that often require “air transportation to bring workers, clients, suppliers, customers, and time sensitive parts / supplies to and from the region.” However no specific connection between those business needs and ARB was established in the SRDEA. It was merely an allusion.

See Financial/Economic Response #1

- The SRDEA also suggests that the UM’s six / seven home football weekends and Michigan International Speedway two annual NASCAR events bring increased aircraft activity to the area, and that “should Runway 6 / 24 be extended, additional aircraft activity could occur at ARB due to its proximity to special event venues.” However, the SRDEA contained no actual forecasts of such potential activity.

See Technical Response #3.

- However, a less sanitized version of the SRDEA, contained in an earlier draft submitted to the FAA and reviewed under the Freedom of Information Act, projected an immediate tripling of annual jet operations if the ARB runway were extended to over 1,000 per year, with another 500-665 operations from jets, which currently utilize Willow Run Airport, possibly moving to an extended ARB on football weekends. That earlier draft SRDEA suggested up to 40% of the 9,313 annual small and medium jet operations at Willow Run “would likely shift to ARB if additional runway length were available,” thus increasing jet operations from the

360 in 2019 to upwards of 3,660 jet operations per year – ultimately turning ARB into a jetport. We cannot let that happen!

See Technical Response #4

- To temper any fears of such runway expansion, the final SRDEA omitted such jet growth claims and forecast, instead, that the operations of small turboprop and jet aircraft “will slowly increase over time.”

See Noise Response #3

- While the SRDEA projects a maximum of ARB operations of 84,336 in 2039, it is interesting to note that the current 3,505-foot runway supported almost two-thirds more operations in 1999 – 134,554, suggesting the current runway is more than sufficient for the projected future.

See Technical Response #6

- Any ARB expansion is especially dangerous because, with jets being the primary source of increased operations, it raises the level of risk in an area heavily populated with Canada geese, which do not interact well with jet aircraft.

See Noise Response #3, Wildlife Response #1, and Safety/Health Responses #1 and #8

- ARB also has certain conditions that can enhance the level of risk over other nearby airports: Instrument approaches and landings are not permitted at the airport. The control tower only operates part-time. Also, in winter, de-icing is not permitted on the airport, to protect the wells on the property that produce drinking water. And ARB does not provide 24-hour on-site fire and rescue services.

See Safety/Health Response #3

- The noise problem around the airport would almost certainly increase. Even the very conservative FAA-required noise analysis conducted as part of the SRDEA concedes that the harmful 60-decible noise level would extend to “a residential area at the southwest corner of the airport.”

See Noise Responses #1, #2, and #3

- The FAA requires the identification of environmental health risks to children. However, despite numerous scientific studies confirming the negative impact of aircraft noise on the neuropsychological development of children, the SRDEA does not discuss such threats, concluding, instead, that “the FAA has not established a significance threshold for impacts to children’s environmental health and safety. . .”

See Noise Response #1 and Safety/Health Response #4

- The SRDEA does not acknowledge any potential risks to the three wells on airport property that supply about 20% of Ann Arbor’s drinking water, stating only that, “there are several water wells on ARB property, all of which are outside the proposed project area.” The SRDEA, however, contained extensive analysis of wetlands and streams in and around the property. But nothing about the important drinking water wells!

See Water Resources/Water Quality Response #1

Thus, there is plenty to object to regarding the proposed expansion.

Susan Riggs Runge, MD
1730 Stonebridge Dr South
Ann Arbor, MI 48108
January 5, 2023

Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Dr.
Ann Arbor, MI 48108

Dear Sir:

I am extremely concerned about possible expansion of the Ann Arbor Municipal Airport. There are multiple reasons that I do not think this potential runway expansion is either reasonable or prudent.

First, an argument of proponents for the runway expansion frequently make the entitled argument that “you knew there was an airport there when you moved to Stonebridge.” That is true. However, there was every reason to believe that there would not be the runway extension being proposed. This issue has been dealt with many times already but keeps being pushed by the airport administration.

Second, the airport has made a financial argument that by allowing larger planes and jets to operate out of the Ann Arbor there will be a benefit to the community, stating that without this additional income the Ann Arbor airport will be unable to be fiscally viable.

See Noise Response #3, Safety/Health Responses #7 and #16, and General Responses #3 and #14.

This is an odd argument since the Ann Arbor airport, like many small General Aviation airports was constructed using the Civil Works Administration funds as part of the civil works projects created after the great depression. Subsequently there has been additional funding from the Civil Aeronautics Administration (CAA). Now that federal funds are becoming harder and harder to get, there is an interest in expanding in ways that may or may not qualify for federal funds. The runway expansion will be very costly under any circumstance but without other funding sources will have to be funded by local taxpayers.

See General Response #3.

Below are two examples (of many) of how the landscape is changing and this type of airport is very unlikely to succeed over the long run.

Some larger general aviation airports in or close to major cities have recently been denied funding and permits to expand. Take the Teterboro airport – a major destination for executives and private charter jets with NYC destinations. It is very unlikely that the Teterboro expansion will be approved and alternatives using other NYC airports are likely to prevail. This should be the case with the proposed Ann Arbor airport expansion.

As with Teterboro, there is an excellent alternative. Willow Run is a much larger and better airport than Ann Arbor and closer to Detroit and its suburbs. Small general aviation airports that support flying lessons or hobbyists in similar communities like the Ann Arbor airport are closing across the country.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

A second, very relevant example is the former Horace Williams airport in Chapel Hill, North Carolina, is almost exactly analogous. It closed in May of 2018. This closure was opposed for many years by private plane owners, flying instructors, lobbyists seeking to preserve their access to the airport and, even, the UNC-related Area Health Education Centers, a noble cause. These basically are all personal interests and with the airport closure, all have been moved to Raleigh-Durham International Airport with no negative impact. This same exact dynamic has played out across the country in airports similar to the Ann Arbor airport.

Third, there is the argument made that the Ann Arbor airport serves a valuable need for the University of Michigan Health System for medical flights. This is simply not true. There is a helipad at the university hospital and currently flights supporting the large transplant program at the university operate out of Willow Run. It has been estimated that the lost time between transporting an organ or patient from Willow Run vs the Ann Airport is approximately ten minutes. [See General Response #22.](#)

Finally, it is well documented that accidents and aviation deaths is much higher at small General Aviation airports than at commercial airports, in some cases by 100-fold. Just this past September, a Cessna 152 flight had to make an emergency landing in the bean field adjacent to the airport shortly after takeoff. Fortunately, there were no injuries reports. However, had the power loss happened minutes later, the results could have been tragic both for the pilot and passenger in the plane but also for residents of Stonebridge. To encourage larger and faster airplanes to use this facility also poses a well known risk of large birds damaging jet engines with the potential for flight failure and crashing. Anyone who lives in this area knows of the large number of geese and swans that make this area their home due to water supplies and abundant food in the field immediately adjacent to the airport.

[See Noise Response #3, Wildlife Response #1 and Safety/Health Responses #1, #2, #5, #6, #8, and #14.](#)

Recent publications have cited a number of approaches to controlling this risk including: firing air cannons when birds are present in an area of aircraft activity, making the nearby landscape less bird-friendly by filling in ponds or replacing grass with gravel. There is zero enthusiasm for the abatement approaches in Stonebridge, or likely in any part of Ann Arbor. A commitment to a runway expansion to accommodate jets means a commitment to control the risk from geese or risk a tragic accident to the plane, its passengers and the people on the ground.

[See Noise Response #3, Wildlife Response #1 and Safety/Health Responses #1, #2, #5, #6, #8, and #14.](#)

On a personal note, I have found the flights over our part of Stonebridge disrupting and disturbing as these can occur at any time of night or day. Some are so loud it seems they are about to land on the house and many times I have been awakened at night or in the wee hours of the morning by a noisy airplane. and, with flying lessons, the same plane will fly over homes in our area as many as 10 times during a lesson. This is both a safety hazard with risk to adults, children and pets as well as a quality-of-life issue. [See Noise Responses #7 and #9.](#)

There are published noise abatement flight paths, but these are not required to be used and don't seem to be used for pilot lessons. As I've been writing this letter, two different flight lessons have been buzzing over my home for the last 30 minutes. Had there been any attempt to mandate these alternate paths, I might have been more sympathetic. [See Noise Responses #7 and #9.](#)

Any expansion of the airport will increase automobile traffic, noise and quality of life for those who live in this area. Real estate values will likely severely decline for homeowners in our area.

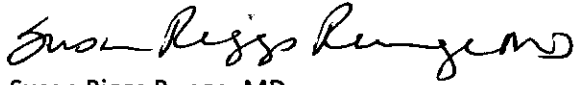
[See Noise Responses #1, #2, and #3, Financial/Economic Response #2, and General Responses #13 and #19.](#)

In summary, except for the wishes of a very small number of plane owners, flight instructors and those with larger planes, there can be made no argument for expanding the airport. Expansion of the airport contradicts the stated goals of the Ann Arbor City Council to reduce the carbon footprint of Ann Arbor.

See Air Quality Response #3, Safety/Health Responses #7 and #16, and General Responses #3 and #14.

I hope you will consider these factors seriously prior to continued lobbying for a runway expansion at the Ann Arbor Airport.

Sincerely,



Susan Riggs Runge, MD

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 3, 2023 6:10 PM
To: William Ballard
Subject: FW: Opposition to Pittsfield Township Airport expansion

From: Th McDonnell <tmx513@ameritech.net>
Sent: Monday, January 02, 2023 9:36 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: kathewun@aol.com
Subject: Opposition to Pittsfield Township Airport expansion

You don't often get email from tmx513@ameritech.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Kulhanek:

The purpose of this communication is to express opposition to the proposed Pittsfield Airport expansion. The current increase in training and commercial flights has turned the neighborhood community of Stonebridge into a version of Detroit Metro Airport.

While the lengthening of the SE-NE runway by 720 feet to accommodate commercial aircraft may seem insignificant, it significantly increases noise level, reduces WI-FI signals, disturbs and ruptures the housing interiors, decreases property value, and renders Stonebridge an airport and not a residential community. Commercial aircraft have the ability to land at Willow Run Airport, 10 miles to the east.

See Noise Responses #1, #2, and #3, Financial/Economic Response #11, and General Responses #5 and #10.

Constituents and community over commercialism.

Respectfully submitted,

Theresa McDonnell
Stonebridge Community
4712 Sawgrass Dr. E.
Ann Arbor, MI 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, January 4, 2023 7:31 AM
To: William Ballard
Subject: FW: Reject proposed Ann Arbor airport expansion

From: Susan Wisely <swisely@comcast.net>
Sent: Tuesday, January 03, 2023 10:20 AM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>; Eyer, Jen <JEyer@a2gov.org>; Akmon, Dharma <DAkmon@a2gov.org>
Subject: Fwd: Reject proposed Ann Arbor airport expansion

You don't often get email from swisely@comcast.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

I was going to list all of the reasons why the airport expansion should not happen, but I realized that this been done over and over again for over 15 years and yet, here we are again.

Countless experts have researched the negative effects of expanding the airport. Residents have pleaded with you to preserve their environment and property values. Business owners have also pointed out the negative impact on the environment and the dangers of expansion.

As residents of Pittsfield Township, we implore you to put an end to this once and for all.

Thomas and Susan Wisely
5266 Pinnacle Court
Ann Arbor, MI 48108

See Noise Responses #1 and #2, Wildlife Response #1, Water Resources/Water Quality Responses #1 and #2, Air Quality Response #1, Financial/Economic Response #2, and Safety/Health Responses #2, #5, #6, and #14.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Monday, December 19, 2022 7:08 AM
To: William Ballard
Subject: FW: Proposed airport runway expansion

-----Original Message-----

From: wiley massingill <wileymassingill@gmail.com>
Sent: Sunday, December 18, 2022 6:06 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Proposed airport runway expansion

You don't often get email from wileymassingill@gmail.com. Learn why this is important
<<https://aka.ms/LearnAboutSenderIdentification>>

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear sir,

I live at 2225 twine islands court, located in bridge community. I moved here 7 years ago,,and I am 70 years old. Right now I realize that ever summer that comes how unhappy I am living here because of the irritating noise from airplanes. Any proposed runway expansion will increase the irritating sound level and increase the number of times they fly over my head. Weekends are meant to fun times spending time out side. With the noise I can't do it. You would have thought I would have thought about this before I bought here. As a kid I lived near metro. I have no memories of noise affecting me.

I hope to influence you not to support the runway expansion to improve my quality of life

See Noise Responses #1 and #2.

William J. Kraus (wjkraus@gmail.com)
4614 Sawgrass Drive West
Ann Arbor, Michigan
48108

December 12, 2022

Steve Houtteman (houttemans@michigan.gov)
MDOT-AERONAUTICS
2700 Port Lansing Road
Lansing, Michigan
48906

Matthew Kulhanek (mjkulhanek@a2gov.org)
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, Michigan
48108

Dear Mr. Houtteman and Mr. Kulhanek,

I offer this letter in support of the proposed expansion of Ann Arbor Municipal Airport (the “Airport”).

As brief background, I am a resident of the Stonebridge Community (“Stonebridge”) neighboring the Airport, and have lived there for approximately two years. I am also a certified FAA Private Pilot who learned to fly at the Airport.

When I moved to Stonebridge, I understood—as every other person to ever build or move to Stonebridge in its short history¹ no doubt understood—that I was choosing to purchase a property near a small airport. Suffice it to say, I and others in Stonebridge have presumably benefited from that proximity, namely in the form of lower home prices and lower Pittsfield Township taxes. I would also not be surprised if I and other residents directly benefit from the reduced response time of Pittsfield Township Fire Station #3, which I assume was built, in part, to cover the Airport (as well as others who chose to develop residential real estate in its shadow).

Broadly speaking, I understand that Stonebridge has opposed aspects of the Airport more or less continually for the last thirty years. For example, when I was training to earn my FAA certification at the Airport in 2008, I was expressly instructed to implement noise abatement procedures demanded by Stonebridge fourteen years ago.

Today, I understand that Stonebridge is again voicing opposition of the Airport, this time to the proposed expansion of Runway 6/24. Based on a communication I received urging all Stonebridge residents to oppose this expansion, I understand the principal concerns of my neighbors (or at least a vocal few of them) to be: a) that aircraft would pass over Lohr Road “at 1/3 the altitude they currently do; about 100 feet[;]” b) “due to the lower altitude and larger aircraft; [sic] noise levels would be double or triple what they are now[;]” and c) “the risk of a bird strike (goose or swan) at these lower altitudes is greatly increased.” As discussed below, these arguments are red herrings.

First, my review of the materials available online regarding the expansion does suggest that some aircraft landing on Runway 6 will fly lower over Lohr Road than they currently do. As best I can tell, the proposed expansion would require a significantly less steep approach to Runway 6 than is currently required, resulting in aircraft potentially passing over Lohr Road roughly 70-80 feet lower than they currently do. Practically speaking, not every aircraft landing at the Airport would require, or attempt to utilize, the maximum length of the expanded runway. As such, I expect that most aircraft will continue to land at Runway 6 using an approach like what they use now, but with expanded margins for safety.

¹ Off hand, it appears that the Airport was in use for more than sixty years prior to the establishment of Stonebridge.

To that end, my anecdotal understanding is that most landings at the Airport occur on Runway 24 as a result of local wind patterns. If correct, I question the implication that minimum altitude approaches over Lohr Road will occur frequently. Likewise, it is neither advisable nor routine for small aircraft that require short takeoff distances (like the vast majority of the aircraft using the Airport) to use the maximum length of a runway for takeoff. This, too, suggests that the expansion will have little impact on the altitude of aircraft departing Runway 24. What I would expect, however, is that *all* aircraft using the Airport would benefit from the possibility of additional runway length in the event it was needed (such as in an emergency). This actual safety consideration is ignored by opponents from Stonebridge, who seem to believe that their safety (in the infinitesimally small chance that an aircraft collides with their home) must take precedence. [See Support Responses #2 and #14.](#)

Second, while Stonebridge has suggested that noise levels over the community would dramatically increase as a result of “lower altitude and larger aircraft,” that claim does not appear to be supported by either the communication I received from Stonebridge or the publicly available materials studying the noise impact of the expansion. To the contrary, it appears that the Airport will continue to be—as it was long before Stonebridge was built and is today—a relatively quiet neighbor. In fact, I would offer further anecdotal evidence that vehicle noise associated with the major roads neighboring Stonebridge (Maple Road and Lohr Road) far exceeds what is generated by all but a small number of aircraft operating from the Airport, now or with the proposed expansion.² [See Support Response #17.](#)

Third, it appears that the possibility of a bird strike—particularly, Canadian Geese that seasonally populate the area—is being held out as a key reason to oppose expanding the Airport. The argument, so it goes, is that because geese [sometimes] can be found around Stonebridge, [some] aircraft flying [incrementally] lower [when the less-used Runway 6 is being utilized] presents the increased risk of a bird strike. Implicitly referring to US Airways Flight 1549 (a/k/a the “Miracle on the Hudson”), the Stonebridge Community website further claims that “Canada geese . . . do not interact well with jet aircraft, as several prominent national accidents have showcased.” The website then goes on to state that the Airport (pre-expansion) already has geese on its property and on nearby undeveloped land.

Among other reasonable responses that could be made to the above, I note that Flight 1549 struck Canadian geese at approximately 3,200 feet (far higher than current or proposed Airport operations), and has little apparent relevance to the Airport expansion beyond the general proposition that “bird strikes are bad.” Furthermore, it is unclear whether there currently exists, or would exist in the future, any meaningful risk of a goose strike around the Airport. To be sure, while my understanding is that strikes do occur in aviation, they are—as a matter of comparison between the number of birds and aircraft in operation over the United States—an exceedingly rare occurrence. Likewise, the fact that geese are already found around the Airport, and the fact that I could not readily identify any past instances of a goose strike involving traffic from the Airport, suggests that the true risk is being wildly exaggerated by opponents of the expansion. [See Support Response #18.](#)

Taken together, I believe that Stonebridge’s arguments opposing the expansion of the Airport have little actual basis in fact, and largely reduce to what is commonly referred to as the concept of “NIMBY” (not in my back yard). Put differently, it appears that Stonebridge’s real concern is that home values might drop for those individuals who knowingly purchased property adjacent to the Airport. I feel that Stonebridge’s opposition therefore reflects a pernicious trend of reaping the benefits of a nearby public good (e.g., a highway, a rail line, or (in this case) an airport), and then objecting to the expansion of those benefits to others. Indeed, I have heard nothing disputing the critical role of general aviation in the United States, the potential economic benefits of the expansion, or even the increased safety offered to aircraft pilots and passengers by an expanded runway. These considerations, it would seem, are being ignored by those who have always found some reason (real or imagined) to object to the Airport’s operation.

For these reasons, I offer my strong support for the expansion of the Airport. [See Support Response #19.](#)

Warm regards,

William J. Kraus

² Notably, one argument against the expansion appears to be that it would serve little purpose given that only an extremely small number of jet aircraft are expected to benefit from the longer runway. If true, this would seem to support the conclusion that the expansion will actually have little measurable impact on day-to-day noise levels in Stonebridge.

January 7, 2023

Mr. Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108
Email: mjkulhanek@a2gov.org

Dear Mr. Kulhanek,

I am a retina surgeon at the University of Michigan Michigan Medicine. I have had the pleasure of calling Ann Arbor home with my wife and five boys for the past 8 years. I was recruited to the University of Michigan from Johns Hopkins University. I see patients in clinic, operate, and direct an active lab developing novel laser and imaging technologies to improve the vision of patients with macular degeneration and diabetes.

I am writing to you with grave concerns regarding the proposed Ann Arbor Airport runway expansion. I think this runway expansion would be disastrous for Ann Arbor, the University of Michigan, Pittsfield Township, the entire state of Michigan, and all of the residents who live in very close proximity to the proposed runway expansion.

First, there are major safety and health concerns to the families and children in close proximity to the airport. I am one of the residents in the community called Stonebridge and live at 1716 Bent Pine Court, Ann Arbor, MI 48108. This is a very residential community with numerous subdivisions, including Stonebridge, Lake Forest, Briar Hills, and Lohr Lake Village, to name a few. I have major concerns about having planes landing so close over some houses in an area heavily populated by Canada geese with training pilots. Numerous children live in these subdivisions along with Kozy Heart Daycare immediately adjacent at 5443 Lohr Rd, Ann Arbor, MI 48108. Airplane noise pollution has been shown in numerous peer-reviewed medical studies in leading journals to lead to learning difficulties and health issues in schoolchildren. Fourteen of those articles are listed in Exhibit A. The health consequences of this airport expansion on children needs further investigation given the close proximity of this daycare and numerous children to the proposed expansion.

See Noise Responses #1, #2, and #4, Wildlife Response #1, and Safety/Health Responses #1 and #8.

Second, there is no need for the expansion. While I give numerous talks both nationally and internationally and thus fly frequently, I find absolutely no need for an expansion to the Ann Arbor airport. We have a world-class international airport that is a mere 22 minutes away, the DTW Detroit Wayne County airport. Even closer is the Willow Run Airport. These airports more than meet the need for large, commercial flights, and there is absolutely no need for this expansion.

See Noise Response #3, Safety/Health Response #7, Financial/Economic Response #11, and General Responses #3, #5, #10, and #14.

This airport expansion will also have a significant unexpected negative impact on the University of Michigan. The great state of Michigan has dedicated much time, money, and energy to make a truly world-class university. It is ranked as one of the best public universities in the world. The education, innovation, and start-up companies that come from the University create hundreds of thousands of jobs throughout the state. Expanding the Ann Arbor airport would be a terrible step in destroying Ann Arbor. While I do not speak for the university, I speak as a tenured faculty at

the university with 5 children. I think this would negatively impact both Ann Arbor and the University of Michigan.

See General Response #23.

The proposed Ann Arbor Airport runway expansion would be disastrous for Ann Arbor, the University of Michigan, Pittsfield Township, and the entire state of Michigan. There is no need for the expansion, and there are numerous valid concerns, including health concerns for the children and daycare nearby. As a resident of Stonebridge, a tenured faculty at the University of Michigan, a surgeon, and a father of 5 wonderful children, I ask that you oppose the Ann Arbor Airport runway expansion.

See Noise Responses #1, #2, and #4, Safety/Health Response #7, and General Responses #3, #13, #14, and #23.

Sincerely,



Yannis M. Paulus, M.D., F.A.C.S.
Helmut F. Stern Career Development Professor of Ophthalmology and Visual Sciences
Associate Professor, Department of Ophthalmology and Visual Sciences
Associate Professor, Department of Biomedical Engineering
Medical Director, Grand Blanc ACU
Michigan Medicine, University of Michigan
Telephone: (734) 478-8400
Email: yannis.paulus@gmail.com
<https://medicine.umich.edu/dept/ophthalmology/yannis-m-paulus-md-facs>
<https://paulus.lab.medicine.umich.edu/>

Exhibit A: Peer-reviewed Scientific Articles Demonstrating the Negative Effects of Noise on Children

1. Health Effects of Noise Exposure in Children. Stansfeld S, Clark C. *Curr Environ Health Rep*. 2015 Jun;2(2):171-8. doi: 10.1007/s40572-015-0044-1. Review.
2. Association between ambient noise exposure and school performance of children living in an urban area: a cross-sectional population-based study. Pujol S, Levain JP, Houot H, Petit R, Berthillier M, Defrance J, Lardies J, Masselot C, Mauny F. *J Urban Health*. 2014 Apr;91(2):256-71. doi: 10.1007/s11524-013-9843-6.
3. A prospective follow-up study of the effects of chronic aircraft noise exposure on learners' reading comprehension in South Africa. Seabi J, Cockcroft K, Goldschagg P, Greyling M. *J Expo Sci Environ Epidemiol*. 2015 Jan;25(1):84-8. doi: 10.1038/jes.2013.71.
4. Does noise affect learning? A short review on noise effects on cognitive performance in children. Klatte M, Bergström K, Lachmann T. *Front Psychol*. 2013 Aug 30;4:578. doi: 10.3389/fpsyg.2013.00578. Review.
5. The impact of aircraft noise exposure on South African children's reading comprehension: the moderating effect of home language. Seabi J, Cockcroft K, Goldschagg P, Greyling M. *Noise Health*. 2012 Sep-Oct;14(60):244-52. doi: 10.4103/1463-1741.102963.
6. Night time aircraft noise exposure and children's cognitive performance. Stansfeld S, Hygge S, Clark C, Alfred T. *Noise Health*. 2010 Oct-Dec;12(49):255-62. doi: 10.4103/1463-1741.70504.
7. The effects of road traffic and aircraft noise exposure on children's episodic memory: the RANCH project. Matheson M, Clark C, Martin R, van Kempen E, Haines M, Barrio IL, Hygge S, Stansfeld S. *Noise Health*. 2010 Oct-Dec;12(49):244-54. doi: 10.4103/1463-1741.70503.
8. Neurobehavioral effects of transportation noise in primary schoolchildren: a cross-sectional study. van Kempen E, van Kamp I, Lebet E, Lammers J, Emmen H, Stansfeld S. *Environ Health*. 2010 Jun 1;9:25. doi: 10.1186/1476-069X-9-25.
9. Noise-induced annoyance and morbidity results from the pan-European LARES study. Niemann H, Bonnefoy X, Braubach M, Hecht K, Maschke C, Rodrigues C, Röbbel N. *Noise Health*. 2006 Apr-Jun;8(31):63-79.
10. Exposure-effect relations between aircraft and road traffic noise exposure at school and reading comprehension: the RANCH project. Clark C, Martin R, van Kempen E, Alfred T, Head J, Davies HW, Haines MM, Lopez Barrio I, Matheson M, Stansfeld SA. *Am J Epidemiol*. 2006 Jan 1;163(1):27-37.
11. Aircraft and road traffic noise and children's cognition and health: a cross-national study. Stansfeld SA, Berglund B, Clark C, Lopez-Barrio I, Fischer P, Ohrström E, Haines MM, Head J, Hygge S, van Kamp I, Berry BF; RANCH study team. *Lancet*. 2005 Jun 4-10;365(9475):1942-9.
12. Health assessment of populations living close to the airport of Bourgas, Bulgaria. Turnovska T, Staykova J, Petkov T. *Arh Hig Rada Toksikol [Archives of Industrial Hygiene and Toxicology]*. 2004 Apr;55(1):5-10.
13. The effect of noise on the health of children. Kawada T. *J Nippon Med Sch*. 2004 Feb;71(1):5-10.
14. Jets over Labrador and Quebec: noise effects on human health. Rosenberg J. *CMAJ Canadian Medical Association Journal*. 1991 Apr 1;144(7):869-75.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, October 7, 2022 11:48 AM
To: William Ballard
Cc: houttemans
Subject: EA Update via Stonebridge Subdivision

Bill,

This went out yesterday to the Stonebridge subdivision residents from one of their residents. I'll let you know if they send out sample opposition letters. Just keeping you in the loop.

Matt

Dear Stonebridge Neighbors,

I am writing to follow up on my presentation regarding the proposed expansion of the Ann Arbor Municipal Airport delivered during the Stonebridge Annual Meeting Monday night.

Many of you have asked how to stay informed regarding the Environmental Assessment (EA) now being completed by Ann Arbor. We anticipate that this third EA since the project began 14 years ago might be completed within the next month. Then a 30-day public comment period will begin.

The best way for us to keep you up-to-date as things progress is for you to become part of our grassroots citizens group the Committee to Preserve Community Quality, a legal partner with Pittsfield Township, made up of hundreds of residents from not only Stonebridge, but also Ann Arbor and Saline as well as Pittsfield, Lodi, and Scio townships. To stay informed, please send your email address to Kathe Wunderlich at kathewun@aol.com -- and we will add you to our mailing list for updates.

As I noted Monday night, we object to the runway expansion because it would cause aircraft to be landing just 93 feet over homes along Lohr Road. Even more troublesome, because Ann Arbor is a municipal airport -- with improvements paid for with public funds, primarily federal -- any pilot can choose to land at the airport with ANY aircraft, with no way to stop them. This, we believe, poses an added inherent danger.

See Noise Response #1 and Safety/Health Responses #6 and #14.

We will keep you informed as to how to join your scores of neighbors to provide public written comments on the revised EA, once it is issued. We will also send out some sample letters opposing the expansion in response to the last EA, as requested.

Thanks for your support. Again, please email Kathe at kathewun@aol.com to stay updated.

Regards,

Andy McGill

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, January 11, 2023 10:53 AM
To: William Ballard
Subject: FW: Objection. to the expansion of the Ann Arbor Airport

From: amdamon <amdamon@aol.com>
Sent: Wednesday, January 11, 2023 10:49 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov; kathewun@aol.com
Subject: Objection. to the expansion of the Ann Arbor Airport

You don't often get email from amdamon@aol.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Letter of Opposition to Expanding the Ann Arbor Airport.

Despite the following claims to expand the Runway 6/24 by 720 feet, there is not compelling data to support such a request. Therefore I submit my voice of objection, to reject any expansion based on the lack of supportive data to merit the request.

If approved, the proposal would increase to air traffic, change landing patterns for aircraft and enable larger aircraft to use the runways, and all together place a greater danger of physical and air chemical exposure, with an increase in noise pollution or worse come in contact with nearby homes in dire or emergency situations. Expanding the runway would increase air traffic and impact a nearby Canadian geese population, not to mention endanger aviation.

“To support its claim, the SRDEA emphasizes the needs of four types of “critical aircraft” – two classes of jets and two classes of turboprops. However, rather than supporting the need for an expanded runway, detailed aircraft performance charts provided in an Appendix to the SRDEA for each model confirm that three of the four classes of “critical aircraft” could operate year-round without penalty at full weight on the existing 3,505-foot runway, and that aircraft in the fourth class – dominated by the Cessna Citation Excel XLS -- could operate at full weight 90 % of the time and at 100 % capacity on most days.”-unk

For the above reasons and more, as a resident close to the airport, I am objecting to the request for expanding the Ann Arbor Airport.

See Technical Responses #2 and #7, Noise Response #1 and #10, Wildlife #1, and Safety/Health Responses #6 and #14.

Sincerely,

Ann Damon
3901 Ann Arbor-Saline Road
Ann Arbor, Michigan. 48103-9779
(734) 709-7634

See Noise Responses #1, #2, and #3.

January 10, 2023

From: Barbara E. Wise
4765 Sawgrass Dr E
Ann Arbor, MI 48108

To: **[via email]**
Matthew Kulhanek
Ann Arbor Municipal Airport
mjkulhanek@a2gov.org

Steve Houtteman
MDOT-AERONAUTICS
houttemans@michigan.gov

Kathe Wunderlich
kathewun@aol.com

RE: Proposed Expansion of the Ann Arbor Municipal Airport, specifically,
The 2022 Second Revised Draft Environmental Assessment
("SRDEA")

To Whom it May Concern:

I am very strongly opposed to the proposed SRDEA.

I do not see any benefits to individuals or the community at large in the proposed expansion. Increased noise cannot be denied. Even more importantly are possible health issues to certain populations from increased exhaust, or even the general public if the Ann Arbor water wells become accidentally contaminated.

See Noise Responses #1, #2, and #3
and Water Resources/Water Quality
Response #1.

Property values will certainly decrease, which will impact revenues that fund community benefits, including roads, schools, etc. Additionally, individuals who purchased homes in the area because the homes were in a nice neighborhood and expected to appreciate, will lose any financial gain from their large investment in real property.

See Financial/Economic Response #2.

Any argument to expand the airport in order to be able to bring prominent business people to the area is ridiculous, as Detroit Metro Airport is only 30 minutes away and Willow Run is even closer.

See General Response #10.

This issue should not have been brought up again. Prior resolutions from Pittsfield Twp and Lodi Twp objecting to the proposed expansion have been ignored, which violates an FAA order. As an appalling resolution to this, the SRDEA describes halting further reviews by the FAA. Further, Federal Funds may not be used to build 'safety extensions,' and merely changing the wording of SRDEA's proposal to 'operational utility' does not disguise SRDEA's former rationale and arguments.

See Technical Response #9.

The SRDEA proposal does not benefit anyone except an airline company which seeks profit for itself, but it does hurt the citizens individually and as a community.

See General Response #13.

Barbara E. Wise
Resident of Ann Arbor and Stonebridge Community

December 28, 2022

Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Dear Sir,

I am writing this letter to voice my strong objection to the expansion of the Ann Arbor Airport.

If the expansion is allowed to take place it would mean that aircraft would be within 93 feet over existing homes which could mean a disaster for any aircraft failing to take off or land properly.

See Safety/Health Response #6.

It would also mean that any pilot regardless of their qualifications could use this Municipal Airport. The lack of an air traffic controller from 8PM to 8AM poses an inherent danger.

There are hundreds of Canadian Geese (not the mention the ducks, swans and other water fowl) that inhabit the area which could cause a midair collision. It would cause a major disaster to anyone near the point of impact. I have also seen an American Bald Eagle on top of one of the trees lining the third fairway at Stonebridge Golf Course. I would hate to image what would happen if it were to collide with a plane.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

The noise pollution is a major concern. The increased traffic, the lower altitude of piston aircraft and jet aircraft, plus the increased size of the aircraft will all add to the noise pollution.

See Noise Responses #1, #2, and #3.

I am also concerned for the wells on the airport property ~~becoming contaminated from~~ any kind of fuel spill. These wells contribute 15%-20% of the Ann Arbor water supply.

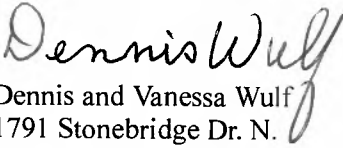
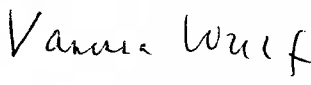
See Water Resources/Water Quality Response #1.

Lastly, Willow Run Airport is only 10 miles away and it is already fully equipped to handle larger aircraft safely. The Ann Arbor Airport expansion is not necessary.

For the above reasons we are opposed to the expansion of the Ann Arbor Municipal Airport.

See General Responses #3, #5 and #10

Respectively Yours,

 
Dennis and Vanessa Wulf
1791 Stonebridge Dr. N.
Ann Arbor, MI 48108

Unnecessary Endangerment through Proposed Airport Expansion

In addition to the environmental, reputational, and most other arguments stated by other opponents to the proposed Ann Arbor Airport runway expansion, which I also advance in opposition to the proposed Ann Arbor Airport expansion, please additionally consider the following.

My name is Dennis J. Dlugokinski. I live in the Stonebridge condominium development community at 2249 Twin Islands Court, in the area of Ellsworth/Platt/W. Maple.

All of us here have already been forced to endure increasingly frequent air traffic into and from the Ann Arbor Airport, including glide paths that are dangerously close to our roofs - and lives. Please do not make things worse.

See Noise Response #1 and Safety/Health Responses #6 and #14.

The proposed runway extension will unjustly enable larger, heavier, and noisier aircraft to unnecessarily and unfairly invade our airspace and “take” and compromise our safety, tranquility and property values for the commercial benefit of a few others and for no reasonable or appreciable benefit to the City of Ann Arbor and area residents.

Please don't allow that.

See Noise Response #3, Financial/Economic Response #2, and General Responses #3 and #13.

Much of the Stonebridge development, and indeed much of the area surrounding the airport, contains lakes, ponds and other wetlands that are the home for swans, herons, ducks, and large populations of Canada geese. As should be apparent to anyone observing air traffic in this heavily populated area, both man-made and natural, it is not a question of whether these two groups will disastrously collide midair, but when. Four to fourteen pound birds, especially when flying in flocks, effectively become weighty bombs when ingested by airplane motors and jet engines. Please decrease or minimize these risks and the risk of death and destruction to those of us below from falling “bird strike” aircraft - by denying the wholly unnecessary proposed expansion.

Willow Run airport is already cleared of most flying flock dangers, is already equipped and designed to handle larger cargo planes, and is already easily accessible to the few private jets that would prefer to land closer to Main and Stadium on game days. Certainly, if those blessed few can afford their jets or private prestige flights into this general area, they can afford to take an Uber from Willow Run to the stadium. My life, the lives of all of the residents here, and the lives of our children should not be risked for such trivialities. Please direct those elite souls to existing resources. Please do not sacrifice our safety, quiet, peace of mind and property values for scant benefit to others.

I still recall one of the first cases I ever read in law school more than 47 years ago: *United States v Causby et al*, 328 U.S. 256 (1946), the so called “crazy chicken case.”

See Wildlife Response #1 and Safety/Health Responses #1 and #8, and General Responses #5 and #10.

Please look it up! Aircraft noise and disruptive low-level flights drove Causby's chickens to crash themselves in terror into barns and other structures. The government action in that case was found to be an actionable "taking" for which the government was liable in damages. *See also: Griggs v County of Allegheny*, 369 U.S. 84 (1962), and other unconstitutional taking cases.

What about our swans and herons? What about our resident flocks of Canada geese? Most importantly, what about us? Our quiet? Our property values? Our lives? Please volitionally do the right thing. Please deny the unnecessary and dangerous proposed expansion.

Thank you.

Dennis J. Dlugokinski, Esq.

2249 Twin Islands Court

Ann Arbor, MI 48108

dennisjohnlaw@gmail.com

Gary Budnik
5413 Pinnacle Ct.
Ann Arbor, Mi. 48108
734-431-1344

January 4, 2023

Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, Michigan 48108.

Dear Matthew,

I am becoming very concerned with the Ann Arbor Airport expansion plans. As a Stonebridge resident with the additional training schools, I have been constantly buzzed by the training planes which now , because of their noise, prohibit my use of my outdoors for normal conversation, cell use, open windows, and of course sleeping. I occasionally have jets and turbo props flying over with reverse engine noise landings, which I understand may also increase due to expansion plans.

See Noise Responses #1, #2, and #3.

My concern is with the location of the airport in relation to surrounding highly populated areas for reasons of noise, safety, pollution, and property destruction already being caused by airplanes. The property destruction I refer to involves the possible correlation between the noise vibrations and my window seals failing along with my drywall shifting.

See Noise Responses #1, #2, and #3.

Obviously, the airport has long standing and I was comfortable building a home close by due to limited use of the airport in 2000. However, over the years more aircraft have appeared and the interference with my home has become awkward. I think we can agree that expansion will make things worse than they already are.

Zoning for cohabitation would seem to remedy these types of conflicts. However, we seem to be beyond this cushion of planning. I believe zoning in 2000 took the airports size and usage into account in allowing sub divisions so closely built. Airport conditions in 2022 have certainly changed the quality of life for many diminished.

Over the past 20 years airport conditions have changed as have the subdivisions and I would encourage the current conditions be assessed and subsequently locations of the airport and subdivisions be considered going forward.

Yours,



Cc:

Steve Houtteman
MDOT-AERONAUTICS
2700 Port Lansing Road
Lansing, MI 48906

From: Julia Pappas pjulrex@comcast.net
Subject: Airport
Date: Dec 26, 2022 at 9:55:11 PM
To: Kathewun@aol.com

Dear Sirs, I am a resident of the Stonebridge community, and am very unhappy with the expansion for the airport. As it is now, I have planes flying over my house so low, that I'm waiting for the cupola on my roof to be hit. I have plane light shining into, my living room and vibrating my house. The plane are very loud and fly most of the night. At 1 o'clock and on into morning at times. I am awakened by their noise and it is like I'm in a war zone. It is frightening to young children in the night with the low flying planes while they are trying to sleep. I too am awakened many nights.

See Noise Responses #1, #2, and #3.

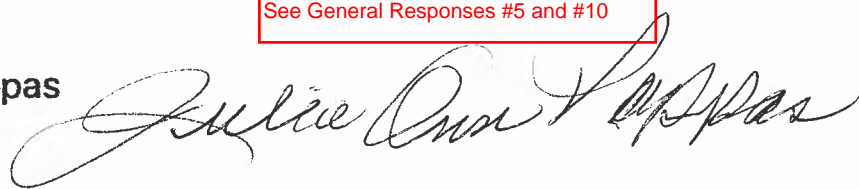
I have called the airport several time and left messages in the middle of the night because of the noisy low planes. I have takes to Mathew, and his answer seems to be :mor planes more money, it is a business. I was told to get the tail numbers of low planes. The airport should know what plane and it's number when it is coming in.

I built this house 7 years ago. My last HURAH. I wanted a peaceful good area to spend my years at. This is becoming a nightmare not a pasture.

Please hear our words, and help us to live in peace. It is not a trailer park, and we spent a lot of money to have a nice home for our remaining years , after years of hard work. I would think that Willow Run airport is the correct answer.there is no good reason to disrupt so many residents because of more and larger noisy planes.

See General Responses #5 and #10

Thank you, Julia Ann Pappas



Sent from my iPad

On Dec 11, 2022 at 1:08 PM Kathewun@aol.com wrote:

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, January 11, 2023 10:53 AM
To: William Ballard
Subject: FW: Airport Expansion

-----Original Message-----

From: Mark Hanna <mhanna48@gmail.com>
Sent: Wednesday, January 11, 2023 8:54 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov
Subject: Airport Expansion

[You don't often get email from mhanna48@gmail.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hello,

I'm writing on behalf of the airport expansion. The path of the runway is in line with two of the smaller lakes in the Stonebridge community on Lohr rd and a large pond on the north side of Ellsworth across the street from the control tower. Each of these lakes are full with geese who migrate back to these ponds each and every year and produce more geese. With the expansion of the run way not only will the size and sound of the jets create noise, it will cause a daily fear to the residents with the potential of accidents between the geese and the planes. This could be a catastrophic loss of lives in our community.

With willow run airport 5 minutes away there is no need to threaten our community.

Mark Hanna a resident of Stonebridge
4637 sawgrass dr e
Ann Arbor 48108
Phone 734-216-3981

See Wildlife Response #1 Safety/Health Responses #1 and #8, Noise Responses #1, #2, and #3, and General Responses #5 and #10.

Sent from my iPhone

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, January 11, 2023 7:26 AM
To: William Ballard
Subject: FW: Denial of Airport Expansion

From: marnorm@rocketmail.com <marnorm@rocketmail.com>
Sent: Tuesday, January 10, 2023 7:40 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: kathewun@aol.com
Subject: Denial of Airport Expansion

You don't often get email from marnorm@rocketmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Matthew Kulhanek,

After many failed attempts to expand the Ann Arbor airport, it is difficult to comprehend why requests to allow larger planes at this small local airport are still at issue. There is NO purpose to the expansion, NO need for the expansion. The request for expansion has been denied in the past. NO MEANS NO!

The airport expansion is not necessary. The "convenience for a few" does not take precedent over the lives of many. See General Response #14.

The aircraft would pass over the residential areas at a much lower altitude than the planes currently allowed to fly out of the Ann Arbor Airport.

The effects of the expansion are harmful in many ways:

SAFETY: The danger of a crash is very real with low

flying planes encountering the great many number of

geese and birds that fly in this area.

See Noise Response #1, Safety/Health Responses #1, #6, #8, and #14, and Wildlife Response #1.

HEALTH: The noise generated by an expansion is

harmful to all.

See Noise Responses #1, #2, and #3.

FINANCIAL: The disruption to the quiet residential

areas will lower property values.

See Financial/Economic Response #2.

The nearby Willow Run Airport is available for larger aircraft and more planes.

See General Responses #5 and #10.

Every person with the authority and power to stop these expansion requests now needs to ask themselves: Would I want this unnecessary and dangerous situation where I live?

Please use your position and power to protect and serve the people who live here from those who want to create an unnecessarily dangerous, unhealthy living environment for all the residents in this area.

Very truly yours,

Marlene Otton
4682 Sawgrass Drive E
Ann Arbor, MI 48108

January 10, 2023

Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Dear Mr. Kulhanek,

A serious concern I have about the proposed expansion at the Ann Arbor airport is the need.

Any need to expand the airport in Ann Arbor can easily be met by using Willow Run Airport, 20 minutes away via the I-94 Freeway. Willow Run has the runway length and the other infrastructure needed to safely handle the larger planes that are planned for the Ann Arbor airport if the expansion is approved. There is no need for the considerable expense, and risk, associated with the expansion – everything needed is 20 minutes away.

See General Responses #5 and #10.

Additionally, a few years ago our regional leadership came together to form the Detroit Region Aerotropolis uniting two counties, Wayne and Washtenaw, two cities and two townships that surround Metro and Willow Run Airports as well as the Michigan Economic Development Corporation, with the stated purpose of using the two airports as the prime economic development tool for our region and our state. Partner business organizations include the French-American Chamber of Commerce, the German-American Chamber of Commerce, the British-American Business Council, the Detroit Regional Chamber and others. All are working to use the Aerotropolis concept (Metro and Willow Run Airports) to stimulate and encourage economic development within the Aerotropolis region.

Clearly the expansion of an airport 20 minutes away from the Aerotropolis will adversely affect its economic development plans. An earlier version of the Second Draft Environmental Assessment on the proposed expansion submitted to the FAA acknowledged a significant negative impact on Willow Run if it were approved. This point has been removed from the current version of the Environmental Assessment – but it's still valid.

The basic question is, should we be working to support the efforts of the Detroit Region Aerotropolis to bring economic development to our region and our state or should we be working against the regional effort by encouraging this costly, and unsafe, duplication?

See Financial/Economic Response #11

Sincerely,

Michael Emlaw
4700 Sawgrass Dr. E.
Ann Arbor, MI 48108

Copy: Kathe Wunderlich

13DEC22

Mr. Matthew Kulhanek, Airport Manager

Ann Arbor Municipal Airport

801 Airport Drive, Ann Arbor, MI 48108

Phone: 734-994-9124, Email: mjkulhanek@a2gov.org

Dear Mr. Kulhanek:

Please consider my public comments concerning the proposed runway extension project for the Ann Arbor Airport. I am a former Township Trustee and Planning commissioner in Augusta Township, Washtenaw County, MI and currently the HOA President for my subdivision (Maple Creek). Other residential subdivisions west of the airport whom are affected, but not considered in the EA, include the following; Lohr Lake, Maple Creek, Silo Ridge, Stonebridge Estates, Lake Forest, Waterways, Mallard Cove, Centennial Park, Travis Point, Kirtland Hills, Bella Vista, and others.

Washtenaw County and the surrounding area possess outstanding natural resources, including rich agricultural land, key watersheds, and clean air, which together comprise a living environment of unmatched value. Our landscape includes parkland, recreational fields, residences, fields, ponds, streams, and wetlands that sustain habitats and a rich diversity of plant and animal species. I tender my comments with these key factors in mind.

Summary: I request the City of Ann Arbor to reject the Airport Expansion and request additional resources to complete the EA. 1) In spite of City of Ann Arbor Noise Regulations the EA does not address the significant noise issues presented to the surrounding community from aircraft overflight events. 2) The EA does not fully address wetlands disturbances which will require a public hearing process for any wetlands disturbance 3) A Comprehensive Hazardous Materials management plan for significant hazardous chemical storage present on site. This would include periodic inspections, emergency mitigation training, and associated equipment. 4) Comprehensive compliance with local ordinances (Ann Arbor/Pittsfield Twp.) and citizen involvement that include public comments periods.

See Noise Responses #1, #2, and #3, Water Resources/
Water Quality Response #2, Safety/Health Response
#13, and General Response #4,

My comments are as follows;

A) The EA should include FULL compliance to Michigan Wetlands Protection Act and related regulations. (Section 4: Conclusions)

- I. This would include a more comprehensive Wetlands Impact study to evaluate the entire project scope for regulated wetlands before commencing work on site and additionally obtaining the necessary permits from the MDEQ before commencing activities in or around wetlands. Michigan's Wetland Protection Act, which is now known as Part 303 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, authorizes the State of Michigan through its Michigan Department of Environmental Quality to oversee and regulate certain wetlands located in the state.

http://www.ewashtenaw.org/government/drain_commissioner/dc_webPermits_DesignStandards/dc_Rules/section-vi-areas-of-special-concern.pdf

- II. Following a comprehensive Wetlands study a full public comment period is conducted with local review and public comment to allow citizen oversight. This is part of the Michigan Wetlands Protection Act process.
- III. The EA should additionally address full compliance to the Washtenaw County Grading/Soil Erosion Sedimentation Control Act. (Act 347 (now Part 91 of Act 451), 2018, including Rule 1703 Requirements

<https://www.washtenaw.org/2442/Soil-Erosion-Requirements-Standards>

and,

[See Water Resources/Water Quality Response #2](#)

http://www.michigan.gov/deq/0,4561,7-135-3313_3687-10801--,00.html

B) The result of such findings and subsequent analysis should be fully documented and publicly disclosed as part of a comprehensive EA which would include citizen oversight and public comment period. [See General Response #4](#)

C) Emergency Response Preparedness and Capability for local first responders.

The EA should include full evaluation and demonstration of emergency response capabilities for local fire department and first responder resources. According to the U.S. F.A.A. Airport Compliance Guidelines an emergency plan is required that establishes procedures for handling emergency events such as gas leaks, fires, and explosions, and that establishes protocols for communication and coordination with local fire, police, and public

officials. Additional first responder training and funding for specialized equipment should be provided to address potential hazards and accidents.

https://www.faa.gov/airports/airport_safety/aircraft_rescue_fire_fighting

See Safety/Health Response #4

D) Hazardous Materials Management:

- Please review the EA pages Hazardous Materials section. These are items of particular concern and indicate that the EA is incomplete in particular that both public and private water wells are present on the Airport property or close by. Additionally, the need for more study is indicated to address unknown legacy activities as described in section 4.9.
 - o Section 2.5 Additionally, it should be noted that portions of this report are based on unverified information supplied to L&A by third-party sources. While efforts have been made to substantiate third-party information, L&A cannot guarantee its completeness or accuracy.
 - o 3.3 Specialized knowledge or experience related to the subject property or nearby properties was not provided.
 - o 3.5 Commonly known or reasonably ascertainable information about the subject property that would be indicative of releases or threatened releases was not provided.
 - o 3.8 Information of pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property was not provided. Additionally, information regarding notices from any governmental entity regarding possible violations of environmental laws or possible liability relating to hazardous substances or petroleum products was not provided.
 - o Section 4.3. Local Fire Authority 4.3.1 No response, Local Health Department 4.3.2 No information, Local Building and Zoning 4.3.4 No response.
 - o 4.3.5 Soil staining and associated odors were observed during the closure inspection. Confirmatory soil samples were collected; however, laboratory results were not provided, nor was additional information on any remedial activities.
 - o 4.4.9 As such, the historical waste management practices associated with aircraft service operations are unknown and may be a source of subsurface contamination...Therefore, the potential exists for a release to have occurred from the former USTs... and the former on-site septic field are unknown and may be a source of subsurface contamination... the potential exists for failure of the drainage systems (i.e. cracks, leaks) to have occurred over time...

See Safety/Health Response #13

E) This application is not exclusively an FAA undertaking. Public comment and involvement of affected communities is key. The EA should address and demonstrate compliance with local municipalities planning commissions oversight in the subject city and township for master plan compliance and zoning revisions, where required, local municipality ordinance compliance in affected areas that would include citizen review and a public comment period as in any other major undertaking in the state. See also CFR 150 Appendix A which recognizes local law.

<http://www.legislature.mi.gov/documents/mcl/pdf/mcl-Act-33-of-2008.pdf>

See also

See General Response #4

<https://www.ecfr.gov/current/title-14/part-150/appendix-Appendix%20A%20to%20Part%20150>

F) Noise:

- Computer modeling: Computer modeling is a wholly inadequate method to determine noise levels to homeowners in the affected area. The 65 DNL contour is approximate and in-accurate. An authentic determination would involve actual calibrated noise level meters collecting (randomly, double blind) noise data in real time in the busiest traffic pattern areas. Computer modeling does not address variation in aircraft noise level, speed, frequency, or altitude. Ex: Faster quieter aircraft are less of a disturbance than the slower moving louder models. The FAA Methodology, although adopted, does address real life conditions, aircraft type variation, altitude variation, pattern variation, and data authenticity. The modeling coverage area only includes the airport and adjoining properties, affected subdivisions, listed above (page 1), are not included in the study and should be. Please see City of Ann Arbor Noise Ordinance for non-vehicular traffic. 9:360.2

https://library.municode.com/mi/ann_arbor/codes/code_of_ordinances?nodeId=TITIXPORE_CH19NOCO_ARTINHINO

- Noise pollution level determination involving unbiased person-person on-site home owner interviews are a much more precise and accurate method to determine actual noise levels, aircraft traffic volume, and how it affects humans on the ground. My experience as a homeowner (sitting on my deck) is approximately 70-75 dB noise level during an overflight event is a more accurate overflight noise indication. This noise level is loud enough to prevent conversation.

- Study Dates: Any noise study or model dated prior to 2022 is outdated and non-representative. As a homeowner in the affected area I can assure you that airplane traffic for 2022 has increased significantly. This is confirmed in the EA Justification study (page 8 of 38).
- PRH Graphical shown on Page 7 with conservative extrapolated data for years missing(2020-2023)

See Noise Response #5, #6, and #10

G) Repeated and Consistent Homeowner over flights: Over Flight: An airplane that flies directly (within a few yards) over a persons ground position. How many direct overflights (Innocuously labeled "events" in the study) in a one-hour period is considered normal? I have regularly observed from 3 overflights/hour to as many 15 overflights/hour by the same aircraft. I am a homeowner in the affected area which includes numerous actual observations. I suffer through this on a daily basis, particularly including weekends and legal holidays. Aircraft overflights on my home and others in my subdivision is planned, designed, and intentional, and follow a very narrow band of flight path. I have had conversations with the rental schools that report, "we do exactly what the tower tells us to do". I do not dispute that statement. This pattern is identified in the AAAP Pilot Brochure. See web link below. In spite of what the EA reports traffic patterns are very consistent, very repeatable, and very disturbing. The Runway 24 pattern flies directly over homes in the west of Lohr Road. This is proximately Lohr Lake and Maple Creek subs. The rental planes head back to the airport over proximately Mallard Creek and Silo Ridge subdivisions or the Saline Rec Center ball fields. Often times there are two planes up simultaneously providing double the noise and double the disturbance. This is a detriment to backyard BBQs, Pool parties, Deck Parties, Volleyball parties, etc...as conversation stops when a noisy aircraft is directly overhead...only to return moments later.

- On occasion aircraft use residents citizens walking on the ground as "dead reckoning targets" as some kind of game or practice exercise? See letters below dated 12JUN22. (Letter, Not answered, eMail not returned, phone call, no answer, message not returned)

See Noise Responses #1, #2, and #3 and Safety/Health Responses #6 and #14

<https://www.a2gov.org/departments/fleet-facility/Airport/Documents/NABrochureFIN.pdf>

H) Although the AAAP claims "implementation" of a noise abatement program compliance should be demonstrated in a fact-based manner. The EA should require demonstration of compliance to the NBAA Noise Abatement Program in particular student "touch and gos" that create the

most egregious noise events for local residents. Evidence of regular pilot training beyond “hanger posters” should be demonstrated. See Noise Response #7

<https://nbaa.org/aircraft-operations/environmental-sustainability/noise-abatement-program/#close-in>

- l) In spite of clear directions in the AAAP Brochure, AAAP Mission Statement, there is consistent non-compliance from pilots on the following request. “Recommended TRAFFIC PATTERN procedures:
- **Pattern Altitude when possible.** Reduce power as soon as practical.
 - **Please be mindful of multiple Touch-and-Go landings, especially early morning and evening.**
 - **Strive to preserve the quality of our residential areas by maintaining a community friendly noise abatement policy**

See Noise Response #9

<https://www.a2gov.org/departments/fleet-facility/Airport/Documents/airport%20rules%20and%20regs%202013%20final.pdf>
Section 1.3.1.1

In conclusion there are significant defects and omissions in the EA, demonstrating that an expanded EA is needed with additional data collection, citizen involvement, and public comment period prior to any expansion approval.

Thank you for the opportunity to submit these objections, concerns, and comments.

Respectfully submitted,
Phil Hemenway

Ann Arbor, MI 48108

2096 Maple Park Drive

313-505-9785

pshemenwa@gmail.com

Attachments: 12JUN22 (M. Kulhanek, airport@a2gov.org)

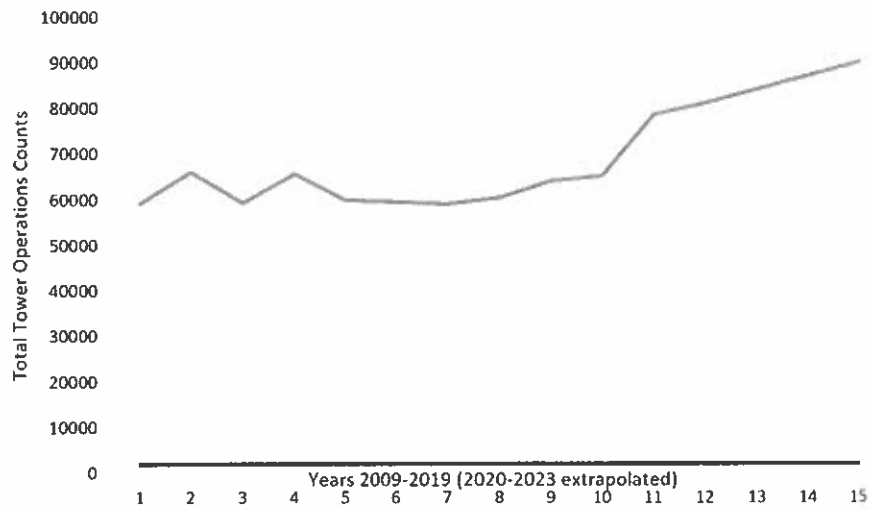
Presentation: 13DEC22, 5:30-8:00 PM at Council Chambers, 2nd Floor, Larcom City Hall, 301 E. Huron Street

from Table 3.1

Tower Operations

Year	Total
2009	57109
2010	63999
2011	57228
2012	63555
2013	57746
2014	57370
2015	56915
2016	58386
2017	61996
2018	63103
2019	76430
2020	79000
2021	82000
2022	85000
2023	88000

Traffic Counts Annual 2009-2019



Conservative extrapolation
for years 2020-2023

12JUN2022

MATTHEW KULHANEK

801 AIRPORT DR

ANN ARBOR, MI 48108-9703

Dear Mr. Kulhanek,

I am a private citizen and home owners association President for Maple Creek Sub-divison. While walking with my wife Sunday, June 12th (between 8:40 and 9:10PM) a single engine aircraft (tricycle landing gear) gray flew directly over my wife and myself position on 5 consecutive instances.

We were walking within Maple Creek, East Horizons and Lohr Lake subdivisions. (West of the airport)

On that evening there were two single engine aircraft operating. I do not have tail numbers for obvious reasons and cannot identify what plane it was other than single engine. I called the airport tower immediately after the 5th pass and it was closed.

I am not exaggerating. While we are walking we are moving positions not stationary. The aircraft was doing circles proximate to the airport location as they often do. This pilot, I presume a student soloist or rental pilot, when his circle came to our walking path was adjusting his flight heading to DIRECTLY over run our position as if he was using our position to dead reckon his heading. I could observe the aircraft making minor heading adjustments to successfully accomplish this outcome. My wife and I were very uncomfortable about this. This was not accidental, but intended, which was patently obvious after the 5th pass.

I wish to appraise you of this egregious act and seek your involvement in speaking to the student pilots/rental pilots and ask that they not use pedestrians out walking as dead reckoning beacons or some such random practice exercises.

If you have questions about this evening please contact me at 313-505-4908 and I will be pleased to recount the events as it occurred on that night.

I also have concerns about AA airport noise abatement and pilot compliance with FAA minimum altitudes while flying around congested sub-divisions.

See Noise Responses #1, #2, #3, #7, and #9, and Safety/Health Responses #6 and #14

Thank you for your immediate attention on this matter.

Name: Phil Hemenway

2096 Maple Park Drive

Ann Arbor, MI 48108

eMail: phemenwa@gmail.com

Best Regards, Phil Hemenway

12JUN2022

801 Airport Drive

Ann Arbor, MI 48108

Dear Airport Official, (airport@a2gov.org)

While walking with my wife Sunday, June 12th (between 8:40 and 9:10PM) a single engine aircraft (tricycle landing gear) gray flew directly over my wife and myself position on 5 consecutive instances.

We were walking within the Maple Creek, East Horizons, and Lohr Lake subdivisions. (West of the airport)

On that evening there were two single engine aircraft operating, I do not have the tail numbers for obvious reasons and cannot identify what plane it was other than single engine. I called the airport tower immediately after the 5th pass and it was closed.

I am not exaggerating. While we are walking we are moving positions not stationary. The aircraft was doing circles proximate to the airport location as they often do. This pilot, I presume a student soloist or rental pilot, when his circle came to our walking path was adjusting his flight path to directly over run our position as if he was using our position to dead reckon his heading. I could see the plane making minor adjustments to accomplish this outcome. My wife and I were very uncomfortable about this. This was not accidental, but intended, which was patently obvious after the 5th pass.

I wish to appraise you of this egregious act and seek your involvement in speaking to the airport manager/student pilots/rental pilots and ask that they not use pedestrians out walking as dead reckoning beacons or some such target exercises.

If you have questions about this evening please contact me at 313-505-9785 and I will be pleased to recount the events as it occurred on that night.

See Noise Responses #1, #2, #3, #7, and #9, and Safety/
Health Responses #6 and #14

Thank you for your immediate attention on this matter.

Name: Phil Hemenway

2096 Maple Park Drive

Ann Arbor, MI 48108

eMail: phemenwa@gmail.com

Best Regards,

Phil Hemenway

313-505-9785

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, January 11, 2023 8:53 AM
To: William Ballard
Subject: FW: ARB Runway Extension
Attachments: SLO Ltr toMatthew Kulhanej.docx

From: SHARON OTOOLE <otoole.sharon@comcast.net>
Sent: Wednesday, January 11, 2023 8:15 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: ARB Runway Extension

You don't often get email from otoole.sharon@comcast.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Mr. Matthew Kulhanek
Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

January 10, 2023 Ann Arbor

Sent by to: Email Address: mjkulhanek@a2gov.org

Dear Mr. Kulhanek,

I am a resident of the Stonebridge residential area, in the south part of Ann Arbor, MI directly west of the Ann Arbor Municipal Airport (ARB). This location is now directly impacted by the runway orientation at the ARB. I believe my personal evaluation of the current version of the ARB Environmental Assessment (EA) is representative of thousands of other Pittsfield Township residents who would suffer from the proposed runway extension and shift described in the EA. The following are my comments regarding the recent EA.

Summary:

1. The need is simply not there. The desires of a small group of business/corporate entities have been substituted for "need". Writing off the attributes of the Willow Run airport as an alternative indicates a fixed goal, without evidentiary reason.
2. This proposed action is clearly in opposition to the surrounding communities and their governing institutions that have sought for many years to increase the quality of life in the area. Increasing aircraft traffic, by number, propulsion system and aircraft size, is diametrically opposite to the desires of the tax-paying communities near the ARB.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

3. **C. Safety has been greatly discounted** in the EA due to the prevalence of wildlife hazards for jet aircraft, dramatic changes in noise levels and ARB capacity to provide the attendant safety requirements of larger jet aircraft.
4. The “domino effect” of the proposed runway extension would dramatically change the character of the highly desirable residential communities now well endowed with parks, wetlands, and wildlife. In addition, this action would gravely impact the local communities resulting in decreased real estate valuation and significant personal losses.
5. These potential negative impacts have caused the Pittsfield and Lodi Township and other government institutions to pass resolutions against the extended runway plan. They are acutely aware of the obvious negative impacts on the property value, safety and quality of life for residents.

For all the above reasons, proposed Runway Extension Project **must not be allowed to proceed.**

Sincerely,

See Wildlife Response #1, Safety/Health Responses #1 and #8, and Financial/Economic Response #2.

Sharon L. O'Toole
5245 Crooked Stick Dr.
Ann Arbor, MI 48108

Matthew Kulhanek and anyone invested in the runway expansion of the AA airport,

As you know there is considerable opposition to this proposal, all for very good reasons. I will be following some of the suggested talking points, but don't wish to rehash the SRDEA report.

I've lived in Stonebridge subdivision for over 10 years now. When we considered moving here, the proximity to the airport was a major factor. We spent time outside to assess the level of plane activity and how much we could tolerate in order to live in a wonderful community with many sought after amenities. Obviously, we felt the sacrifice of plane noise, emissions, safety were tolerable enough to build our home.

I have been involved with the opposition to any expansion since this time. There have been exhaustive studies of the feasibility of a runway expansion since before we moved in and here we are again 10 years later. The incredible aspect of this to me is, nothing has changed! Small airplanes circling overhead to practice is a nuisance at times, but still tolerable as 10 years ago. Now we have small jets flying low overhead and it feels incredibly invasive and dangerous. Not what we agreed to tolerate.

See Noise Response #1 and Safety/Health Responses #6 and #14.

A few of my biggest concerns are: 1. increase in safety risk due to more traffic, weather variables that effect landing/takeoff, lower trajectory of aircraft landing, geese in flight path. 2. Increase in pollution due to more traffic i.e. exhaust, increased noise pollution, water pollution and more human activity. 3. The effect on habitat i.e. one variable that helped with the airport proximity was the beautiful surrounding nature. We have a rich diversity of wild life that some human activity has already impacted, most notably enbridge pipeline. Nesting great horned owls have been disrupted very near to our home. We have coyote, deer, turkeys, foxes, a tremendous variety of birds. All will be impacted by increased aircraft activity.

I support the technical analyses that have been provided, but they can't include the impact that will be felt by the multitude of citizens living nearby. In Stonebridge alone there are approximately 900 homes. There are several other surrounding communities that will be equally affected.

See Wildlife Response #1, Safety/Health Responses #1 and #8, and Water Resources/ Water Quality Response #1.

Please take all this in consideration as you look for rational to raise some more capital and cater to the elite few that might benefit from a runway expansion.

Sincerely, Thomas Restruck

5471 Pinnacle Ct. Ann Arbor 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, January 11, 2023 7:26 AM
To: William Ballard
Subject: FW: ARB Airport Expansion

From: Vicki Salemi <vsalemi19@gmail.com>
Sent: Tuesday, January 10, 2023 5:02 PM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: kathewun@aol.com
Subject: ARB Airport Expansion

You don't often get email from vsalemi19@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

To Matthew Kulhanek and Steve Houtteman

I am writing to oppose the proposed runway expansion at the Ann Arbor Municipal Airport (ARB). The expansion fails to take into consideration the real world (not computer simulated) impact it would have on the numerous residents in neighborhoods surrounding the airport and ignores resolutions from Lodi and Pittsfield Township (ie Pittsfield Charter Township Resolution #17-21) which object to the expansion for safety reasons, in violation of NEPA and FAA order. More detail of why I oppose this expansion is listed below:

1) The proposed extension would put the end of the runway 870 feet closer to the homes on Lohr Rd which poses a significant risk to those residents and their homes. At the Pittsfield Township meeting in December the homeowner closest/directly in the runway path spoke on how she watched a plane crash in the field between her house and the end of the runway. As she watched the headlights approach she thought for sure it was going to crash into her home. Nathan Clark reported the crash on [mlive.com](https://www.mlive.com)

“By Nathan Clark | nclark1@mlive.com (<https://www.mlive.com/staff/nclark1/posts.html>)

WASHTENAW COUNTY, MI – A pilot was forced to make an emergency landing shortly after takeoff in Ann Arbor after losing power to his plane Sunday afternoon. Emergency crews were called at 2:48 p.m. Sunday, Sept. 11, to the Ann Arbor Airport, 875 Airport Drive, for a report of a possible plane crash at the airport, according to the Pittsfield Township Department of Public Safety.

Crews arrived to find a two-seat Cessna 152 had landed in a bean field on the airport property.”

This homeowner also stated that when she was getting her roof replaced recently that the workers joked they should make a sign with the shingles that says “PULL UP” because the planes seemed so close to the house on takeoff. She also stated that there are cracks in her second floor walls from the vibrations of the planes as they go over. All the homes along Lohr Road are not adequately protected by “Runway Protection Zones” and there is no where to put one because of the existence of Lohr Rd. ARB is also not equipped to provide bad-weather instrument approaches/landings, so a runway expansion would put these homes in even greater danger during bad weather, especially with less experienced private pilots.

See Noise Responses #1, #2, and #3 and Safety/Health Responses #6 and #14.

2) History has shown that areas where there have been runway/airport expansion, property values have decreased between 5.7-9.2 % nationally.

This results is millions of dollars of lost tax revenue: from Pittsfield Township alone it would mean a loss to Ann Arbor Public schools of \$1.5 million annually, Saline School District \$1.4 million annually, Pittsfield Township \$850,000 annually and Washtenaw County \$810,000 annually.

See Financial/Economic Response #2.

3) At the MDOT-AERO Public hearing on December 13, 2022 a presenter stated that with the runway expansion, the planes will be flying 35% lower than they currently are over homes in the flight pattern. This presents a danger to the residents in the surrounding neighborhoods ESPECIALLY those on Lohr Rd mentioned above. Another concern about the planes flying lower is small aircraft use unleaded fuel, so they will be spewing this from their exhaust plumes 35% closer to our homes and our bodies. This is a SEVERE environmental health risks to adults, children, pets and wildlife in the surrounding area of the airport which needs to be brought to the attention of the FAA.

See Noise Response #1, Air Quality Response #1, and Safety/Health Responses #4, #6 and #14.

4) Another environmental risk to the surrounding area is the increase of noise. Even the very conservative FAA required noise analysis (which a presenter at the MDOT-AERO public hearing in Ann Arbor admitted used a computer simulation-not an actual measurement) which was part of the SRDEA concedes that the harmful 60-decibel noise level would extend to the residential area at the southwest corner of the airport.

And those that live directly in the flight path know that the current noise level causes stress and anxiety. Conversations have to stop, TVs are unintelligible, and phone conversations are impossible when a plane is flying overhead, even when the windows are closed in our homes. And on UofM football Saturdays residents become extremely stressed from the increase in airplane traffic and noise.

The computer simulation of calculating the noise level only took into account the ideal/average scenarios. At ARB the control tower operates only part-time. So basically the pilots can do whatever they want when not being observed by the tower, so more than likely will not be replicating the situation that was used by the computer model calculation. The computer simulation also did not take into account the need to vary from the norm due to weather. There needs to be **actual measurement** of the noise levels in the surrounding neighborhoods, especially in the flight patterns. Some residents have measured levels well into the harmful level. And if the planes/jets are flying 35% lower, because of the expansion, the noise level will certainly increase from its already harmful level. And there also needs to be consideration of the affect on the neuropsychological development of children from aircraft noise as well as on the psychological effect on Veterans, especially those with PTSD living in the surrounding neighborhoods.

See Noise Response #5, and Safety/Health Response #4.

5) The Purpose and Need statement on the SRDEA does not support the need for extending the runway. The SRDEA contends that aircraft that routinely use ARB suffer "undue concessions in reduced fuel, passengers and/or cargo loads when the runway surface is wet, or hot because of the temperature in summer months, however the SRDEA provides no actual data in support of the claimed concessions in fuel, passengers or cargo.

See Technical Response #7.

6) The SRDEA stated an excess of hot weather days to justify the proposed expansion and identified 81 hot days in Ann Arbor when temperatures exceed 80 degrees in 2019. However aircraft performance charts, included in the SRDEA, suggest the industry standard for hot weather is 85 degrees, not 80 degrees. There were actually only 66 days in 2019 over 85 degrees, so **the SRDEA inflated the numbers used for their argument by 25%, by using a lower than industry standard!!**

See Technical Response #5.

7) The SRDEA also focuses reason for the expansion "to improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase in time", however 3 of the 4 "critical aircraft" identified by the SRDEA could operate 100% of the on the current existing runway. And only the Cessna Citation Excel XLS could still operate at full weight 90% of the time and at 100% capacity most days. At most only 48 of the 263 operations per year of the Citation XLS in 2019 were impacted by hot weather. A miniscule .00038 of ARB's total annual operations that year, This is not sufficient to justify this proposed expansion. And if this did become a problem, there is Willow Run Airport, built specifically to handle larger aircraft with full passenger or cargo, only 13 miles away. And Congressman Debbie Dingell just announced that Willow Run Airport will receive a \$25 million grant to expand their airport, therefore making the expansion of ARB unnecessary and a waste of funds.

Also the SRDEA projects maximum operations of 84,336 by the year 2039, yet the current runway supported 134,553 operations in 1999. This shows that the current runway is more than sufficient, so no expansion is necessary.

See Technical Responses #2 and #6.

9) Earlier versions of the SRDEA (reviewed under the Freedom of Information Act) projected immediate tripling of jet operations (to 1,000 per year) if the runway was extended. ARB is a Municipal Airport funded with federal tax dollars, so any pilot can land there, regardless of their plane size and ARB cannot stop them. In the final SRDEA it omitted jet growth forecasts (to make the proposal more palatable maybe) and instead states that operations of small turboprop and jet aircraft will slowly increase over time. Not only would the presence of jets lead to increased noise and disruption, but poses a SIGNIFICANT danger to surrounding neighborhoods due to the large amount of Canada geese in the area, which do not interact well with jets. The SRDEA acknowledges the presence of Canada geese, and a USDA inspector even concluded they are a “real and present danger” and “will need to be managed for the foreseeable future”.

The surrounding neighborhoods provide ideal habitat for these geese. Besides the corn/soybean field next to Lohr Rd, there are 2 lakes directly across Lohr Rd in the Stonebridge Subdivision, also lakes in several other surrounding neighborhoods. There is also an 18 hole golf course in Stonebridge directly in the flight path of the runway. Attached is a map showing some of these lakes and the golf course.

At the MDOT-AERO public hearing in Ann Arbor I asked a man from the FAA how geese mitigation around airports works. He said that it could involve draining bodies of water nearby, or making the banks of lakes steeper to make them less appealing to the geese. How would this be possible with all the lakes in the surrounding neighborhoods (especially Stonebridge). Who would pay for this? Would they try and remove the golf course? There is simply no way to manage the geese population to the level needed.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

For all the reasons I have stated, the proposed runway expansion at ARB must be rejected.

Thank you,
Vicki Salemi
4717 Sawgrass Dr East
Ann Arbor MI 48108

**BRYANT
PATTENGILL
WEST**

3D

**Ann Ar
Airpo**

Parked Car



01/03/2023

Ann Arbor Airport Runway 6/24 Justification Proposal

Do not support the proposal because of the following:

-Shifting the runway to the west increases the chance of catastrophic accident in high density housing communities due to changes air traffic patterns. The proposal mentions moving the runway could resolve existing line of site issues at the airport and potential runway landing issues. From my perspective, while the proposal could in fact solve or reduce these dangers, it is essentially increasing the danger of a catastrophic event affecting a few pilots at the airport to higher density communities outside the airport footprint.

See General Response #25.

-Noise levels in the housing communities from aircraft landing and taking off at the airport are already way too high. In a very high percentage of flights, noise levels as measured from my residence already exceed the safe recommendation levels of 65 decibels. Again, the changes in approach angles caused by the runway reorientation will only increase the costs of the affected communities if they want to implement serious noise suppression actions. We are just shifting the burden of noise enforcement and suppression actions from the regulatory commissions to the private communities surrounding the airport.

See Noise Responses #1, #2, and #3.

-Moving the runway to the west will negatively impact the Canadian geese nesting site which abuts Lohr Rd. While the Justification Study mentions this concern, I believe they are seriously undercounting the number of geese which use the field. We moved to our residence 13 months ago. On several occasions, my observation is THOUSANDS of geese in the field. A serious study of the numbers is clearly needed.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

-Finally, there is no real need to lengthen the runway— Willow Run Airport is approximately 12 miles to the east and can accommodate the heavier loaded aircraft the proposal uses an argument to lengthen the runway. Willow Run has four runways which presumably could handle the larger planes with very little safety/noise/environmental impact. Common sense would say this alternative should be seriously explored in the spirit of "regional cooperation".

See General Responses #5 and #10.

In summary, the Airport Justification Proposal is a "good deal" for the airport. But the solutions to existing issues are just shifting the burden from the City of Ann Arbor to high density housing communities that aren't even in the city's footprint. For instance, no where in the report did I see an alternative of moving the Control Tower to solve line of site concerns. Also, no where is it proposed that a potential solution to the highest impact safety concerns is to increasingly rely on our regional partner, Willow Run Airport, to take on an increasingly larger share of the Air traffic.

Walter Bielski
Sharon Cloke
Stonebridge Community — just west of the airport
5181 Crooked Stick Dr
Ann Arbor, mi

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Wednesday, January 11, 2023 11:22 AM
To: William Ballard
Subject: FW: Ann Arbor Municipal Airport

From: Bill Mitchell <billmit68@gmail.com>
Sent: Wednesday, January 11, 2023 11:16 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov
Cc: kathewun@aol.com
Subject: Ann Arbor Municipal Airport

You don't often get email from billmit68@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

I am writing as a resident of the Stonebridge Subdivision and as an opponent of the expansion of the Ann Arbor airport.

These are reasons why I oppose the expansion:

- The proposed runway extension would move the airport primary runway 870 feet closer to Lohr Road, adding to the risks to residents near the end of the runway, which are not adequately protected by so-called “Runway Protection Zones.” [See Safety/Health Response #2](#)
- We know that there is already a potential for accidents and equipment failure – there was such an incident just this past summer. Fortunately, there was adequate distance between the airport and the residential area that a major problem was avoided. [See Safety/Health Response #2, #5, #6, and #14](#)
- This proposed expansion would benefit only a small number of aircraft types that would be able to be able to use an expanded runway. The “reward” is small and the “risk” is high. In addition, since Ann Arbor is a municipal airport funded with federal dollars, any pilot who chooses can land at the airport, no matter the size of their aircraft – adding to the level of risk. Ann Arbor cannot regulate the type of aircraft that could utilize the field. [See General Response #13.](#)
- The Willow Run Airport is only 12 miles away from the Ann Arbor Municipal Airport. That larger airport already can accommodate larger planes. With such a facility within a few miles, there is no reason for the AA expansion with all the issues that such an expansion creates. [See General Responses #5 and #10.](#)

Please do not allow this proposed expansion of the Ann Arbor Municipal Airport to proceed.

Thank you for your consideration.

William D. Mitchell
4904 Lone Oak Ct.
Ann Arbor, MI 48108

January 11, 2023

January 9, 2023

Steve Houtteman
2700 Port Lansing Rd
Lansing, MI 48906

Dear Mr. Houtteman,

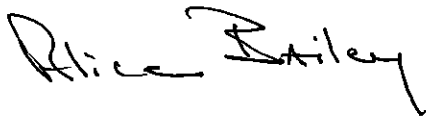
I am writing in opposition to the proposed expansion of the Ann Arbor Municipal Airport. I believe that it poses serious safety risks to residents around the airport while benefiting a minute number of ARB operations. It appears that it is the intention of the airport to increase air traffic which would increase noise pollution for local residents. I am one of those local residents!

See Noise Responses #1, #2, and #3.

I have not seen any information that justifies the purpose or need for expanding the airport. Such an expansion would have adverse effects on the quality of life for me and my family. Therefore, I urge you to reject the proposed expansion.

See Safety/Health Responses #7 and #16 and
General Responses #3 and #14.

Sincerely,



Alice Bailey
4751 Sawgrass Drive E

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 11:33 AM
To: William Ballard
Subject: FW: Proposed Airport Extension

From: Ann Gruber <ann.m.gruber@gmail.com>
Sent: Friday, January 13, 2023 10:53 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Fwd: Proposed Airport Extension

You don't often get email from ann.m.gruber@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Sent from my iPhone

Begin forwarded message:

From: Ann Gruber <ann.m.gruber@gmail.com>
Date: 13 January 2023 at 10:44:44 GMT-5
To: mjkulhanek@2gov.org, houttemans@michigan.gov
Cc: kathewun@aol.com
Subject: Proposed Airport Extension

Dear Mr Kulhanek and Mr Houtteman,

I am writing to express my disagreement with the proposed expansion of the Ann Arbor Municipal Airport. As a Pittsfield and Waterways resident, I am not convinced that any minimal benefits this runway extension may provide would outweigh the substantial negative impact to the community.

Residential development near the Ann Arbor Municipal Airport has grown substantially in the past 20 years. When the airport was originally constructed back in the 20s, the area was largely surrounded by farmland. Today, this is not the case. In very close proximity, small businesses and highly populated residential communities sit adjacent to the airport's perimeter. The flight path of most airplanes, landing and taking off from the municipal airport, extends at low altitudes over the Stonebridge, St Regents, Lohr Woods and Waterways developments. The SRDEA proposes the extension of the runway length westward as being the most ideal, as eastwards would impact future plans for State Street expansion and small business development. Really? So flying closer and with bigger/heavier airplanes over developed neighborhoods is safe? It only took one accident last September when a plane came down in a small farm field, on the corner of Lohr and Ellsworth, to understand the risks at hand. With only a slight difference in distance, this plane could have easily come down on any one of the major streets near the airport: Lohr, Ellsworth and State, not to mention the nearby neighborhoods.

The expansion of the Ann Arbor Municipal Airport in a developed residential area seems ludicrous when Willow Run; an airport more equipped with a longer runway, 24 hour control tower and fire/rescue facilities which can accommodate flights sits merely 14 miles down the road. Have people come to feel so entitled that they feel an airport needs to be at their doorstep?

See General Responses #5 and #10.

Ann Arbor prides itself on striving to be one of the most progressive and green communities in the United States. So how does Ann Arbor justify this runway expansion which will undoubtedly bring with larger and heavier planes more noise, carbon emissions, lower air quality and increased water contamination (not to mention Ann Arbor water wells sitting on airport property) and disruption of wildlife/fauna? Or even the increased risk of accidents as a result of the substantial population of geese which are found around the airport?

See Noise Responses #1 and #2, Wildlife Response #1, Water Resources/Water Quality Response #1, and Air Quality Response #1.

Again, I would hope that the Ann Arbor City government would listen to the concerns of those that this proposed expansion would so negatively affect, largely Pittsfield residents, and decide this proposal should not be supported.

Sincerely,

Ann M Gruber

January 11, 2023

Mr. Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Mr. Steve Houtteman
MDOT-AERONAUTICS
2700 Port Lansing Road
Lansing, MI 48906

Re: Ann Arbor Municipal Airport Runway Expansion

Gentleman:

I am a resident of Stonebridge and currently serve on the Board of Directors of the Stonebridge Community Association. I am writing to express my concerns about the proposed extension of Runway 24 870 feet closer to Lohr Road. We all have been round and around again about this project for longer than I have been a resident of Stonebridge which is going on 8 years now.

As you both know I am sure, a very substantial majority of the residents in this community as well as the several other neighborhoods south of the Airport and the Township generally are against this proposal. Virtually everyone I talk to about it, and there have been many, are vehemently against it. The opposition to it is well organized and well funded. Should the measure be approved by the City of Ann Arbor I expect that funding will increase substantially. I am hearing calls for litigation and pushes to have the Township Board retaliate with all manor of punitive actions.

Suggestions range from imposing a Township fuel tax on leaded fuel sold at the airport to setting up sophisticated sound level monitoring systems with cameras along Lohr Road to be used by the Township for issuing pilots noise ordinance violations. Just about anything to make as unpleasant as possible the user experience at the Ann Arbor Municipal Airport. People really are pissed about this. Now where all this goes remains to be seen but from what I am seeing and hearing the community will not go away quietly if the runway is extended south. I would expect at a minimum litigation and further souring of the relationship between the Ann Arbor city community and the Township Community. Beyond that I wouldn't be surprised by anything.

I was going to rattle off the usual bullet points as to why I have concerns about this project but have decided instead to attach to this letter, as an addendum, the talking points published by the Grass Roots Committee for Preserving Community Quality (CPCQ) which have been distributed widely in the community for letter writing in opposition to the project. You have no doubt already seen most of these bullet points. They do seem to me to be valid observations and fair points of concern.

That said, should either of you Gentleman wish to address these concerns I would be happy to arrange for either one of you, or both, to attend a Stonebridge Community Association (SCA) Board of Directors meeting to discuss the project and concerns surrounding it. SCA does not represent the other neighborhoods or the Township but it is a good place to start should you wish to discuss the matter with the communities impacted by the project.

I look forward to hearing from you.

Dan Horn
5190 Crooked Stick Drive
Ann Arbor, MI 48108
(734) 604-1305
dan_horn@comcast.net

ADDENDUM

☐ The proposed runway extension would move ARB's primary Runway 24 870 feet closer to Lohr Road, adding to the risks to residents near the end of the runway, which are not adequately protected by so-called "Runway Protection Zones." [See Safety/Health Response #2.](#)

☐ The SRDEA has dropped prior claims, since the onset of the project in 2007, that the expansion was a "safety extension." Since the FAA ruled that federal funds would not be available for such an expansion, the focus was shifted to "improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase over time." [See Technical Response #1.](#)

☐ However, of the four "critical aircraft" types identified by the SRDEA, three could operate 100% of the time on the existing 3,505-foot runway. Only the Cessna Citation Excel XLS, the type of aircraft owned and operated by AvFuel Corp., which dominates operations in this class, could suffer weight penalties on hot summer days, but could still operate at full weight 90% of the time, and at 100% capacity on most days. At most, only 48 operations per year of the Citation XLS class's 263 annual operations (in 2019) could be impacted by hot weather – a miniscule .00038 of ARB's total annual operations – hardly sufficient to justify the proposed expansion. [See Technical Response #2.](#)

☐ The SRDEA acknowledges that any expansion would likely attract more jet traffic, where larger and heavier aircraft pose additional risks in an area heavily populated by Canada geese. [See Wildlife Response #1 and Safety/Health Responses #1 and #8.](#)

☐ Further complicating issues, because ARB is a municipal airport funded with federal dollars, any pilot who chooses to land at the airport, no matter the size of their aircraft – adding to the level of risk. Ann Arbor cannot regulate the type of aircraft that could utilize the field. [See General Response #18.](#)

☐ The SRDEA acknowledges for the first time the presence of Canada geese surrounding the airport, with a U.S. Department of Agriculture inspector observing 75-100 Canada geese at the airport, feeding in a tilled fallow field. The inspector also reported "flocks of 5 to 15 geese arrived on the airfield at different times. . . Geese were observed within 10 yards of the runway." The inspector concluded that, "Canada geese are a real and present danger, and will need to be managed for the foreseeable future. KARB is surrounded by ideal resident / migratory Canada goose habitat." However, the SRDEA presents no plan for such mitigation – and makes no mention of any risks posed by the Canada geese. [See Wildlife Response #1 and Safety/Health Responses #1 and #8.](#)

☐ The Purpose and Need statement does not support the need for an extended runway. The SRDEA contends that aircraft that routinely use ARB suffer "undue concessions in reduced fuel, passengers, and / or cargo loads. . . diversions to other airports are also commonly needed when the runway surface is wet, or during summer months when higher temperatures reduce aircraft performance." However, the SRDEA provides no actual data in support of the claimed concessions or diversions. The FAA noted, "the rate of users taking weight restrictions has not been documented," and, "The inclusion of the contaminated runway length distances cannot be used to justify FAA funding requirements" for an extended runway. [See Technical Response #7.](#)

☐ The SRDEA stated an excess number of hot weather days at ARB. To justify the proposed expansion, the SRDEA identified 81 hot days in Ann Arbor, when temperatures exceeded 80 degrees (in 2019). However, aircraft performance charts included in the SRDEA suggest an industry standard for hot weather is 85 degrees, not 80 degrees. There were only 66 days in 2019 when the temperature exceeded 85 degrees. Thus, the SRDEA inflated the number of hot weather days by 25% by using the 80-degree standard. [See Technical Response #5.](#)

☐ The SRDEA alludes to a connection between "many prominent business and institutions with the University of Michigan being the area's largest employer. Manufacturing, health care, automotive, information technology, and biomedical research companies account for major employers surrounding the area" that often require "air transportation to bring workers, clients, suppliers, customers, and time sensitive parts / supplies to and from the region." However no

specific connection between those business needs and ARB was established in the SRDEA. It was merely an allusion.

See Financial/Economic Response #1.

☐ The SRDEA also suggests that the UM's six / seven home football weekends and Michigan International Speedway two annual NASCAR events bring increased aircraft activity to the area, and that "should Runway 6 / 24 be extended, additional aircraft activity could occur at ARB due to its proximity to special event venues." However, the SRDEA contained no actual forecasts of such potential activity.

See Technical Response #3.

☐ However, a less sanitized version of the SRDEA, contained in an earlier draft submitted to the FAA and reviewed under the Freedom of Information Act, projected an immediate tripling of annual jet operations if the ARB runway were extended to over 1,000 per year, with another 500-665 operations from jets, which currently utilize Willow Run Airport, possibly moving to an extended ARB on football weekends. That earlier draft SRDEA suggested up to 40% of the 9,313 annual small and medium jet operations at Willow Run "would likely shift to ARB if additional runway length were available," thus increasing jet operations from the 360 in 2019 to upwards of 3,660 jet operations per year – ultimately turning ARB into a jetport. We cannot let that happen!

See Technical Response #4.

☐ To temper any fears of such runway expansion, the final SRDEA omitted such jet growth claims and forecast, instead, that the operations of small turboprop and jet aircraft "will slowly increase over time."

See Technical Response #1.

☐ While the SRDEA projects a maximum of ARB operations of 84,336 in 2039, it is interesting to note that the current 3,505-foot runway supported almost two-thirds more operations in 1999 – 134,554, suggesting the current runway is more than sufficient for the projected future.

See Technical Response #6.

☐ Any ARB expansion is especially dangerous because, with jets being the primary source of increased operations, it raises the level of risk in an area heavily populated with Canada geese, which do not interact well with jet aircraft.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

☐ ARB also has certain conditions that can enhance the level of risk over other nearby airports: Instrument approaches and landings are not permitted at the airport. The control tower only operates part-time. Also, in winter, de-icing is not permitted on the airport, to protect the wells on the property that produce drinking water. And ARB does not provide 24-hour on-site fire and rescue services.

See Safety/Health Response #3.

☐ The noise problem around the airport would almost certainly increase. Even the very conservative FAA-required noise analysis conducted as part of the SRDEA concedes that the harmful 60-decibel noise level would extend to "a residential area at the southwest corner of the airport."

See Noise Responses #1, #2, and #3.

☐ The FAA requires the identification of environmental health risks to children. However, despite numerous scientific studies confirming the negative impact of aircraft noise on the neuropsychological development of children, the SRDEA does not discuss such threats, concluding, instead, that "the FAA has not established a significance threshold for impacts to children's environmental health and safety. . ."

See Safety/Health Response #4.

☐ The SRDEA does not acknowledge any potential risks to the three wells on airport property that supply about 20% of Ann Arbor's drinking water, stating only that, "there are several water wells on ARB property, all of which are outside the proposed project area." The SRDEA, however, contained extensive analysis of wetlands and streams in and around the property. But nothing about the important drinking water wells!

See Water Resources/Water Quality Response #1.

Thus, there is plenty to object to regarding the proposed expansion.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 12, 2023 3:03 PM
To: William Ballard
Subject: FW: Airport Expansioin

-----Original Message-----

From: David Fritsch <davidfritsch@comcast.net>
Sent: Thursday, January 12, 2023 2:11 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: kathewun@aol.com; houttemans@michigan.gov
Subject: Airport Expansioin

[You don't often get email from davidfritsch@comcast.net. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr Kuhlhanek

This is to express our concern and dismay regarding the latest proposals to expand Ann Arbor City Airport.

Our opposition is not based on any of the studies or reports. We don't need to understand these. What we understand quite clearly is that the unacceptable noise pollution from the planes diminishes our lives and our property values.

[See Noise Responses #1, #2, and #3.](#)

We live on the Georgetown Golf Course. Your pilots are supposed to avoid our neighborhood by flying east to US 23 before turning north. Your pilots flout the guidelines with impunity. The result is that hundreds of flights per year come over our house and those of our neighbors in a near constant stream, especially during the warmer months, when, I imagine, there is much golf that needs to be played up in Traverse City.

Turning north over our neighborhood must cut at least, I don't know, three minutes off the flying time. The pilots evidently view this as a small price to pay for fellow Ann Arborites having to listen to the ear-splitting racket that they create as they go by, sometimes two at a time, and occasionally three at a time.

The proposals references to "safety" also ring completely hollow to us, as many of these flights pass over our house at no more than 50 to 100 feet in altitude.

[See Noise Response #1 and Safety/Health Responses #6 and #14.](#)

So, the prospect of more flights, with larger and noisier lanes, is not one we welcome, to put it as mildly as possible.

We will be joining the many people who oppose this further intrusion into our lives with whatever money and resources we can spare. We are making our first contribution today.

David and Janet Fritsch
1295 King George Blvd
Ann Arbor MI 48108

734/973-1227

9 January, 2023

Steve Houtteman
2700 Port Lansing Rd
Lansing, MI 48906

Dear Mr Houtteman,

I would like to respectfully register my opposition to the proposed expansion of the Ann Arbor Municipal Airport. There appears to be a clear intention to increase air traffic at ARB, but equally clear are the increased safety issues that will go hand in hand with more takeoffs and landings. Not to mention the increased noise pollution for local residents.

See Noise Responses #1, #2, and #3.

This expansion will certainly have adverse effects on the quality of life for my family. I urge you to reject the proposed expansion.

Respectfully,


David G Bailey
4751 Sawgrass Dr E

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 12, 2023 7:44 AM
To: William Ballard
Subject: FW: Proposed Extension of the Ann Arbor Airport runway

From: Don Deatrick <ddeatrick@live.com>
Sent: Wednesday, January 11, 2023 8:19 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov; kathewun@aol.com
Subject: Proposed Extension of the Ann Arbor Airport runway

You don't often get email from ddeatrick@live.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

January 11, 2023

To: Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, Michigan 48108.
Email: mjkulhanek@a2gov.org

Copy: Steve Houttemans
MDOT-AERONAUTICS
2700 Port Lansing Road
Lansing, MI 48906.
Email: houttemans@michigan.gov

Copy: Kathe Wunderlich
Email: kathewun@aol.com

RE: Ann Arbor Airport Expansion

I am writing to you in opposition to the Ann Arbor Airport Expansion as a concerned community member. My report is in two portions. First portion is regarding the number of waterfowl in the area surrounding the Ann Arbor Airport and potentially flying in the path of aircraft landing or taking off from the airport in a southern direction. The second portion of my report is regarding the low flying aircraft into and out of the Ann Arbor Airport.

Waterfowl in and around the Ann Arbor airport (KARB)

My physical exercise activities includes long walks and jogs around the Stonebridge Subdivision and along Lohr Road adjacent to the large property and along Ellsworth Road and to Airport Blvd.. This daily exercise program allows me to observe the daily flights of aircraft into and out of the airport over a two to four hour period, almost every day of the year. My observations only pertain to the flights toward the south end of the runway and over the soy bean or corn field between the runway and Lohr Road. This field is directly under the flight path of aircraft landing from or taking off toward the south. And my observations include waterfowl on or near the two lakes on Stonebridge Golf course off of Lohr Road under the flight paths of aircraft taking off or landing from a southerly direction.

Observations during 2020:

July 1 through October 31 - Canadian Geese count is between 151 to 223. Plus 5 Mute swans and 39 ducks.

October 1 through November 31 – Geese count is between 336 to 357. Plus 5 Mute swans and 46 ducks.

November 1 through December 31 – Geese count is between 112 to 136. Plus 2 Mute swans and 32 ducks.

Observations during 2021:

July 1 through October 31 - Canadian Geese count is between 167 to 268. Plus 5 Mute swans and 17 ducks.

October 1 through November 31 – Geese count is between 376 to 453 Plus Mute 5 swans.

November 1 through December 31 – Geese count is between 232 to 246. No Mute swans and 36 ducks

Observations during 2022:

July 1 through October 31 - Canadian Geese count is between 194 to 299. Plus 10 Mute swans and 41 ducks.

October 1 through November 31 – Geese count is between 381 to 457. Plus 10 Mute swans and 29 ducks.

November 1 through December 31 – Geese count is between 242 to 253. No Mute swans and 34 ducks.

Observations during 2023:

January 1 through January 11 - Canadian geese count is between 164 to 178 plus an average of 31 ducks and no Mute swans.

Summary of waterfowl and further comments follow. During the three years of my observing waterfowl near the airport, I observed, the number of geese increased 110 and Mute swans increase by five. On one morning, during my walk in October of 2022, I counted 457 geese in the field on Lohr Road. These geese also exercise twice each day once in the morning then during the afternoon. The geese circle and across the path of incoming and outgoing aircraft many times, during their twice daily exercise. An example of the danger and hazard of mixing waterfowl and aircraft is shown next. During the first week of December 2022 I observed a V formation of approximately 40 geese flying across the south end of the runway and flying at the same attitude as a Cessna type aircraft taking off heading toward the south and with V formation of geese directly in the path of the aircraft. At the very last second the aircraft flipped and turned over on its left side to avoid the 40 Canadian geese. Three seconds later, the geese and aircraft would have collided into each other with the potential of the aircraft crashing into houses on Lohr Road. This time an accident was avoided.

What about the next time.

Additionally, the two lakes on Lohr Road in the Stonebridge Golf course area is a habitat for mute swans. During 2022 five pair of mute swans were seen during May through October. During the last four years, observations show the lake on the north side of Stonebridge Blvd. E. is the breeding lake for Mute swans and Canadian Geese. The mute swans average six signets each year. Further, the lake at the corner of Airport Drive and Ellsworth Road, near the Bank of Ann Arbor, is a breeding lake and habitat for Canadian Geese. Each year over 30-40 goslings hatch at this site. My observations of waterfowl, does not include any count of waterfowl at the Bank of Ann Arbor site. However, an estimate of geese at the Bank of Ann Arbor site is over 70 geese each year and increasing.

The wild geese population presents a significant flight hazard to aircraft taking off and landing at the Ann Arbor Airport. A runway expansion would only increase the danger to pilots, aircraft and residents in the area.

NOTE: A complete Environmental Impact Assessment study must be completed so that everyone including the Ann Arbor Airport management understands and Also knows what wild life is in the airport area. The current study is only guess work or at best an estimate and in some areas no mention is made of wild life that is found every day. One example is the Mute Swans that have been in the area for three years.

See Wildlife Responses #1 and #2 and Safety/Health Responses #1 and #8.

Low flying aircraft

The second portion of my report is regarding low flying aircraft. Federal Aviation Regulation (FAR) Part 91.119 indicates that, except when necessary for departure or landing, the

minimum altitude over rural areas is **1,000 feet above (AGL) and 500 feet over rural areas**. All my observations below pertain to rural areas.

Since August 21, 2021 when I observed an aircraft flying 15 feet over the top a tree behind my neighbor's home. The plane was so low I thought it would hit the tree and crash into our home and the neighbor's home. I hit the floor immediately and found the aircraft had not crashed. Where upon, I called the Pittsfield Police to report the near crash. I talked to the Director of Safety, Mathew Harshberger Pittsfield Police and he promised to talk with the Flying Schools at the airport to not Buzz homes in the airport area again. Noticed there was some improvement for a few weeks. However, the low flying aircraft continue to fly too low causing many neighbors to fear for their safety and when an aircraft will crash into their home. After this event I did triangulations of aircraft using their shadow as they flew over Stonebridge Drive S., to determine the altitude of aircraft taking off to the south from the runway and found approximately two percent of all aircraft were under 300 feet. At that point the aircraft(s) were over 2000 feet from the end of the runway. Many times, this was reported to the Ann Arbor airport control tower and to the FAA. The FAA said they viewed the flights over a few days and did not see the conditions that I observed. The Airport tower personnel said the pilots determine what is safe for them and their aircraft. Therefore, the low flying aircraft continue into the year 2023.

Summary of low flying aircraft

NOTE: Many other low flying aircraft were observed but not reflected here due to the length of the number of events. (Note: these observations were recorded from 2000 feet from the end of the runway near Lohr Road)

August 21, 2021 15 feet over 4881 Lone Oak Court, Ann Arbor, MI or 55 feet (AGL)

July 20, 2022 10:25 AM silver with blue strip on side,

July 22, 2021 at 9:25 AM

July 25, 2021 7:45 AM –Twin engine. 150 feet (AGL)

July 25, 2021 8:58 AM silver, wing on bottom of fuselage

July 25, 2021 5:30 PM

July 27, 2021 10:37 AM touch and go many times

July 31, 2011, 1:06 PM silver with blue strip on side, wing on top of fuselage, 250 feet (AGL)

August 2, 2021, 8:47 AM wing on top of the fuselage, under 200 feet (AGL)

August 24, 2021 5:29 PM 250 feet above ground (AGL)

See Noise Response #1 and Safety/Health Responses #6 and #14.

Don Deatrck

Resident of Pittsfield Township

and A Stonebridge Subdivision

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 10:20 AM
To: William Ballard
Subject: FW: AA Airport Expansion

From: Donia Perin <donia.perin@gmail.com>
Sent: Friday, January 13, 2023 10:02 AM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>; kathewun@aol.com
Subject: AA Airport Expansion

You don't often get email from donia.perin@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hello to All,

I am writing with regards to the proposed airport expansion/extension of runway at Ann Arbor Airport (KARB). I could go into a very long dissertation as to why this proposed expansion is a detriment to my neighborhood and environmental affects but I will keep this short and to the point. As I have previously contacted Mr. Kulhanek, the mayor of Ann Arbor, FAA liaison for KARB about my extreme concerns about the noise we have experienced at our home in Stonebridge, I feel that my concerns (along with so many other people), were just another pain in someone's behind. Below I have listed the very valid reasons why an expansion should be turned down:

1) Since we purchased our home in 2019, we have had to endure increased traffic noise which a lot of the times starts at 7:00am and at times has gone until 10:00 and even 11:00pm. This has caused stress, both mental and physical since this noise occurs most days of the week. I have even seen animals run up a tree due to the low and loud level of these aircraft AND has scared my cat off the couch. Noise abatement, what noise abatement? I suppose we should have done more research as we would not have purchased a home here. See Noise Responses #1, #2, #3 and #7.

2) Concerns for safety of our neighborhood and surrounding areas should more (and larger) aircraft be allowed to land at KARB. See Health/Safety Responses #6.

3) Environmental stress due to noise and pollution on wildlife (what is left). See Noise Responses #1 and #2, Wildlife Response #1, Water Resources/Water Quality Response #1, and Air Quality Response #1.

4) More (and larger) aircraft will produce more (and louder) noise bringing fear that the value of homes in Stonebridge will be affected (and most undoubtedly will). Why would you buy a home near an airport that now allows more aircraft and produces noise and safety issues with extended runways? It doesn't matter how nice a neighborhood is, aircraft noise and traffic is a major concern. See Financial/Economic Response #2.

5) This seems to be a driven by money (as in more revenue for city of Ann Arbor). See General Response #13.

6) I know for a fact that the owner of the Citation jet also has a jet at Willow Run, why does this **Ann Arbor business owner** need a larger runway here, take it to Willow Run. Why do we need a larger airport when there is one within 15 minutes? Is this also a U of M involvement, huh?? See General Responses #5 and #10.

All in all, I believe I have expressed very valid safety, environmental and physical concerns and I pray that this proposal is turned down once and for all.

Concerned Stonebridge Resident,
Donia Perin

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 12, 2023 8:58 AM
To: William Ballard
Subject: FW: Opposition to Ann Arbor Airport Expansion

From: Greg Tolmoff <gregtolmoff@gmail.com>
Sent: Thursday, January 12, 2023 8:48 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov; kathewun@aol.com; City Council <CityCouncil@a2gov.org>; Taylor, Christopher (Mayor) <CTaylor@a2gov.org>
Cc: Board The Waterways <thewaterwaysboard@gmail.com>; mjlee_@hotmail.com
Subject: Opposition to Ann Arbor Airport Expansion

Some people who received this message don't often get email from gregtolmoff@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hi,

I am a resident of the Waterways subdivision (5491 Waterview Ct) and I am adding my name to the list of those in opposition to the expansion of the Ann Arbor Airport. I am a commercial airline pilot and I fly out of DTW so I am intimately familiar with airport operations; I have also rented and flown small aircraft out of Ann Arbor airport many times. The airport is situated in a location that makes it *barely* suitable as is! I spend time at 4932 Lohr Rd and it is directly on the departure path of Rwy 24 and directly on the approach path of Rwy 6. Not to mention the noise of the airplanes that affect all citizens, the safety of the flights is what inspired me to write.

I was a career Air Force pilot flying Fighters and Bombers and I am a trained safety and accident investigator. When I first moved here 7.5 years ago, I was shocked at the airport's proximity to all of the migrating Canadian geese. Literally thousands of geese occupy the farm land adjacent to Lohr Rd at all hours and throughout the year. Increasing the size of the runway will bring in larger and heavier jets that can easily ingest/strike geese and put all surrounding neighborhoods in jeopardy. Not a risk I am willing to take with my loved ones.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

I know that you all are aware of the other talking points of the opposition, but I will list them below. I implore you to not expand the runway - the "reward" (getting a Citation to fly at Max gross weight on a summer day), is most certainly not worth the risk of life with a mishap in our surrounding neighborhoods. And if you do decide to continue pursuit of expansion? Please put it up to a vote so the citizens can decide.

Thank you very much for your consideration and I would be more than happy to discuss my position in person or over the phone.

Respectfully,

Greg Tolmoff
(660)864-3979
gregtolmoff@gmail.com

ï The proposed runway extension would move ARB’s primary Runway 24 870 feet closer to Lohr Road, adding to the risks to residents near the end of the runway, which are not adequately protected by so-called “Runway Protection Zones.”

See Safety/Health Response #2.

ï The SRDEA has dropped prior claims, since the onset of the project in 2007, that the expansion was a “safety extension.” Since the FAA ruled that federal funds would not be available for such an expansion, the focus was shifted to “improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase over time.”

See Technical Response #1.

ï However, of the four “critical aircraft” types identified by the SRDEA, three could operate 100% of the time on the existing 3,505-foot runway. Only the Cessna Citation Excel XLS, the type of aircraft owned and operated by AvFuel Corp., which dominates operations in this class, could suffer weight penalties on hot summer days, but could still operate at full weight 90% of the time, and at 100% capacity on most days. At most, only 48 operations per year of the Citation XLS class’s 263 annual operations (in 2019) could be impacted by hot weather – a miniscule .00038 of ARB’s total annual operations – hardly sufficient to justify the proposed expansion.

See Technical Response #2.

ï The SRDEA acknowledges that any expansion would likely attract more jet traffic, where larger and heavier aircraft pose additional risks in an area heavily populated by Canada geese.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

ï Further complicating issues, because ARB is a municipal airport funded with federal dollars, any pilot who chooses can land at the airport, no matter the size of their aircraft – adding to the level of risk. Ann Arbor cannot regulate the type of aircraft that could utilize the field.

See General Response #18.

ï The SRDEA acknowledges for the first time the presence of Canada geese surrounding the airport, with a U.S. Department of Agriculture inspector observing 75-100 Canada geese at the airport, feeding in a tilled fallow field. The inspector also reported “flocks of 5 to 15 geese arrived on the airfield at different times. . . Geese were observed within 10 yards of the runway.” The inspector concluded that, “Canada geese are a real and present danger, and will need to be managed for the foreseeable future. KARB is surrounded by ideal resident / migratory Canada goose habitat.” However, the SRDEA presents no plan for such mitigation – and makes no mention of any risks posed by the Canada geese.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

ï The Purpose and Need statement does not support the need for an extended runway. The SRDEA contends that aircraft that routinely use ARB suffer “undue concessions in reduced fuel, passengers, and / or cargo loads. . .diversions to other airports are also commonly needed when the runway surface is wet, or during summer months when higher temperatures reduce aircraft performance.” However, the SRDEA provides no actual data in support of the claimed concessions or diversions. The FAA noted, “the rate of users taking weight restrictions has not been documented,” and, “The inclusion of the contaminated runway length distances cannot be used to justify FAA funding requirements” for an extended runway.

See Technical Response #7.

ï The SRDEA stated an excess number of hot weather days at ARB. To justify the proposed expansion, the SRDEA identified 81 hot days in Ann Arbor, when temperatures exceeded 80 degrees (in 2019). However, aircraft performance charts included in the SRDEA suggest an industry standard for hot weather is 85 degrees, not 80 degrees. There were only 66 days in 2019 when the temperature exceeded 85 degrees. Thus, the SRDEA inflated the number of hot weather days by 25% by using the 80-degree standard.

See Technical Response #5.

ï The SRDEA alludes to a connection between “many prominent business and institutions with the University of Michigan being the area’s largest employer. Manufacturing, health care, automotive, information technology, and biomedical research companies account for major employers surrounding the area” that often require “air transportation to bring workers, clients, suppliers, customers, and time sensitive parts / supplies to and from the

region.” However no specific connection between those business needs and ARB was established in the SRDEA. It was merely an allusion.

See Financial/Economic Response #1.

ï The SRDEA also suggests that the UM’s six / seven home football weekends and Michigan International Speedway two annual NASCAR events bring increased aircraft activity to the area, and that “should Runway 6 / 24 be extended, additional aircraft activity could occur at ARB due to its proximity to special event venues.” However, the SRDEA contained no actual forecasts of such potential activity.

See Technical Response #3.

ï However, a less sanitized version of the SRDEA, contained in an earlier draft submitted to the FAA and reviewed under the Freedom of Information Act, projected an immediate tripling of annual jet operations if the ARB runway were extended to over 1,000 per year, with another 500-665 operations from jets, which currently utilize Willow Run Airport, possibly moving to an extended ARB on football weekends. That earlier draft SRDEA suggested up to 40% of the 9,313 annual small and medium jet operations at Willow Run “would likely shift to ARB if additional runway length were available,” thus increasing jet operations from the 360 in 2019 to upwards of 3,660 jet operations per year – ultimately turning ARB into a jetport. We cannot let that happen!

See Technical Response #4.

ï To temper any fears of such runway expansion, the final SRDEA omitted such jet growth claims and forecast, instead, that the operations of small turboprop and jet aircraft “will slowly increase over time.”

See Technical Response #1.

ï While the SRDEA projects a maximum of ARB operations of 84,336 in 2039, it is interesting to note that the current 3,505-foot runway supported almost two-thirds more operations in 1999 – 134,554, suggesting the current runway is more than sufficient for the projected future.

See Technical Response #6.

ï Any ARB expansion is especially dangerous because, with jets being the primary source of increased operations, it raises the level of risk in an area heavily populated with Canada geese, which do not interact well with jet aircraft.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

ï ARB also has certain conditions that can enhance the level of risk over other nearby airports: Instrument approaches and landings are not permitted at the airport. The control tower only operates part-time. Also, in winter, de-icing is not permitted on the airport, to protect the wells on the property that produce drinking water. And ARB does not provide 24-hour on-site fire and rescue services.

See Safety/Health Response #3.

ï The noise problem around the airport would almost certainly increase. Even the very conservative FAA-required noise analysis conducted as part of the SRDEA concedes that the harmful 60-decible noise level would extend to “a residential area at the southwest corner of the airport.”

See Noise Responses #1, #2, and #3.

ï The FAA requires the identification of environmental health risks to children. However, despite numerous scientific studies confirming the negative impact of aircraft noise on the neuropsychological development of children, the SRDEA does not discuss such threats, concluding, instead, that “the FAA has not established a significance threshold for impacts to children’s environmental health and safety. . .”

See Safety/Health Response #4.

ï The SRDEA does not acknowledge any potential risks to the three wells on airport property that supply about 20% of Ann Arbor’s drinking water, stating only that, “there are several water wells on ARB property, all of which are outside the proposed project area.” The SRDEA, however, contained extensive analysis of wetlands and streams in and around the property. But nothing about the important drinking water wells!

See Water Resources/Water Quality Response #1.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 12, 2023 7:45 AM
To: William Ballard
Subject: FW: Public Statement - Strong Objection to proposed Ann Arbor Airport Expansion - Private Citizen
Attachments: ADB93CC4E34540929FB67E41894D1750.png; ADB93CC4E34540929FB67E41894D1750.png

From: Jerry Wood <jwood0011@gmail.com>
Sent: Wednesday, January 11, 2023 6:05 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov
Cc: kathewun@aol.com
Subject: Fwd: Public Statement - Strong Objection to proposed Ann Arbor Airport Expansion - Private Citizen

You don't often get email from jwood0011@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Adding my voice of very strong opposition to the Ann Arbor airport expansion. Mr. Lee's previous note below pretty thoroughly articulates the many problems.

Regards,
Jerry Wood
1366 Whispering Maples Ct. Ann Arbor

On Wed, Jan 4, 2023 at 10:23 AM Michael Lee <mjlee@hotmail.com> wrote:

To – MKulhanek@a2gov.org - Mr. Matt Kulhanek, Airport Manager

Cc – CityCouncil@a2gov.org – Ann Arbor City Council

ctaylor@a2gov.org – Ann Arbor Mayor

jhayner@a2gov.org – Ann Arbor City Council Member

ldisch@a2gov.org – Ann Arbor City Council Member

CHarrison@a2gov.org – Ann Arbor City Council Member

LSong@a2gov.org – Ann Arbor City Council Member

CWatson@a2gov.org – Ann Arbor City Council Member

tradina@a2gov.org – Ann Arbor City Council Member

AGhaziEdwin@a2gov.org – Ann Arbor City Council Member

JEyer@a2gov.org – Ann Arbor City Council Member

DAkmon@a2gov.org – Ann Arbor City Council Member

EBriggs@a2gov.org – Ann Arbor City Council Member

JCornell@a2gov.org – Ann Arbor City Council Member

kathewun@aol.com - Citizen

andymc@umich.edu - Citizen

houttemans@michigan.gov – MDOT rep

lsmolciclaron@mlive.com - Lucas Smolcic Larson – Ann Arbor News Reporter

thewaterwaysboard@gmail.com – The Waterways Subdivision Board

supervisor@pittsfield-mi.gov - supervisor@pittsfield-mi.gov

clerk@pittsfield-mi.gov - clerk@pittsfield-mi.gov

treasurer@pittsfield-mi.gov - treasurer@pittsfield-mi.gov

edwards-brownl@pittsfield-mi.gov - edwards-brownl@pittsfield-mi.gov

jaffery@pittsfield-mi.gov - jaffery@pittsfield-mi.gov

kroneg@pittsfield-mi.gov - kroneg@pittsfield-mi.gov

Urda-ThompsonA@pittsfield-mi.gov - Urda-ThompsonA@pittsfield-mi.gov

Ktle61@hotmail.com – Citizen

pghuebner@gmail.com - Paul & Erika Huebner, Citizens

sandersc@washtenaw.org - Washtenaw County Commissioner Caroline Sanders

From – Michael J. Lee – Resident of Waterways Subdivision, Pittsfield Township

Subject – Public Statement – Strong Opposition to Proposed Ann Arbor Airport Expansion

I am a resident of 4793 Wildflower Ct., Ann Arbor, MI 48108. My home is in Pittsfield Township. I do not live in the direct take-off or landing flight path, but experience very frequent and very repetitive low altitude and very loud traffic from training patterns. We also hear very large planes take-off and land during the night, typically at 5:00AM. We have experienced numerous very low altitude encounters with aircraft at our home. My wife and I knew that there was an airport nearby when we purchased our home.

I am going to be as brief and direct as possible, to increase the potential that you will read this entire letter. I have already provided a recorded/transcribed comment at the Public Hearing at Ann Arbor City Hall on December 13, 2022, and I also appeared at the Pittsfield Township Council Meeting on December 14, 2022 and provided a comment during the public comment portion of the agenda. I have also filed formal complaints with the FAA, which I reference below. I will summarize my objections below –

Based on my own observations and interactions with the Airport Management Team, the current airport perimeter with current runway configuration is not safe, the airport is not a good neighbor, and it is not well managed. Providing more and larger aircraft to this entity, on this patch of property, and to the management team and management structure, and permitting it to operate on the current airport property with a larger runway, is a very bad decision. Additionally –

1. Significant safety issues - Aircraft approach and land very low above the Speedway Gas Station on State St. and Ellsworth, and take off very low above homes on Lohr Rd. This seems to obviously infer that the current airport and it's current use, doesn't safely fit on the existing property. Extending or expanding the airport or allowing still larger aircraft to operate there would not be safe. During my interactions with other residents, I learned about multiple recent safety events, including a plane going down this past summer in the cornfield along Lohr Rd.

a. The Airport did not make this public – why??

b. If the runway is extended, an event like this likely would have involved a house, personal injury, and private property damage!

See Noise Response #1 and Safety/Health Responses #6 and #14.

c. Any events over the last 15 years, have been attributed to “pilot error”. With longer runways, and more and larger aircraft, “pilot error” will have a higher probability of impacting local residents and house structures. How is this OK? It defies logic, but must be answered by airport management, and the Ann Arbor Mayor and City Council. Despite the fact that the airport is not in the city limits, it is still Ann Arbor's responsibility.

See Technical Responses #9

2. Significant altitude and noise violations - Training patterns from the Ann Arbor Airport flight schools are an obnoxious menace to the surrounding area, with frequent violations of FAA altitude regulations, and frequent noise in excess of FAA regulations. I have provided a copy of the data used in my complaints to the FAA as reference. Mr. Kulhanek has been directly contacted on numerous occasions and has done nothing to address it.

See Noise Response #1 and Safety/Health Responses #6 and #14.

a. I use the FlightAware app on my phone to monitor altitude, tail numbers, and locations of planes. This has been a good resource for actual data to provide in complaints.

b. I also use the dB App on my phone to measure noise. I have recorded 85 dB inside of my home with the windows closed. This is real data from a person not on the direct take-off/landing path. It is directly opposed to the FAA standard and what has been used in the consultant's study for this proposal. The FAA uses an average annual type noise level, which clearly includes night time data, and

time when no planes are in the area; artificially reducing the actual noise level. Further, the consultant's study only uses modeled data, and never cites any actual measured data from airport grounds or the surrounding area. This is deceptive at best, and purposeful/strategic at worst. The proposal reviewers should demand real physical and measured data from the surrounding area. I will offer the use of my property free of charge. See Noise Response #5.

3. Disingenuous and non-transparent motivations - Direct conversations that I have had with the Airport Manager, Mr. Kulhanek, an addressee on this letter, are polite, but have yielded no action or actionable responses. He seems to be a mouthpiece for the financial entities seeking to expand this airport. His motivations for expansion are not transparent, and should be questioned very rigorously by the City of Ann Arbor and any other stakeholders. Any financial benefits to the city of Ann Arbor are also not apparent. Requests, as part of this process, to send any and all comments to Mr. Kulhanek, seems ill-advised based on my interaction, and the total lack of reaction and lack of actionable responses. He is a defacto "fox watching the hen-house" on this matter. That is why I have copied a much larger distribution list.

See General Response #12.

4. Major risk to Water Aquifer below the airport- Given the Dioxane Plume concerns to the north, adding further risk to the water sources for Ann Arbor, seem very ill-advised. The recent addition of a business that paints/restores aircraft at the airport will provide additional increased risk to the water resources surrounding the airport.

See Water Resources/Water Quality Response #1.

5. Why not use Willow Run? Willow Run is a viable, ready, convenient alternative. The cost/benefit seems clear. All of the benefits at zero cost to the city of Ann Arbor.

See General Responses #5 and #10.

6. Climate/Green Policy - this proposed plan makes a mockery of the City of Ann Arbor's green initiatives and climate propaganda. The risk to the water resources, additional noise above the already obnoxious and damaging noise levels, increased propagation of jet fuel usage, irreparable harm to the mental health of surrounding residents and our quality of life in the surrounding area, are in direct opposition to any green initiatives, and don't indicate any care or concern for residents near to Ann Arbor, but outside of the city limits. Ann Arbor needs to truly understand and own what is happening at this airport and how it affects other citizens.

See Air Quality Responses #1, #2, and #3 and Safety/Health Responses #11, #12, and #13

I strongly object to this proposal and request that any and all steps be taken to stop it from moving forward.

Sincerely,

Michael J. Lee

4793 Wildflower Ct.

Ann Arbor, MI

(734) 904-8756

mjlee@hotmail.com

Attachment #1 - Data summary of Summer 2022 incidents at my home – items 10 and 11 were very alarming and unsafe, and item 8 was disruptive and unsettling to our household. Both resulted in phone calls to the Airport Manager. His phone logs can be used to verify the calls from me.

Sent from [Mail](#) for Windows

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 7:25 AM
To: William Ballard
Subject: FW: Ann Arbor Airport Expansion

From: JAMES MCELROY <jim5448@comcast.net>
Sent: Thursday, January 12, 2023 9:45 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; Airport (Public Services) <Airport@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com; thewaterwaysboard@gmail.com
Subject: Ann Arbor Airport Expansion

You don't often get email from jim5448@comcast.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

After carefully reviewing the proposed expansion of the Ann Arbor airport, let me go on record for supporting the NO ACTION alternative offered. I agree with all the safety and noise concerns expressed by many other local residents. Meanwhile, there are no compelling reasons to move forward on the other alternatives. No significant safety or operating problems to overcome. I saw no cost / benefit analysis in the proposal that could possibly justify the project in the face of adamant resident opposition. Meanwhile, Willow Run is only 20 minutes away and already offers all the supposed benefits of this expansion. See Noise Responses #1, #2, and #3, Financial/Economic Response #11 and #12, and General Responses #5 and #10.

Now, if the tower visibility issue is such a big deal, why not include another alternative to merely move the runway 150 ft to the southwest and keep its length the same? I for one could agree to that, but it isn't even considered. So put me down for opposing the recommendation.

Jim McElroy
5448 Waterfield Ct
Ann Arbor 48108

See General Response #25

Dave Clawson

From: Kulhanek, Matthew <MKKulhanek@a2gov.org>
Sent: Thursday, January 12, 2023 11:48 AM
To: William Ballard
Subject: FW: Airport Expansion

From: joanne@lavignelawoffices.com <joanne@lavignelawoffices.com>
Sent: Thursday, January 12, 2023 11:10 AM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKKulhanek@a2gov.org>; kathewun@aol.com
Subject: Airport Expansion

You don't often get email from joanne@lavignelawoffices.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

To Whom it May Concern:

I am a resident of the Stonebridge subdivision on Lohr Road and I am writing this letter to adamantly oppose the expansion of the Ann Arbor Airport runway. We moved to this subdivision to provide a quiet, safe environment for our children to grow up in. The idea of aircraft flying as low as 100 feet overhead and the increased noise level is appalling to me. That does not even consider the impact such an expansion will have on the bird populations in our community. I have read that expanding the runway will make it "safer" for pilots to land in harsh conditions but that sound ridiculous to me. If pilots are not trained to properly land on the runway as is, then perhaps they should not be flying in the first place. There is also no reason to create a longer runway when Willow Run Airport is ten miles away. The only people this will benefit are a small group of people that wish to operate larger aircraft-at the risk to our wildlife, our homes and our families. Please do not expand the Ann Arbor Airport runway. Please.

Respectfully,

See Noise Response #1, Safety/Health Responses #6 and #14, and General Responses #5 and #10.

Joanne Pray Schleicher

Joanne E. Pray
LAW OFFICES OF JOSEPH A. LAVIGNE
31700 West 13 Mile Road, Suite 96
Farmington Hills, Michigan 48334
(248) 539-3144 - voice
(248) 539-3166 - fax
joanne@lavignelawoffices.com
<http://www.lavignelawoffices.com>

This electronic message and all contents contain information from the Law Offices of Joseph A. Lavigne which may be privileged, confidential or otherwise protected from disclosure. The information is intended to be for the addressee only. If you are not the addressee, any disclosure, copy, distribution or use of the contents of this message is prohibited. See 18 U.S.C. 2510 et seq. If you have received this electronic message in error, please notify us immediately and destroy the original message and all copies. Thank you.

Date: 12-January-2023

To: Matthew Kulhanek, mjkulhanek@a2gov.org, Ann Arbor Municipal Airport, 801 Airport Drive, Ann Arbor MI 48108

Steve Houtteman, houttemans@michigan.gov, MDOT-AERONAUTICS, 2700 Port Lansing Rd, Lansing MI 48906

Cc: Kathe Wunderlich, kathewun@aol.com, Committee to Preserve Community Quality

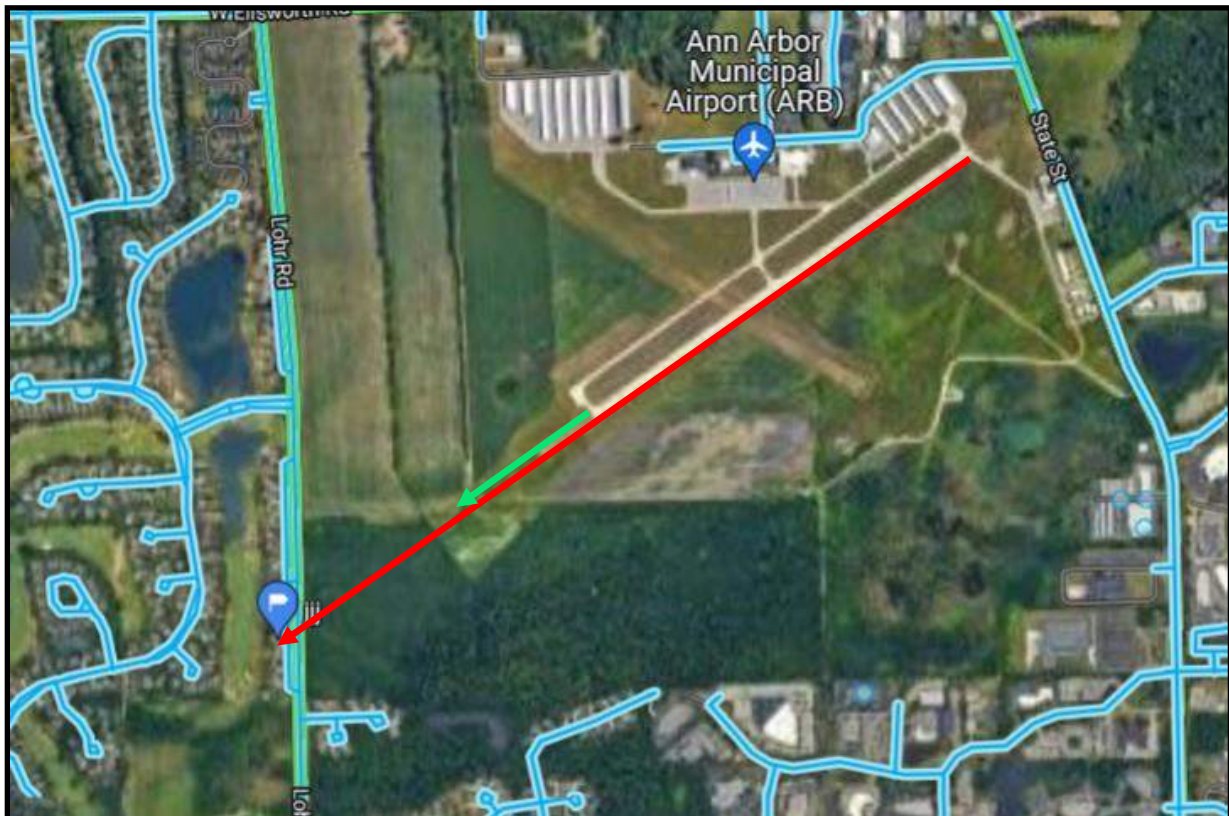
From: Joyce Svechota, jsvechot@umich.edu, Homeowner, 4932 Lohr Rd, Ann Arbor MI 48108

RE: Proposed Ann Arbor Airport runway extension

WHO AM I? 4932 LOHR RD

Notice the **RED LINE** in the photo below. It extends from the current Ann Arbor Airport runway **DIRECTLY** to the blue flag marker across from Lohr Rd. **That blue flag is MY HOUSE!** The **GREEN ARROW** approximates how much closer that runway will be to my house if is lengthened according to the suggested runway expansion plan.

It's a LOT closer.



BULLSEYE TARGET? YOU BET! MY SAFETY MATTERS

Any plane landing now has my house in their sights and cannot get any closer to the roof of my house without crashing into my house. How can the small planes that land now get any lower to reach the extended runway without going through my house? And a JET?

See Noise Response #1 and Safety/Health Responses #6 and #14.

I envision constant and immediate danger to everyone in the vicinity of my house if the runway is extended.

I urge you to think about the liability those of you who vote for this proposal will have for any damage, injury, or death when a plane lands on my property.

OUR FLYING NEIGHBORS WITH FEATHERS

Our feathered friends, mostly geese, are out in full force in any season. They can be found all along our Lohr Rd stretch, swimming in the large pond, snacking in the corn/soy fields along Lohr Rd, and drinking in the swales along Lohr Rd after the rains. I am watching huge flocks flying over the airport as I write this.

The risk to a plane from their flying masses and sudden flights is severe and that risk translates to additional danger to my home and others.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

UNBEARABLE NOISE

Multiple planes fly over my house every single day. I can hear them inside as they fly over. If I am outside with another person, conversation ALWAYS has to stop until the plane is gone. And these are little planes.

See Noise Responses #1, #2, and #3.

But what happens when JETS start landing over my house. The noise pollution will be TREMENDOUS.

Any semblance of a normal, quiet existence in my home will be gone if the runway is extended.

VALUE OF MY BEAUTIFUL HOME WILL BE DESTROYED

Are any one of the people who are going to vote to make this happen, or are on committees for it, or giving money to the cause to make this happen, going to buy my house at the value it SHOULD BE when the house is sold in 5, 10, 15 years?

You can be sure my losses, if I can even sell my house, will be UNBELIEVABLE. Why should I take a significant loss on my property because someone (really - who are these people) thinks expansion is so important that they don't believe the people who live here matter.

See Financial/Economic Response #2.

REALITY CHECK FOR THOSE WHO WANT THE EXPANSION

To all of those who are for this expansion, and ultimately those voting for it, I urge you to buy a house in Stonebridge today, or any other of the other neighborhoods affected by the expansion. Since the growth and value of Stonebridge currently continues to go up, will you bet with your own cash that it's value is going to continue to increase after an expansion with jets flying in and out?

NEEDLESS DESIRE TO EXPAND AIRPORT

Even with all the negative consequences to Stonebridge, other neighborhoods, and the REAL PEOPLE who live in these communities, what is really the point of this expansion?

Free money to make it happen? (Maybe that money can be better used elsewhere where it actually improves our community instead of destroying it.)

The ability for a couple of people to land their planes and get to their office 5-10 minutes quicker? (Maybe they can leave home earlier like the rest of the world does when they have to commute.)

WHAT EXACTLY ARE THE REASONS TO EXPAND THE AIRPORT?

See General Response #13.

We have two amazing airports nearby – Willow Run and Detroit Metro. Let planes use those instead of destroying our homes.

We all know the reasons why the airport expansion should NOT HAPPEN but has anyone every provided a GOOD reason for why it should happen. Maybe we should vote on it!

NEXT STEPS – COME VISIT ME

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

To anyone who believes that this airport expansion is a good thing, I invite you to my home for an afternoon experience of airport activity from my point of view. How about on a football Saturday? Or any Saturday? EMAIL ME AT JSVECHOT@UMICH.EDU to set up a time and date.

I want you to SEE the plane lights heading directly towards you and HEAR how you cannot carry on a conversation while a plane goes by. Imagine then that plane is a jet.

I want you to FEEL how close the planes are to the house and THEN IMAGINE that those planes are going to land three football fields closer. Hmmm – it seems they really can't get any closer within that distance without landing on the house.

NOW IMAGINE a REALLY BIG JET landing. You won't like it.

WHY I LIVE HERE

Stonebridge is truly a wonderful community. It's well maintained, loved by its owners, has great proximity to everything a person needs. We all bought our homes here knowing there was a community airport across the street – a small community airport.

We bought knowing that we could live together with the airport and even enjoy it. Who doesn't like seeing some of the interesting planes that fly in and out and who doesn't love it when the kids and grandkids get excited to see a plane fly by.

That's the reality we have all chosen to live with. The airport expansion is not in any of our realities.

Respectfully,

Joyce Svehota

4932 Lohr Rd, Ann Arbor MI 48108

jsvechot@umich.edu

734-476-3019

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 7:25 AM
To: William Ballard
Subject: FW: Airport expansion

-----Original Message-----

From: Kay Davoux <kdavoux@yahoo.com>
Sent: Thursday, January 12, 2023 8:23 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Airport expansion

[You don't often get email from kdavoux@yahoo.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

I live in the Waterways subdivision just south and west of the airport. Most of the time we are not bothered by the airport; however, many times low altitude and loud airplanes fly over and over our house practicing take offs and landings. These planes could easily do alternate routes in the area to not cause noise right above our home. We are in agreement with Pittsfield Township in our feelings that an expansion of the airport and its runways is a very bad idea causing bigger planes and more noise! Please read the data that our neighbor Mike Lee has collected as that will give you great information from airport neighbors. Please do not continue to support this issue.

Kay and Paul Davoux
4805 Wildflower Ct.
Ann Arbor, MI 48108
Sent from my iPad

See Noise Response #1 and Safety/Health Responses #6 and #14.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 12, 2023 7:28 AM
To: William Ballard
Subject: FW: Opposition to the proposed Ann Arbor Airport Expansion

From: Linda French <lindafrench625@gmail.com>
Sent: Thursday, January 12, 2023 7:25 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Opposition to the proposed Ann Arbor Airport Expansion

You don't often get email from lindafrench625@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

To: Steve Houttemans
CC: Matthew Kulhaneck
From: Linda M. French

This letter is to voice my opposition to the proposed Ann Arbor Airport Expansion. In essence this proposal will benefit a small portion of the population, many of whom do not live in the area affected, to the harm of the larger population of Pittsfield and Lodi Townships, who have no voting voice in the decision.

See General Response #13.

In addition to the safety risk from the harmful emission of leaded fuels of the larger airplanes, There is the issue of the negative affect of noise pollution.

See Air Quality Responses #1, #2, and #3 and Noise Response #1

To accommodate the needs of a smaller number at the cost of the larger number is at odds with Ann Arbor's commitment to the betterment of the community of the city as well as to it's

neighbors. The proximity of the larger airport at Willow Run makes this proposal unnecessary.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

Thank you for your consideration of this issue.

Linda M. French

2201 Twin Islands Court

Ann Arbor, MI 48108

--

Linda French

Please note my new email address: lindafrench625@gmail.com

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 12, 2023 11:48 AM
To: William Ballard
Subject: FW: Airport Expansion

From: Lori Salemi <loransal19@gmail.com>
Sent: Thursday, January 12, 2023 11:16 AM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: kathewun@aol.com
Subject: Airport Expansion

You don't often get email from loransal19@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hello,

I am writing to oppose the proposed runway expansion at the Ann Arbor Municipal Airport (ARB).

The expansion poses serious safety risks to residents in the surrounding neighborhoods

- The proposed extension would put the end of the runway 870 feet closer to the homes on Lohr Rd which poses a significant risk to those residents and their homes
- All the homes along Lohr Road are not adequately protected by "Runway Protection Zones" and there is no where to put one because of the existence of Lohr Rd.
- On Sunday, Sept 11 2022 the pilot of a *Cessna 152* was forced to make an emergency landing shortly after takeoff after losing power, it landed in the bean field on the airport property, directly across from the homes on Lohr Rd. If the runway was expanded at the time it would have landed on the homes.
- There is a large population of Canada geese in the areas surrounding the airport. A USDA inspector concluded these geese are a real and present danger.
- The bean/corn field, Stonebridge Golf Course, and numerous lakes in the surrounding subdivisions provide an ideal habitat for Canada geese. It would be unrealistic and cost prohibitive to try to manage/mitigate the geese population
- With the expansion, aircraft would be flying 35% closer to the homes in the flight pattern, a statistic from a presenter at the MDOT-AERO public meeting. This would increase the risk of a bird strike over a neighborhood.
- Smaller aircraft use unleaded fuel. Flying 35% closer to homes will increase the exposure of lead from the aircraft's exhaust plumes to homes, adults, children, pets and wildlife in the surrounding area.
- Water wells at ARB provide 20% of Ann Arbor's drinking water, if there were an accident at the airport this could be placed at risk. There are also wetlands and streams on the property that could be at risk also.
- ARB is a Municipal airport funded by federal tax, so any pilot can land their plane there regardless of size and ARB cannot stop them. Larger aircraft pose a larger risk to the surrounding neighborhoods in regards to crashes, especially when the geese population is taken into account.

See Safety/Health Responses #1, #2, #5, #6, #8, and #14, Wildlife Response #1, Air Quality Responses #1, #2, and #3, and Water Resources/Water Quality Response #1.

The expansion would increase noise exposure:

- With aircraft flying 35% closer to homes in the surrounding area, noise from the current number of aircraft would increase. If air traffic increases

- The SRDEA (Second Revised Draft Environmental Assessment) acknowledges that noise would likely get worse
- Because of the methodology of the ARB's noise analysis, such figures almost always underestimate noise levels over time
- The methodology used to measure noise also did not take into account the need to vary from the norm due to weather. Variations in takeoff and landings due to weather conditions would certainly increase noise levels.
- There needs to be actual measurement of decibel levels over surrounding homes (not computer simulated). This will show that there are already harmful levels of noise. And with increased traffic and larger aircraft this level will only increase.

See Noise Responses #5 and #7.

Inherent Infrastructure flaws at ARB

- The FAA control tower only operates 12 hours a day
- ARB is not equipped to provide bad-weather instrument approaches and landings
- De-icing is not allowed in winter to protect the water wells. De-icing is necessary for larger aircraft
- There is no 24-hour fire/rescue provided at the airport

See Safety/Health Responses #3

The Purpose and Need for any expansion has not been justified

- The SRDEA contends that aircraft that routinely use ARB suffer “undue concessions in reduced fuel, passengers and/or cargo loads when the runway surface is wet, or hot because of the temperature in summer months, however the SRDEA provides no actual data in support of the claimed concessions in fuel, passengers or cargo.
- The SRDEA suggests there is a need for air transportation to bring workers, clients, suppliers, customers and time sensitive parts/supplies to and from the region, yet there is Willow Run Airport only 15 minutes away from ARB. And the SRDEA provides no data to support the connection to the Ann Arbor business and the ARB.
- Willow Run Airport can also handle the aircraft that claim a need of concession in fuel, passengers or cargo to operate fully at ARB.
- The SRDEA projects maximum operations of 84,336 by the year 2039, yet the current runway supported 134,553 operations in 1999. This shows that the current runway is more than sufficient, so no expansion is necessary.
- The SRDEA stated an excess of hot weather days to justify the proposed expansion and identified 81 hot days in Ann Arbor when temperatures exceed 80 degrees in 2019. However aircraft performance charts, included in the SRDEA, suggest the industry standard for hot weather is 85 degrees, not 80 degrees. There were actually only 66 days in 2019 over 85 degrees, so **the SRDEA inflated the numbers used for their argument by 25%, by using a lower than industry standard.**
- The SRDEA also focuses reason for the expansion “to improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase in time”, however 3 of the 4 “critical aircraft” identified by the SRDEA could operate 100% of the on the current existing runway. And only the Cessna Citation Excel XLS could still operate at full weight 90% of the time and at 100% capacity most days. At most only 48 of the 263 operations per year of the Citation XLS in 2019 were impacted by hot weather. A miniscule .00038 of ARB’s total annual operations that year, This is not sufficient to justify this proposed expansion.

See Technical Responses #2, #5, and #7, General Responses #5 and #10.

The SRDEA ignores governments surrounding the airport and can significantly affect their funding

- It ignores prior resolutions from Pittsfield and Lodi Townships (ie Pittsfield Charter Township Resolution #17-21) which object to the expansion for safety reasons, in violation of NEPA and FAA order.
- The SRDEA claims the FAA has no control, responsibility, or discretion for the use of the funds once MDOT-AERO receives the FAA's block grant funds.
- Property values typically decrease in communities surrounding airports when they are expanded. The values can decrease between 5.7-9.2% which would cost Pittsfield Township alone \$1.5 million to Ann Arbor School District, \$1.4 million to Saline School District, \$850,00 to Pittsfield Township and \$810,000 to Washtenaw County from lost tax revenue.

See Financial/Economic Response #2 and General Responses #24 and #26

Thank you,
Lori Salemi

4705 Sawgrass Drive East
Ann Arbor 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 12, 2023 7:39 AM
To: William Ballard
Subject: FW: KARB Runway expansion
Attachments: IssuesofConcern.docx

From: mikep3184@aol.com <mikep3184@aol.com>
Sent: Wednesday, January 11, 2023 8:50 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov; City Council <CityCouncil@a2gov.org>
Cc: Ismolciclerson@mlive.com; grewalm@pittsfield-mi.gov
Subject: KARB Runway expansion

You don't often get email from mikep3184@aol.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

As a pilot and a Pittsfield Township resident, I have followed closely since 2009 the debate about the Ann Arbor Airport (ARB) runway expansion. Although I have 27,000 plus flight hours and nearly five decades of military and airline flying, I write this as a concerned citizen troubled by both the questionable process and motives that brought us to this point and the negative impact the expansion will have on the surrounding communities. I am against the KARB runway being expanded to over 4200 feet. However, at the end of this letter I will present to all concerned a compromise proposal.

The arguments against expansion are led by a grass roots community organization of over 400 people, which has done an excellent job exposing falsehoods and dubious claims by expansion proponents. The civic leaders advocating for expansion appear to be a shadowy group of local aviation advocates and behind the scenes business interests who, because of their political donations to certain Council members now have strong connections and influence within the city administration. The majority of the Council may not know the history surrounding the runway expansion issue.

The proponents want the expansion in order to bring traffic to an underutilized facility; which will bring in more and bigger planes that will buy more fuel and rent more parking. The owner of AvFuel has a Citation Excel XLS housed at KARB, and wants the convenience of not having to stop for fuel when he travels. One airplane. They will say otherwise but we all know the powerful are twisting arms. Please read the attachment written by Andy McGill. It is very enlightening and informative.

See Technical Response #2.

The safety argument for expansion has been completely discredited as research through FAA reports proved that every incident/accident at ARB over the past 20 years were not caused by the 3500 foot runway but rather pilot error, weather issues, or mechanical events. When pilots land long and “hot” they can either go around or go off the end. These are also the type of pilots who fly low on glide slope over houses. Runway length is not a safety concern at KARB. The FAA agrees with that. The expansion as advocated is really, in my opinion, a hidden business issue centered around the hanger housing the Aviation Center. Rumors have an airplane paint shop or a aircraft sales and leasing facility going in. That businessman needs a longer runway for the many more airplanes coming and going for either business.

See Technical Response #9.

As for the SRDEA, that is a discredited document because it's proponent ideas are shoddy and not at all impartial. It did not analyze the runway expansion's effects on the large aquifer beneath the airport from which Ann Arbor gets much of its drinking water and it failed to take into account the geese, and the increased NOISE during more night operations or the noise pollution caused by an increase in larger jet traffic year round.

See Noise Responses #1 and #2, Wildlife Response #1, Water Resources/Water Quality Response #1, and Air Quality Response #1.

There is no doubt that the longer runway will bring in larger and noisier planes of all types. Build it and they always will come. Expansion will force airplanes on the 3 degree glide slope for Runway 06 to be 93 feet above the homes on Lohr Road. And that only is if a good professional pilot is flying on glide slope. Well trained, experienced Airline and Regional Commuter pilots will not be flying the larger personal jets landing at KARB. Many, very many, of the pilots flying into Ann Arbor for football games and other events will be amateur pilots here on a lark showing off their new plane they have only a few hours experience in and may not have flown a real instrument approach to low adverse landing minimums in months or years. There will be pilots who will get overwhelmed by winds and rain and low clouds and be dangerously below that 93 feet, and there will be a house below them. Which member of the Ann Arbor City Council wants a rusty and inexperienced amateur pilot flying over their house a dot low at all hours of the day and night at 50 feet???

See Noise Response #1 and Safety/Health Responses #6 and #14.

There is a huge difference in an accident fireball between a small Cessna and a 20,000 pound jet!! Willow Run Airport is near enough, with it's proper Fire and Emergency Response teams that we can surely afford to keep ARB the “Sleepy Hollow” airport it was always meant to be.

See General Responses #5 and #10

I admit there is an issue with the approach end of Runway 24 because of future road expansion plans for State Street. How about this idea.....Shift the approach end of RWY 24 150 feet to the SW and ONLY add 150 feet to the departure end of RWY 06? Basically shift the entire runway 150 feet to the Southwest. That keeps the total length at a manageable 3550 feet. The aircraft will be higher over the houses at Stonebridge. Think about it. I bet Pittsfield Township may look favorably on this compromise.

See General Response #26

I hope Ann Arbor respects the wishes of the Pittsfield Township community.

Regards,

Michael S Petraszko

Saline MI

Lt.Col. Ret. MIANG

Delta Airlines Ret

Olympia Aviation

Issues of Concern

The current Second Revised Draft Environmental Assessment (SRDEA) is the third issued in a dozen years.

- The proposed runway extension would move ARB's primary Runway 24 870 feet closer to Lohr Road, adding to the risks to residents near the end of the runway, which are not adequately protected by so-called "Runway Protection Zones."

See Safety/Health Response #2.

- The SRDEA has dropped prior claims, since the onset of the project in 2007, that the expansion was a "safety extension." Since the FAA ruled that federal funds would not be available for such an expansion, the focus was shifted to "improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase over time."

See Technical Response #1.

- However, of the four "critical aircraft" types identified by the SRDEA, three could operate 100% of the time on the existing 3,505-foot runway. Only the Cessna Citation Excel XLS, the type of aircraft owned and operated by AvFuel Corp., which dominates operations in this class, could suffer weight penalties on hot summer days, but could still operate at full weight 90% of the time, and at 100% capacity on most days. At most, only 48 operations per year of the Citation XLS class's 263 annual operations (in 2019) could be impacted by hot weather – a miniscule .00038 of ARB's total annual operations – hardly sufficient to justify the proposed expansion.

See Technical Response #2.

- The SRDEA acknowledges that any expansion would likely attract more jet traffic, where larger and heavier aircraft pose additional risks in an area heavily populated by Canada geese.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

- Further complicating issues, because ARB is a municipal airport funded with federal dollars, any pilot who chooses can land at the airport, no matter the size of their aircraft – adding to the level of risk. Ann Arbor cannot regulate the type of aircraft that could utilize the field.

See General Response #18.

- The SRDEA acknowledges for the first time the presence of Canada geese surrounding the airport, with a U.S. Department of Agriculture inspector observing 75-100 Canada geese at the airport, feeding in a tilled fallow field. The inspector also reported "flocks of 5 to 15 geese arrived on the airfield at different times. . . Geese were observed within 10 yards of the runway." The inspector concluded that, "Canada geese are a real and present danger, and will need to be managed for the foreseeable future. KARB is surrounded by ideal resident / migratory Canada goose habitat." However, the SRDEA presents no plan for such mitigation – and makes no mention of any risks posed by the Canada geese.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

- The Purpose and Need statement does not support the need for an extended runway. The SRDEA contends that aircraft that routinely use ARB suffer “undue concessions in reduced fuel, passengers, and / or cargo loads. .diversions to other airports are also commonly needed when the runway surface is wet, or during summer months when higher temperatures reduce aircraft performance.” However, the SRDEA provides no actual data in support of the claimed concessions or diversions. The FAA noted, “the rate of users taking weight restrictions has not been documented,” and, “The inclusion of the contaminated runway length distances cannot be used to justify FAA funding requirements” for an extended runway.

See Technical Response #7.

- The SRDEA stated an excess number of hot weather days at ARB. To justify the proposed expansion, the SRDEA identified 81 hot days in Ann Arbor, when temperatures exceeded 80 degrees (in 2019). However, aircraft performance charts included in the SRDEA suggest an industry standard for hot weather is 85 degrees, not 80 degrees. There were only 66 days in 2019 when the temperature exceeded 85 degrees. Thus, the SRDEA inflated the number of hot weather days by 25% by using the 80-degree standard.

See Technical Response #5.

- The SRDEA alludes to a connection between “many prominent business and institutions with the University of Michigan being the area’s largest employer. Manufacturing, health care, automotive, information technology, and biomedical research companies account for major employers surrounding the area” that often require “air transportation to bring workers, clients, suppliers, customers, and time sensitive parts / supplies to and from the region.” However no specific connection between those business needs and ARB was established in the SRDEA. It was merely an allusion.

See Financial/Economic Response #1.

- The SRDEA also suggests that the UM’s six / seven home football weekends and Michigan International Speedway two annual NASCAR events bring increased aircraft activity to the area, and that “should Runway 6 / 24 be extended, additional aircraft activity could occur at ARB due to its proximity to special event venues.” However, the SRDEA contained no actual forecasts of such potential activity.

See Technical Response #3.

- However, a less sanitized version of the SRDEA, contained in an earlier draft submitted to the FAA and reviewed under the Freedom of Information Act, projected an immediate tripling of annual jet operations if the ARB runway were extended to over 1,000 per year, with another 500-665 operations from jets, which currently utilize Willow Run Airport, possibly moving to an extended ARB on football weekends. That earlier draft SRDEA suggested up to 40% of the 9,313 annual small and medium jet operations at Willow Run “would likely shift to ARB if additional runway length were available,” thus increasing jet operations from the 360 in 2019 to upwards of 3,660 jet operations per year – ultimately turning ARB into a jetport. We cannot let that happen!

See Technical Response #4.

- To temper any fears of such runway expansion, the final SRDEA omitted such jet growth claims and forecast, instead, that the operations of small turboprop and jet aircraft “will slowly increase over time.”

See Technical Response #1.

- While the SRDEA projects a maximum of ARB operations of 84,336 in 2039, it is interesting to note that the current 3,505-foot runway supported almost two-thirds more operations in 1999 – 134,554, suggesting the current runway is more than sufficient for the projected future.

See Technical Response #6.

- Any ARB expansion is especially dangerous because, with jets being the primary source of increased operations, it raises the level of risk in an area heavily populated with Canada geese, which do not interact well with jet aircraft.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

- ARB also has certain conditions that can enhance the level of risk over other nearby airports: Instrument approaches and landings are not permitted at the airport. The control tower only operates part-time. Also, in winter, de-icing is not permitted on the airport, to protect the wells on the property that produce drinking water. And ARB does not provide 24-hour on-site fire and rescue services.

See Safety/Health Response #3.

- The noise problem around the airport would almost certainly increase. Even the very conservative FAA-required noise analysis conducted as part of the SRDEA concedes that the harmful 60-decible noise level would extend to “a residential area at the southwest corner of the airport.”

See Noise Responses #1, #2, and #3.

- The FAA requires the identification of environmental health risks to children. However, despite numerous scientific studies confirming the negative impact of aircraft noise on the neuropsychological development of children, the SRDEA does not discuss such threats, concluding, instead, that “the FAA has not established a significance threshold for impacts to children’s environmental health and safety. . .”

See Safety/Health Response #4.

- The SRDEA does not acknowledge any potential risks to the three wells on airport property that supply about 20% of Ann Arbor’s drinking water, stating only that, “there are several water wells on ARB property, all of which are outside the proposed project area.” The SRDEA, however, contained extensive analysis of wetlands and streams in and around the property. But nothing about the important drinking water wells!

See Water Resources/Water Quality Response #1.

Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive, Ann Arbor MI 48108

Steve Houtteman
MDOT-AERONAUTICS
2700 Port Lansing Road, Lansing MI 48906

January 10, 2023

Dear Sirs,

I am opposed to the expansion of Runway 24 at the Ann Arbor Municipal Airport.

The airport has historically been a basic general aviation airport, intended for small planes and non-commercial use. Increasing runway length would make it available for larger planes and jets. This is unnecessary due to the proximity of Willow Run Airport (10 miles away) and Detroit Metropolitan Airport. In fact, it may complicate air traffic in the area since flights using YIP and DTW often pass near ARB while taking off and landing. Yes, I know they fly at a higher altitude – but increased use of jets at ARB will bring aircraft closer.

See General Responses #5 and #10.

My concerns relate to safety, and I believe that the risk of serious accidents will increase, not decrease, if the extension is approved. Besides increased traffic complicating flight paths, the greater hazard is collisions with large fowl, especially geese. ARB was built amidst wetlands. The wetlands have been developed into research parks and residential areas surrounded by ponds, streams, and canals, and the population of large birds – Canadian geese, Snow Geese, swans, egrets, great blue herons, ducks and more – is great. I have walked near the airport for 20 years, and the population density of large birds is greater than I see at national wildlife refuges such as Ottawa, to the south. Flocks circle the area multiple times a day. I have often seen geese, wild turkeys, and deer on the airfield. Large populations of large birds are not compatible with jets.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

Although the SRDEA claims that the expanded runway length is necessary to serve current aircraft, only one local aircraft class rarely needs to fly with less than (90%) full weight. And once the expansion is built, ARB cannot control pilot decisions and increased use by larger planes and jets, which is to be expected. One example of poor decision-making is the cowboy who flew a Boeing C-17A Globemaster III into ARB to show off to local flight instructors on the morning of 7-21-2020 (RHINO90). He had to

See Technical Response #2.

abort his first attempt and circled low to try again, causing considerable alarm to area residents. A longer runway will bring more such traffic. Unlike many airports, there is no buffer, or Runway Protection Zone, past the southwest runway; aircraft immediately fly over homes. With larger, faster aircraft, pilot error could be devastating.

Ann Arbor cites the University of Michigan as an example of need for the airport expansion, but the vast majority of university transportation needs are served by DTW, and, to a lesser extent, YIP. Even with an extended runway, only a small fraction of university transportation needs could transfer to ARB.

See General Responses #5 and #10.

Willow Run Airport (YIP) has been awarded millions of dollars for improvement over the past few years. Apparently the City of Ann Arbor wishes to make money by diverting some of the traffic – as much as 40% - to ARB. This does not improve safety nor does it improve the regional economy. Simply put, Ypsilanti and Van Buren Charter Township need the business much more than Ann Arbor, and their roads are less congested.

Some other safety concerns are the lack of instrument approaches and landings at ARB; the part-time schedule of the control tower; and the lack of de-icing on the runway in winter to protect the wells that provide 20% of the water to Ann Arbor residents. The lack of de-icing concerns me for safety reasons. The proximity of the wells also concerns me, as potable water is critical for city residents and the local economy, and Ann Arbor is already restricted due to the growing dioxin plume on the west side of the city and episodes of pollution in the Huron River. The wells are much more important to Ann Arbor than an extended runway.

See Safety/Health Response #3 and Water Resources/Water Quality Response #1.

The recent Environmental Assessment does not adequately demonstrate need for the runway extension, nor does it reasonably predict the increased use of larger aircraft. Evaluation of risks such as the extensive large bird population, flight paths of YIP traffic, and contamination of municipal wells are insufficiently addressed. The proposed extension is unnecessary and increases risks to area and city residents.

Sincerely,



Pamela Kittel, PhD
5652 Creekview Dr
Ann Arbor MI 48108
pkittel@umich.edu

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 12, 2023 10:23 AM
To: William Ballard
Subject: FW: Opposition on Ann Arbor Airport Expansion

From: parsha.meshinchi@gmail.com <parsha.meshinchi@gmail.com>
Sent: Thursday, January 12, 2023 9:31 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: RE: Opposition on Ann Arbor Airport Expansion

You don't often get email from parsha.meshinchi@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions .the content is safe unless you recognize the source of this email and know

Resending this since my last name was not typed correctly in previous email.

To whom it may concern

I am resident of Pittsfield Township at 1486 W Greenfield CT, Ann Arbor and I am completely against the expansion of the Ann Arbor airport runway.

I hope the decision community consider how they would vote for this expansion proposal if their own family were living close to the airport with considering safety and basic comfort of their kids, family, and elderly adults.

We already leave close to the airport runway and expanding it make the runway even closer to our home. We already have noisy takeoffs and flights at nights, days, and weekends, expansions of the runway will create more travel, more noise, and more hazardous environment for our neighborhood and our family.

I am requesting the extension of the Ann Arbor airport get rejected due to safety, noise, and comfort of our residents. Willow Run Airport should be used for the flights requires longer runway.

The decision community should consider the resident's safety, comfort, and needs as highest priority in their decision making.

Best Regards,
Parsha Meshinchi

See Noise Responses #1, #2, and #3
and General Responses #5 and #10

From: parsha.meshinchi@gmail.com <parsha.meshinchi@gmail.com>
Sent: Thursday, January 12, 2023 9:07 AM
To: mjkulhanek@a2gov.org
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: Opposition on Ann Arbor Airport Expansion

To whom it may concern

I am resident of Pittsfield Township at 1486 W Greenfield CT, Ann Arbor and I am completely against the expansion of the Ann Arbor airport runway.

I hope the decision community consider how they would vote for this expansion proposal if their own family were living close to the airport with considering safety and basic comfort of their kids, family, and elderly adults.

We already live close to the airport runway and expanding it make the runway even closer to our home. We already have noisy takeoffs and flights at nights, days, and weekends, expansions of the runway will create more travel, more noise, and more hazardous environment for our neighborhood and our family.

I am requesting the extension of the Ann Arbor airport get rejected due to safety, noise, and comfort of our residents.

Willow Run Airport should be used for the flights requires longer runway.

The decision community should consider the resident's safety, comfort, and needs as highest priority in their decision making.

Best Regards,

Parsha Meshi

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 11:33 AM
To: William Ballard
Subject: FW: Rejection of the Current 2022 Draft Environmental Assessment

From: patricia scribner <patriciaann1945@sbcglobal.net>
Sent: Friday, January 13, 2023 11:00 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: Rejection of the Current 2022 Draft Environmental Assessment

You don't often get email from patriciaann1945@sbcglobal.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

January 12, 2022

Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

Dear Mr. Kulhanek,

I became a Lake Forest resident of Pittsfield Township in 1994 and was elected in 2008 to represent the people of Pittsfield Charter Township. I, along with the vast majority of our citizens, oppose the expansion of the Ann Arbor Municipal Airport. Any expansion would jeopardize the public safety from low flying aircraft in an area heavily populated with Canada geese and with planes landing only 93 feet above the rooftops of homes along Lohr Road.

[See Noise Response #1, Wildlife Response #1, and Safety/Health Responses #6 and #14.](#)

Pittsfield Charter Township has twice resolved to oppose the runway extension of the airport due to the safety risks involved. The Township is committed to protecting the safety and quality of life of residents and businesses in and around the vicinity of the Ann Arbor Municipal Airport.

As Treasurer of Pittsfield Charter Township, I am particularly concerned that the expansion would lead to reduced property values surrounding the airport. National statistics show that when airports are expanded, property values typically drop down 5.7-9.2 percent. A reduction of assessed property values would lead to millions of dollars in lost property tax revenue for Saline and Ann Arbor schools, Pittsfield Township, and Washtenaw County.

[See Financial/Economic Response #2.](#)

The negative impact this expansion will have is not limited to only the residents of Pittsfield Township, but may also increase the physical health risks to our neighbors in the City of Ann Arbor due to major risk to Water Aquifer below the airport. I reject this current 2022 Draft Environmental Assessment.

[See Water Resources/Water Quality Response #1.](#)

Sincerely,

Patricia Tupacz Scribner

11JAN22

Mr. Matthew Kulhanek, Airport Manager

Ann Arbor Municipal Airport

801 Airport Drive, Ann Arbor, MI 48108

Phone: 734-994-9124, Email: mjkulhanek@a2gov.org

Dear Mr. Kulhanek:

Please consider my public comments concerning the proposed runway extension project for the Ann Arbor Airport. I am a former Township Trustee and Planning commissioner in Augusta Township, Washtenaw County, MI and currently the HOA President for my subdivision (Maple Creek). Other residential subdivisions W and SW of the airport whom are affected, but not considered in the EA, include the following; Lohr Lake, Lohr Woods, East Horizons, Silo Ridge, Stonebridge Estates, Brookview Highlands, Bella Terrace, Lodi Estates, Lake Forest, Waterways, Mallard Cove, Legacy Heights, Inglewood Park, Centennial Park, Travis Point, Kirtland Hills, Briar Hill, Bella Vista, Oak Valley, and others.

Washtenaw County and the surrounding area possess outstanding natural resources, including rich agricultural land, key watersheds, and clean air, which together comprise a living environment of unmatched value. The potential deleterious effects on the quality of life and economic value of single family residential real estate assets of working taxpayers cannot be ignored.

Summary: Congested residential areas in Pittsfield Twp. and the Ann Arbor Airport are a conflicting and non-conforming land use. I request the City of Ann Arbor to reject the Airport Expansion and request additional resources to complete the EA (Environmental Assessment).

1) In spite of City of Ann Arbor Noise Regulations, the EA does not address the significant noise pollution issues presented to the surrounding community from aircraft overflight events. 2) The EA does not fully address wetlands mitigation which will require a public hearing process for any wetlands disturbance. 3) A Comprehensive Hazardous Materials management plan for the significant hazardous chemical storage present on site and spill response. This would include periodic inspections of fuel farm, emergency mitigation training, and associated emergency equipment. 4) Comprehensive compliance with Zoning Restrictions and local ordinances (Ann Arbor/Pittsfield Twp./Washtenaw County) and taxpayer involvement that include public comment periods.

See Noise Responses #1, #2, #3, and #4, Water Resources/Water Quality Response #2, Safety/Health Response #13, and General Response #24

My comments are as follows;

A) The EA should include compliance to Michigan Wetlands Protection Act and related regulations. (Section 4: Conclusions)

- I. This would include additional Wetlands Impact study to evaluate the entire project scope for regulated wetlands before commencing work on site and additionally obtaining the necessary permits from the MDEQ before commencing activities in or around wetlands. Michigan's Wetland Protection Act, authorizes the State of Michigan through its Michigan Department of Environmental Quality to oversee and regulate certain wetlands located in the state. *Additionally, please see Pittsfield Township Code, Chapter 8. Environment.*

http://www.washtenaw.org/government/drain_commissioner/dc_webPermits_DesignStandards/dc_Rules/section-vi-areas-of-special-concern.pdf

- II. Following a comprehensive Wetlands study a full public comment and evaluation period is conducted with local review and public comment to allow citizen input. This is part of the Michigan Wetlands Protection Act process.
- III. The EA should include any effect (including potential hazardous material discharges) in and around Wood Outer Drain including easement area in cooperation with the Washtenaw County Water Resources Commissioner. This would involve permit applications and associated inspections.

<https://www.washtenaw.org/208/Drain-Use-Permits>

- IV. The EA should demand Green Infrastructure and Low Impact Development practices in accordance with the County Water Resources Department in particular that runways are impermeable surfaces that may contain hazardous materials runoff.

<https://www.washtenaw.org/631/Green-Infrastructure>

- V. The EA should address compliance to the Washtenaw County Grading/Soil Erosion Sedimentation Control Act. (Act 347 (now Part 91 of Act 451), 2018, including Rule 1703 Requirements also in Pittsfield Township Code.

<https://www.washtenaw.org/2442/Soil-Erosion-Requirements-Standards>

and,

See Water Resources/Water Quality Response #2

http://www.michigan.gov/deq/0,4561,7-135-3313_3687-10801--,00.html

- B) Emergency Response Preparedness and Capability for local first responders. The EA should include full evaluation and demonstration of emergency response capabilities for Pittsfield Township Fire Department and first responder resources. According to the U.S. F.A.A. Airport Compliance Guidelines an emergency plan is required that establishes procedures for handling emergency events such as gas leaks, fires, and explosions, and human injury, that establishes protocols for communication and coordination with PTFD, PTPD, and public officials. First responder training and funding for specialized equipment should be provided to address potential hazards and accidents. Additionally, please see Pittsfield Township Performance Standards 40-14.02(a)

See Safety/Health Response #13

https://www.faa.gov/airports/airport_safety/aircraft_rescue_fire_fighting

- C) Hazardous Materials Management:
- Please review the EA pages Hazardous Materials section. These are items of particular concern and indicate that the EA is incomplete in particular that both City of Ann Arbor public wells (4 locations adjacent to runways) and private water wells are present on the Airport property or close by.
 - Please see Pittsfield Township Performance Standards 40-14.02(c) and Washtenaw County Pollution Prevention Regulation for facility standards, user training, and user certification.
 - Please see Pittsfield Township Code Chapter 7 Emergency Services, Article I

<https://www.washtenaw.org/DocumentCenter/View/4754/Pollution-Prevention-Regulation-PDF>

See Safety/Health Response #13

- D) The Ann Arbor Airport uses approximately 250,000 Gals/year of aviation fuel. Additionally, the need for EA completeness and more study is indicated below to address unknown legacy activities as described in section 4.9. Partial excerpts follow;
- a. Section 2.5 Additionally, it should be noted that portions of this report are based on unverified information supplied to L&A by third-party sources. While efforts have been made to substantiate third-party information, L&A cannot guarantee its completeness or accuracy.
 - b. 3.3 Specialized knowledge or experience related to the subject property or nearby properties was not provided.

- c. 3.5 Commonly known or reasonably ascertainable information about the subject property that would be indicative of releases or threatened releases was not provided.
- d. 3.8 Information of pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property was not provided. Additionally, information regarding notices from any governmental entity regarding possible violations of environmental laws or possible liability relating to hazardous substances or petroleum products was not provided.
- e. Section 4.3. Local Fire Authority 4.3.1 No response, Local Health Department 4.3.2 No information, Local Building and Zoning 4.3.4 No response.
- f. 4.3.5 Soil staining and associated odors were observed during the closure inspection. Confirmatory soil samples were collected; however, laboratory results were not provided, nor was additional information on any remedial activities.
- g. 4.4.9 As such, the historical waste management practices associated with aircraft service operations are unknown and may be a source of subsurface contamination...Therefore, the potential exists for a release to have occurred from the former USTs... and the former on-site septic field are unknown and may be a source of subsurface contamination... the potential exists for failure of the drainage systems (i.e. cracks, leaks) to have occurred over time...
- h. 8.2 Data Gaps Local Building and Fire and City of Ann Environmental Questionnaire not answered. See Safety/Health Response #13

- E) This application is not exclusively an FAA undertaking.
- The EA does not include compliance with the Pittsfield Township Master Plan and Zoning Ordinances. The airport is almost entirely surrounded by Pittsfield Township C-1, R-1B, and PUD zoning districts. Public comment and involvement of these affected communities is paramount.
 - The EA should address and demonstrate compliance with local municipalities planning commissions oversight in Pittsfield Township for zoning revisions, where required, local municipality code compliance in affected areas that would include citizen review and a public comment period as in any other major undertaking in the state. See also CFR 150 Appendix A which recognizes local law and Pittsfield Township 40-14.04(A) Preservation of Environmental Quality. See General Response #24

<http://www.legislature.mi.gov/documents/mcl/pdf/mcl-Act-33-of-2008.pdf>

<https://www.ecfr.gov/current/title-14/part-150/appendix-Appendix%20A%20to%20Part%20150>

<https://ecode360.com/37336935>

- Airport Layout Plan: Rezoning permits are required for parcels identified as “purchasing additional land”, “future parcel acquisitions” or “future easement interests” in compliance with City of Ann Arbor and Pittsfield Township Master Plan, Site Plan Approval, and re-Zoning Plan Process. Please see;

<https://pittsfield-mi.gov/391/Site-Plan-Process>

F) Noise Pollution over Pittsfield Township Airspace:

- Computer modeling: Computer modeling is a wholly inadequate method to determine noise levels to homeowners in the affected area. The 65 DNL contour is approximate and in-accurate. An authentic determination would involve actual calibrated noise level meters collecting (randomly, double blind) noise data in real time in the busiest traffic pattern areas. Computer modeling does not address variation in aircraft engine type, aircraft operation band, speed, frequency, or altitude. Ex: Faster quieter aircraft are less of a disturbance than the slower moving and louder models. The methodology shown here does address real life conditions, such as pattern variation, minimum altitude non-compliance, or computer model assumptions. The modeling coverage area only includes the airport and fence line properties, affected subdivisions, listed above (page 1), are not included in the analysis and should be.
- Please see City of Ann Arbor Noise Ordinance for non-vehicular traffic. 9:360.2 and Pittsfield Twp. 40-1.03.D

https://library.municode.com/mi/ann_arbor/codes/code_of_ordinances?nodeId=TITIXPORE_C_H119NOCO_ARTINHINO

See Noise Responses #4 and #5.

- G) Noise pollution level determination involving unbiased, 3rd party, person-person on-site homeowner interviews are a much more deterministic method to uncover actual noise levels, aircraft traffic volume, and how it affects humans on the ground. My experience as a homeowner (sitting on my deck) is approximately 70-75 dB noise level during an overflight event is a more accurate overflight noise indication. This noise level is loud enough to prevent normal conversation.

- Please see Pittsfield Township Performance standards 40-14.02(G)

See Noise Responses #4.

- H) Noise level study dates: Any noise study or model dated prior to 2022 is outdated and non-representative. As a homeowner in the affected airspace I can assure you that airplane traffic for 2022 has increased significantly. This is confirmed in the EA Justification study (page 8 of 38). See Noise Responses #6.
- I) Traffic Count/year PRH Graphical shown on Page 8 with conservative extrapolated data estimates for years missing(2022-2024) See General Response #19.
- J) The EA ignores the net altitude reduction change over residential properties that will result from a runway extension and associated glide path lowering. This may be as much as a 50% reduction for homeowners adjoining the runway start/end. See Noise Response #1 and Safety/Health Responses #6 and #14.
- K) The EA does not account for repeated and consistent homeowner over flights and consistent violation of FAA minimum altitude violations particularly on days with a low cloud ceiling.
- Over Flight: An airplane that flies directly (within a few yards) over an individual's ground position. How many direct overflights in a one-hour period is considered normal? I and others regularly observe from 3 overflights/hour to as many 15 overflights/hour by the same aircraft. Monitoring of aircraft altitude indicate chronic non-compliance with FAA minimum altitude guidelines by student and rental users. Homeowners in the affected airspace are replete with countless actual observations. We suffer through this noise pollution on a daily basis, particularly including weekends and holidays. Aircraft overflights on our dwellings and others in the area is by design, intentional, and follow a very narrow band of flight path. I have had conversations with the rental schools that report, "we do exactly what the tower tells us to do". This pattern is identified in the AAAP Pilot Brochure. See web link below. In spite of what the EA reports traffic patterns are very consistent, very repeatable, and very disturbing.
 - Please see examples from "Flight Aware" Pattern Data Base Graphical that demonstrate this practice. Page 9.
 - There is consistent violation of FAA minimum altitude violations by hobby and rental aircraft operators particularly on days with a low cloud ceiling. Since the aircraft are lower to the ground noise pollution is thereby increased.
 - Oftentimes there are two planes in pattern simultaneously creating double the noise and double the disturbance. This is a detriment to backyard BBQs, Pool parties, Deck Parties, Volleyball parties, etc...as conversation stops when a noisy aircraft is directly overhead...only to return minutes later.
- See Noise Responses #4

<https://www.a2gov.org/departments/fleet-facility/Airport/Documents/NABrochureFIN.pdf>

- L) Although the AAAP claims “implementation” of a noise abatement program, compliance should be demonstrated in a fact-based manner. The EA should require demonstration of compliance to the NBAA Noise Abatement Program in particular student “touch and gos” that create the most egregious noise events for local residents. As a minimum evidence of regular pilot training beyond “hanger posters” should be demonstrated.

<https://nbaa.org/aircraft-operations/environmental-sustainability/noise-abatement-program/#close-in>

- M) There are no Noise abatement directives in the Michigan Flyers Airplane Club operating procedures.

- N) In spite of In spite of clear directions in the AAAP Brochure and AAAP Mission Statement, there is consistent non-compliance from pilots on the following request.

“Recommended TRAFFIC PATTERN procedures:

See Noise Responses #7

- **Pattern Altitude when possible.** Reduce power as soon as practical.
- **Please be mindful of multiple Touch-and-Go landings, especially early morning and evening.**
- **Strive to preserve the quality of our residential areas by maintaining a community friendly noise abatement policy”**

<https://www.a2gov.org/departments/fleet-facility/Airport/Documents/airport%20rules%20and%20regs%202013%20final.pdf>

Section 1.3.1.1

- O) Expansion Proposal conflict of interest. The airport manager is a stakeholder in the Airport Expansion positive approval outcome and is improperly assigned to the position of collecting and reviewing public comments, in particular opposition comments. The expansion review process should involve a wider audience of evaluators outside of airplane enthusiasts.

In conclusion, there are significant defects and omissions in the EA and associated process, demonstrating that an expanded EA is needed with additional data collection, outside evaluators, demonstration of compliance with Pittsfield Township oversight, citizen involvement, and public comment period prior to any expansion approval.

Thank you for the opportunity to submit these objections, concerns, and comments.

Respectfully submitted,
Phil Hemenway

2096 Maple Park Drive, Ann Arbor, MI 48108

Maple Creek Homeowners Association

313-505-9785 p_hemenwa@gmail.com

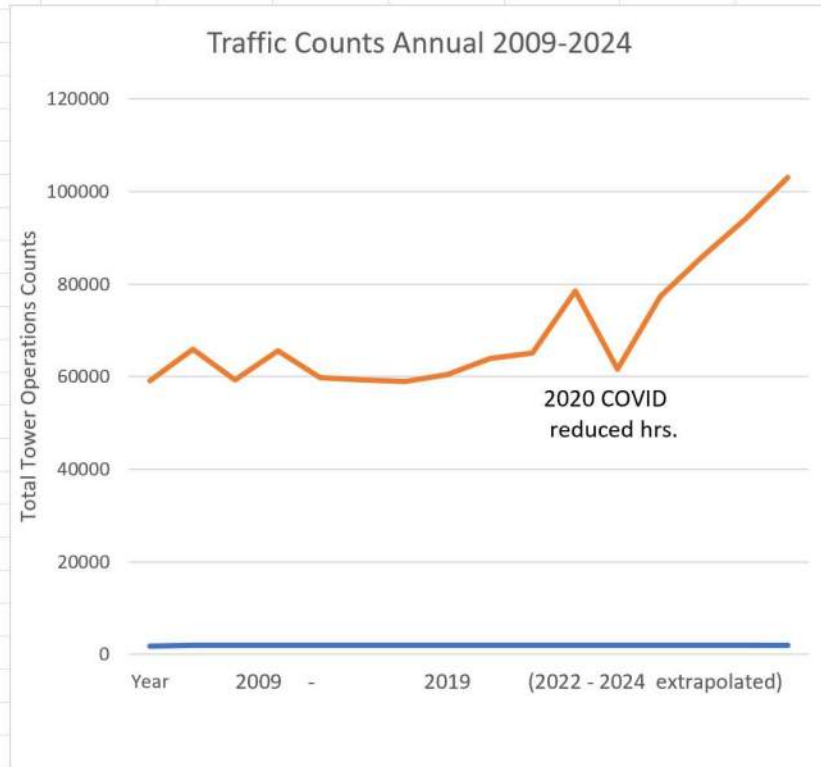
Attachments: Table/Graph Page 8

Flight Aware Image Page 9

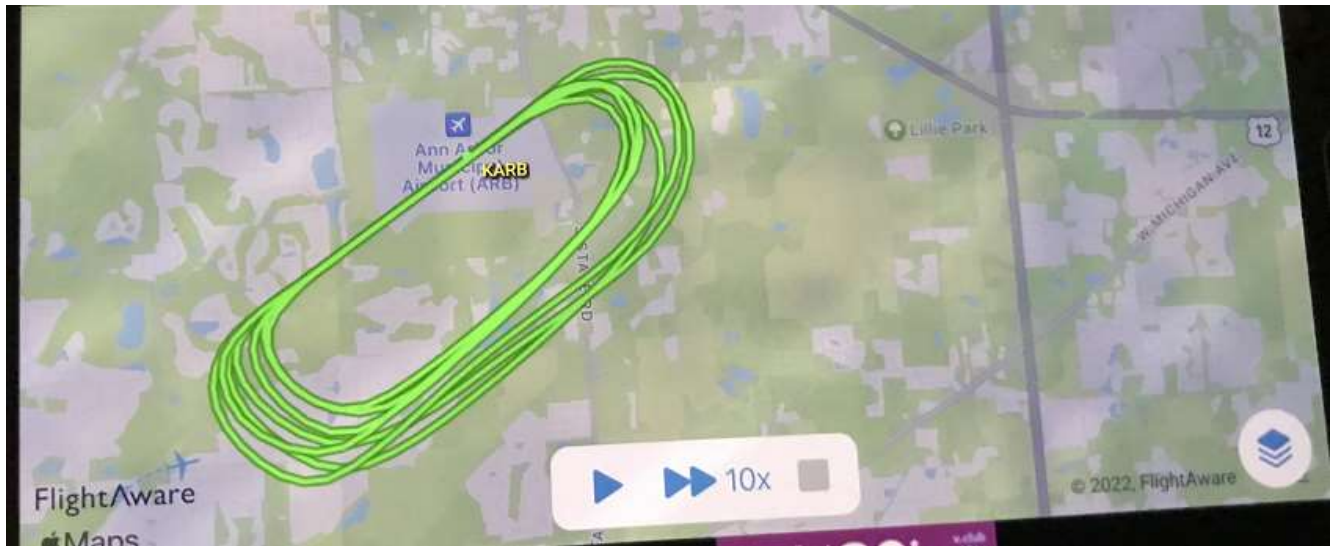
from Table 3.1

Tower Operations

Year	Total
2009	57109
2010	63999
2011	57228
2012	63555
2013	57746
2014	57370
2015	56915
2016	58386
2017	61996
2018	63103
2019	76430
2020	59665
2021	75333
2022	84000
2023	92000
2024	101000



Conservative extrapolation
for years 2022-2024



Example: (Above/Below) Touch and Go Patterns – In 1 hour period

Notes: Oral and Written comments provided:

- 13DEC22, 5:30-8:00 PM at Council Chambers, 2nd Floor, Larcom City Hall, 301 E. Huron Street
- Pittsfield Township BOT Meeting. 14DEC22, Pittsfield Twp. Hall.
- Rev5 eMail distribution
- tbd

Commissioner Caroline Sanders

District 4

220 North Main Street

Ann Arbor, MI 48104

sandersc@washtenaw.org

MDOT houttemans@michigan.gov

Steve Houtteman

MDOT-AERONAUTICS

2700 Port Lansing Road

Lansing, MI 48906

Mail/eMail: Mr. Matthew Kulhanek, Airport Manager

Ann Arbor Municipal Airport

801 Airport Drive, Ann Arbor, MI 48108

Phone: 734-994-9124, Email: mikulhanek@a2gov.org

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 7:24 AM
To: William Ballard
Subject: FW: Opposition to Ann Arbor Airport Expansion
Attachments: Objection to AA Airport Expansion_rev4_01032023[13524].docx

From: Qinghai Chen <qinghaichen3@hotmail.com>
Sent: Thursday, January 12, 2023 10:03 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: Opposition to Ann Arbor Airport Expansion

You don't often get email from qinghaichen3@hotmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Kulhanek:

I am writing in strong opposition to proposed Ann Arbor Airport Expansion and in full support of my neighbor Michael J. Lee's public statement dated January 4, 2023 in this regard, of which you are the main recipient. To avoid repetition of arguments, I'm simply attaching Michael's statement here and believe that it deserves reading many times by relevant people.

I would like to point out that, with the establishment of neighboring residential subdivisions (particularly those to its west and south west), Ann Arbor Airport has long lost its chance of an expansion. The macro-plan for this area would have been very different should the Ann Arbor Airport have had a foresight of long-term development from the beginning. Now that the die is cast, it is the Ann Arbor Airport that must obey the big picture, not the opposite. You can stay and continue with what you have been allowed to do, or you can leave and expand your business elsewhere. It is that simple!

Regards.

Qinghai CHEN

1477 W Greenfield Ct
Ann Arbor, MI 48108

Sent from [Mail](#) for Windows

Dave Clawson

From: Kulhanek, Matthew <MKKulhanek@a2gov.org>
Sent: Thursday, January 12, 2023 10:22 AM
To: William Ballard
Subject: FW: Strong Opposition to Proposed Ann Arbor Airport Expansion

From: Rashin Fekri <rashin_fe@yahoo.com>
Sent: Thursday, January 12, 2023 9:59 AM
To: Kulhanek, Matthew <MKKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: Strong Opposition to Proposed Ann Arbor Airport Expansion

You don't often get email from rashin_fe@yahoo.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

To whom it may concern

I am resident of Pittsfield Township at 1486 W Greenfield CT, Ann Arbor and I am completely against the expansion of the Ann Arbor airport runway.

I hope the decision community consider how they would vote for this expansion proposal if their own family were living close to the airport with considering safety and basic comfort of their kids, family, and elderly adults.

We already live close to the airport runway and expanding it make the runway even closer to our home. We already have noisy takeoffs and flights at nights, days, and weekends, expansions of the runway will create more travel, more noise, and more hazardous environment for our neighborhood and our family.

I am requesting the extension of the Ann Arbor airport get rejected due to safety, noise, and comfort of our residents. Willow Run Airport should be used for the flights requires longer runway.

The decision community should consider the resident's safety, comfort, and needs as highest priority in their decision making.

Best Regards,

Rashin Fkrie

Sent from my iPhone

See Noise Response #1, Safety/Health Responses #6 and #14, and General Responses #5 and #10.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 12, 2023 10:22 AM
To: William Ballard
Subject: FW: Public Statement – Strong Opposition to Proposed Ann Arbor Airport Expansion

From: Reza Amini <amini.dr@gmail.com>
Sent: Thursday, January 12, 2023 10:06 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: Public Statement – Strong Opposition to Proposed Ann Arbor Airport Expansion

You don't often get email from amini.dr@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Greetings,

I am a resident of 1478 W Greenfield CT, Ann Arbor, MI 48108, in the Pittsfield Township. I do not live in the direct take-off or landing flight path, but I experience frequent and repetitive low altitude and loud traffic from training patterns. We also hear very large planes take off and land during the night, typically at 5:00 AM. We have experienced numerous very low-altitude encounters with aircraft at our home.

My wife and I knew that there was an airport nearby when we purchased our home, but we did not expect an expansion in the runway. The airport perimeter with the current runway configuration is not **safe**; recently, there was an incident based on what we learned from the news. Moreover, an expansion increases the number of flights with larger aircraft and raises noise and air pollution, significantly affecting the environment and residents of multiple subdivisions in the area. See Noise Responses #1, #2, and #3, Air Response #1, and Safety/Health Responses #6 and #14.

These are more concerns that persuade us to oppose this proposal and plan:

- Significant safety issues - Aircraft approach and land very low above the Speedway Gas Station on State St. and Ellsworth and take off very low above homes on Lohr Rd. This seems to obviously infer that the current airport and its current use don't safely fit on the existing See Noise Response #1 and Safety/Health Responses #6 and #14. property. Extending or expanding the airport or allowing larger aircraft to operate there would be unsafe.

- Major risk to Water Aquifer below the airport– Given the Dioxane Plume concerns to the north, adding further risk to the water sources for Ann Arbor seems very ill-advised. The recent addition of a business that paints/restores aircraft at the airport will provide an additional increased risk to the water resources surrounding the airport. See Water Resources/Water Quality Response #1.

- Climate/Green Policy – this proposed plan makes a mockery of the City of Ann Arbor's green initiatives and climate propaganda. The risk to the water resources, additional noise above the already obnoxious and damaging noise levels, and increased propagation of jet fuel usage. Irreparable harm to the mental health of surrounding residents and our quality of life in the surrounding area are in direct opposition to any green initiatives and don't indicate any care or concern for residents near Ann Arbor but outside the city limits. Ann Arbor needs to truly understand and own what is happening at this airport and how it affects other citizens.

I strongly object to this proposal and request that all steps be taken to stop it from moving forward.

Sincerely,
Reza Amini
1478 W Greenfield CT
Ann Arbor, MI
48108
940-600-0324
amini.dr@gmail.com

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 12, 2023 11:50 AM
To: William Ballard
Subject: FW: Ann Arbor Municipal Airport (ARB) Proposed Runway Expansion

From: Rob Salemi <rsalemi222@gmail.com>
Sent: Thursday, January 12, 2023 11:05 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov
Cc: kathewun@aol.com
Subject: Ann Arbor Municipal Airport (ARB) Proposed Runway Expansion

You don't often get email from rsalemi222@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

I am writing to oppose the proposed runway expansion at the Ann Arbor Municipal Airport (ARB). due to safety and noise issues.

The expansion poses serious safety risks to residents in the surrounding neighborhoods

- The proposed extension would put the end of the runway 870 feet closer to the homes on Lohr Rd which poses a significant risk to those residents and their homes
- The homes along Lohr Road are near the end of the runway and an expansion would bring the runway closer to the homes and they would not be adequately protected by "Runway Protection Zones"
- On Sunday, Sept 11 2022 the pilot of a *Cessna 152* was forced to make an emergency landing shortly after takeoff after losing power, it landed in the farm field on the airport property, directly across from the homes on Lohr Rd See Safety/Health Response #2.
 - If the runway was expanded at the time the plane would have landed on the homes.
- There is a large population of Canada geese in the areas surrounding the airport
 - The farm, Stonebridge Golf Course, and numerous lakes in the surrounding subdivisions provide an ideal habitat for Canada geese
 - It would be unrealistic and cost prohibitive to try to manage/mitigate the geese population
 - A USDA inspector concluded these geese are a real and present danger and with the mitigation, that would continue to be an safety issue
- With the expansion, aircraft would be flying much, much closer to the homes in the flight pattern, approximately 35% closer
 - This would increase the risk of a bird strike over a neighborhood as stated by the MDOT-AERO presenter at one of the public meetings
 - Some of the aircraft use leaded fuel and flying 35% closer to homes will increase the exposure of lead from the aircraft's exhaust to children, adults, pets homes, and wildlife in the surrounding area
- Water wells at ARB provide 20% of Ann Arbor's drinking water, if there were an accident at the airport these could be placed at risk
 - There are wetlands and streams as well on the property and these could be at risk as well

- ARB is a Municipal airport funded by federal tax, so any pilot can land their planes and the expansion would allow larger planes and ARB cannot stop them
 - The larger aircraft pose more of a risk to the surrounding neighborhoods in regards to crashes, especially when the geese population is taken into account

See General Response #18.

The expansion would increase noise exposure:

- With aircraft flying 35% closer to homes in the surrounding area, noise from the current number of aircraft would increase
- The SRDEA (Second Revised Draft Environmental Assessment) acknowledges that noise would likely get worse
- Because of the methodology (computer simulated) of the ARB's noise analysis, such figures almost always underestimate noise levels over time
 - The methodology used to measure noise also did not take into account the need to vary from the norm due to; weather conditions, variations in takeoff & landings, age of the aircraft, etc.
 - These issues would certainly increase noise levels
 - One of the charts in the presentation showed the DB increase to one of the houses in Stonebridge would increase to just below the max allowed
 - And again this was with a computer simulated method
 - There needs to be actual measurement of decibel levels over surrounding homes (not computer simulated)
 - This will show that there are already harmful levels of noise, and with increased traffic and larger aircraft this level will continue to increase

Inherent Infrastructure flaws at ARB

See Noise Responses #1, #2, #3, and #5.

- The FAA control tower only operates 12 hours a day
- ARB is not equipped to provide bad-weather instrument approaches and landings
- De-icing is not allowed in winter to protect the water wells
 - De-icing is necessary for larger aircraft
- There is no 24-hour fire/rescue provided at the airport
- An expansion will pose more safety risks to the surrounding homes

See Safety/Health Response #3.

The Purpose and Need for any expansion has not been justified

- The SRDEA contends that aircraft that routinely use ARB suffer "undue" concessions in reduced fuel, passengers and/or cargo loads when the runway surface is wet, or hot because of the temperature in summer months, however the SRDEA provides no actual data in support of the claimed concessions in fuel, passengers or cargo.
- The SRDEA suggests there is a need for air transportation to bring workers, clients, suppliers, customers and time sensitive parts/supplies to and from the region, yet there is Willow Run Airport only 15 minutes away from ARB
 - And the SRDEA provides no data to support the connection to the Ann Arbor business and the ARB
- Willow Run Airport can also handle the aircraft that claim a need of concession in fuel, passengers or cargo to operate fully at ARB
- The SRDEA projects maximum operations of 84,336 by the year 2039, yet the current runway supported 134,553 operations in 1999
 - This shows that the current runway is more than sufficient, so no expansion is necessary
- The SRDEA stated an excess of hot weather days to justify the proposed expansion and identified 81 hot days in Ann Arbor when temperatures exceed 80 degrees in 2019

See Safety/Health Responses #7 and #16 and General Responses #3, #5, #10, and #14.

- However aircraft performance charts, included in the SRDEA, suggest the industry standard for hot weather is 85 degrees, not 80 degrees
- There were actually only 66 days in 2019 over 85 degrees, so **the SRDEA inflated the numbers** used for their argument **by 25%, by using a lower than industry standard**
- The SRDEA also focuses reason for the expansion “to improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase in time”, however 3 of the 4 “critical aircraft” identified by the SRDEA could operate 100% of the on the current existing runway
 - And only the Cessna Citation Excel XLS could still operate at full weight 90% of the time and at 100% capacity most days
 - At most only 48 of the 263 operations per year of the Citation XLS in 2019 were impacted by hot weather
 - A miniscule .00038 of ARB’s total annual operations that year
 - This is not sufficient to justify this proposed expansion.

See Technical Responses #2 and #5.

The SRDEA ignores governments surrounding the airport and can significantly affect their funding

- It ignores prior resolutions from Pittsfield and Lodi Townships (i.e. Pittsfield Charter Township Resolution #17-21) which objects to the expansion for safety reasons, in violation of NEPA and FAA order
- The SRDEA claims the FAA has no control, responsibility, or discretion for the use of the funds once MDOT-AERO receives the FAA's block grant funds
- Property values typically decrease in communities surrounding airports when they are expanded
 - The values can decrease between 5.7 and 9.2% which would cost Pittsfield Township alone , \$1.5 million to Ann Arbor School District, \$1.4 million to Saline School District, \$850,00 to Pittsfield Township and \$810,000 to Washtenaw County from lost tax revenue.

See Financial/Economic Response #2 and General Response #24.

For all these reasons I oppose the expansion of the Ann Arbor Airport and believe you should as well.

Thank you for your time and consideration,
Rob Salemi

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 12, 2023 7:45 AM
To: William Ballard
Subject: FW: Ann Arbor Airport Increases Carbon with Runway Expansion

From: Robert Gansen <gansenr@gmail.com>
Sent: Wednesday, January 11, 2023 7:42 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: Ann Arbor Airport Increases Carbon with Runway Expansion

You don't often get email from gansenr@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Mr. Kulhanek,
Is that the headline you want to see in local and national media coverage?

It seems likely that larger and heavier aircraft, plus more air traffic will increase the amount of carbon in Ann Arbor's air. If you disagree, please explain how the runway expansion supports the Carbon Neutrality Plan and efforts underway in Ann Arbor.

See Air Quality Responses
#1, #2, and #3.

The larger and heavier aircraft will increase the risk of accidents. Aircraft would pass over Lohr Rd at 1/3 the altitude they currently do; about 100 ft. Large flocks of Canada geese are often seen in the field west near Lohr Road, which is at the end of the runway.

The risk of a bird strike (goose or swan) at these lower altitudes is greatly increased.

See Noise Response #1, Wildlife Response #1, and Safety/Health Responses #1, #6, #8, and #14.

Due to the lower altitude and larger aircraft; noise levels would be double or triple what they are now. I live nearby and currently hear the noisy aircraft at all hours. Increased noise levels from more and larger aircraft will negatively affect local residents' quality of life.

See Noise Responses #1, #2, and #3.

Willow Run airport is nearby and should accommodate the aircraft instead of expanding this runway in a residential area.

See General Responses #5, and #10.

The risks far outweigh any benefits.

R. Gansen

January 11, 2023

To: Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, Michigan 48108.
Email: mjkulhanek@a2gov.org

Copy: Steve Houttemans
MDOT-AERONAUTICS
2700 Port Lansing Road
Lansing, MI 48906.
Email: houttemans@michigan.gov

Copy: Kathe Wunderlich
Email: kathewun@aol.com

RE: Ann Arbor Airport Expansion

I am writing to you in opposition to the Ann Arbor Airport Expansion as a concerned community member and former public health official. I am a 22 year resident of a housing development located west of the airport, and I am a daily witness to the impact of increased air traffic, especially the touch and go operations associated with the pilot training schools. The intensity of touch and go operations were considerably fewer when I moved in 2001.

See Noise Response #9.

A further expansion of the airport runway to accommodate jets and larger payloads will greatly decrease the quality of life, health and safety of many communities surrounding the AA airport. I write this critique of the proposed runway expansion and the Second Revised Draft Environmental Assessment (SRDEA) from a Public Health perspective.

1. Noise Analysis

The Noise Analysis was conducted only using computer modeling. The Noise Analysis only used data supplied by the airport and the control tower. There were no independent measurements of noise or monitoring of operations to verify data. For example, the SRDEA states that “Touch and go operations were modeled to occur only during the day.” This is an incorrect assumption. I have personally observed touch and go flights after dark. Onsite measurements and verification of data related to noise were not conducted.

The noise problem around the airport would almost certainly increase with the airport expansion. Even the very conservative FAA-required noise analysis conducted as part of the SRDEA concedes that the harmful 60 decibel noise level would extend to the adjacent residential areas. Noise is more than a nuisance – noise is a well documented public health hazard affecting human health.

“Loud noise causes hearing loss and tinnitus, contributes to serious health problems and impairs children’s learning and work productivity, costing the nation billions of dollars each year. Chronic noise, even at low levels, can cause annoyance, sleep issues and stress that contribute to cardiovascular and cerebrovascular disease, metabolic disturbances, worsening of psychological disorders and early death.” Children are among the most vulnerable and environmental justice communities are affected disproportionately.

<https://apha.org/Policies-and-Advocacy/Public-Health-Policy-Statements/Policy-Database/2022/01/07/Noise-as-a-Public-Health-Hazard>

See Noise Responses #1, #2, #3, #5, and #9.

2. Ground Water Contamination

The possibility of an accidental aviation fuel spill contaminating the ground water is a real concern with more jet traffic, more fuel, more takeoffs and landings.

There are three water wells located on the airport property that supply 20% of Ann Arbor residents' water - a water supply that is already threatened by other contaminants such as PFAS and dioxane. The SRDEA acknowledges that in winter, de-icing is not permitted on the airport, to protect the wells on the property that produce drinking water. Hence, if there is already an acknowledgement that de-icing could contaminate the aquifer, why isn't the possibility of aviation fuel also being considered. The consultants emphasize that the ground water will be protected during construction yet the issue of an aviation fuel spill contaminating the aquifer is not addressed.

The SRDEA does not acknowledge any potential risks to the three wells on airport property other than de-icing stating only that, "there are several water wells on ARB property, all of which are outside the proposed project area." The SRDEA, however, contained extensive analysis of wetlands and streams in and around the property, but nothing about the important drinking water wells!

Local and state officials overseeing water supplies need to be brought into the Environmental Assessment process to assess the risk to the ground water as a result of extending the runway and the increased use of jet fuel. "One- time jet fuel spills often cause horrific environmental impacts."

<https://www.salon.com/2022/03/23/nearly-2000-gallons-of-jet-fuel-spilled-from-an-aircraft-in-kentucky/>

See Water Resources/Water Quality Responses #1 and #3.

3. Lead in Aviation Fuel

Leaded gasoline is still used by small piston powered planes, which make up 70% of all lead emissions in the nation, according to the U.S. Environmental Protection Agency. Children who attend school, preschool, play on soccer fields or live close to Ann Arbor Airport may be unknowingly exposed to lead.

The ARB is a municipal airport funded with federal dollars, any pilot who chooses can land at the airport adding to the volume and intensity of risk for lead exposure. Ann Arbor cannot regulate the type of aircraft that could utilize the field. More low flying small piston powered planes means more exposure to lead. “Touch and gos” seem particularly egregious considering they fly low over and over spewing lead from their exhaust. “When it comes to our children the science is clear, exposure to lead can cause irreversible and lifelong health effects. Aircraft that use leaded fuel are the dominant source of lead emissions to air in the country,” EPA Administrator Michael Regan said in a statement.

<https://spectrumnews1.com/ca/la-west/environment/2022/10/19/lead-emissions-from-small-planes-may-be-a-health-hazard>

See Air Quality Response #1

https://thehill.com/policy/equilibrium-sustainability/3806051-children-living-near-airports-may-be-exposed-to-high-levels-of-lead-study/?segment=1*100pp7z*s amp id*SIE0ck1HOFBwWkNQ QzVRMnBYNmVpU3FLUFd0Z1dybDN2ZDdNcGVtUlhTWEFvQ VQwWmFMRjlyQkZfTWNTZmVjXw

<https://jalopnik.com/small-planes-responsible-for-14-000-times-more-lead-pol-1849882751>

4. Climate Crisis

A2Zero is a project of the City of Ann Arbor that seeks to achieve a transition to carbon neutrality by 2030. The Environmental Assessment fails to address the issue of increased green house gas emissions that may be counterproductive to the intent of A2Zero. The proposed ARB runway expansion will significantly increase air traffic and likely attract more jets releasing more emissions into the atmosphere. EPA reports that commercial airplanes and large business jets contribute 10% of US transportation emissions and account for 3% of the nation's total greenhouse gas.

When Ann Arbor City Council passed the climate neutrality resolution designating a “climate emergency”, they failed to factor in the growth of greenhouse gas emissions that would result from the ARB expansion. The SRDEA needs to be revised to include the impact of more aircraft creating more emissions on the Ann Arbor community and how that might effect the goal of carbon neutrality by 2030.

See Air Quality Response #3

<https://www.eesi.org/papers/view/fact-sheet-the-growth-in-greenhouse-gas-emissions-from-commercial-aviation>

I am opposed to the airport runway expansion for these and other reasons. Thank you for the opportunity to provide input on this crucial question for our community.

Rosemarie Rowney
4879 Lone Oak Ct
Ann Arbor, MI 48108

December 30, 2022

Rosemarie Simon
4968 Lohr Road
Ann Arbor, MI, 48108
rosemariesimon@comcast.net
734-663-4207

To whom it may concern:

As stated in the FAA LAND USE COMPATIBILITY AND AIRPORTS GUIDELINES, “it is vitally important that airports operate in an environment that maximizes the compatibility of the airport with off-airport development...Airport and community planning processes are intertwined” The airport is obligated to, “Develop and implement a citizens’ public participation program, replete with appropriate processes and relevant information.” I believe the Ann Arbor City Airport has failed to meet this obligation to the citizenry.

My first access to relevant information concerning the Airport Expansion was at Airport Expansion Hearing on January 26 2017. The material presented that evening compelled me to write this second letter. I am now resubmitting this letter for a third time as the issue of expanding the runway at the Ann Arbor City Airport has resurfaced.

First and foremost, I live across the street from the west end of the existing runway and therefore I am as vested in the safety of the Ann Arbor City Airport as all other parties. To that end I would like to see the present extension of the runway, 950 feet to the west, abandoned and the parties supporting the Airport expansion encouraged to design a win/win proposal that is as safe for the residential communities surrounding the airport as it is for the pilots using the airport. I learned on the evening of January 26 2017, that David Cantor created a different proposal to ensure air traffic safety that did not require the 950 foot western extension of the runway. I was told that plan was not approved by the FAA but was more of a win-win for residents. I am begging the Ann Arbor City council to ask the airport representatives to go back to the design table and develop a win-win proposal that will satisfy the FAA and the residential community. A proposal that will ensure the Ann Arbor City Airport operates “in an environment that maximizes the compatibility of the airport with off-airport development”.

In Section III of the Legislation and Federal Regulations Relating to Compatible Land Use Planning Guidelines it is stated that the airport has an obligation to utilize “the reasonable alternatives that would avoid or minimize adverse impacts or enhance the quality of the human environment.... In addition, EIS/EAs must consider the broader land use, social, and socioeconomic fabric of the communities surrounding an airport.” This guideline is not being followed.

See General Response #20.

Second, I learned that presently, the end of the runway is 2000 feet from existing homes on Lohr Road on the west side of the airport. My home is one of those homes and already has sustained structural damage due to plane engine and we suffer from noise pollution, as phone conversations, yard conversations and television programming are interrupted and terminated by engine roar. The new runway diminishes that margin of safety of 2000 feet to 900 feet, from the

end of the runway to the front doors of homes on Lohr Road. I cannot believe that planes, especially double axel 70,000 pound planes can safely land or take off 900 feet from residential homes. Many counties in the United States have runway setback standards such as, “600 feet from the sides of the runway and 1,200 feet from the ends of the runway.” In my research, I found nothing less than 1,200 feet from the end of a runway to residential dwellings. This expansion violates that safety standard.

See Noise Responses #1, #2, and #3 and Safety/Health Response #2.

For example, in June of 2009, as reported by Art Aisner of the Ann Arbor News, “Steve Blackman was piloting a small plane. He was on approach to the Ann Arbor Airport and had good height. But the plane was sinking too fast to reach the closest runway. Blackman couldn’t risk touching down on the road, especially with his 13-year-old grandson, Brad, aboard. Blackman guided the plane to a bouncy but safe landing on the 5th hole fairway of the Stonebridge Golf Course in Pittsfield Township at about 10:18 a.m. Tuesday. The course is barely a mile from the airport and is notorious among golfers for low-flying planes overhead, but Tuesday was the first time an airplane had to use the grounds for a runway, co-owner Jim Roland said.” This occurred directly behind my home. Just this year, Morgan Russ, Digital News Editor for Click On Detroit, published on September 11, 2022 that the “Pittsfield Township Police and Fire Departments were dispatched to the Ann Arbor Airport on Sunday afternoon, responding to a report of an airplane possibly crashing on the airport property. The airplane was located west of the main airport in a bean field on airport property. Further investigation revealed the airplane did not crash, but it did make an emergency landing in the field after losing power moments after taking off from the runway.” This happened directly in front of my home.

See Safety/Health Response #2.

Third, this expansion has been billed as a safety measure, when in fact as stated by Matt the airport manager that evening, “Air traffic has decreased by 50% over the last 20 years. That statement begs the question is this expansion commerce motivated? Is the quality of residential life being sacrificed for economic gain? If so, I beg the council to represent their citizenry by rejecting this expansion, thereby, protecting residential property, the safety of home owners, preserving the quality of homelife, limiting noise pollution, and protecting the existing wildlife (the multitude of flocks of Canadian geese which inhabit the 8 surrounding ponds).

Forth, a study has determined that all of the surrounding residential property values will decrease minimally by 10% and that decrease will be reflected in a significant reduction in property tax revenue for the city of Ann Arbor. It also begs the question of “condemnation of property”. The runway expansion will take away value from all the surrounding residences. I believe the Ann Arbor City Council has a duty to protect our property values and the revenue stream that supports our city.

See Wildlife Response #1, Safety/Health Responses #1 and #8, and General Response #13.

Fifth, the Aviation Safety and Noise Abatement Act of 1979 requires the following actions be taken:

- “Establishment of a single system of measuring noise, for which there is a highly reliable relationship between projected noise exposure and surveyed reactions of people to noise, to be uniformly applied in measuring the noise at airports and the areas surrounding airports;”

- “Establishment of a single system for determining exposure of individuals to noise which results from the operations of an airport and which includes, but is not limited to, noise intensity, duration, frequency, and time of occurrence; and”
- “Identification of land uses which are normally compatible with various exposures of individuals to noise.”

“Section 103 of the Act authorized the Secretary of the DOT to make grants for airport noise compatibility planning to minimize noise impacts on communities in and around airports. According to the ASNA, a noise compatibility program identifies measures that an airport owner has taken or has proposed for the reduction of existing incompatible land uses, and the prevention of additional incompatible land uses within the area covered by noise exposure maps. This effort should be designed to elicit meaningful responses from the general public regarding the status of land use planning around the airport.”

Results of a study of the projected noise exposure have not been reported and I have not received a survey regarding my reaction to noise. No one at the hearing presented the system used for measuring noise. No one from the airport has tried to elicit a meaningful response from the general public regarding the status of land use planning around the airport. The hearing on January 26th was a presentation of the airport’s plan, they were not interested in hearing the public’s response, they were there to defend their position. See Noise Responses #7 and #11

Sixth, the National Environmental Policy Act (NEPA) of 1969 “established the fundamental commitment of the federal government to fully consider the effects of a proposed action on the human environment. It also set the basic requirements for the contents of a “detailed statement” (of impact) to be prepared for “major federal actions.” ...In terms of aviation, this would include, but not be limited to, such actions as approval of an Airport Layout Plan (ALP) revision, construction of a new runway, or a major runway extension. NEPA is the basic national charter for protection of the environment. NEPA declares it a national policy to “encourage productive and enjoyable harmony between man and the environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; and to enrich the understanding of the ecological systems and natural resources important to the Nation.” The profound impacts of man’s activities “on the interrelations of all components of the natural environment” are recognized (including urbanization, population growth, industrial expansion, and resource exploitation). The Act specifically declares that “governments, and other public and private organizations, use all practicable means and measures... to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.”

The airport manager referred to the Airport Expansion Plan as “impact-less” when in fact the opposite is true. The airport expansion will have negative environmental impacts that will result from the runway being extended 950 feet to the west accommodating larger planes. If this plan is implemented the negative impacts on residential structures, safety, quality of homelife, noise pollution and wildlife (large population of Canadian geese) will be significant. I do not believe there has been a full and fair disclosure of significant environmental impacts which negatively impacts the ability to make an informed decision.

See Noise Responses #1 and #2, Wildlife Response #1, Water Resources/Water Quality Response #1, and Air Quality Response #1.

Finally, the U.S. Department of Transportation Federal Aviation Administration in their Advisory Circular dated November 10, 1994, issue #AC 150/5300-13 states in Chapter 2, AIRPORT GEOMETRY:

“This chapter presents the airport geometric design standards and recommendations to ensure the safety, economy, efficiency, and longevity of an airport. 201. Coordination with the FAA and users of the airport should assist in determining the airport's immediate and long range functions which will best satisfy the needs of the community and traveling public. This involves determining the following: (1) The operating characteristics, sizes, and weights of the airplanes expected at the airport; (2) The airport reference code (ARC) resulting from (1); (3) The most demanding meteorological conditions in which airplanes will operate; (4) The volume and mix of operations; (5) The possible constraints on navigable airspace; and (6) The environmental and compatible landuse considerations associated with topography, residential development, schools, churches, hospitals, sites of public assembly, and the like. Runway location and orientation are paramount to airport safety, efficiency, economics, and environmental impact. Environmental Factors. In developing runways to be compatible with the airport environs, conduct environmental studies which consider the impact of existing and proposed land use and noise on nearby residents, air and water quality, wildlife, and historical/archeological features...g. Wildlife Hazards. In orienting runways, consider the relative locations of bird sanctuaries, sanitary landfills, or other areas that may attract large numbers of birds or wildlife. Where bird hazards exist, develop and implement bird control procedures to minimize such hazards.

The large number of Canadian geese that are attracted to the area by the many ponds are already a hazard to pilots. To bring the runway closer to the habitats of these birds is simply negligent.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

As an Ann Arbor city resident, a constituent of yours, and one of the taxpayers who adds to our city's revenue, I strongly object to the extension of the Ann Arbor city airport runway. This a poor plan that has ignored the significant negative impact this expansion will have on residential property (see below), noise pollution, safety of homeowners, quality of homelife and wildlife. There is no need to extend the runway to accommodate larger aircraft when a superb airfield alternative already exists – constructed with federal and state taxpayer dollars -- just eight air miles away at Willow Run for these larger aircraft, which makes any extension of the Ann Arbor field both unnecessary and wasteful. For that reason, I urge you to intervene and reject the Airport Expansion Plan.

Thank you for your prompt attention to this matter.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

Sincerely,

Rosemarie Simon

Rosemarie Simon

PS: Attached is a picture of the structural damage to my home from plane engine vibrations. I have had this damage repaired four times.

(Below is a view of the upper most corner of my home, the top of a stairwell and cathedral ceiling, where the crack keeps reappearing.)



Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 12, 2023 7:28 AM
To: William Ballard
Subject: FW: ARB Runway expansion thoughts.

From: S. Castell <ajetjock@yahoo.com>
Sent: Thursday, January 12, 2023 12:14 AM
To: houttemans@michigan.gov; Kulhanek, Matthew <MKulhanek@a2gov.org>; Taylor, Christopher (Mayor) <CTaylor@a2gov.org>; Disch, Lisa <LDisch@a2gov.org>; Harrison, Cynthia <CHarrison@a2gov.org>; Song, Linh <LSong@a2gov.org>; Watson, Chris <CWatson@a2gov.org>; Radina, Travis <TRadina@a2gov.org>; Ghazi Edwin, Ayesha <AGhaziEdwin@a2gov.org>; Eyer, Jen <JEyer@a2gov.org>; Akmon, Dharma <DAkmon@a2gov.org>; Briggs, Erica <EBriggs@a2gov.org>; Cornell, Jenn <JCornell@a2gov.org>
Subject: ARB Runway expansion thoughts.

You don't often get email from ajetjock@yahoo.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

To Whom It May Concern.

As a retired commercial pilot with over 20,000 Hrs, and a recreational pilot who flies occasionally out of ARB, I completely oppose this never ending expansion attempt for the following reasons:

1. This snowball of an expansion attempt is based on false presentation to the AA Council. The false and misleading presentation told council members that a longer runway is safer for the pilots.

Such a blatant falsification of facts, and lacing it with "safety", led the council to approve the plan. The snowball has been rolling ever since.

The fact that "safety" as an excuse has since been dropped from the talking points, is all one needs to know. It never has been about "safety". Yet that false reasoning is what started the snowball.

Since aircraft performance are tailored to specific runway length, metrological conditions etc. Every pilot knows that longer runway allows for increased payload and larger aircraft. Therefore, a shorter runway is the best "filter" to keep larger aircraft out of the Ann Arbor skies.

See Technical Response #9,
and Safety/Health Response
#2.

Hence, since the event which triggered the expansion snowball, was based on **FALSE and MISLEADING presentation**, it is high time to **stop** the futile attempt of turning a small recreational airport into an airport it never intended to be.

2. Fact is that the area around the airport is what the FAA calls "densely populated" area. If not for the exception for "takeoff and landing", aircraft will be required to fly over the area at a **minimum** distance of 1000' above ! It is in the Federal Aviation Regulation because that is what the FAA considers as safe operation.

Yet it is a common to see aircraft flying over rooftops at **less than 100'** ! (Allowed per the "takeoff / landing " exception).

Expanding the runway closer to homes, will DECREASE this already dangerous separation. It is clearly NOT A SAFE PRACTICE. Not for pilots, and certainly not for area residents.

See Noise Response #1 and #9, and Safety/Health Responses #6 and #14.

Let me say this again: A longer runway WILL increase the risk to Pittsfield AND Ann Arbor residents by many folds.

If you need an example of a longer runway with more corporate aircraft traffic in a densely populated area, take a look at Ft Lauderdale Executive airport and their accidents. The list is long:

[Ft Lauderdale Executive airport airplane accidents at DuckDuckGo](#)

The images are horrific :

<https://duckduckgo.com/?t=avast&q=Ft+Lauderdale+Executive+airport+airplane+accidents&iax=images&ia=images>

There is absolutely NO NEED for any of this in the Ann Arbor / Pittsfield area.

We have both Willow Run just 10 min away and DTW.

See General Responses #5 and #10.

3. The HYPOCRICY ! Yes, the Ann Arbor extreme hypocrisy, in pushing for a project which they would not even dare to propose to their AA voters, yet have no problem with it in another township.

As much as I like airplanes, an airport is neither "green" nor QOL friendly. Look no further at what becomes to any area around a larger airport. Take a look around Willow Run. Is this what we want to take place around Ann Arbor or Pittsfield ? Absolutely not.

See Noise Responses #1 and #2, Wildlife Response #1, Water Resources/Water Quality Response #1, and Air Quality Responses #1 and #3.

4. The airspace outside ARB belongs to Pittsfield Township. The township regulations were created to protect the residents. Such an expansion can trigger PT to actually start enforcing them.

See General Response #24

5. The 15% addition runway needed for contamination is yet another laughable excuse. Such a requirement is for commercial operations. If people are concerned with contamination they should use Willow Run which has plowing, de-icing equipment and 24/7 fire rescue and tower operations.

See General Responses #5 and #10 and Safety/Health Response #3.

6. Every airport has different purpose. ARB has been doing just fine serving as a small hobby / flight training and occasional charter airport. For anything more serious we are lucky enough to have Willow Run and DTW just a short distance away, yet not close enough to have negative impact on our Quality Of Life.

See General Responses #5 and #10.

7. Most people are not aware that there were around 10 **fatal** crashes at ARB over the years. As well as multiple incidents.

See Safety/Health Responses #2

Larger, faster and heavier aircraft, which WILL come with a longer runway, will only make future accidents more dangerous. For residents and pilots.

8. A few months ago a Cessna lost an engine on takeoff. They landed on the field near the runway. With the longer runway closer to homes, where do you think a large twin or a corporates jet will end in the case of an emergency on takeoff ?

Just take a look at the Ft Lauderdale Exclusive link above. Most likely; at someone's HOME !

See Safety/Health Responses #2

9. The land on which ARB appeared after WW II, was purchased by Ann Arbor not to operate and airport, but rather because of the aquifer and water wells. Today, the water level is just few feet below the surface where trucks full of LEADED fuel (Yes, Aviation fuel has LEAD in it) are fueling aircraft. With the Gelman dioxin plum affecting its water supply, does AA really needs the increased risk with their ARB water supply ?

See Water Resources/Water Quality Responses #1

I understand that the expansion money from the Aviation Trust Fund is burning a hole in MDOT's pockets. Sometimes however, the best course of action is to do nothing.

There is absolutely nothing wrong with the airport and the purpose it serves as is. Any attempt to change the symbiotic relationship between the airport and the neighborhoods around it, will most likely be counter productive and destructive to our QOL and **safety**.

As a retired professional pilot and an ARB recreational pilot, I would like to urge everyone involved in the project, to once and for all let this snowball melt and disappear.

Thank you.

Capt. S. Castell (Ret) Delta Air Lines.

734- 678 9437 (C)

ajetjock@yahoo.com

Dave Clawson

From: Kulhanek, Matthew <MJKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 10:08 AM
To: aaron.comrov@faa.gov; William Ballard
Subject: FW: Extension Request on Public Comments for Runway Extension Draft Environmental Assessment

FYI.

Matt

From: Steven Taber <Staber@LeechTishman.com>
Sent: Friday, January 13, 2023 9:51 AM
To: Kulhanek, Matthew <MJKulhanek@a2gov.org>; houttemans@michigan.gov
Subject: RE: Extension Request on Public Comments for Runway Extension Draft Environmental Assessment

You don't often get email from staber@leechtishman.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Mr. Kulhanek,

Thank you very much for your quick reply. We will plan on filing our comments by Wednesday, January 18, 2023.

Best regards,

Steve Taber

Steven Taber | Partner
staber@leechtishman.com

LEECHTISHMAN
LEECH TISHMAN FUSCALDO & LAMPL, INC.
leechtishman.com

200 South Los Robles Avenue, Suite 300
Pasadena, CA 91101
T: 626.796.4000 | F: 626.795.6321
Direct 626.395.7300 | Toll-Free 844.750.1600

PITTSBURGH | CHICAGO | LOS ANGELES | NEW YORK | PHILADELPHIA | SARASOTA | WASHINGTON, D.C.

From: Kulhanek, Matthew <MJKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 5:40 AM
To: Steven Taber <Staber@LeechTishman.com>; houttemans@michigan.gov
Subject: RE: Extension Request on Public Comments for Runway Extension Draft Environmental Assessment

Mr. Taber,

Your email below indicates that you are working on behalf of Pittsfield Township. Pittsfield Township was provided an Agency Coordination letter dated December 15, 2022 which has a comment deadline date of January 18, 2023. The deadline for responses for those that received Agency Coordination letters is not today, but January 18, 2023. Thanks you for your interest in the project.

Matthew J. Kulhanek

Airport Manager

City of Ann Arbor | Ann Arbor Municipal Airport | 801 Airport Drive · Ann Arbor · MI · 48108

734.794.6312 Office | 734.972.9112 Cell | Internal Extension 43113

mjkulhanek@a2gov.org | www.a2gov.org

From: Steven Taber <Staber@LeechTishman.com>

Sent: Thursday, January 12, 2023 3:24 PM

To: houttemans@michigan.gov; Kulhanek, Matthew <MJKulhanek@a2gov.org>

Subject: Extension Request on Public Comments for Runway Extension Draft Environmental Assessment

You don't often get email from staber@leechtishman.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Houtteman and Mr. Kulhanek,

This firm is assisting Pittsfield Township in preparation of its public comments of the recently published Draft Environment Assessment concerning the proposed extension of Runway 6/24 at Ann Arbor Municipal Airport. Because of the holidays and subsequent COVID infections of both myself and the primary contact (who is in the hospital), we would request that you extend the public comment period for 14 days – that is, until January 27, 2023.

Since the due date for public comments is tomorrow, Friday, January 13, 2023, we would appreciate an answer as soon as possible. Thank you for your attention to this matter. If you have any questions or comments, please let me know.

Best regards,

Steven M. Taber

Steven Taber | Partner

staber@leechtishman.com

LEECHTISHMAN

LEECH TISHMAN FUSCALDO & LAMPL, INC.

leechtishman.com

200 South Los Robles Avenue, Suite 300

Pasadena, CA 91101

T: 626.796.4000 | F: 626.795.6321

Direct 626.395.7300 | Toll-Free 844.750.1600

**PITTSBURGH | CHICAGO | LOS ANGELES | NEW YORK | PHILADELPHIA | SARASOTA | WASHINGTON,
D.C. | WILMINGTON, DE**

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 11:32 AM
To: William Ballard
Subject: FW: Proposed Airport Expansion

From: Chris DiVirgilio <divirgiliochris@gmail.com>
Sent: Friday, January 13, 2023 10:40 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; Taylor, Christopher (Mayor) <CTaylor@a2gov.org>; Disch, Lisa <LDisch@a2gov.org>; Harrison, Cynthia <CHarrison@a2gov.org>; Song, Linh <LSong@a2gov.org>; Watson, Chris <CWatson@a2gov.org>; Radina, Travis <TRadina@a2gov.org>; Ghazi Edwin, Ayesha <AGhaziEdwin@a2gov.org>; Eyer, Jen <JEyer@a2gov.org>; Akmon, Dharma <DAkmon@a2gov.org>; Briggs, Erica <EBriggs@a2gov.org>; Cornell, Jenn <JCornell@a2gov.org>; supervisor@pittsfield-mi.gov; jan@loditownshipmi.org; kathewun@aol.com; Walter Bielski <wbielski@me.com>; Monica Carter <cartermo@comcast.net>; Estates Board Gregg <gaconner1@gmail.com>; Dan Horn <dan_horn@comcast.net>; Adem Saglik <ademsaglik@gmail.com>; Lance Simpson <ldsimpson44@yahoo.com>
Subject: Proposed Airport Expansion

Some people who received this message don't often get email from divirgiliochris@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

January 13, 2023

Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, Michigan 48108
Attn: Matthew Kulhanek
mjkulhanek@a2gov.org

Via e-mail

Dear Mr. Kulhanek:

We are the Board of Directors of Stonebridge Community Association (“SCA”). SCA is a non-profit homeowners’ association comprised of 700+ homes and businesses located immediately west of ARB. SCA opposes the proposed runway extension and shift (the “Proposed Extension”) for the reasons discussed below, among others.

The Proposed Extension is unnecessary.

According to data in the Second Revised Draft Environmental Assessment (the “SRDEA”) submitted in support of the Proposed Extension, the current runway configuration at ARB is sufficient for (i) more than 99.999% of operations currently served by ARB and (ii) 3 of the 4 classes of aircraft cited in the SRDEA as justification for the Proposed Extension. For the remaining 0.0001% of operations, the distance between ARB and Willow Run (which has more than sufficient capacity) is less than 15 minutes by car.

Moreover, while the SRDEA projects a maximum of 84,336 operations at ARB in 2039, the existing runway supported 134,554 operations in 1999. That is nearly 60% more than the projected 2039 maximum. The current runway is more than sufficient for the projected future.

See Technical Responses #2 and #6.

The Proposed Extension will severely impact the safety and quality of life of nearby residents.

The Proposed Extension will unfairly “change the deal” our residents accepted when they built or purchased homes near a small, recreational airport because it will result in a significant increase of jet operations at ARB.

Although Willow Run is a mere 15 minutes away, if you build it, they will come. An earlier draft of the SRDEA acknowledges this, projecting an immediate tripling of jet operations at ARB. Curiously, this statistic was omitted from the final draft of the SRDEA.

Once the Proposed Extension is completed, neither ARB nor the community will have a means to control traffic. As a federally funded airport, any pilot who chooses to land at ARB can do so.

See General Response #18.

Safety is a significant concern. In 2017, a Cessna Citation CJ4 crashed in Howell – just 20 miles away – destroying the plane and seriously injuring the pilot after the jet plowed through a fence and across a road. Plotting that crash onto the Proposed Extension – even with the contemplated runway protection zone – the Howell plane would have crossed Lohr Road and crashed into houses on the other side. This risk is unacceptable.

See Safety/Health Response #5.

Moreover, the area is home to many flocks of resident and migrating Canada geese. In an appendix to the SRDEA, a U.S. Department of Agriculture inspector observed 75-100 geese feeding in the field adjacent to the runway. This number is understated. We have observed many hundreds or thousands of geese that live on and around ARB, including our backyards. In any event, the inspector noted, “Canada geese are a real and present danger [because] KARB is surrounded by ideal resident / migratory Canada goose habitat.” This risk is not mentioned in the body of the SRDEA itself.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

For examples of other Jetport nuisances, see Van Nuys in California and Teterboro in New Jersey. These two are particularly egregious, and on a larger scale, but qualitatively similar to what we will experience.

- <https://www.latimes.com/entertainment-arts/story/2022-10-20/kylie-jenners-private-jet-is-bad-for-the-residents-around-van-nuys-airport>
- <https://www.latimes.com/entertainment-arts/story/2022-10-28/calendar-feedback-sunday-october-30>

- <https://ktla.com/news/local-news/city-council-votes-to-have-faa-look-into-new-rules-leading-to-600-percent-rise-in-noise-complaints-near-van-nuys-airport/>
- <https://www.nytimes.com/2018/01/01/nyregion/teterboro-airport-steeped-in-glamour-history-and-noise.html>

In summary, the Proposed Extension will benefit a tiny group of private jet owners, to the detriment of tens of thousands of residents. The minor inconvenience suffered by a very, very small number of people does not outweigh the safety and quality of life of the citizens who live in our communities.

See General Response #13.

Sincerely,

Board of Directors of Stonebridge Community Association

- Walter Bielski
- Dr. Monica Carter
- Greg Conner
- Chris DiVirgilio
- Dan Horn
- Adem Saglik
- Lance Simpson

cc: Steve Houtteman, MDOT-Aeronautics (via email)
Chris Taylor, City of Ann Arbor (via email)
Ann Arbor City Council (via email)
Mandy Grewal, Pittsfield Township (via email)
Jan Godek, Lodi Township (via email)
Kathe Wunderlich, Committee for the Preservation of Community Quality (via email)

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 12, 2023 3:03 PM
To: William Ballard
Subject: FW: Public Statement – Strong Opposition to Proposed Ann Arbor Airport Expansion

From: Sue Snow <smsnow@comcast.net>
Sent: Thursday, January 12, 2023 2:42 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov
Cc: kathewun@aol.com; thewaterwaysboard@gmail.com; mjlee_@hotmail.com
Subject: Public Statement – Strong Opposition to Proposed Ann Arbor Airport Expansion

You don't often get email from smsnow@comcast.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Gentlemen:

We are residents of 1421 West Greenfield Court, Ann Arbor, MI 48108. Our home is in Pittsfield Township. We do not live in the direct take-off or landing flight path, but experience very frequent and very repetitive low altitude and very loud traffic from training patterns. We knew that there was an airport nearby when we purchased our home.

We are writing to express our strong opposition to the proposed expansion of the Ann Arbor Airport. We share concerns expressed by our neighbor, Michael Lee, in his letter to you and Ann Arbor City Council members dated January 4, 2023. This is not the first time our neighborhood has had to express opposition to the airport expansion. Our concerns have not changed nor is it any clearer why this expansion is needed with Willow Run located close by.

Our primary concerns include the following:

See General Responses #5 and #10.

- Safety of residents in subdivisions surrounding the airport
- Increased noise pollution due to larger, louder, and more frequent jet planes
- Increased danger from larger aircraft with low approaches over businesses on State Street.
- Impact to wildlife on and near airport property
- Ground pollution from expanded maintenance operations at the airport
- Lack of onsite fire and rescue services

See Noise Responses #1, #2, and #3, Safety/Health Responses #1, #3, #6, #8, and #14, Water Resources/Water Quality Response #3, and Wildlife Responses #1 and #2,

It is not clear who stands to benefit from expansion of the airport. We are left to speculate that there are unidentified corporate entities or perhaps University of Michigan supporters who continue to press this issue with the City of Ann Arbor.

We strongly object to this proposal and request that any and all steps be taken to stop it from moving forward.

Sincerely,

Susan and Carlton Snow
1421 West Greenfield Court
Ann Arbor, MI 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Thursday, January 12, 2023 11:50 AM
To: William Ballard
Subject: FW: Ann Arbor Airport Expansion

From: Susan Campbell <a2sue@sbcglobal.net>
Sent: Thursday, January 12, 2023 10:54 AM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: Ann Arbor Airport Expansion

You don't often get email from a2sue@sbcglobal.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hello,

I am a resident of The Waterways subdivision, which is very close to the Ann Arbor Airport. I strongly oppose the proposed airport expansion. Please note the following.

ï The proposed runway extension would move ARB's primary Runway 24 870 feet closer to Lohr Road, adding to the risks to residents near the end of the runway, which are not adequately protected by so-called "Runway Protection Zones." See Safety/Health Response #2.

ï The SRDEA has dropped prior claims, since the onset of the project in 2007, that the expansion was a "safety extension." Since the FAA ruled that federal funds would not be available for such an expansion, the focus was shifted to "improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase over time." See Technical Response #1.

ï However, of the four "critical aircraft" types identified by the SRDEA, three could operate 100% of the time on the existing 3,505-foot runway. Only the Cessna Citation Excel XLS, the type of aircraft owned and operated by AvFuel Corp., which dominates operations in this class, could suffer weight penalties on hot summer days, but could still operate at full weight 90% of the time, and at 100% capacity on most days. At most, only 48 operations per year of the Citation XLS class's 263 annual operations (in 2019) could be impacted by hot weather – a miniscule .00038 of ARB's total annual operations – hardly sufficient to justify the proposed expansion. See Technical Response #2.

ï The SRDEA acknowledges that any expansion would likely attract more jet traffic, where larger and heavier aircraft pose additional risks in an area heavily populated by Canada geese.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

ï Further complicating issues, because ARB is a municipal airport funded with federal dollars, any pilot who chooses can land at the airport, no matter the size of their aircraft – adding to the level of risk. Ann Arbor cannot regulate the type of aircraft that could utilize the field.

See General Response #18.

ï The SRDEA acknowledges for the first time the presence of Canada geese surrounding the airport, with a U.S. Department of Agriculture inspector observing 75-100 Canada geese at the airport, feeding in a tilled fallow field. The inspector also reported “flocks of 5 to 15 geese arrived on the airfield at different times. . . Geese were observed within 10 yards of the runway.” The inspector concluded that, “Canada geese are a real and present danger, and will need to be managed for the foreseeable future. KARB is surrounded by ideal resident / migratory Canada goose habitat.” However, the SRDEA presents no plan for such mitigation – and makes no mention of any risks posed by the Canada geese.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

ï The Purpose and Need statement does not support the need for an extended runway. The SRDEA contends that aircraft that routinely use ARB suffer “undue concessions in reduced fuel, passengers, and / or cargo loads. . . diversions to other airports are also commonly needed when the runway surface is wet, or during summer months when higher temperatures reduce aircraft performance.” However, the SRDEA provides no actual data in support of the claimed concessions or diversions. The FAA noted, “the rate of users taking weight restrictions has not been documented,” and, “The inclusion of the contaminated runway length distances cannot be used to justify FAA funding requirements” for an extended runway.

See Technical Response #7.

ï The SRDEA stated an excess number of hot weather days at ARB. To justify the proposed expansion, the SRDEA identified 81 hot days in Ann Arbor, when temperatures exceeded 80 degrees (in 2019). However, aircraft performance charts included in the SRDEA suggest an industry standard for hot weather is 85 degrees, not 80 degrees. There were only 66 days in 2019 when the temperature exceeded 85 degrees. Thus, the SRDEA inflated the number of hot weather days by 25% by using the 80-degree standard.

See Technical Response #5.

ï The SRDEA alludes to a connection between “many prominent business and institutions with the University of Michigan being the area’s largest employer. Manufacturing, health care, automotive, information technology, and biomedical research companies account for major employers surrounding the area” that often require “air transportation to bring workers, clients, suppliers, customers, and time sensitive parts / supplies to and from the region.” However no specific connection between those business needs and ARB was established in the SRDEA. It was merely an allusion.

See Financial/Economic Response #1.

ï The SRDEA also suggests that the UM’s six / seven home football weekends and Michigan International Speedway two annual NASCAR events bring increased aircraft activity to the area, and that “should Runway 6 / 24 be extended, additional aircraft activity could occur at ARB due to its proximity to special event venues.” However, the SRDEA contained no actual forecasts of such potential activity.

See Technical Response #3.

ï However, a less sanitized version of the SRDEA, contained in an earlier draft submitted to the FAA and reviewed under the Freedom of Information Act, projected an immediate tripling of annual jet operations if the ARB runway were extended to over 1,000 per year, with another 500-665 operations from jets, which currently utilize Willow Run Airport, possibly moving to an extended ARB on football weekends. That earlier draft SRDEA suggested up to 40% of the 9,313 annual small and medium jet operations at Willow Run “would likely shift to ARB if additional runway length were available,” thus increasing jet operations from the 360 in 2019 to

upwards of 3,660 jet operations per year – ultimately turning ARB into a jetport. We cannot let that happen!

See Technical Response #4.

ï To temper any fears of such runway expansion, the final SRDEA omitted such jet growth claims and forecast, instead, that the operations of small turboprop and jet aircraft “will slowly increase over time.”

See Technical Response #1.

ï While the SRDEA projects a maximum of ARB operations of 84,336 in 2039, it is interesting to note that the current 3,505-foot runway supported almost two-thirds more operations in 1999 – 134,554, suggesting the current runway is more than sufficient for the projected future.

See Technical Response #6.

ï Any ARB expansion is especially dangerous because, with jets being the primary source of increased operations, it raises the level of risk in an area heavily populated with Canada geese, which do not interact well with jet aircraft.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

ï ARB also has certain conditions that can enhance the level of risk over other nearby airports: Instrument approaches and landings are not permitted at the airport. The control tower only operates part-time. Also, in winter, de-icing is not permitted on the airport, to protect the wells on the property that produce drinking water. And ARB does not provide 24-hour on-site fire and rescue services.

See Safety/Health Response #3.

ï The noise problem around the airport would almost certainly increase. Even the very conservative FAA-required noise analysis conducted as part of the SRDEA concedes that the harmful 60-decible noise level would extend to “a residential area at the southwest corner of the airport.”

See Noise Responses #1, #2, and #3.

ï The FAA requires the identification of environmental health risks to children. However, despite numerous scientific studies confirming the negative impact of aircraft noise on the neuropsychological development of children, the SRDEA does not discuss such threats, concluding, instead, that “the FAA has not established a significance threshold for impacts to children’s environmental health and safety. . .”

See Safety/Health Response #4.

ï The SRDEA does not acknowledge any potential risks to the three wells on airport property that supply about 20% of Ann Arbor’s drinking water, stating only that, “there are several water wells on ARB property, all of which are outside the proposed project area.” The SRDEA, however, contained extensive analysis of wetlands and streams in and around the property. But nothing about the important drinking water wells!

Obviously this is not a prudent endeavor!

See Water Resources/Water Quality Response #1.

Susan Campbell
1370 Waterways Drive
Ann Arbor, MI

Dave Clawson

From: Kulhanek, Matthew <MJKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 7:25 AM
To: William Ballard
Subject: FW: Proposed Airport Expansion

From: Deborah Hodge <deb.hodge20@gmail.com>
Sent: Thursday, January 12, 2023 4:39 PM
To: Kulhanek, Matthew <MJKulhanek@a2gov.org>
Subject: Fwd: Proposed Airport Expansion

You don't often get email from deb.hodge20@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Debby Hodge
Sent from my iPad

Begin forwarded message:

From: Deborah Hodge <deb.hodge20@gmail.com>
Date: January 11, 2023 at 2:28:21 PM EST
To: houttemans@michigan.gov
Cc: mjkulhanek@a2goc.org, kathewun@aol.com
Subject: Fwd: Proposed Airport Expansion

Subject: Proposed Airport Expansion

Dear Mr Houtteman and Mr Kulhanek
Our names are Terrance and Deborah Hodge and our NEW HOME address is 2373
Quaker Ridge Dr, Ann Arbor 48108

We emphasized NEW HOME since we moved into the Stonebridge Community
(Highpointe) in July, 2022.
During the remainder of our first summer, we utilized our 3 season room and deck as
often as possible including evenings after sunset. Although we realized our proximity to
the airport when we purchased, we were surprised at the noise level and distance
above our home. Since attending the information meeting at the Pittsfield Township
office, it is my understanding that a plane should be at least 1000 ft above our home

and that appears to be ignored by pilots and the airport. Although this may not be a valid reason to object to the expansion, we felt we should bring that to your attention.

Now, on to the reasons for our objection.

See Noise Response #1 and Safety/Health Responses #6 and #14.

The 2022 Second Revised Draft Environmental Assessment (SRDEA) discusses ARB rationale for the expansion. The claim is it would improve “operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase over time.” After reviewing what is considered to be “critical aircraft” (2 classes of jets and 2 classes of turboprops) and reviewing an Appendix to the SRDEA for each model, 3 of the 4 classes of critical aircraft could operate year round without penalty on the existing 3,505 foot runway. The 4th class (Cessna Citation Excel XLS) could operate at full weight 90% of the time and at 100% capacity on most days. After reviewing the Appendix, we believe the expansion is unnecessary.

See Technical Responses #1 and #2.

The SRDEA argues the expansion is necessary for pilots to have a longer stopping distance when there are certain weather conditionsespecially wet runways. This does not appear to be a valid reason. Per the FAA, “The inclusion of the contaminated runway length distance cannot be used to justify runway length under FAA funding requirements.” It only makes sense to us that pilots are expected to always calculate runway length needs and make adjustments needed for safety. Again, not a reasonable reason for expansion.

We believe the proposed expansion poses imminent danger to the heavily populated neighborhoods surrounding the airport since the expanded runway could (and likely would per the SRDEA) attract more larger and heavier jets posing additional risks in an area heavily populated with Canada geese. We have observed large flocks of the geese immediately north of the airport on a large pond just west of Costco off of airport road. In addition, we have observed large flocks of Canada geese in the 2 areas of water at the entrance to Stonebridge off of Lohr Road just south of Ellsworth.

It is our opinion the risks of the proposed project far exceed any benefit. The project poses serious risks to residents living around the airport and an area HEAVILY populated by Canada geese. And after attending a public meeting, there is strong opposition by Pittsfield Charter Township where the airport is located.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

It is our hope as new residents to this community that the you will NOT expand the airport and continue providing for the safety and well being of those living in the highly populated areas surrounding the airport.

Sincerely,
Terrance and Deborah Hodge

[Sent from the all new AOL app for iOS](#)

Yifan Chen
4746 Sawgrass Dr W
Ann Arbor, MI 48108
January 11, 2023

Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive

Dear Matthew Kulhanek:

I am writing to express my strongest opposition to the Proposed Ann Arbor Airport Expansion.

I have been a resident from the Stonebridge Subdivision since 1997. In my nearly 25 years of living in this community, I can tell you from my own experience that the Ann Arbor Airport has negatively impacted our quality of life in terms of both safety and noise pollution created by frequent, low flying aircraft over the airspace of our subdivision. Despite your voluntary Noise Abatement Program, we routinely suffer from low flying and fast flying aircraft in and out of the airport leaving disturbing noise and safety concern behind, which the pilots don't seem to care. I have in the past raised the issue to the Ann Arbor Airport with photographic evidence and even brought to the attention of the mayor of Ann Arbor, but no one seemed to care.

The proposed expansion, which calls for the extension of the primary runway at the airport from its current 3,505 feet 4,225 feet, adding 720 feet westward towards Stonebridge, for which research has shown that aircraft would be landing only 93 feet above the rooftops of homes along Lohr Road. This is completely irresponsible and unacceptable. Imagine if you are one of the residents living in those homes, what would you feel?

See Noise Responses #1 and #7, and Safety/Health Responses #6 and #14.

The Proposed Ann Arbor Airport Expansion prioritizes the interest of business and profits while ignoring our basic rights to safety and a healthy living environment. I urge the Ann Arbor Airport to listen to the voice of the communities and stop this irresponsible plan.

See General Response #13.

Best Regards,



Yifan Chen

cc. Steve Houtteman
Kathe Wunderlich

1/13/2023

RE: Letter in Opposition of the Proposed Airport Expansion

To Whom It May Concern;

My name is Alexander Hermanowski. This is a letter in opposition to the runway expansion at the Ann Arbor Municipal Airport.

I live in the Stonebridge Subdivision which is directly across the street from where the proposed runway expansion is located. I live there with my wife, three young children, and mother in law. We like where we live and enjoy spending a lot of time outside. We are gravely concerned about this expansion for many reasons.

Most of our concerns relate to safety. If you are not aware, jet fuel is one of the last remaining fuels to be leaded. Lead is released into the atmosphere when fuel is burned. Increasing the runway length would release more lead into our environment due to the increase in activity. This would directly impact anyone living in the surrounding area.

See Water Resources/Water Quality Response #1 and Air Quality Response #1.

Another concern is noise. Living next to a municipal airport you expect to see and hear some planes as municipal airports are typically used for recreation. We already have to stop talking when some planes fly above due to their noise. Increased flights and larger planes will make enjoying the outdoors even more difficult. Football Saturday are an example. Activity is usually very high before and after the games, which is okay during those limited periods, but if the frequency increases and larger planes are landing and taking off this would make it very difficult to live where we currently live.

See Noise Responses #1, #2, and #3.

The longer runway would increase the risk of an incident like a crash or bird strike. With this expansion the aircraft would pass over Lohr Road at 1/3rd the altitude that they currently do which would be about a hundred feet from the ground. There is a large population of geese and other wildlife in the area. It is not unusual to see hundreds of geese on either of the ponds or in the field. I am not sure those who are approving this understand the geese situation. I've even seen some bald eagles in the field and flying above. This is a heavily populated area and if a plane were to crash this would result in someone being killed.

See Noise Response #1 and Safety/Health Responses #6 and #14.

I read the SRDEA and it spoke about the geese situation. They wrote that "flocks of 5 to 15 geese arrived on the airfield at different times. . . Geese were observed feeding within 10 yards of the runway." As the Agriculture Inspector concluded, "Canada geese are a real and present danger, and will need to be managed for the foreseeable future. KARB is surrounded by ideal resident / migratory Canada goose habitat."

See Noise Response #1 and Safety/Health Responses #6 and #14.

The value of our homes will also decrease significantly. The benefit that a few small companies will gain will be the detriment of thousands of people. It is my understanding the AV Fuel is the main driver of this expansion. Willow Run Airport is about 11 miles away. It is fully equipped for the largest of jets. That site was intended to be used in a capacity which is consistent with their corporate interests. AA Municipal airport was always known as a site for recreational flying. It even started as a flying club. If the runway is expanded, then larger aircraft would be attracted to fly in and out and there is nothing that anyone can do about it. Imagine a larger jet landing at 3AM on a Tuesday. This doesn't currently happen.

See Financial/Economic Response #2, and General Responses #5 and #10.

I am sure you have received many letters in opposition. The reality of this situation is that this expansion only serves and benefits a few corporate interests. It does not take into account the thousands of personal residences that will be negatively impacted. Nothing good will come from this expansion. This feels very much like a greedy powerplay by a company like AV Fuel, especially when there is a suitable alternative in Willow Run Airport. Ann Arbor has stood for its residents for a long time. It's time that they be a good neighbor by denying this expansion as it will impact everyone other than Ann Arbor.

See General Response #13.

I respectfully request that this expansion be denied.

Best regards,



Alexander W. Hermanowski

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 3:42 PM
To: William Ballard
Subject: FW: Expansion of Ann Arbor Airport

From: DONALD DI VIRGILIO <ddivir@comcast.net>
Sent: Friday, January 13, 2023 2:01 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com; Taylor, Christopher (Mayor) <CTaylor@a2gov.org>; Disch, Lisa <LDisch@a2gov.org>; Harrison, Cynthia <CHarrison@a2gov.org>; Song, Linh <LSong@a2gov.org>; Watson, Chris <CWatson@a2gov.org>; Radina, Travis <TRadina@a2gov.org>; Ghazi Edwin, Ayesha <AGhaziEdwin@a2gov.org>; Eyer, Jen <JEyer@a2gov.org>; Akmon, Dharma <DAkmon@a2gov.org>; Briggs, Erica <EBriggs@a2gov.org>; Cornell, Jenn <JCornell@a2gov.org>
Subject: Expansion of Ann Arbor Airport

You don't often get email from ddivir@comcast.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

We have been residence and employed in the city of Ann Arbor since 1983. We currently live at 2115 Ridge Ave, in the flight path for landings.

We oppose the expansion proposed for the Ann Arbor Airport. The hypocrisy of this proposal is palpable.

1. We just passed a \$1 billion millage to combat climate change, and we're considering allowing the airport to become a jetport. How can you ask your citizens pay to fund climate action while simultaneously inviting a massive increase in carbon emissions locally? This will not be net neutral.

[See Air Quality Responses #1, #2, and #3.](#)

2. We profess to be a community committed to equity, yet we're considering expanding the airport for the benefit of a very small number of private jet owners and passengers, to the significant detriment of the rest of our community. Jetports are loud and dangerous. It will not just be the immediate area impacted. See, e.g., Van Nuys in California and Teterboro in New Jersey.

[See General Response #13.](#)

3. The airport claims jet traffic increase will be minimal, but we know this is not accurate. Earlier statements of the airport directly contradict this, projecting an immediate tripling of private jet traffic and a shift of 40% of Willow Run's jet operations to Ann Arbor. Yet we're trying to get to carbon neutrality?

[See Technical Response #4.](#)

<https://ktla.com/news/local-news/city-council-votes-to-have-faa-look-into-new-rules-leading-to-600-percent-rise-in-noise-complaints-near-van-nuys-airport/>

<https://www.latimes.com/entertainment-arts/story/2022-10-28/calendar-feedback-sunday-october-30>

<https://www.nytimes.com/2018/01/01/nyregion/teterboro-airport-steeped-in-glamour-history-and-noise.html>

<https://www.latimes.com/entertainment-arts/story/2022-10-20/kylie-jenners-private-jet-is-bad-for-the-residents-around-van-nuys-airport>

Thank you for your consideration,
Don and Lori DiVirgilio

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 4:27 PM
To: William Ballard
Subject: FW: Re: Ann Arbor Airport runway expansion

From: Jim and Dottie Symons <truebluefans@att.net>
Sent: Friday, January 13, 2023 12:12 PM
To: Steve Houtterman <houttermans@michigan.gov>; Kulhanek, Matthew <MKulhanek@a2gov.org>; Kathe Wunderlich <kathewun@aol.com>
Subject: Re: Ann Arbor Airport runway expansion

You don't often get email from truebluefans@att.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

To: Steve Houtterman (houttermans@michigan.gov)
Matthew Kulhanek (mikulhanek@a2gov.org)
Kathe Wunderlich (kathewun@aol.com)

From: Dorothy Symons (truebluefans@att.net)

Re: Ann Arbor Airport runway expansion

This letter is to express my(our) strong objection to the lengthening of the runway at the Ann Arbor airport. My husband and I have lived in the Stonebridge community at two different times, the first in what is called the Ponds at Stonebridge from 2001-2003 and currently in the Fairways of Stonebridge from 2015 – present. While residing at the Ponds, which is adjacent to Lohr Road, the road that is also adjacent to the airport, we became very aware of the frequency of flights in and out of the airport as well as the noise associated with them. On more than one occasion we questioned whether a plane was going to make a safe takeoff or landing based on the height and sound of the plane. Extending the runway will only contribute to closer planes and increased noise. While we now live at the Fairways of Stonebridge which is close to Maple Road (further from the airport) we still see and hear many planes overhead given the proximity to the airport and what appears to be their flight paths.

Mr. Phil Hemenway presented a detailed argument for the rejection of the airport expansion based on the lack of a complete Environmental Assessment that would address the following: 1) the significant noise issue; 2) the effect on the wetland disturbance; 3) lack of a Comprehensive Hazardous

Materials management plan for the chemical storage present on site; and 4) comprehensive compliance with local ordinances (Ann Arbor/Pittsfield Township).

See Noise Responses #1, #2, and #3, Water Resources/Water Quality #2, and Safety/Health Response #13.

The letter from Mr. Hemenway provides more detail and references with regard to each of the points above and I don't think that repeating each of those is needed by me. However, I do want emphasize the noise issue that currently exists that will only get worse with larger planes using the extended runway along with the increased risk of accidents given the proximity to the number of housing developments near the airport. The accident risk is especially of concern with the number of geese that are in the various fields and ponds near the airport. It is naïve to think there will not be some accident due to this hazard that will be greater with larger and faster planes using the airport.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

The extension of the runway has been ongoing for 13 years. Willow Run airport is only 10 miles away and has the runway length, if not more, that is being sought in the expansion. It makes no sense to increase risk while ignoring the issues that have been at the forefront of concerns of the Ann Arbor/Pittsfield Township citizens, especially with a solution only 10 miles away.

See General Responses #5 and #10.

As stated at the outset this letter is to communicate my (our) strong objections to the airport expansion and hope that the continuation of this pursuit will be finally put to rest.

Sincerely,

Dorothy Symons

4638 Sawgrass Dr. E., Ann Arbor 48108

To: Steve Houtterman (houttermans@michigan.gov)

Matthew Kulhanek (mjkulhanek@a2gov.org)

Kathe Wunderlich (kathewun@aol.com)

From: James Symons (james.symons@att.net)

Re: Ann Arbor Airport runway expansion

This letter is to express my strong objection to the expansion of the runway at the Ann Arbor airport. My wife and I have lived in the Stonebridge community at two different times, the first in what is called the Ponds at Stonebridge from 2001-2003 and currently in the Fairways of Stonebridge from 2015 – present. While residing at the Ponds, which is adjacent to Lohr Road, the road that is also adjacent to the airport, we became very aware of the frequency of flights in and out of the airport as well as the noise associated with them. On more than one occasion we questioned whether a plane was going to make a safe takeoff or landing based on the height and sound of the plane. Extending the runway will only contribute to closer planes and increased noise. While we now live at the Fairways of Stonebridge which is close to Maple Road (further from the airport) we still see and hear many planes overhead given the proximity to the airport and what appears to be their flight paths.

Mr. Phil Hemenway presented a detailed argument for the rejection of the airport expansion based on the lack of a complete Environmental Assessment that would address the following: 1) the significant noise issue; 2) the effect on the wetland disturbance; 3) lack of a Comprehensive Hazardous Materials management plan for the chemical storage present on site; and 4) comprehensive compliance with local ordinances (Ann Arbor/Pittsfield Township).

See Noise Responses #1, #2, and #3, Water Resources/Water Quality #2, and Safety/Health Response #13.

The letter from Mr. Hemenway provides more detail and references with regard to each of the points above and I don't think that repeating each of those is needed by me. However, I do want emphasize the noise issue that currently exists that will only get worse with larger planes using the extended runway along with the increased risk of accidents given the proximity to the number of housing developments near the airport. The accident risk is especially of concern with the number of geese that are in the various fields and ponds near the airport. It is naïve to think there will not be some accident due to this hazard that will be greater with larger and faster planes using the airport.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

The extension of the runway has been ongoing for 13 years. Willow Run airport is only 10 miles away and has the runway length, if not more, that is being sought in the expansion. It makes no sense to increase risk while ignoring the issues that have been at the forefront of concerns of the Ann Arbor/Pittsfield Township citizens, especially with a solution only 10 miles away.

See General Responses #5 and #10.

As stated at the outset this letter is to communicate my strong objections to the airport expansion and hope that the continuation of this pursuit will be finally put to rest.

Sincerely,

James Symons

4638 Sawgrass Dr. E.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 4:28 PM
To: William Ballard
Subject: FW: Ann Arbor Airport Runway

From: James Wynne <jameswynne1@att.net>
Sent: Friday, January 13, 2023 4:19 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; kathewun@aol.com; Andrew McGill <andymc@umich.edu>; John Dahl <jedwardd20@gmail.com>; Dave Denzin <jddenzin@aol.com>; Bob Barber <barber.rw@gmail.com>
Subject: Ann Arbor Airport Runway

You don't often get email from jameswynne1@att.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Mr. Kulhanek and Interested Parties,

According to the resolution by the Ann Arbor City Council approving the grant for the most recent Environmental Assessment "it is important to complete the EA so the City and surrounding public can have a documented assessment of the potential impacts of any runway changes which then allows for an informed decision on whether to consider the project or not." The EA as submitted falls far short of this goal. Potential impacts of a very serious nature have not been assessed at all and several of the assessments made are grossly understated because the process for getting to the scientific proof was shortchanged on the altar of expediency.. As a consequence the EA is rife with evidence that it was written with a bias favoring the trampling of environmental interests for the sake of rank commercialism of no significant public value.

Just one assessment that was not made was to what extent the EA's projected increase in aircraft take offs and landings increased the spewing of dangerous lead (Pb) emissions into the surrounding homes and neighborhoods from the increased use of aviation fuels. In October of 2022 the US Environmental Agency issued Technical Support Document EPA-420-R-22-025 finding "lead emissions from aircraft engines cause lead pollution endangering public health within the meaning of Section 231(a) of the Clean Air Act." Lead (Pb) is toxic to human health at 3.5 microns/dL. The EA projects an increase of .01 Ton of Pb per year spewed into the nearby environment if the runway is expanded. That's 20 pounds extra of Pb, or 99,000,000 extra microns of Pb when only 3.5 microns/ dL are toxic. The EA is entirely incomplete, and inadequate.

[See Air Quality Response #1](#)

Another fatal flaw of the EA is that in assessing the impact of increased noise upon the neighborhoods no actual noise measurements were taken or used, at all!. Noise values used in assessing the impact of increased noise were taken from textbooks and aircraft vendor predictions.in company literature, as per AEDT version 3. No one **measured actual operations** at and near the site and no one made any effort to **make projections based on actually collected data!**

[See Noise Responses #1, #2, #3, and #5.](#)

It is extremely clear that an expanded runway will result in multiple, negative environmental consequences visited mostly upon the nearby residential neighborhoods to the southwest, south, and southeast (most used runway for take-offs) and less harshly upon the commercial zones to the north and north east.(lesser used runway for take-offs). The serious negative consequences are not outweighed by a countervailing public good. The public interest in extending the runway is extremely minimal when more than sufficient landing length for jet aircraft is already available to the community 24/7 at the existing Willow Run Airport a mere 10 miles away.

James E. Wynne
5209 Doral Ct.

[See General Responses #5 and #10](#)

Ann Arbor, MI 48108
313-330-0696
jameswynne1@att.net

To: Matthew Kulhanek
Ann Arbor Municipal Airport
801 Airport Drive
Ann Arbor, MI 48108

January 13, 2023

I attended the briefing on the airport runway extension project and appreciated the information provided. However, I did not find any new information that would dissuade me from opposing the project.

I oppose the project because information that was not provided could affect the safety and health of the Ann Arbor region community. The studies addressed only the immediate area of the airport. However, the ultimate effects of the airport on the community were not addressed in the study.

It seems that the main reason for the project is to accommodate larger jets in both passenger capacity and weight capacity for the few aircraft currently using the facility. Willow Run Airport, which can easily handle larger or heavier jet aircraft, is close (only 12 miles away) and the need for this capacity in Ann Arbor is unnecessary given that the airport is hemmed in by residential communities. This risk is especially concerning for residents of Southeast Ann Arbor who are in the flight paths of this airport traffic.

See Noise Response #3 and General Responses #5 and #10.

It is proposed that the relocation of the East end of the main runway be moved, effectively shortening the runway and necessitating an extension on the West end, because part of the taxiway at the East end cannot be viewed from the tower. This is a design issue that was allowed to happen and the offending objects blocking the view should be simply removed as a safety issue.

See Safety/Health Response #7

Another concern not addressed adequately is the possibility of pollution on our Ann Arbor water supply. The airport is built on a wetland that was set aside as unusable early in the settlement of the region. As a result, the City has located freshwater wells on the property that, with the expanding Gelman dioxin plume, is making their protection essential to the water supply of the community. Jet fuel spillage, firefighting foam (PFAS) use and other pollutants were not addressed in the presentation. Increased usage of the airport by larger aircraft, which inevitably will be attracted, only increases the potential for contamination of the wells on an already identified critical wetland.

See Water Resources/Quality Response #1

Until these concerns are adequately addressed, I remain opposed to the project.

Sincerely yours,



Kevin R. Gilson

3009 Williamsburg Rd., Ann Arbor, MI 48108, 734-412-9131; kgilson2@mac.com

Cc: Steve Houtteman, MDOT-AERONAUTICS, 2700 Port Lansing Road, Lansing, MI 48906

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 4:27 PM
To: William Ballard
Subject: FW: Airport Expansion

From: Madia DiVirgilio <mdivirg@gmail.com>
Sent: Friday, January 13, 2023 1:19 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com; Taylor, Christopher (Mayor) <CTaylor@a2gov.org>; Disch, Lisa <LDisch@a2gov.org>; Harrison, Cynthia <CHarrison@a2gov.org>; Song, Linh <LSong@a2gov.org>; Watson, Chris <CWatson@a2gov.org>; Radina, Travis <TRadina@a2gov.org>; Ghazi Edwin, Ayesha <AGhaziEdwin@a2gov.org>; Eyer, Jen <JEyer@a2gov.org>; Akmon, Dharma <DAkmon@a2gov.org>; Briggs, Erica <EBriggs@a2gov.org>; Cornell, Jenn <JCornell@a2gov.org>
Subject: Airport Expansion

Some people who received this message don't often get email from mdivirg@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Good Afternoon,

I am a 3rd generation Ann Arborite, and my sons are 4th generation. This is my grandfather: <https://aadl.org/aaobserver/17689>

We love this City, both what it was and what it has become. But this proposal is ridiculous and frustrating.

We claim to be a progressive community that values sustainability and equity. We have many carbon neutrality initiatives, and the City just passed a \$1B+ climate change millage. See Air Quality Response #3

How can you simultaneously consider increasing the volume of one of the largest carbon emitters - private jet traffic - in our own community? The airport claims jet traffic increase will be minimal, but we know this is not accurate. Earlier statements of the airport directly contradict this, projecting an immediate tripling of private jet traffic and a shift of 40% of Willow Run's jet operations to Ann Arbor. Yet we're trying to get to carbon neutrality? See Technical Response #4

This will benefit a very small number of private jet owners and passengers, to the significant detriment of the rest of our community. Jetports are loud and dangerous. It will not just be the immediate area impacted. Similar jetports that originated as small airfields have been a major problem for nearby residents. See, for example, Van Nuys in California and Teterboro in New Jersey. See General Response #13.

<https://ktla.com/news/local-news/city-council-votes-to-have-faa-look-into-new-rules-leading-to-600-percent-rise-in-noise-complaints-near-van-nuys-airport/>

<https://www.latimes.com/entertainment-arts/story/2022-10-28/calendar-feedback-sunday-october-30>

<https://www.nytimes.com/2018/01/01/nyregion/teterboro-airport-steeped-in-glamour-history-and-noise.html>

<https://www.latimes.com/entertainment-arts/story/2022-10-20/kylie-jenners-private-jet-is-bad-for-the-residents-around-van-nuys-airport>

Sincerely,

Madia (Sekaros, Commings) DiVirgilio

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 3:43 PM
To: William Ballard
Subject: FW: Ann Arbor airport expansion

From: Arboroads Farm <arboroads@aol.com>
Sent: Friday, January 13, 2023 12:59 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov; kathewun@aol.com; leslieblackburn1@gmail.com
Subject: Ann Arbor airport expansion

You don't often get email from arboroads@aol.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Good afternoon,

I know you have received a number of letters from my neighbors who have raised many good reasons to oppose this expansion. I have read their concerns and I share them.

I do not feel this expansion is warranted by the (lack of) demand for it. I would like to add that the current infrastructure cannot support this. The traffic circle next to the airport is maxed out already, and I would add that some of clients on the other side of the circle are already very wary of crossing State street due to it. This will further separate these two areas with regard to ability to commercial interactions. I have heard no public outcry about the NEED for this, only about the LACK of need for it. Further, if a much larger operation is needed, Willow Run is quite nearby, and HAS THE INFRASTRUCTURE IN PLACE already. They also have more undeveloped land around them, not neighbors nearby who have spent a lot of money buying homes in our area. Frankly, I don't understand where this is coming from. If it's just a FedEx thing, I don't feel that this one user should dictate how the neighborhood should be. Again, Willow Run is already set up for this.

My own property is about one mile away, and it seems like pilots use our big building as a landmark. I own the bulk of the AA-Saline / Ellsworth / S. Maple Rd. triangle, and would prefer not to have larger aircraft buzzing my home, and opinion shared by my husband, my horses, my cows and of course my chickens. Thank you for your consideration.

Mary Francis, Arboroads Farm

See General Response #5,
#10, and 19.

3660 S. Maple, 3600 S. Maple, 2580 W. Ellsworth and a vacant lot on AA-Saline Rd.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 4:26 PM
To: William Ballard
Subject: FW: Urgent Airport Expansion

From: maryam shirazi <maryshirazi12@gmail.com>
Sent: Friday, January 13, 2023 4:11 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: Urgent Airport Expansion

You don't often get email from maryshirazi12@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Greetings,

I am a resident of [1478 W Greenfield CT, Ann Arbor, MI 48108](#), in the Pittsfield Township. I do not live in the direct take-off or landing flight path, but I experience frequent and repetitive low altitude and loud traffic from training patterns. We also hear very large planes take off and land during the night and early mornings. We have experienced numerous very low-altitude encounters with aircraft at our home.

We knew that there was an airport nearby when we purchased our home, but we did not expect an expansion in the runway. The airport perimeter with the current runway configuration is not **safe**; recently, there was an incident based on what we learned from the news. Moreover, an expansion increases the number of flights with larger aircraft and raises noise and air pollution, significantly affecting the environment and residents of multiple subdivisions in the area. These are more concerns that persuade us to oppose this proposal and plan:

- Significant safety issues - Aircraft approach and land very low above the Speedway Gas Station on State St. and Ellsworth and take off very low above homes on Lohr Rd. **This seems to obviously infer that the current airport and its current use don't safely fit on the existing**

See Noise Responses #1, #2, and #3, Safety/Health Responses #2, #6 and #14.

property. Extending or expanding the airport or allowing larger aircraft to operate there would be unsafe.

- Major risk to Water Aquifer below the airport– Given the Dioxane Plume concerns to the north, adding further risk to the water sources for Ann Arbor seems very ill-advised. The recent addition of a business that paints/restores aircraft at the airport will provide an additional increased risk to the water resources surrounding the airport.

See Water Resources/Quality Response #1.

- Climate/Green Policy – this proposed plan makes a mockery of the City of Ann Arbor's green initiatives and climate propaganda. The risk to the water resources, additional noise above the already obnoxious and damaging noise levels, and increased propagation of jet fuel usage. Irreparable harm to the mental health of surrounding residents and our quality of life in the surrounding area are in direct opposition to any green initiatives and don't indicate any care or concern for residents near Ann Arbor but outside the city limits. Ann Arbor needs to truly understand and own what is happening at this airport and how it affects other citizens.

I strongly object to this proposal and request that all steps be taken to stop it from moving forward.

See Air Quality Responses #1, #2, and #3.

Sincerely,
Maryam Shirazi
[1478 W Greenfield CT](#)
[Ann Arbor, MI](#)
[48108](#)
940-600-0318
Maryshirazi12@gmail.com

Matthew Kulhanek, Airport Manager
Ann Arbor Municipal Airport
801 Airport Drive, Ann Arbor MI 48108

Steve Houtteman
MDOT-AERONAUTICS
2700 Port Lansing Road, Lansing MI 48906

January 13, 2023

Addendum to my letter dated January 10, 2023 submitted yesterday, 1-12-2023.

I took another look at the list of Major Employers in the Area (page 3-28) on the SRDEA. It is worth noting that the second largest employer (St Joseph Mercy Health System) is closer to YIP than to ARB. The third employer listed (GM Proving Grounds) is in Oakland County (where did they get this list?) and would clearly use YIP over ARB. Other major employers on the east side of Ann Arbor or Saline (VA Healthcare, Eastern Michigan University, Toyota and others) can get to YIP more easily than ARB. I can see no benefit to any of the employers on this list for a runway extension at ARB.

See Financial/Economic Response #1 and
General Responses #5 and #10.

And if I may, I'd like to draw your attention to the number of adjacent ponds/lakes listed on page 3-39, which draw hundreds of geese to the area. I know many airports are close to water – but is it good planning to enlarge one surrounded by developed office and residential areas containing dozens of ponds and lakes attractive to large waterfowl?

Pam Kittel
5652 Creekview Dr
Ann Arbor MI 48108
pkittel@umich.edu
734-369-2228



See Wildlife Response #1 and Safety/Health
Responses #1 and #8.

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 3:42 PM
To: William Ballard
Subject: FW: Proposed Ann Arbor Airport Expansion

From: paul keller <paul_k8@yahoo.com>
Sent: Friday, January 13, 2023 3:26 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: Proposed Ann Arbor Airport Expansion

You don't often get email from paul_k8@yahoo.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Kulhanek,

We are strongly opposed to the plan to lengthen runway at the Ann Arbor airport as outlined in the Second Revised Draft Environmental Assessment (SRDE). There are many environmental and safety concerns. The proposed runway expansion would be closer to Lohr Road, adding to the risks to residents near the end of the runway, which are inadequately protected by so-called "Runway Protection Zones." The runway is already adequate for the >99% of the aircraft trips there, and the Willow Run airport is 8 air miles away for larger jet aircraft to land. As the SRDEA acknowledges, lengthening the airport will only encourage larger aircraft to use it. This further increasing the chances of accidents in a variety of ways. [See Safety/Health Response #2 and General Responses #5 and #10.](#)

As a USDA inspector reported "...KARB is surrounded by ideal resident / migratory Canada goose habitat." We frequently walk past the fallow field next to the airport, and confirm there are numerous times when it has many Canada geese in the field. In fact, over the past several years we've (Paul) actually seen bald eagles flying low over the fallow field and adjacent retention ponds apparently hunting them! (On two different occasions, witnessed an eagle dive at the pond, and afterwards upon closer inspection once observed a goose with a red neck, its feathers stripped but apparently okay). Since jets are projected to be the primary source of increased operations, ARB expansion is particularly dangerous because it increases the risk in an area heavily populated with these geese, which interact poorly with such aircraft. [See Wildlife Response #1 and Safety/Health Responses #1 and #8.](#)

It's disingenuous for the SRDEA to claim that aircraft which routinely use the ARB suffer "undue concessions in reduced fuel, passengers, and / or cargo loads. . .diversions to other airports are also commonly needed...", when the SRDEA provides no actual data in support of these claims. [See Technical Response #7.](#)

Furthermore, the SRDEA does not acknowledge any potential risks to the three wells on airport property that supply about 20% of Ann Arbor's drinking water, stating only that, "there are several water wells on ARB property, all of which are outside the proposed project area." [See Water Resources/Quality Response #1.](#)

Finally, we don't want the increased jet air traffic noise to degrade the quality of our neighborhood and reduce the home values in the area. [See Noise Responses #1, #2, and #3 and Financial/Economic Response #2.](#)

Thank you for your consideration in this matter.

Paul and Kimberly Keller
3768 Barry Knoll Dr
Ann Arbor, MI 48108

5200 Crooked Stick Drive
Ann Arbor, MI 48108
12 January 2023

To: Mr. Matthew Kulhanek – Ann Arbor Municipal Airport
Mr. Steve Houtteman – MDOT-AERONAUTICS

Cc: Andrew McGill, Mandy Grewal, Christopher Taylor, Caroline Sanders

Subject: Draft Environmental Assessment (2022)
“Ann Arbor Municipal Airport Proposed Runway Extension Project”

Comments:

- It is my understanding that the reason for the proposed lengthening of the runway is to enhance safety. However, *it would appear that there is also an economic aspect to the proposal* in that lengthening the runway will permit higher fuel and passenger (freight?) loads thereby permitting larger aircraft and aircraft with heavier loads to utilize the Ann Arbor facility. Such aircraft / loadings, I would expect, would require more power from the jet engines on take-off (and landing?) thereby increasing fuel consumption (and engine exhaust) during this period.
- It is also my understanding that having the runway closer to Lohr Road, would result in aircraft flying at heights as close as 100 feet above residential housing.
- According to a report in Environmental Health magazine (06 February 2021) (Katja M. Bendtsen, Elizabeth Bengtsen, Anne T. Saber, and Ulla Vogel) *“there is evidence that jet engine emissions have physicochemical properties similar to diesel exhaust particles, and that exposure to jet engine emissions is associated with similar adverse health effects as exposure to diesel exhaust particles and other traffic emissions.”*
- In the same Environmental Health magazine report was stated *“Westerdahl et. al reported very high particle number concentrations at take-off of a single jet aircraft, with a 10 s peak of 4.8 million particles/cm³ together with NO_x and BC levels. The small particles are emitted in large numbers and tend to form complex agglomerates in ambient air that can be detected in larger size modes.”*
- In a report entitled “A Systematic Review of the Impact of Commercial Aircraft Activity on Air Quality Near Airports” that was accessed via the National Center for Biotechnology Information referenced *“studies that consistently showed that ultrafine particulate matter (UFP) is elevated around airports. Furthermore, many studies show elevated levels of particulate matter under 2.5 microns in diameter (PM_{2.5}), black carbon, criteria pollutants, and polycyclic aromatic hydrocarbons as well. Finally, the systematic review, while not focused on health effects, identified a limited number of on-topic references reporting adverse health impacts, including increased rates of premature death, pre-term births, decreased lung function,”* etc.

- While these reports may not be directly applicable to the Ann Arbor City Airport because every airport has its own characteristics (type of aircraft, number of flights per day, etc.), it would be hoped that any study would closely consider the potential impacts on local residents.
- Although tests of air quality over a 24-hour period around the Ann Arbor City Airport may indicate no instance of high particulate matter, they do not take in account of those instances during aircraft takeoff, for instance, in which the air that a resident is breathing may be contaminated with relatively high particulate matter. My concern is that in presuming that having “clean air” most of the day will make up for those times when a larger jet is landing or taking off may possibly be akin to saying that if one drinks seven glasses of pure water and only one glass of water containing PFAS or Hexavalent Chrome or 1,4-dioxane, there should be no health concern.
- As a resident with admittedly no expertise in this area, I have to rely on my local, state, and national governments to ascertain any risk that may result from the proposed change.

In summary, however, I am concerned that there may be the risk of potential health impacts on Ann Arbor and Pittsfield Township residents (and others) who live near the flight path of the aircraft landing and taking off from the Ann Arbor City Airport. Whereas at one time the facility was primarily utilized by small private aircraft, if the runway is lengthened in the manner proposed, it would appear that larger numbers of heavier aircraft would make use of the facility and would, conceivably be at lower elevations and closer to residential housing.

I would hope that the Environmental Assessment will direct attention to this area with respect to the health of local residents resulting from aircraft operations.

Sincerely,

Richard Brown

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 4:38 PM
To: William Ballard
Subject: FW: Opposition to Proposed Ann Arbor Airport Expansion

From: rp4781@aol.com <rp4781@aol.com>
Sent: Friday, January 13, 2023 4:37 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov
Subject: Opposition to Proposed Ann Arbor Airport Expansion

You don't often get email from rp4781@aol.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

My name is Ruth Parrish and I live at 4781 Wildflower Court, Ann Arbor, MI 48108. My home is in Pittsfield Township, in the Waterways Subdivision. I am writing in opposition to the proposed expansion to the Ann Arbor Airport.

I have lived in my home for 25 years and during that time have become accustomed to the sound of small airplanes flying overhead. Over the years, the number of flights has increased and with it the noise. We have learned to accept this, as there is no choice; however, to think that this air traffic and noise may increase due to the proposed expansion is unacceptable. There must be consideration for the people who live in the area. Ann Arbor presents itself as a desirable community with the well-being of its residents as a priority. Ann Arbor also purports to be striving to be a Green community. Neither of these objectives are met with the expansion of the airport. My neighbors and I realize that we are not Ann Arbor residents, per se, but I would hope that Pittsfield Township residents are as worthy of your consideration as those within Ann Arbor limits.

See Noise Responses #1, #2, and #3
and Air Quality Response #3.

It is a mystery to me why this expansion is necessary. Willow Run provides a more than acceptable venue for larger planes and no cost would be incurred. I do not have the data, statistics, nor expertise as some who have commented on this issue, but I do have a great deal of concern for the well-being of the people in my neighborhood and the surrounding neighborhoods that will be adversely affected. Please think of the human impact of this proposal. Please do not move forward with this proposal.

See General Responses #5 and #10

Sincerely,

Ruth Parrish
(734)657-2558

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 3:42 PM
To: William Ballard
Subject: FW: Ann Arbor Municipal Airport (ARB) Proposed Runway Expansion

From: Tony Salemi <tonys48108@gmail.com>
Sent: Friday, January 13, 2023 1:23 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov; CC: kathewun@aol.com <kathewun@aol.com>
Subject: Ann Arbor Municipal Airport (ARB) Proposed Runway Expansion

You don't often get email from tonys48108@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

I am writing to oppose the proposed runway expansion at the Ann Arbor Municipal Airport (ARB). due to safety and noise issues.

The expansion poses serious safety risks to residents in the surrounding neighborhoods

- The proposed extension would put the end of the runway 870 feet closer to the homes on Lohr Rd which poses a significant risk to those residents and their homes
- The homes along Lohr Road are near the end of the runway and an expansion would bring the runway closer to the homes and they would not be adequately protected by "Runway Protection Zones"
- On Sunday, Sept 11 2022 the pilot of a *Cessna 152* was forced to make an emergency landing shortly after takeoff after losing power, it landed in the farm field on the airport property, directly across from the homes on Lohr Rd
 - If the runway was expanded at the time the plane would have landed on the homes. See Safety/Health Responses #2, #5, #6, and #14.
- There is a large population of Canada geese in the areas surrounding the airport
 - The farm, Stonebridge Golf Course, and numerous lakes in the surrounding subdivisions provide an ideal habitat for Canada geese
 - It would be unrealistic and cost prohibitive to try to manage/mitigate the geese population
 - A USDA inspector concluded these geese are a real and present danger and with the mitigation, that would continue to be an safety issue
- With the expansion, aircraft would be flying much, much closer to the homes in the flight pattern, approximately 35% closer
 - This would increase the risk of a bird strike over a neighborhood as stated by the MDOT-AERO presenter at one of the public meetings

See Wildlife Response #1, Noise Response #1, and Safety/Health Responses #1, #6, #8 and #14.

- Some of the aircraft use leaded fuel and flying 35% closer to homes will increase the exposure of lead from the aircraft's exhaust to children, adults, pets homes, and wildlife in the surrounding area
- Water wells at ARB provide 20% of Ann Arbor's drinking water, if there were an accident at the airport these could be placed at risk
 - There are wetlands and streams as well on the property and these could be at risk as well
- ARB is a Municipal airport funded by federal tax, so any pilot can land their planes and the expansion would allow larger planes and ARB cannot stop them
 - The larger aircraft pose more of a risk to the surrounding neighborhoods in regards to crashes, especially when the geese population is taken into account

The expansion would increase noise exposure:

See Air Quality Responses #1, #2, and #3. and Water Resources/Quality Response #1

- With aircraft flying 35% closer to homes in the surrounding area, noise from the current number of aircraft would increase
- The SRDEA (Second Revised Draft Environmental Assessment) acknowledges that noise would likely get worse
- Because of the methodology (computer simulated) of the ARB's noise analysis, such figures almost always underestimate noise levels over time
 - The methodology used to measure noise also did not take into account the need to vary from the norm due to; weather conditions, variations in takeoff & landings, age of the aircraft, etc.
 - These issues would certainly increase noise levels
 - One of the charts in the presentation showed the DB increase to one of the houses in Stonebridge would increase to just below the max allowed
 - And again this was with a computer simulated method
 - There needs to be actual measurement of decibel levels over surrounding homes (not computer simulated)
 - This will show that there are already harmful levels of noise, and with increased traffic and larger aircraft this level will continue to increase

Inherent Infrastructure flaws at ARB

See Noise Responses #1, #2, #3, and #12.

- The FAA control tower only operates 12 hours a day
- ARB is not equipped to provide bad-weather instrument approaches and landings
- De-icing is not allowed in winter to protect the water wells
 - De-icing is necessary for larger aircraft
- There is no 24-hour fire/rescue provided at the airport
- An expansion will pose more safety risks to the surrounding homes

See Safety/Health Response #3.

The Purpose and Need for any expansion has not been justified

- The SRDEA contends that aircraft that routinely use ARB suffer "undue" concessions in reduced fuel, passengers and/or cargo loads when the runway surface is wet, or hot because of the temperature in summer months, however the SRDEA provides no actual data in support of the claimed concessions in fuel, passengers or cargo.
- The SRDEA suggests there is a need for air transportation to bring workers, clients, suppliers, customers and time sensitive parts/supplies to and from the region, yet there is Willow Run Airport only 15 minutes away from ARB
 - And the SRDEA provides no data to support the connection to the Ann Arbor business and the ARB

2 See Technical Response #7 and General Responses #5 and #10.

- Willow Run Airport can also handle the aircraft that claim a need of concession in fuel, passengers or cargo to operate fully at ARB
- The SRDEA projects maximum operations of 84,336 by the year 2039, yet the current runway supported 134,553 operations in 1999
 - This shows that the current runway is more than sufficient, so no expansion is necessary
- The SRDEA stated an excess of hot weather days to justify the proposed expansion and identified 81 hot days in Ann Arbor when temperatures exceed 80 degrees in 2019
 - However aircraft performance charts, included in the SRDEA, suggest the industry standard for hot weather is 85 degrees, not 80 degrees
 - There were actually only 66 days in 2019 over 85 degrees, so **the SRDEA inflated the numbers** used for their argument **by 25%, by using a lower than industry standard**
- The SRDEA also focuses reason for the expansion "to improve operational utility of the airport by meeting the takeoff and landing runway length requirements of aircraft that currently operate at the airport and are projected to steadily increase in time", however 3 of the 4 "critical aircraft" identified by the SRDEA could operate 100% of the on the current existing runway
 - And only the Cessna Citation Excel XLS could still operate at full weight 90% of the time and at 100% capacity most days
 - At most only 48 of the 263 operations per year of the Citation XLS in 2019 were impacted by hot weather
 - A miniscule .00038 of ARB's total annual operations that year
 - This is not sufficient to justify this proposed expansion.

See Technical Response #5

See Technical Response #2

The SRDEA ignores governments surrounding the airport and can significantly affect their funding

- It ignores prior resolutions from Pittsfield and Lodi Townships (i.e. Pittsfield Charter Township Resolution #17-21) which objects to the expansion for safety reasons, in violation of NEPA and FAA order
- The SRDEA claims the FAA has no control, responsibility, or discretion for the use of the funds once MDOT-AERO receives the FAA's block grant funds
- Property values typically decrease in communities surrounding airports when they are expanded
 - The values can decrease between 5.7 and 9.2% which would cost Pittsfield Township alone , \$1.5 million to Ann Arbor School District, \$1.4 million to Saline School District, \$850,00 to Pittsfield Township and \$810,000 to Washtenaw County from lost tax revenue.

See General Responses #4 and #24 and Financial/Economic Response #2

For all these reasons I oppose the expansion of the Ann Arbor Airport and believe you should as well.

Thank you,

Tony Salemi
tonys48108@gmail.com



Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Friday, January 13, 2023 3:42 PM
To: William Ballard
Subject: FW: Oppose Ann Arbor Airport (KARB) expansion

From: Vik Sohoni <vsohoni@comcast.net>
Sent: Friday, January 13, 2023 3:36 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>; houttemans@michigan.gov
Cc: kathewun@aol.com
Subject: Oppose Ann Arbor Airport (KARB) expansion

You don't often get email from vsohoni@comcast.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Hello Mr. Matthew Kulhanek,

I oppose expansion of Ann Arbor Airport(KARB) expansion on these grounds:

1. As noted in the Second Revised Draft Environmental Assessment(SDREA) there is large flock of Canada geese in this the area. These are present year round, I see them all the time in open spaces around my house. These present a danger to aircraft should the runway be extended repositioned. As you are aware it's almost 14 years ago the "Miracle on the Hudson" was caused by a flock of Canada geese in the vicinity ofLaGuardia airport, NYC. The subsequent inquire found that aircraft engines design requirement was for birds typically weighing 2 pounds and not for impact from a bird weighing 4 times that. Typical weigh of a Canada geese is about 8 pounds. These birds will pose an enhanced danger to aircraft and civilians on the the ground should such an unfortunate incident occur. See Wildlife Response #1 and Safety/Health Responses #1 and #8.
2. Existence of an all weather airport, Willow Run (KYIP), 10 miles from KARB, removes justification for any expansion of KARB. See General Responses #5 and #10

Sincerely,

Vikram Sohoni

4877 St. Andrews Ct.
Ann Arbor, MI 48108

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 17, 2023 7:39 AM
To: William Ballard
Subject: FW: Proposed A2 Airport Expansion

-----Original Message-----

From: L Peace <lapeace22@gmail.com>
Sent: Friday, January 13, 2023 9:20 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov
Subject: Proposed A2 Airport Expansion

[You don't often get email from lapeace22@gmail.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Gentlemen,

Please register my VERY STRONG concerns and opposition regarding the proposed airport expansion.

As 25 year residents of 5055 Fox Ridge Ct., Ann Arbor (Lodi Township), we are vehemently opposed to the airport expansion request. We purchased a 3 acre lot off of Pleasant Lake Road to custom build a home on a serene lot, in a quiet court backing on to a pond.

Our home is no longer peaceful. Beginning at daybreak almost EVERY morning, we are bombarded with extremely loud, screeching noise from aircraft flying low and DIRECTLY OVER OUR HOME, taking off and landing at the Ann Arbor airport.

It directly impacts our sleep, enjoyment of our home, and to be frank, is SO loud and disturbing that we consider selling our home if this continues. It will become many times worse with any airport expansion/ ability to handle larger aircraft. See Noise Responses #1, #2, and #3.

Wildlife, geese and ducks that have enjoyed the habitat of our pond/lot for a quarter century are no longer evident in previous numbers, now that the plane noise is already intolerable. See Wildlife Response #1.

We cannot imagine the need to expand the airport with BOTH Willow Run, AND Detroit Metropolitan Airport, which handle larger aircraft/jets, a quick 15-25 minute car ride away.

PLEASE DO NOT PERMIT THIS EXPANSION!!!! Thank you.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

Sincerely,

David and Laurie Peace
Lapeace22@gmail.com

Sent from my iPhone

Dave Clawson

From: houttemans
Sent: Tuesday, January 17, 2023 7:18 AM
To: Kulhanek, Matthew; William Ballard
Subject: FW: Proposed Ann Arbor Airport expansion

FYI

-----Original Message-----

From: Delores Wurst <wandwurst@gmail.com>
Sent: Friday, January 13, 2023 4:15 PM
To: Houtteman, Steve (MDOT) <HouttemanS@michigan.gov>
Subject: Proposed Ann Arbor Airport expansion

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

>
> To: Matthew Kulhanek
> Copy: Steve Houttemans
> Copy: Kathe Wunderlich
> I am writing this in opposition to the proposed Ann Arbor Airport expansion. I am a concerned community member and former Public Health Nurse as well as Nursing faculty. I moved to a community west of the airport this past spring. I was forewarned but was still surprised at the amount of noise I encountered after I moved here. I was told by neighbors that there is indeed increasing air traffic as a result of flight schools at the airport. The touch and go pilot training is said to be the cause.
> A further expansion the airport runway for jets and so forth will decrease the health and safety of many of the communities around the Ann Arbor Airport. I am concerned about noise and my information says that the Noise analysis done did not use independent measurements of the noise. The noise at night from touch and go flights is bad enough now and should not be allowed to continue nor expand. The noise will only get worse/expand with expansion. Noise is a clear public health hazard which affects human health. It is particularly an issue for children and those with hearing problems like myself. [See Noise Responses #1, #2, #3, #5, #7, #9 and Safety/Health Responses #4, #11, #12, and #15.](#)
> I am also concerned about ground water contamination possibility with more jet traffic, more fuel and more takeoffs and landings. Aviation fuel (lead based) could get into the wells located on the airport property which supply a goodly amount of water to Ann Arbor residents. I understand little analysis was done about the wells relative to the expansion. Public Health and governmental officials knowledgeable about water supply issues need to be involved in the process of Environmental assessment as it relates to the proposed expansion. [See Water Resources/Water Quality Response #1.](#)
> With the proposed expansion there would be additional risks to those living close to Lohr road. The "Runway Protection Zone" would not be apparently used in that case. I am writing of people and geese who populate that area.
> I am also concerned about the lead in the air as a result of allowing any aircraft to land at the airport as it is now. The effects on children can be severe and last a lifetime. Lastly the issue of greenhouse gas emissions needs to be taken into account in these days of climate concerns and the plan to move to carbon neutrality by some communities.
> I am therefore very opposed to the runway expansion as it stands. Thank you for accepting input on this proposed project.
> Sincerely,
> Delores Wurst
> 2471 Winged Foot Ct.
> Ann Arbor, MI 48108

[See Wildlife Response #1, Safety/Health Responses #1, #2, #5, #6, #8, and #14, and Air Quality Responses #1 and #3.](#)

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 17, 2023 7:39 AM
To: William Ballard
Subject: FW: Opposition to Ann Arbor Airport Runway Relocation and Expansion

From: GERALD KRONE <gfkroner@comcast.net>
Sent: Friday, January 13, 2023 5:19 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: Steve Houtteman <houttemans@michigan.gov>; City Council <CityCouncil@a2gov.org>; kathewun@aol.com
Subject: Opposition to Ann Arbor Airport Runway Relocation and Expansion

You don't often get email from gfkroner@comcast.net. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

As a long-time resident of Pittsfield Charter Township who resides about one-mile (as the crow flies) from the Ann Arbor Municipal Airport (ARB), I am writing to add my voice to other Ann Arbor, Lodi Township, and Pittsfield Township voices who have expressed opposition to the proposed expansion of the main runway at ARB that is currently under consideration. I am also writing as an elected official in Pittsfield Charter Township, where the airport is located, who has never seen nor been apprised of particular safety risks posed by existing runway facilities available at that location.

See Safety/Health Responses #7 and #16 and General Responses #3 and #14.

In fact, since this project first came to my attention some 13-14 years ago as a Pittsfield Township Trustee, I have yet to see any credible argument, verbal or written, public or private, that would justify the expenditure of millions of dollars in federal, state, and local taxpayer funds to support this project which provides few, if any, tangible benefits to any private citizen of Ann Arbor or its nearby townships, such as Pittsfield Township, or to anyone who might live in its flight paths, other than limited commercial interests.

See Safety/Health Responses #7 and #16, General Responses #1, #3, #13, and #14, and Financial/Economic Response #1.

In fact, the existence of Willow Run Airport (YIP), some 12 miles distant and a short 15-minute-ride away, which currently offers longer runways, more services, and safer operations for any and all aircraft that would magically be "permitted" access to ARB if the proposed runway modification were to be authorized, seems to address any and all of the questions, concerns, and reasoning posed by those who support this project. Since the proposed runway modification appears to only negatively impact the citizens of Ann Arbor and nearby townships with the promise of increased air traffic, noise pollution, and an elevated potential for a tragic accident, it can only be concluded that this project is designed to primarily, if not solely, benefit the commercial interests of a very limited number individuals and/or entities.

See Noise Responses #1, #2, and #3, Financial/Economic Response #11, Safety/Health Responses #2, #5, #6, and #14, and General Responses #5, #10, and #13.

As a steward of taxpayer dollars in my role as a local elected official, it is my view that this project would be a major waste of federal, state, and local funds, and would provide no tangible benefit for the tax-paying citizens who would be most impacted by it--citizens of Ann Arbor and the literally

thousands of residents who reside in adjacent and surrounding townships. Further, I believe the proposed runway expansion would place at risk Ann Arbor citizens, as well as those living in nearby townships, by increasing the potential for more flights of ever larger aircraft, thereby raising the potential for a tragic crash in some nearby, densely populated neighborhood. The risk of an airplane crash in a residential neighborhood that is less than one-half mile from end of the runway is real, a reality that increases dramatically should the existing runway be moved some 800-900 feet closer to that neighborhood. Further, the increase in noise pollution due to larger aircraft and more frequent flights would aggravate an already "noisy" air corridor that currently exists in the surrounding countryside, impacting the thousands of residents who currently endure local flight training activity with flights that endlessly circle nearby neighborhoods.

See the following responses: Noise #1, #2, #3, #7, and #9, Safety/Health #2, #5, #6, #14, and #16, Financial/Economic #1, and General #1, #3, and #13.

Please consider that benefits of this project are virtually non-existent for common citizens, extracting a very high cost in terms of increased noise pollution, potential harm to the environment, and increased potential for a tragic crash in a nearby neighborhood.

Thank you for considering my comments.

See Noise Responses #1 and #2, Wildlife Response #1, Water Resources/Water Quality Response #1, Air Quality Response #1, Safety/Health Responses #2, #5, #6, #14 and #16, Financial/Economic Response #1, and General Response #1.

Gerald Krone
Trustee
Pittsfield Charter Township
Resident at 5784 E. Silo Ridge Drive

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 17, 2023 7:41 AM
To: William Ballard
Subject: FW: Comments on EA for Runway Expansion

From: Huda Fadel <hfadel2056@gmail.com>
Sent: Saturday, January 14, 2023 1:30 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Fwd: Comments on EA for Runway Expansion

You don't often get email from hfadel2056@gmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Kulhanek,

I am re-sending the message I submitted on January 13, 2023. The brochure instructing public comments included an incorrect email address for you. Please accept my input on the airport runway project.

Thank-you,
Huda Fadel

----- Forwarded message -----

From: Huda Fadel <hfadel2056@gmail.com>
Date: Fri, Jan 13, 2023 at 10:39 AM
Subject: Comments on EA for Runway Expansion
To: <mjkulhanek@a2gov.com>

Dear Mr. Kulhanek,

The Environmental Assessment Report was very well done and provided good information, though the social and economic impact on neighboring communities was not adequately addressed.

In weighing the pros and cons of the proposed project, the inconvenience and economic impact to those of us in the region of the AA airport outweigh the benefits to those who wish to save a few minutes of commuting time.

See General Response #14.

The communities most impacted by the expanded runway will experience increased traffic and noise from larger heavier airplanes and these aircraft may be closer to some homes while taking off and landing. The impact on nearby residents' quality of life and the economic impact on their property values was not well addressed in the EA. It is likely that these impacts would be negative.

See Noise Responses #1, #2, and #3 and Financial/Economic Response #2.

In other parts of Ann Arbor, we are already troubled by the frequent noise from smaller airplanes using the AA airport. Having more air traffic with larger and heavier planes is not a welcome event for many of us.

See Noise Responses #1, #2, and #3.

We really do not see a compelling reason why this expansion is needed. It has been noted many times that the Willow Run Airport serves the Ann Arbor and surrounding region quite well. Saving 10 or 15 minutes drive time does not justify the expense and impact on our residents and town. Certainly tax monies can be used for better purposes.

Respectfully,

See Noise Response #3, Financial/Economic Response #11, Safety/Health Responses #7 and #16, and General Responses #3, #5, #10, and #14.

Huda Fadel
2340 St. Francis Dr., Ann Arbor
hfadel2056@gmail.com
734-649-5313

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 17, 2023 7:38 AM
To: William Ballard
Subject: FW: Comment on Air Port Expansion Proposal, Lead Emissions
Attachments: Leaded Aviation Gasoline Exposure Risk at Reid-Hillview Airport in Santa Clara County, California 2021.pdf; C29 Trinity Lead Report 031822-1.pdf

From: Jeff Gearhart <jeffg@ecocenter.org>
Sent: Friday, January 13, 2023 4:38 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Subject: Comment on Air Port Expansion Proposal, Lead Emissions

You don't often get email from jeffg@ecocenter.org. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Comment on Proposed Air Port Expansion

June 13, 2023

To: Mr. Matthew Kulhanek, Airport Manager
From: Jeff Gearhart, Research Director, Ecology Center

For the comments in this letter, see Air Quality Response #1.

The public health review inadequately assesses the public health impact of lead emissions on children. This includes both the historical and continued operations (under all reviewed options, with the air expansion likely having the most severe impact). With emissions of several hundred pounds per year of lead, and 1,000's of pounds over the history of its operation, the airport operations represent a significant concern for children's health in the area.

Recently a new report was published and recent reporting in The Hill entitled "*Children living near airports may be exposed to high levels of lead: study*".
<https://thehill.com/policy/equilibrium-sustainability/3806051-children-living-near-airports-may-be-exposed-to-high-levels-of-lead-study/>

The report highlighted that child blood levels near airports do increase due to airport operations.

“Across an ensemble of tests, we find consistent evidence that the blood lead levels of children residing near the airport are pushed upward by the deposition of leaded aviation gasoline,” lead author Sammy Zahran, a professor of economics at Colorado State University, said in [a statement](#).

“This indicates we should support policy efforts to limit aviation lead emissions to safeguard the welfare of at-risk children,” Zahran added.

Numerous public health agencies, including the National Academies of Science, have concluded that there is not a safe threshold for lead exposure. This means that each and every new increment of exposure will have an impact on children's health.

The evaluation conducted concludes the opposite, vaguely stating an impact is "unlikely". The study does not present adequate evidence to support this conclusion. See bold and underlined text.

Affected Environment & Environmental Consequences 3-31

"It is unlikely that the development of either the Preferred Alternative or the No Action Alternative will include products or substances a child is likely to encounter. **It is therefore unlikely that either the No Action Alternative or the Preferred Alternative will result in any environmental health or safety risks that could disproportionately affect children.**"

A 2021 study entitled: "Leaded Aviation Gasoline Exposure Risk at Reid-Hillview Airport in Santa Clara County, California" concluded the significant increases in blood lead level occur to children in the vicinity of Reid-Hillview airport:

Concluding Remarks

At the height of the Flint Water Crisis, child BLLs surged over pre-crisis levels by an estimated 0.35 to 0.45 µg/dL. **Under periods of high piston-engine aircraft traffic, children proximate to Reid-Hillview Airport experience an increase in BLLs excess of what the children of Flint experienced during the FWC.** Because negative cognitive and behavioral outcomes in lead-exposed children are higher at lower blood lead levels – the dose response is non-linear – limiting exposure to lead-formulated aviation gasoline can deliver sizable and lasting social benefits. **On the matter of aviation gasoline exposure risk to families and children proximate to general aviation airports, the National Academies of Sciences, Engineering, and Medicine maintains: "Because lead does not appear to exhibit a minimum concentration in blood below which there are no health effects, there is a compelling reason to reduce or eliminate aviation lead emissions." The ensemble of evidence compiled in this study supports the "compelling" need to limit aviation lead emissions to safeguard the welfare and life chances of at-risk children around Reid-Hillview.**

Additionally, modeling (utilizing AERMOD or other tools) and study of this issue is required prior to making any conclusion about the impact on human health. The second attached study (Trinity study) highlights one such approach to modeling emission utilizing AERMOD.

The work conducted to evaluate lead emission is inadequate to support the conclusion that no impact on children's health will occur do the continuation of current operations or any of the alternatives outlined.

Sincerely,

Jeff Gearhart

Jeff Gearhart
734-369-9276
734-945-7738 cell

SCREENING LEVEL ASSESSMENT OF AMBIENT LEAD CONCENTRATIONS AROUND THE MIDDLETON WISCONSIN MUNICIPAL AIRPORT

Prepared By:

Jeremias Szust
Jim Lyons

TRINITY CONSULTANTS

7919 Folsom Blvd
Suite 320
Sacramento, CA 95826

Jeremy Heiken
Oak Leaf Environmental, Inc.
8141 Mast Road
Dexter, MI 48130

March 18, 2022

TABLE OF CONTENTS

1. PROJECT INFORMATION	1-1
1.1 Project Description	1-1
1.2 Site Description.....	1-1
2. DEVELOPMENT OF AIRCRAFT LEAD EMISSIONS DATA	2-1
2.1 Annual Operations and Temporal Allocation	2-1
2.2 Operation Modes and Time in Mode	2-3
2.3 Aircraft Data and Fuel Flow Rates	2-4
2.4 Airport Inventory Results.....	2-5
2.5 Inventory Comparison and Other Sources of Lead Emissions.....	2-7
2.6 Spatial Allocation	2-8
3. AIR DISPERSION MODELING INPUTS	3-1
3.1 Model Selection.....	3-1
3.2 Meteorological Data	3-1
3.3 Urban versus Rural Determination	3-1
3.4 Receptor Grid.....	3-4
3.5 Terrain Data	3-4
3.6 Modeling Parameters	3-4
3.7 Emission Source Parameters	3-4
4. AIR DISPERSION MODELING RESULTS	4-1

LIST OF FIGURES

Figure 1-1. C29 Airport	1-1
Figure 2-1. 2021 Monthly Lead (Pb) Emissions and Piston Operations	2-6
Figure 2-2. Spatial Allocation of On-the-Ground Emissions	2-9
Figure 3-1. Airport Land-Use Imagery	3-3
Figure 3-2. July 30, 2017, Flight Track Data	3-5
Figure 3-3. Modeled Source Locations Reference	3-7
Figure 3-4. Modeled Source by Operations Type	3-8
Figure 4-1. Max Monthly Impacts	4-2
Figure 4-2. Annual Impacts	4-3
Figure 4-3. Maximum Monthly Impact Season	4-4

LIST OF TABLES

Table 2-1. Estimated 2021 Piston Aircraft Operations at C29	2-2
Table 2-2. Percent Operations by Month, MSN (2013-2019)	2-2
Table 2-3. Day-of-Week Factors, MSN (2013-2019)	2-3
Table 2-4. Apportionment of Daily Operations by Time Period, C29	2-3
Table 2-5. Operation Modes and Time in Mode	2-4
Table 2-6. Estimated Fuel Flow Rates (lb./hr.) by Operation Mode at C29	2-5
Table 2-7. Estimated 2021 Lead Inventory and Piston Operations for C29	2-6
Table 2-8. 2021 Lead Inventory Comparison to EPA's 2017 NEI	2-7
Table 2-9. Other Lead Sources within 10 miles of C29, EPA's 2017 NEI	2-8
Table 3-1. Airport Land-Use Analysis	3-1
Table 4-1. Points of Interest and Impacts from Nearest Receptors	4-1

1. PROJECT INFORMATION

1.1 Project Description

Trinity Consultants and Oak Leaf Environmental were asked by the Town of Middleton, Wisconsin to conduct a screening-level analysis to evaluate ambient concentrations of lead in the air around the Middleton Municipal Airport (C29). This effort involved two main components: 1) the development of spatially resolved estimates of lead emissions from the operation of piston-powered aircraft (which use lead aviation gasoline) at and around the airport and 2) dispersion modeling required to translate the lead emissions estimates into estimates of ambient lead concentrations. This report summarizes the results of the C29 airport analysis.

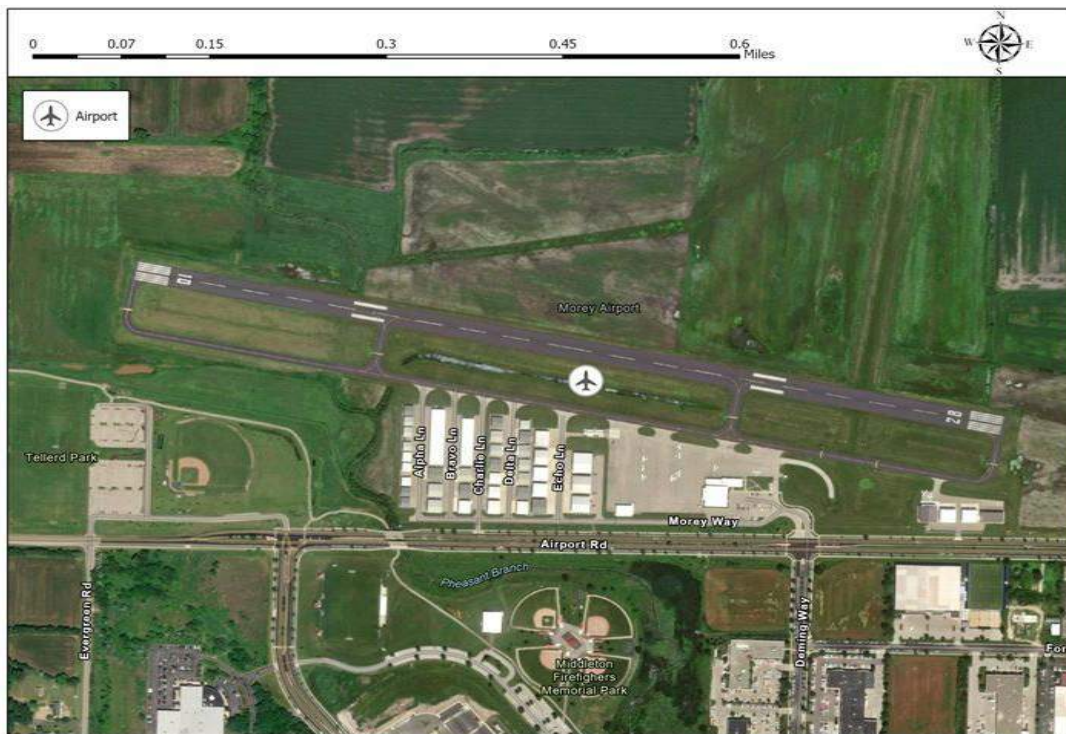
1.2 Site Description

C29 is located in the City of Middleton, WI. The Universal Transverse Mercator (UTM) coordinates for the center of the airport, in 1983 North American Datum (NAD83), are as follows:

- ▶ 293,918.5 meters (m) Easting;
- ▶ 4,776,533.4 m Northing;
- ▶ Zone: 16.

Figure 1-1 below shows the general layout and location of the airport

Figure 1-1. C29 Airport



2. DEVELOPMENT OF AIRCRAFT LEAD EMISSIONS DATA

In this section, the development of the spatially and temporally resolved lead emissions inventory used in the C29 screening analysis is described. The emission inventory estimating procedures followed published guidelines of the US Environmental Protection Agency (EPA)¹ and Transportation Research Board's Airport Cooperative Research Program (ACRP).² The procedures are considered screening-level in that four simplifying assumptions were employed.

1. All operations are modeled as standard takeoffs and landings.
2. The lead content of aviation gasoline is the maximum allowable (2.12 g/gal).
3. All operations are assigned to Runway 10(east)/28(west) with takeoffs occurring to the west on runway 28.
4. All operations are assigned to a single flight track assumption circling back to the airport characteristic of flight school operations

The discussion of the calendar year 2021 lead inventory is presented in the following topics.

- Annual Operations and Temporal Allocation
- Operation Modes and Time in Mode
- Aircraft Data and Fuel Flow Rates
- Airport Inventory Results
- Inventory Comparison and Other Sources of Lead Emissions
- Spatial Allocation

2.1 Annual Operations and Temporal Allocation

The 2021 annual operations for piston-aircraft operating at C29 were derived from the Master Plan.³ The base year of the Master Plan is 2019. Estimates for calendar year 2021 were developed by interpolation of estimates for calendar years 2019 and 2024 presented in Table 2-23 of the Master Plan. Operations for 2021 were approximately 1 percent higher than in 2019. The annual operations were assigned to aircraft by engine type (i.e., piston and jet), fleet type, and trip type (i.e., local and itinerant) using the data presented in Table 2-14 and Appendix A of the Master Plan. The C29-based aircraft are distinguished by flight- school, other airport-based fixed-wing (FW), and rotorcraft fleets. The resulting annual operations for piston aircraft are presented in Table 2.1. The 2021 inventory analysis is based on 40,253 piston aircraft operations. Temporal activity profiles were developed to allocate the estimated annual operations to individual months, days, and hours.

¹ <https://www.epa.gov/regulations-emissions-vehicles-and-engines/epas-data-and-analysis-piston-engine-aircraft-emissions>

² ACRP projects 02-34 and 02-57 include the development of "best practices" guidance for estimating Pb emission from aircraft intended to supplement EPA inventory modeling procedures:

<https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3035> and

<https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3703>.

³ [Airport Master Plan | Middleton, WI - Official Website \(cityofmiddleton.us\)](http://www.cityofmiddleton.us)

Table 2-1. Estimated 2021 Piston Aircraft Operations at C29

Fleet	Itinerant	Local	Total
Flight School, Piston	4,366	25,593	29,959
Other Airport-Based FW, Piston	9,252	0	9,252
Rotorcraft, Piston	0	271	271
Charter / Air Taxi, Piston*	26	0	26
Other Non-Based FW, Piston†	745	0	745
Total Piston Operations‡	14,389	25,864	40,253

* In the absence of local data, the piston share of charter and air taxi operations (22 percent) was taken from ACRP (see Footnote 2).

† In the absence of local data, the piston share of other non-based FW aircraft operations was assumed to equal that observed for the airport-based FW aircraft operations (91 percent).

‡ No piston-engine aircraft were assumed for military and freight operations.

Monthly and day-of-week profiles were based on daily general aviation operations data recorded at Dane County Regional Airport (MSN) given that suitable data are not available for C29. C29 and MSN both serve the Madison area and are equidistant to both the University of Wisconsin and downtown Madison making MSN the preferred surrogate of local general aviation activity patterns. Recorded FAA operations data at MSN, available through the Operations Network (OPSNET)⁴, over a 7-year period were utilized to estimate monthly and day-of-week profiles shown in Tables 2-2 and 2-3, respectively. The monthly factors of Table 2-2 represent the fraction of annual operations occurring within a given month. The day-of-week factors of Table 2-3 represent multiplicative factors that convert average day operations to estimated operations for each day of the week. For example, the local day-of-week factor of 1.129 on Tuesdays signifies that local operations are 12.9 percent higher on Tuesdays versus the week on average.

Table 2-2. Percent Operations by Month, MSN (2013-2019)

Month	General Aviation Itinerant	Local
January	5.7%	6.3%
February	5.8%	6.8%
March	7.9%	8.5%
April	8.0%	8.1%
May	9.1%	8.8%
June	8.9%	9.6%
July	11.4%	9.8%
August	9.8%	9.3%
September	9.4%	8.6%
October	9.5%	8.3%
November	8.1%	9.1%
December	6.3%	7.0%

⁴ <https://aspm.faa.gov/opsnet/sys/Main.asp>.

Table 2-3. Day-of-Week Factors, MSN (2013-2019)

Month	General Aviation Itinerant	Local
Sunday	1.014	1.022
Monday	0.865	0.967
Tuesday	0.972	1.129
Wednesday	1.075	1.103
Thursday	1.079	0.988
Friday	1.035	0.836
Saturday	0.960	0.954

The hourly operations profile was derived from Table 4-3 of the Master Plan, which apportioned operations between daytime (7 am to 10 pm) and nighttime (10 pm to 7 am). These data are summarized in Table 2-4. Without additional hourly information, it was assumed that operations were apportioned equally to each hour in the daytime and nighttime periods. It should be noted however that for purposes of dispersion modeling emissions were only modeled during daytime hours which were assumed to be between 8 am and 8 pm.

Table 2-4. Apportionment of Daily Operations by Time Period, C29

	Daytime Operation (7 am – 10 pm)	Nighttime Operation (10 pm – 7 am)
Itinerant	90.3%	9.7%
Local	95.5%	4.5%

2.2 Operation Modes and Time in Mode

Each aircraft operation is divided into individual operation modes and an estimated time spent in each mode. Fuel flow rates, and thereby lead emission rates, will vary by operation mode. As noted above, all operations were assumed to be standard, standalone takeoffs and landings. This assumption is consistent with standard EPA lead inventory procedures.⁵ Accordingly, C29 operations are equally apportioned to takeoffs (50 percent) and landings (50 percent). The operation modes associated with each are presented in Table 2-5 along with the estimated time spent in each mode.

⁵ A refinement of this assumption would be to evaluate additional operation types associated with flight school training such as touch-and-go and taxi-back-to-takeoff operations.

Table 2-5. Operation Modes and Time in Mode

Operation Type	Operation Mode	Time In Mode (Minutes)
Takeoff	Taxi & Idle #1 (hangar to runup area)	6.70*
	Taxi & Idle #2 (runup area to top of runway)	5.30*
	Runup (magneto test)	0.96†
	Takeoff	0.30‡
	Climb Out (0 – 1,000 ft. AGL)	1.67‡
Landing	Approach (1,000 – 0 ft. AGL)	2.00‡
	Taxi & Idle (wheels down to hangar)	4.08†

* Total taxi/idle time (#1 and #2 combined) of 12 minutes per takeoff taken from EPA (see Footnote 1); portion of taxi/idle time spent (#2) in runup area taken from ACRP (see Footnote 2).

† Time in mode estimates taken from ACRP (see Footnote 2).

‡ Time in mode estimates taken from EPA (see Footnote 1).

There were no airport-specific estimates of the time-in-mode for C29.⁶ Time estimates assigned in Table 2-5 were largely the recommended defaults that the EPA uses in modeling general aviation emissions. The EPA defaults for climb out and approach modes for fixed-wing piston aircraft, however, were truncated to 1,000 feet above ground level (AGL) traffic pattern altitude (TPA) of C29.⁷ ACRP was used for the time spent for the magneto test and the assignment of taxi & idle time spent to the runup area. ACRP was also used for the elapsed time between wheels down and parking as the EPA time estimate for this mode is a bit short relative to on-the-ground observations of the ACRP projects.

2.3 Aircraft Data and Fuel Flow Rates

Appendix A of the Master Plan provides annual operations data and statistics for 100 airport-based aircraft including N-number, make and model. Engine characteristics (manufacturer, model, and power rating) were identified and assigned based on the aircraft statistics. The engine data were combined with brake-specific fuel consumption rates (BSFCs) by engine and EPA assumed engine load points (by operation mode) to estimate operations-weighted aircraft fuel flow rates. Those rates are presented in Table 2-6. The C29-based aircraft are distinguished by flight-school, other airport-based fixed-wing (FW) and rotorcraft fleets. Non-based fleets (air taxi and other non-based) were assigned the same fuel flow rates as other airport-based FW aircraft in the absence of aircraft or engine specifications on these operations.

⁶ While time-in-mode estimates are not commonly collected, a refinement of this approach would be to measure the average time spent in each mode at C29.

⁷ EPA estimates of time in climb out and approach modes assumes an altitude of 3,000 ft. AGL for all aircraft – from large commercial jets to single-engine piston aircraft. 3,000 ft. AGL is a poor assumption for modeling general aviation as these aircraft operate at a TPA of 1,000 to 1,200 ft. AGL. Also, 1,000 feet AGL equals an elevation of 1,928 feet as the airport elevation is 928 feet.

Table 2-6. Estimated Fuel Flow Rates (lb./hr.) by Operation Mode at C29

Fleet	Takeoff	Climb Out	Approach	Taxi/Idle	Runup
Flight School, Piston	99.17	78.77	47.75	12.08	51.57
Other Airport-Based FW, Piston	142.35	114.69	63.40	21.35	66.88
Rotorcraft, Piston	n/a	99.38	53.21	14.39	60.42
Charter / Air Taxi, Piston	142.35	114.69	63.40	21.35	66.88
Other Non-Based FW, Piston	142.35	114.69	63.40	21.35	66.88

2.4 Airport Inventory Results

Lead (Pb) emissions were estimated for each fleet, flight type (e.g., local and itinerant) and operation mode combination. The emission inventory (in the units of grams) was calculated in accordance with the standard approach common to both EPA and ACRP methods.

$$\text{Emissions} = \text{Operations} \times \text{Time-in-Mode} \times \text{Fuel Rate} \times \frac{\text{Pb Content}}{\text{Density}} \times (1 - \text{Pb Retention Rate})$$

Within this equation, the daily C29 inventory was calculated using the following data:

- Operations counts of Table 2-1 along with temporal allocation of Tables 2-2 and 2-3;
- Time-in-mode estimates of Table 2-5;
- Fuel flow rates of Table 2-6;
- Lead (Pb) content of aviation gasoline (100LL) of 2.12 grams per gallon;⁸
- Aviation gasoline density of 6 lb./gal.; and
- Lead (Pb) retention rate with the aircraft fuel/engine system of 5 percent.⁹

The estimated lead inventory aggregated by month is reported in Table 2-7 and Figure 2-1 along with the monthly total operations. The 2021 total airport lead emissions are estimated to equal 77,055 grams (170 lbs.) based on 40,253 piston operations.

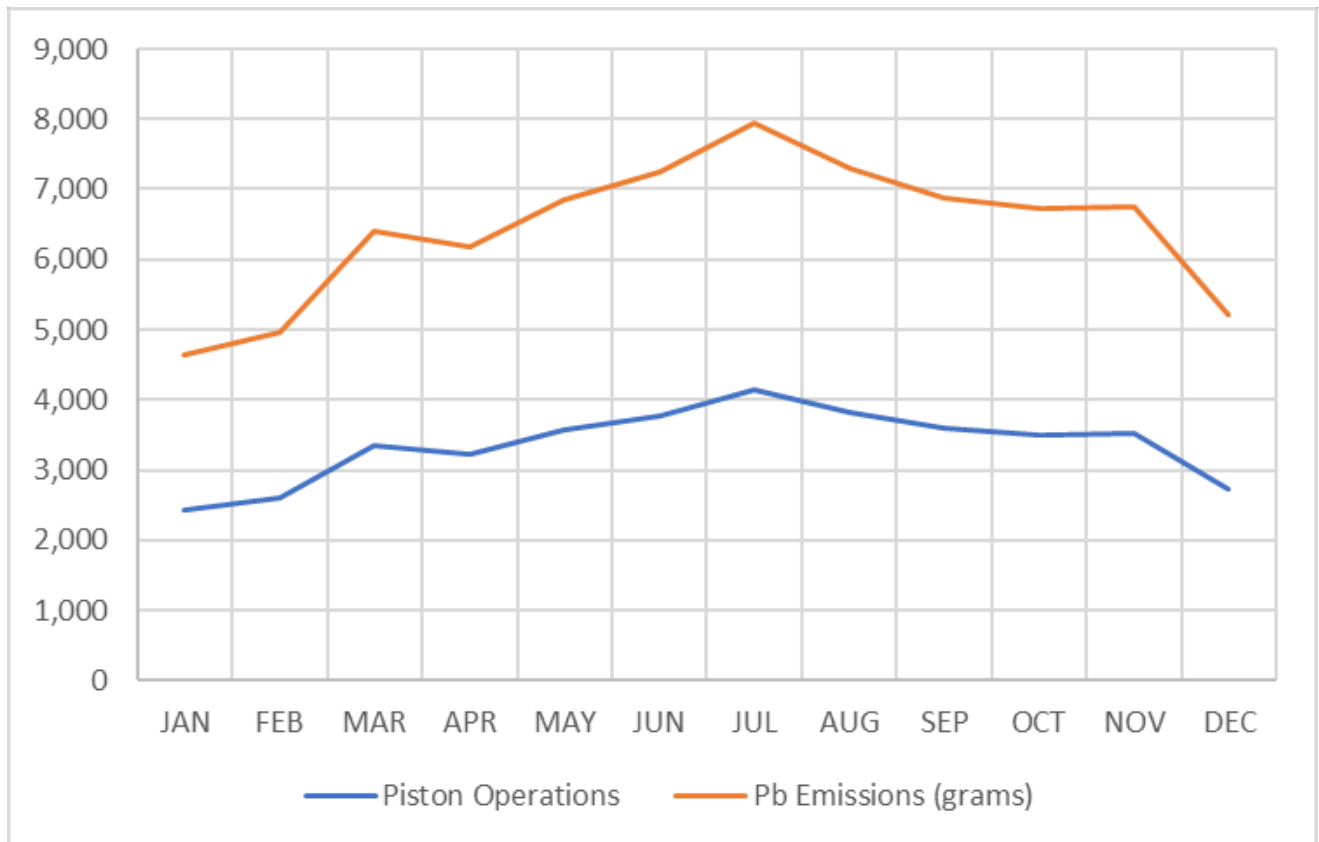
⁸ 2.12 g/gal represents the maximum lead allowable in 100LL aviation gasoline. This is the value commonly employed in emission inventory development including EPA estimates. While not commonly completed, a refinement of this approach would be to collect and analyze gasoline samples at C29 to assess the lead content of gasoline sold.

⁹ EPA defined assumption (see Footnote 1).

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



2.5 Inventory Comparison and Other Sources of Lead Emissions

EPA inventory data were compared against this project’s estimates for C29 and to identify any other local sources of lead (Pb) emissions. EPA prepares national emission inventories, incorporating local and state input, of air emissions of key criteria and toxic pollutants – including lead (Pb). These triennially reported inventory efforts are the EPA’s National Emission Inventory (NEI). The current version of the NEI represents calendar year 2017.¹⁰

In the 2017 NEI for Dane County, the county-wide Pb emissions were estimated to equal 671 lbs. Of that total, 96 percent of the county’s Pb emissions are estimated to originate from aviation sources. Notably, 32 percent of the county’s Pb emissions were estimated to originate from C29 operation (217 lbs.) – representing the second-highest Pb source in the county. Dane County Regional Airport (MSN) was the top Pb source in the county in 2017, estimated at 260 lbs. The third highest is Pb source is estimated to be Waunakee Airport (95 lbs.). Nationally, the 2017 NEI estimated 450 tons of lead emissions in the United States in 2017 of which 63 percent came from general aviation operations. The NEI methods for estimating lead from aircraft are those of Footnote 1.

Table 2-8 compares this project’s 2021 lead inventory and operations statistics with those of the 2017 NEI. The 2021 inventory of 170 lbs. (77,055 grams) is below that of the EPA. Both the on-the-ground and aloft emissions of 98 and 72 lbs. are below the EPA estimates of 130 and 88 lbs., respectively. While the total airport operations are close in magnitude, the EPA’s estimate of the piston-engine share of those operations, based on national average statistics, does not match the C29 aircraft operations as documented in the Master Plan. Other key differences between the two inventory estimates are as follows.

- As described in Section 2.2, the maximum altitude of the climb out and approach operation modes equals the 1,000 ft. AGL traffic pattern altitude for the 2021 inventory; the EPA inventory assumes 3,000 ft. AGL.
- The 2021 inventory includes the runup mode (i.e., magneto test); EPA omits this operation.
- As described in Section 2.3, the 2021 inventory relies on an operations-weighted fuel flow rate analysis (based on 100 resident aircraft) and mapping of aircraft engines to 27 unique engines with fuel rates measurements compiled by ACRP (see Footnote 2). The EPA fuel flow rates are the simple average over 6 unique engines; EPA fuel flow rates are biased high.

Table 2-8. 2021 Lead Inventory Comparison to EPA’s 2017 NEI

Parameter	2021 Inventory, C29	EPA 2017 NEI, C29
Total Inventory (lbs.)	170	217
On-the-Ground Inventory (lbs.)	98	130
Aloft Inventory (lbs.)	72	88
Total Airport Operations	41,761	40,510
Piston-Engine Operations	40,253	29,187

For purposes of comparison, Table 2-9 summarizes all the sources of lead emissions within a 10-mile radius of C29, as reported in the 2017 NEI. Eleven sources of lead emissions were identified in this radius – six of which are airports. The 2017 NEI reports 44 sources of lead emissions in Dane County, WI.

¹⁰ <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data>.

Table 2-9. Other Lead Sources within 10 miles of C29, EPA’s 2017 NEI

Distance from C29 (Miles)	Site Name	Sector	City/Town	Lead Emissions (Lbs.)
1.1	Springs Window Fashions	Manufacturing	Middleton	0.9
5.6	UW Hospital	Medical	Madison	0.3
6.0	Waunakee	Airport	Waunakee	94.5
7.0	UW Madison	Heating Plant	Madison	2.1
7.3	Meriter/Park	Airport	Madison	0.3
7.5	St. Mary's Hospital	Medical	Madison	0.3
8.1	Dane	Airport	Dane	1.6
9.1	Verona	Airport	Verona	5.5
9.6	Dane County Regional	Airport	Madison	259.5
9.6	Madison-Kipp Corp	Manufacturing	Madison	1.9
9.6	Army Guard	Airport	Madison	0.3

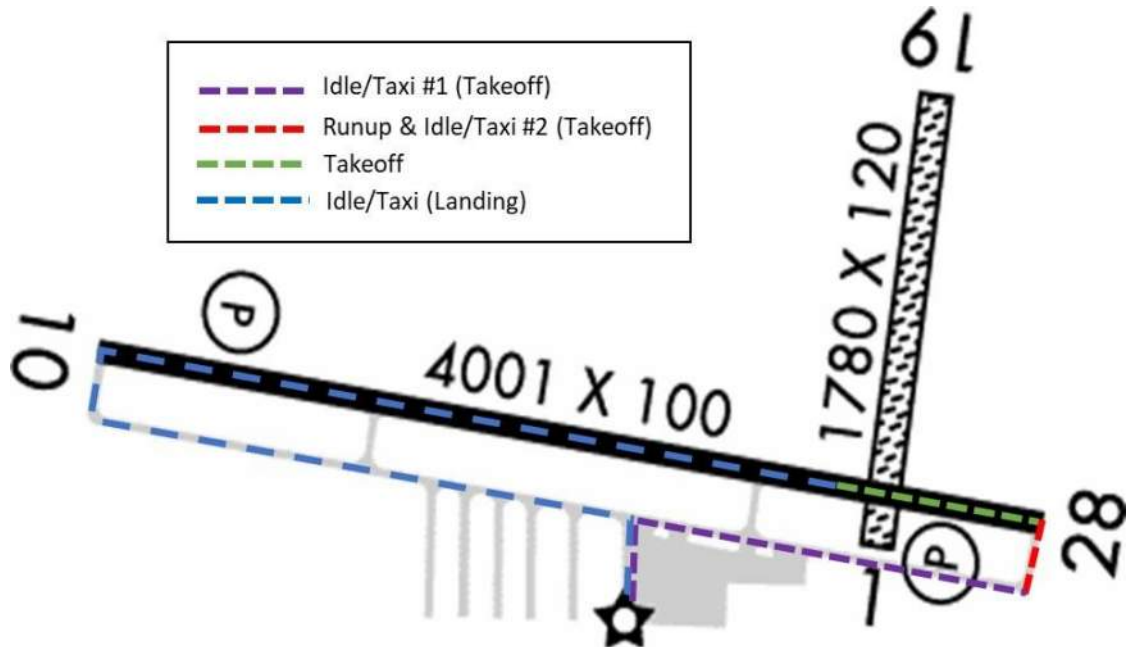
2.6 Spatial Allocation

The spatial allocation assigns the C29 emissions by operation mode within the air quality modeling domain for the purposes of pollutant concentration modeling. The spatial allocation of the on-the-ground emissions and emissions aloft applied different assumptions.

For the on-the-ground operation modes of taxi/idle, runup and takeoff, the emissions were spatially allocated under the simplifying assumption of 100 percent of operations occurring on Runway 10(east)/28(west) with takeoffs to the west. This is the predominate runway usage; the Master Plan assigns about 70 percent of operations to this runway. Moreover, a separate spatial allocation of rotorcraft operations was not completed as these operations were estimated to represent less than 1 percent of the airport emissions.¹¹ The spatial resolution of on-the-ground emissions is presented in Figure 2.2.

¹¹ A refinement to this approach would be to assign fixed-wing operations to a frequency distribution between the runways and develop separate spatial allocation rotorcraft operations.

Figure 2-2. Spatial Allocation of On-the-Ground Emissions



For the two aloft operation modes of climb out and approach, we reviewed available flight track data and other resources. We were provided with a data capture of representative aircraft tracking data (i.e., latitude, longitude, and altitude) on a 4 or 5-second frequency with separate databases by aircraft operating under visual flight rules (VFR) and instrumented flight rules (IFR). We were provided with five years' IFR data and 17 months' VFR data. The data were not specific to C29. The use of IFR for operations at C29 is sporadic and infrequent, which was expected. Therefore, the VFR data are preferable for identifying flight patterns aloft at C29. The climb out and approach for July 30, 2017, was selected as the representative date for modeling the spatial allocation of aloft modes at C29. This date included 83 operations identified and nearly 100 percent use of Runway 10(east)/28(west). These data are presented in Section 3.7 of this report.¹²

¹² There were no automated procedures identified for isolating individual C29 operations within the larger VFR data files, which were organized by date. A handful of dates were examined. Criteria were applied to isolate the operation in the airport environs, eliminating flyovers, and to approximate when a landing or takeoff had occurred at C29 (as the tracking did not include on-the-ground movements). Within the original VFR data capture supplied for July 30, 2017, only 0.4% of the flight track records were specific to climb out and approach operations occurring at C29.

3. AIR DISPERSION MODELING INPUTS

The following sections describe the procedures and methods for conducting the air quality modeling analysis. Dispersion modeling techniques applied in this analysis are in accordance with 40 CFR Part 51 Appendix W, also known as the Environmental Protection Agency’s (EPA’s) Guideline on Air Quality Models.

3.1 Model Selection

Air dispersion modeling was performed using version 21112 of the AERMOD modeling system which is the latest version of AERMOD.

AERMOD is composed of three modular components: AERMAP, the terrain preprocessor that characterizes the terrain and generates source and receptor elevations; AERMET, the meteorological preprocessor that processes raw surface and upper air meteorological observations for use by AERMOD; and AERMOD, the control module and modeling processor.

3.2 Meteorological Data

Meteorological data used in the dispersion modeling analysis was obtained from the Wisconsin Department of Natural Resources (WDNR) Site-Specific Meteorological Data table¹³. Data were processed by WDNR using the meteorological preprocessors AERMET (21112) and AERMINUTE (15272). Data consists of five years (2016 through 2020) of National Weather Service (NWS) surface data collected at the Madison, WI airport. Concurrent upper-air observations used in AERMET were obtained from the Green Bay, WI airport. The data underwent quality assurance and was selected as the most representative data due to its proximity to the site and consistent terrain characteristics with the site location. Additionally, while the Airport does have a meteorological station onsite, it does not meet EPA quality assurance requirements and would not represent high-quality meteorological data for an air dispersion modeling analysis.

3.3 Urban versus Rural Determination

40 CFR Part 51 Appendix W Section 7.2.1.1 provides guidelines on selecting rural or urban dispersion coefficients. This is used in determining the planetary boundary layer characteristics that affect the model’s prediction of downwind concentrations.

Table X below shows the percentage of land that can be categorized as urban vs non-urban, indicating that <50% of the land-use surrounding the Airport can be classified as urban.

Table 3-1. Airport Land-Use Analysis

Value	Description	Count	Urban?	%
11	Open Water	205	N	0.58%
21	Developed, Open Space	2917	N	8.19%
22	Developed, Low Intensity	4911	Y	13.78%
23	Developed, Medium Intensity	4885	Y	13.71%
24	Developed, High Intensity	2759	Y	7.74%

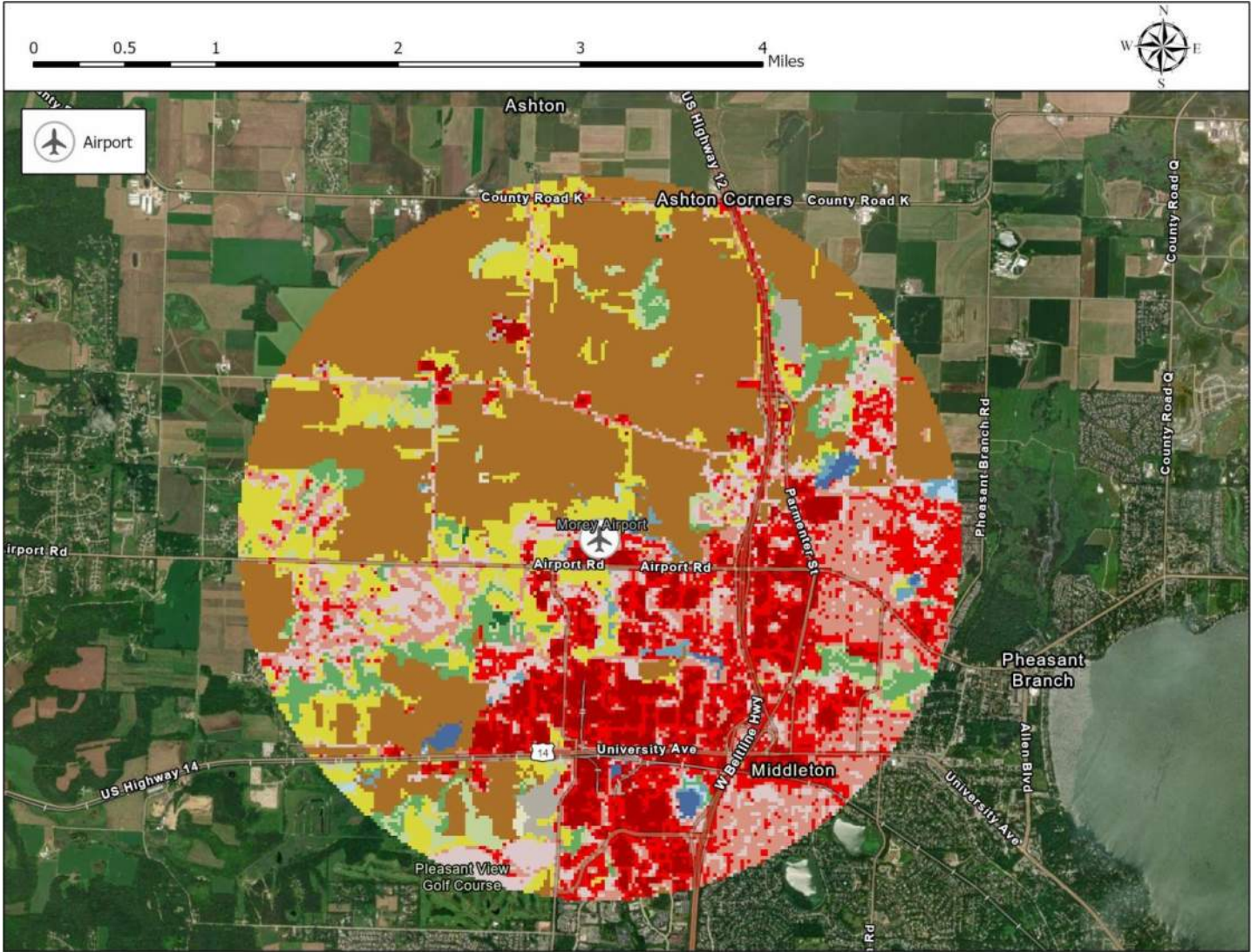
¹³ <https://dnr.wisconsin.gov/sites/default/files/topic/AirPermits/model/MetData2021.pdf> - accessed January 31, 2022

Value	Description	Count	Urban?	%
31	Barren Land	338	N	0.95%
41	Deciduous Forest	1321	N	3.71%
42	Evergreen Forest	28	N	0.08%
43	Mixed Forest	1013	N	2.84%
52	Shrub/Scrub	66	N	0.19%
71	Herbaceous	34	N	0.10%
81	Hay/Pasture	3646	N	10.23%
82	Cultivated Crops	13179	N	36.99%
90	Woody Wetlands	85	N	0.24%
95	Emergent Herbaceous Wetlands	242	N	0.68%

Figure 3-1 depicts the land-use types surrounding the Airport. Only the areas shaded deep-red can be considered urban areas for the purposes of determining whether the use of urban dispersion coefficients is appropriate.

Given that less than 50% of the surrounding land-use type in a three-kilometer radius can be described as urban, urban dispersion coefficients were not utilized in this modeling analysis.

Figure 3-1. Airport Land-Use Imagery



3.4 Receptor Grid

A modeling domain was developed for the air dispersion analyses to encompass the location of nearby areas with points of interest. Discrete receptor locations in AERMOD were based on UTM coordinates in the WGS84 datum.

The receptor grid was developed to ensure that the maximum pollutant concentrations and points of interest were captured by the model. The grid consisted of 1,343 receptors with the following spacing:

- ▶ 100-meter spacing for receptors extending from the center of the Airport to 2,000 meters;
- ▶ 250-meter spacing for receptors extending from the course receptor grid to 8,000 meters.

3.5 Terrain Data

Receptor terrain and source elevations were derived from 1/3 arc-second National Elevation Dataset (NED) data obtained from the U.S. Geological Survey. AERMAP version 18081 was used to determine elevations for all receptors and emission sources, with the exception of elevated sources which are discussed in Section 3.7.

3.6 Modeling Parameters

All sources modeled were represented as volume sources which are unaffected by building downwash (wake effects from buildings) in the AERMOD model, therefore buildings were not included in the modeling analysis.

3.7 Emission Source Parameters

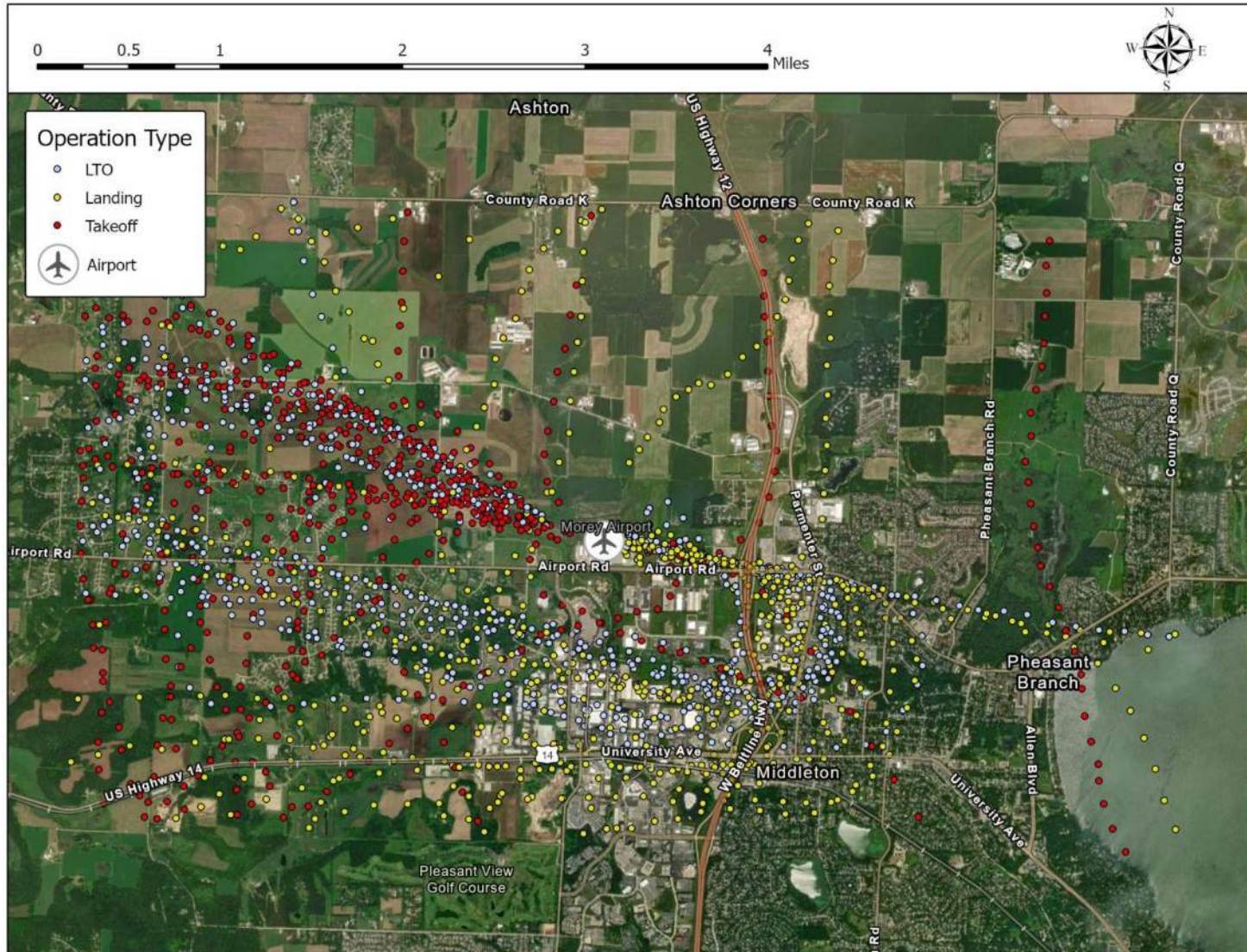
The modeling analysis included six types of airport operations, which can be described as follows:

- Idle/Taxi #1 (Idle/Taxi to Run-Up)
- Run-Up prior to takeoff and Idle/Taxi #2
- Takeoff
- Climb-Out
- Approach
- Idle/Taxi to Hangar

The location of these sources is based on information obtained from the Airport Master Plan, for movement within the airport, as well as a single day of VFR Flight Tracks data from July 30, 2017, for movement of aircraft once they are airborne.

Figure 3-2 below shows a geospatial representation of the flight tracks for July 30, 2017, along with the purpose of each operation.

Figure 3-2. July 30, 2017, Flight Track Data



In an effort to reduce model processing time and represent a “worst-case” scenario, climb-out and approach sources were represented as the average location of Landing and Take-off (LTO) operations, therefore combining all itinerant flight emissions with LTO emissions.

Figure 3-3 shows the locations of modeled sources with respect to the July 30, 2017, flight track information. Figure 3-4 shows the locations of modeled sources along with the type of operation for each source.

Figure 3-3. Modeled Source Locations Reference

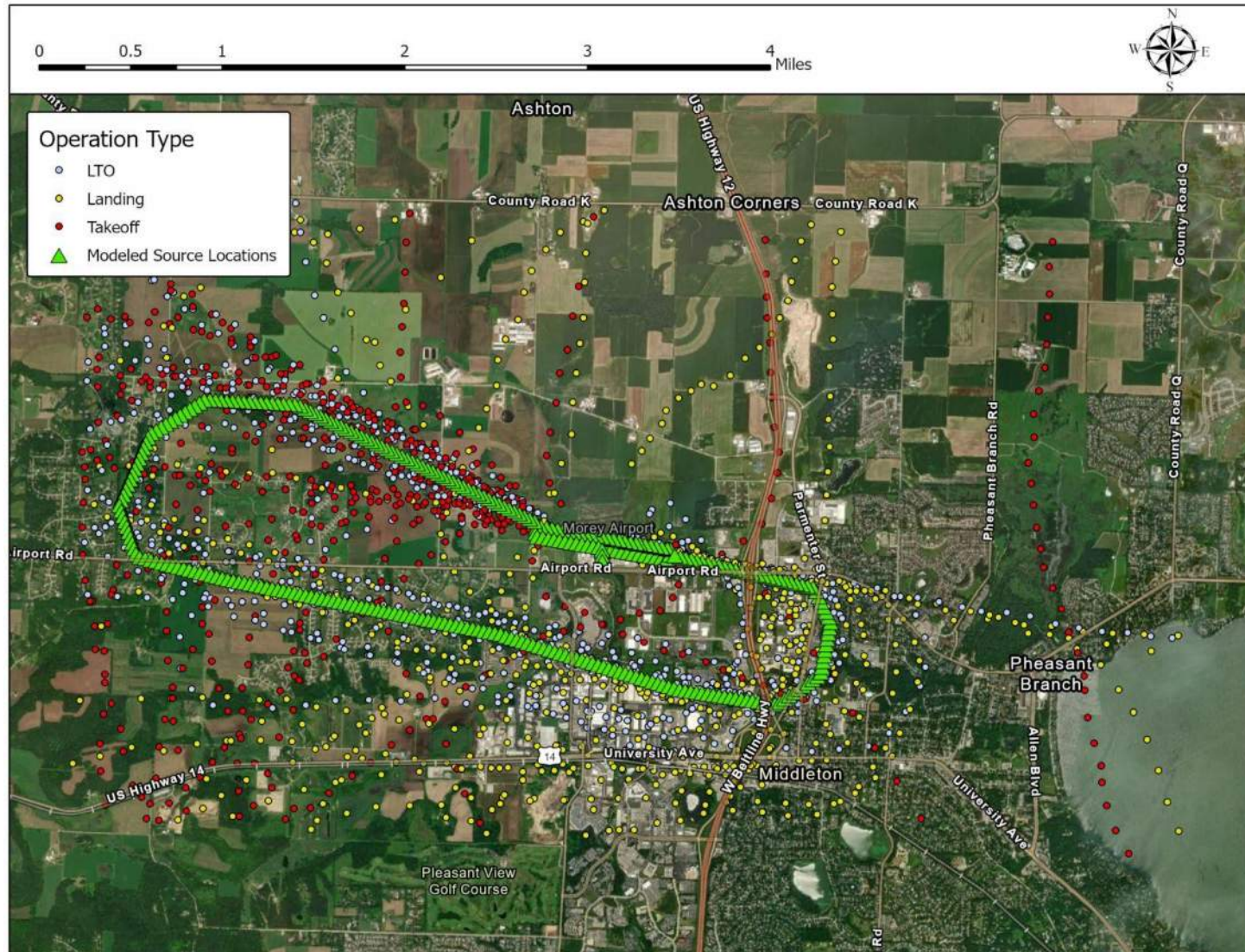
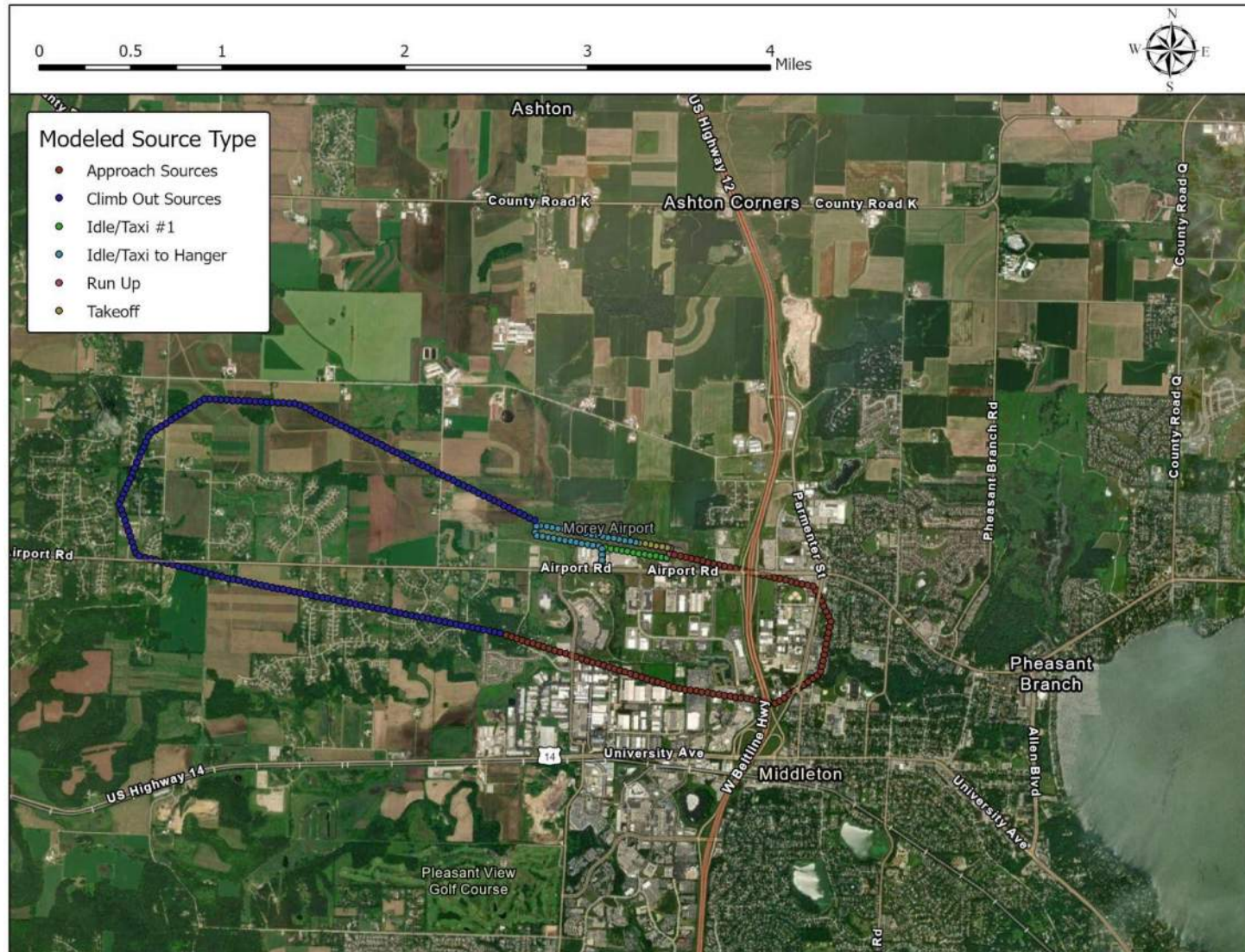


Figure 3-4. Modeled Source by Operations Type



Operations of each source type were then broken down further by Season and Hour-of-Day by utilizing the AERMOD "SEASHR" keyword, which allowed AERMOD to apply variable emission rates to each source. This was applied to account for operations only occurring between 8 AM and 8 PM and the seasonality of emissions. Figure 2- shows how lead emissions vary by month.

The seasons were defined as follows:

- Winter – December, January, and February
- Spring – March, April, and May
- Summer – June, July, and August
- Autumn – September, October, and November

These seasons align closely to the magnitude of monthly lead emissions profiles shown in Figure 3-5.

The modeling analysis was conducted assuming all emissions were from fixed-wing aircraft. Initial horizontal dispersion (σ_y) was calculated as suggested in AERMOD documentation (U.S. EPA 2004, Table 3-1) as the source separation distance divided by 2.15. Initial vertical dispersion (σ_z) was calculated using the mixing zone residence time as defined in the CALINE3 model:

Equation 3-1. Initial Vertical Dispersion Calculation

$$\sigma_z = (1.8 + 0.11) * \frac{WW2}{UU} * \frac{60}{30}^{0.2}$$

where

SZI = initial vertical dispersion (m);

W2 = half-width of the runway or taxiway (m); and

U = average wind speed over the modeling period (m/s).

The values for the initial vertical dimension parameters are as follows:

W2 = 16 meters

U = 4.044 m/s average between 8 AM and 8 PM

SZI = 8.68 meters

Additionally, the source separation distance (the center-to-center distance of adjacent volume sources) was taken as 50 meters, following the ICF report (ICF International and T&B Systems 2010). This means the initial lateral dimension utilized was 23.3 m (50/2.15).

The initial release point for all sources is calculated as the center-line of the initial vertical dispersion coefficient, i.e. the height of the plume divided by two (8.68*2.15/2 = 9.33 meters).

These source characterizations were utilized for all sources and did not account for wake turbulence effects from climb-out and approach sources, which would require additional surveying to determine the takeoff and landing angles. Additionally, wingspan wake, horizontal momentum, and propeller turbulence wake were not utilized in the preparation of run-up source characterization.

Lastly, the elevations for climb-out and approach sources were assumed to be 500 feet (152.4 meters) above ground level elevations (GLE). In order to determine these values, AERMAP was utilized to calculate the GLE for each climb-out and approach source, and 152.4 meters were added to the calculated value.

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	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	Marimont 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	Hinrich's 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

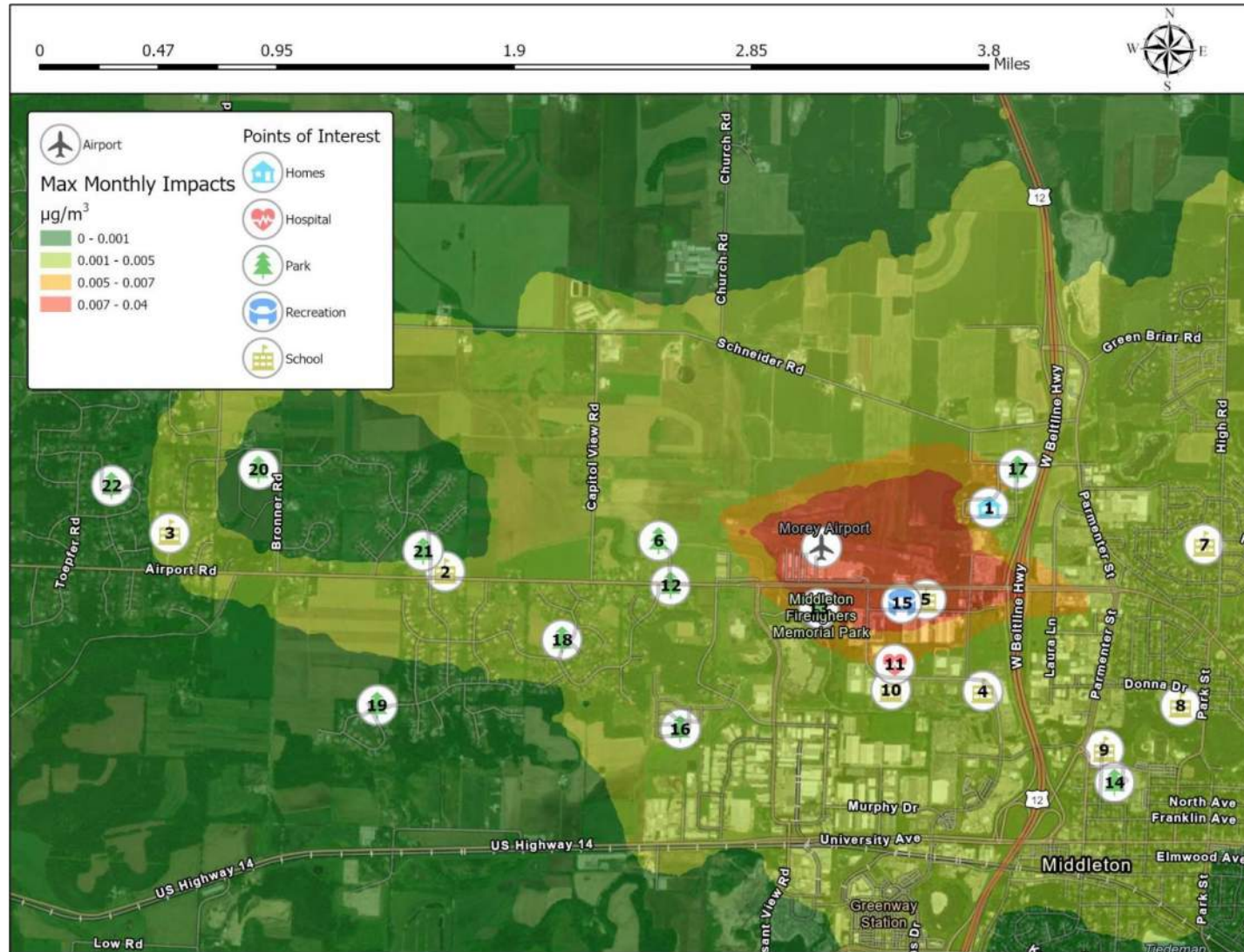


Figure 4-2. Annual Impacts

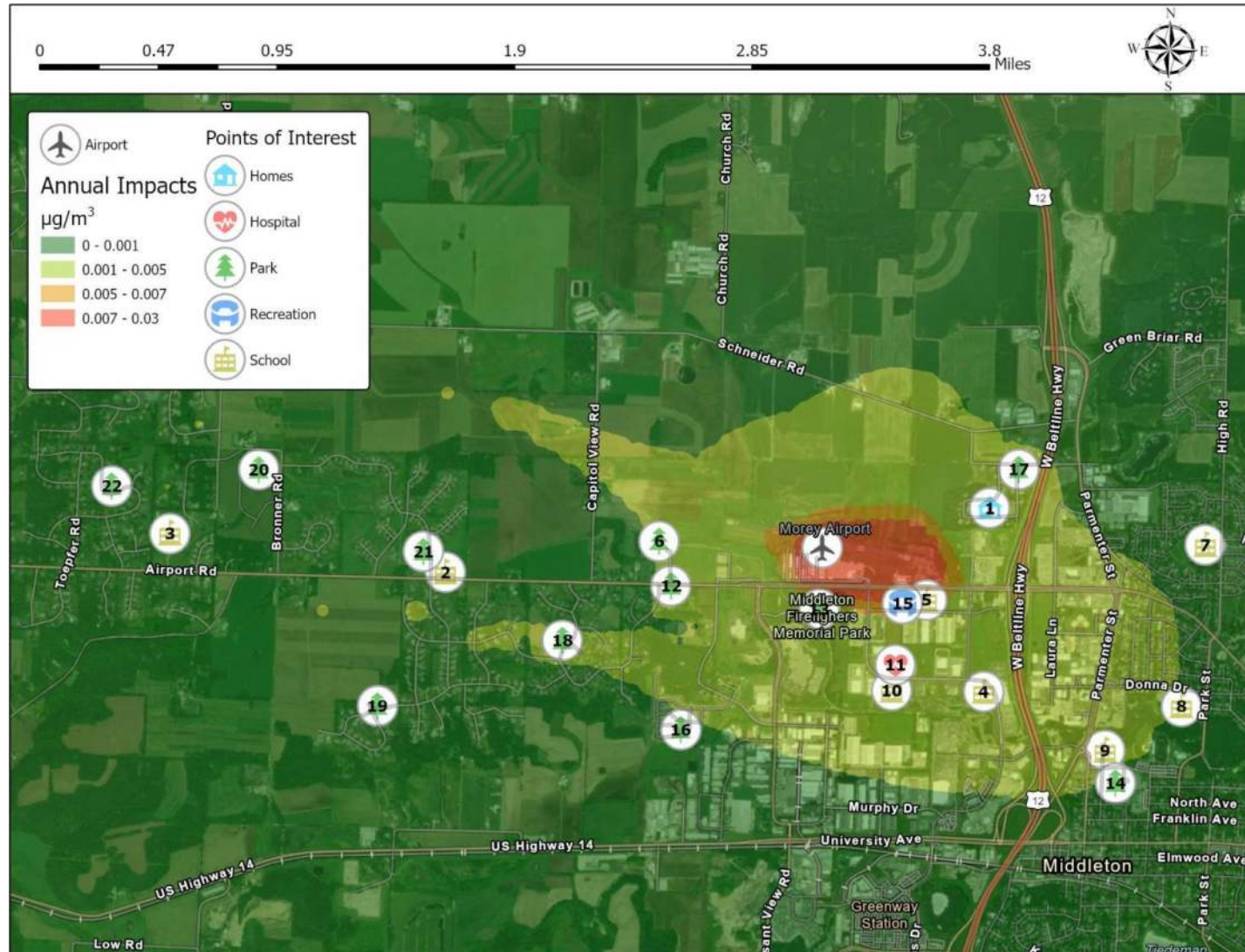
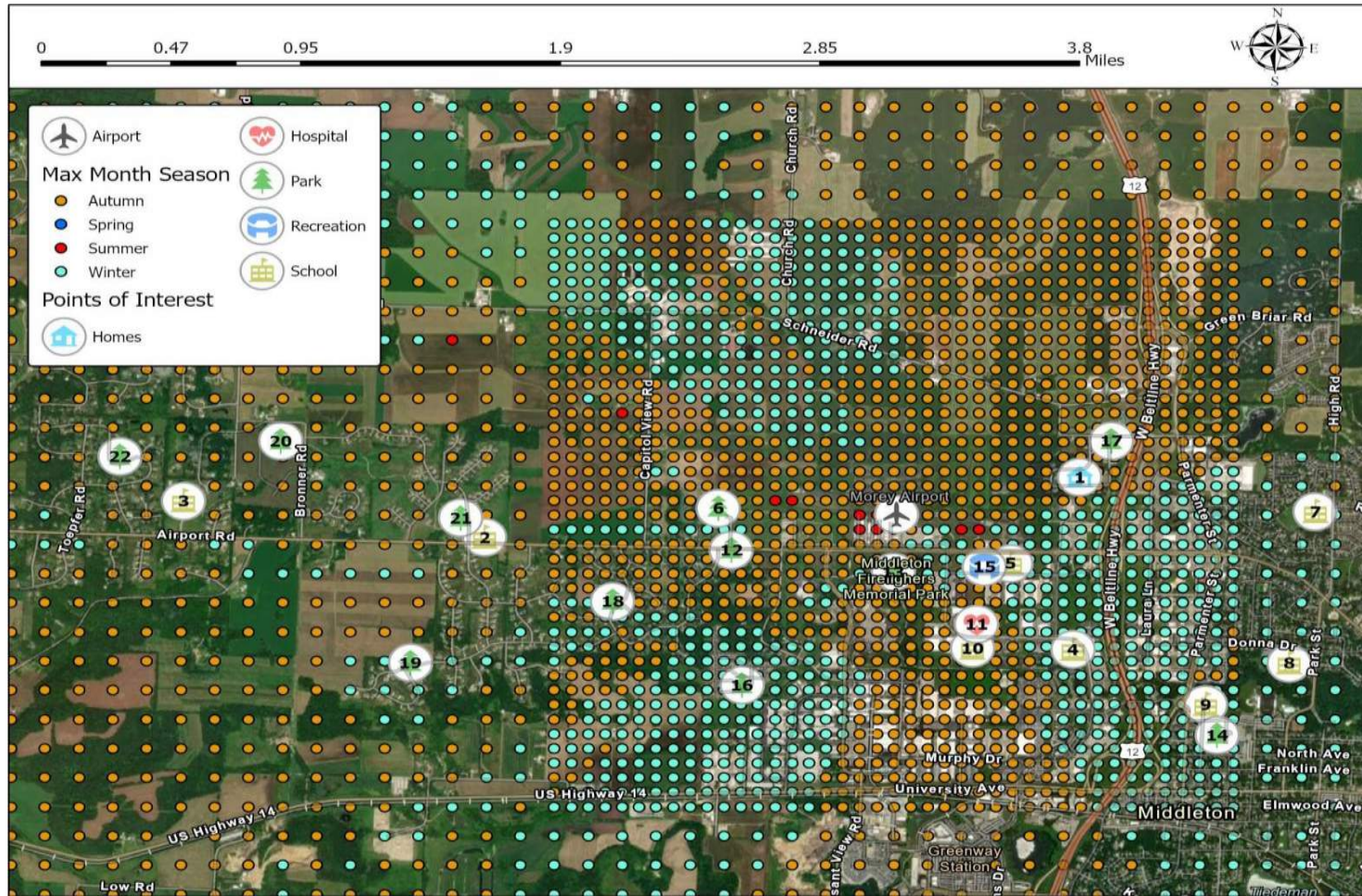


Figure 4-3. Maximum Monthly Impact Season



Leaded Aviation Gasoline Exposure Risk at Reid-Hillview Airport in Santa Clara County, California



Tuesday 3rd August, 2021

Preface

This report presents findings of a study sponsored by the County of Santa Clara and in cooperation with the California Department of Public Health (CDPH), Childhood Lead Poisoning Prevention Branch (CLPPB). The views and analysis presented here are those of the authors, and do not necessarily reflect the views of the County of Santa Clara or the CDPH. Pursuant to a Board request, this research was conducted by Mountain Data Group to assess statistical associations between the blood lead levels of sampled children and indicators of aviation gasoline exposure risk around Reid-Hillview Airport.

Contents

Preface	ii
List of Tables	vi
List of Figures	vii
List of Abbreviations	viii
Executive Summary	ix
1 Introduction and Background	1
1.1 Health and Human Capital Effects of Lead	1
1.2 No Safe Blood Lead Level in Children	2
1.3 Tetraethyl Lead (TEL) in Aviation Gasoline	4
1.4 Deposition of Lead from Aviation Gasoline	5
1.5 Lead from Aviation Gasoline and Child BLLs	6
1.6 Studying Exposure Risk at Reid-Hillview Airport	7
2 Data and Measurement	9
2.1 Childhood Lead Poisoning Prevention Data	9
2.1.1 Child Blood Lead Data	10
2.2 Aviation Gasoline Exposure Risk Data	11
2.2.1 Residential Distance	11
2.2.2 Residential Near Angle	12
2.2.3 Piston-Engine Aircraft Traffic and Aviation Gasoline Sales	14
2.3 Control Data	18
2.3.1 Toxic Release Inventory Facilities	18
2.3.2 Lead-Based Paint Risk	19
2.3.3 Neighborhood Socioeconomic Status	20
3 Empirical Methods	25

3.1	Main Effects	25
3.2	Parameter Direction Expectations	27
3.2.1	Residential Distance	27
3.2.2	Residential Near Angle	27
3.2.3	Piston-Engine Aircraft Traffic Exposure	28
4	Main Results	29
4.1	Descriptive Statistics	29
4.2	Residential Distance	30
4.2.1	Results Summary, Section 4.2	37
4.3	Residential Near Angle	37
4.3.1	Results Summary, Section 4.3	38
4.4	PEA Traffic Exposure	41
4.4.1	Results Summary, Section 4.4	45
4.5	Robustness	47
5	Extended Results	49
5.1	Blood Lead Thresholds	49
5.1.1	Results Summary, Section 5.1	54
5.2	PEA Traffic Exposure × Residential Distance	55
5.2.1	Results Summary, Section 5.2	57
5.3	PEA Traffic Contraction	60
5.3.1	Results Summary, Section 5.3	62
5.4	Relative School Distance	65
5.4.1	Results Summary, Section 5.4	69
5.5	Extension to All Airports	72
5.5.1	Results Summary, Section 5.5	74
6	Reduction Scenario	77
7	Conclusions	82

7.1 Main Results	82
7.2 Extended Results	83
Bibliography	86
Appendix	94
A.1 Robustness Tests: Restrictions and Clustering	106
A.2 Robustness Tests: Children Under 6 Years of Age	108
A.3 Robustness Tests: Detection Limit	112

List of Tables

1	Comparison of Variable Means by Residential Distance, (t-Test)	31
2	BLL Cross-tabulations, RHV	32
3	Residential Distance to Reid-Hillview Airport and Child BLLs	34
4	Functions of Residential Distance to Reid-Hillview and Child BLLs	35
5	Residential Near Angle and Child BLLs, RHV	39
6	PEA Traffic and Child BLLs, RHV	42
7	Child BLL Group, Proportional Odds	52
8	PEA Traffic \times Residential Distance and Child BLLs, RHV	56
9	Comparison of Means on Variables by Contraction Period, (t-Test)	62
10	PEA Traffic Contraction Period and Child BLLs, RHV	63
11	School Distance and Child BLLs, RHV	68
12	Estimated Gain in Cohort Lifetime Earnings, PEA Traffic Reduction	79
A.1	Descriptive Statistics	96
A.2	Residential Distance and Child BLLs, All Airports	98
A.3	Residential Near Angle and Child BLLs, All Airports	99
A.4	PEA Traffic and Child BLLs, All Airports	100
A.5	PEA Traffic \times Residential Distance, All Airports	101
A.6	School Distance and Child BLLs, All Airports	102
A.7	PEA Traffic Contraction Period and Child BLLs, All Airports	103
A.8	Estimated Gain in Cohort Lifetime Earnings, Aviation Gasoline Sales	104
A.9	Robustness Tests: Restrictions and Clustering	107
A.10	Robustness Tests: Distance and Child BLLs, Age 0-6	109
A.11	Robustness Tests: PEA Traffic and Child BLLs, Age 0-6	110
A.12	Robustness Tests: Residential Near Angle and Child BLLs, Age 0-6	111
A.13	Robustness Tests: Detection Limit	113

List of Figures

1	Non-Linear IQ Response to Child BLL	3
2	BLL Samples by Distance Categories to Reid-Hillview Airport	13
3	BLL Samples by Residential Near Angle to Reid-Hillview Airport	15
4	Quantity of FAA Traffic & 100LL Sold, RHV	17
5	Lead-Emitting TRI Facilities, Santa Clara County 2011-2020	18
6	Lead Use in the U.S., 20 th Century	21
7	Lead-Based Paint Exposure Risk by Neighborhood	22
8	Socioeconomic Status by Neighborhood, Santa Clara County	24
9	Residential Distance to Reid-Hillview Airport and Predicted Child BLLs	36
10	Residential Near Angle to Reid-Hillview Airport and Predicted Child BLLs	40
11	Piston-Engine Aircraft Traffic at Reid-Hillview Airport and Child BLLs	43
12	Piston-Engine Aircraft Traffic Terciles at Reid-Hillview and Child BLLs	44
13	Aviation Gasoline Sales at Reid-Hillview Airport and Child BLLs	46
14	Predicted Probabilities of Child BLLs by Distance, Near Angle, and PEA Traffic	53
15	PEA Traffic × Residential Distance and Predicted Child BLLs	58
16	Aviation Gasoline Sales × Residential Distance and Predicted Child BLLs	59
17	PEA Traffic Contraction Period at RHV and Predicted Child BLLs	64
18	Histogram of Relative Distance of School and Residence to RHV	67
19	Relative Distance of School and Residence to RHV and Predicted Child BLLs	70
20	Relative Distance Terciles of School and Residence to RHV and Predicted Child BLLs	71
21	Main Results on Aviation Gasoline Exposure Risk at Nearest Airports	73
22	Aviation Gasoline Exposure Risk at Nearest Airports	75
A.1	Examples of Residential Near Angle Calculations at Reid-Hillview Airport	94
A.2	Prevailing Wind Direction at Reid-Hillview Airport	95
A.3	Downwind Days in Last 60 and Predicted Child BLLs	97

List of Abbreviations

ACS	American Community Survey
BLLs	Blood Lead Levels
CAA	Clean Air Act
CDC	Centers for Disease Control and Prevention
CDPH	California Department of Public Health
CLPPB	Childhood Lead Poisoning Prevention Branch
E16	San Martin Airport
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FFE	Fuel Flowage Fee
FWC	Flint Water Crisis
LTO	Landing-Takeoff
NUQ	Moffett Federal Airfield
PAO	Palo Alto Airport
Pb	Lead
PEA	Piston Engine Aircraft
RHV	Reid-Hillview Airport
SES	Socioeconomic Status
SJC	Norman Y. Mineta San Jose International Airport
TEL	Tetraethyl-lead
TFMSC	Federal Aviation Administration Traffic Flow Management System Counts
TRI	Toxic Release Inventory

Executive Summary

Background

Lead (Pb) is a naturally occurring and ubiquitous metal, used in human industry since antiquity. Lead emissions persists in the lived environment. Lead ingested or inhaled resides in the human bloodstream for about sixty days, but can persist in human tissue, the brain, and the skeletal system for many decades after an exposure event. Lead has no known biological purpose in the human body.

As noted by Bellinger and Bellinger (2006), because “lead serves no useful purpose in the body, exposure to it – regardless of route – can lead to toxic effects.” Children exposed to lead suffer substantial, long lasting, and possibly irreversible negative health, behavioral, and cognitive outcomes. Importantly, negative cognitive and behavioral effects in lead-exposed children are higher at lower blood lead levels (BLLs), with deleterious effects observable at BLLs in the range of 2 to 3 $\mu\text{g}/\text{dL}$ (Miranda et al., 2007, 2009). On the question of safe exposure, the Centers for Disease Control and Prevention (CDC) states: “No safe blood lead level in children has been identified. Even low levels of lead in blood have been shown to affect IQ, ability to pay attention, and academic achievement.”

Over the last four decades, the BLLs of children in the United States have declined significantly, coincident with a series of policies that expelled lead from paint, plumbing, food cans and automotive gasoline. Most effective was the phase-out of tetraethyl lead (TEL) from automotive gasoline induced by provisions of the Clean Air Act (CAA) of 1970. While TEL is no longer used as an additive in automotive gasoline, it remains a constituent in aviation gasoline used by an estimated 170,000 piston-engine aircraft (PEA) nationwide.

Consumption of lead-formulated aviation gasoline accounts for about half to two thirds of current lead emissions in the United States (Kessler, 2013). In a recently published consensus study on *Options for Reducing Lead Emissions by Piston-Engine Aircraft* by

the National Academies of Sciences, Engineering, and Medicine, the authors note: “While the elimination of lead pollution has been a U.S. public policy goal for decades, the GA [General Aviation] sector continues to be a major source of lead emissions.” (2021, pg. 10-11).

Several studies have linked aviation gasoline use to elevated atmospheric lead levels in the vicinity of airports. The U.S. Environmental Protection Agency (EPA) estimates that four million persons reside, and about six hundred K-12th grade schools are located, within 500 meters of PEA servicing airports (EPA, 2020b). Zahran et al. (2017a) estimate that sixteen million persons – and about three million children – live within a kilometer of such airport facilities. The disposition of aviation gasoline around such airports may be a meaningful source of child lead exposure. To date, two studies have explicitly statistically linked aviation gasoline usage to blood lead levels of children residing in the vicinity of general aviation airports, showing the child BLLs increase in proximity to general aviation airports and increase dose-responsively with the volume of piston-engine aircraft traffic at general aviation airports.

Research Objective

The risk of aviation gasoline exposure for children varies considerably by airport, depending on 1) the volume of piston-engine aircraft traffic at the airport, 2) child residential proximity to the airport, and 3) child residential near angle to airport runways. Reid-Hillview Airport (RHV) is among a subset of airports identified by the EPA as having highest potential to exceed National Ambient Air Quality Standards for lead because of the combustion of leaded aviation gasoline. In this study, a team of data scientists from Mountain Data Group assessed whether the BLLs of sampled children around Reid-Hillview Airport are statistically associated with indicators of aviation-related lead exposure, net of other lead exposure pathways. To accomplish this objective, data were collected from various sources and analyzed using established statistical and econometric methods.

Materials and Methods

California Department of Public Health Data

Permission to analyze blood lead data was granted by agreement with the Childhood Lead Poisoning Prevention Branch (CLPPB) of the California Department of Public Health (CDPH). Restricting to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles of Reid-Hillview Airport, and sampled between January 1st, 2011 and December 31st, 2020, over 17,000 blood lead samples were obtained for statistical analysis.

The main outcome variable of analytic interest is *Blood Lead Level* (BLL) measured in micro-grams per deciliter of blood ($\mu\text{g}/\text{dL}$ units). In extended analyses, BLLs are divided into a set of ordered categories moving in increments of $1.5 \mu\text{g}/\text{dL}$ from 0 to $\geq 4.5 \mu\text{g}/\text{dL}$, the CDPH-defined threshold for service action. Also from CDPH data holdings, five control variables were obtained that are known to be correlated with child BLLs, including: child gender, child age, method of blood draw, sample detection limit, and sample order.

Main Indicators of Exposure Risk

Residential Distance

The Haversine distance from the residential address of a sampled child to Reid-Hillview Airport was calculated. Using distance information on each child as an indicator of exposure risk, we test whether BLLs increase measurably with proximity to Reid-Hillview Airport. Following previous research (Miranda et al., 2011; Zahran et al., 2017a), residential distance is analyzed both continuously and by division into categories of distance: < 0.5 miles, 0.5 to 1 mile, and 1 to 1.5 miles from Reid-Hillview Airport. Over the period of January 1st, 2011 to December 31st, 2020, we observe a total of 1,065 records at < 0.5 miles, 6,472 records at 0.5 to 1 mile, and 9,704 at 1 to 1.5 miles from Reid-Hillview Airport. Insofar as aviation gasoline exposure is a source of risk, and other things held equal, children in the nearest orbit to Reid-Hillview Airport should present with higher BLLs as compared to children in outer orbits.

Residential Near Angle

Airport proximity, by itself, is an imperfect indicator of aviation gasoline exposure risk. The fate and transport of lead emissions depend on the direction of prevailing winds. Insofar as aviation gasoline is an independent source of lead exposure, two children equidistant to the same airport face different risk of elevated blood lead depending on the child's residential near angle to the airport. In this study, each sampled child is assigned a near angle to Reid-Hillview Airport corresponding to the four cardinal directions of North, East, South and West. We observe 5,962 blood lead records residing North of Reid-Hillview Airport, 1,170 records East, 3,495 records South, and 6,614 records West of the airport. We also calculate the number of days that winds drift in the direction of a sampled child's residence from the date of blood draw. Because prevailing winds at Reid-Hillview Airport emanate from the West Northwest, children East of Reid-Hillview Airport should present with higher BLLs, other things held equal.

Piston-Engine Aircraft Traffic

The volume of PEA traffic varies meaningfully between airports and within an airport in time. Therefore, two children residing in the same household but sampled at different moments in a calendar year may present with different BLLs, depending on the coincidence of PEA traffic activity. To capture this channel of risk, we collected data on PEA departures and arrivals from Federal Aviation Administration Traffic Flow Management System Counts (TFMSC). Also, fuel flowage fee (FFE) data were obtained from personnel at the Roads and Airports Department of Santa Clara County. The FFE data track monthly quantities of aviation gasoline (100LL) sold to fixed-base operators at Reid-Hillview Airport from 2011 to 2019. Insofar as aviation gasoline exposure is a source of risk, then the BLLs of sampled children should correlate statistically with measured quantities of PEA traffic and aviation gasoline sales.

Control Variables

Lead-emitting industrial facilities are more common in the vicinity of airports (Zahran et al., 2017a). Children that are proximate to airports are therefore simultaneously proximate to other point source emitters of lead. Failing to account for this spatial coincidence can produce biased estimates of aviation gasoline exposure risk vis-à-vis child BLLs. The EPA's Toxic Release Inventory (TRI) system tracks the industrial management of over 650 listed chemicals that pose harm to humans and the environment. We collected records on all facilities in Santa Clara County with reported on-site releases of lead between 2011 to 2020, and calculated the Haversine distance of every sampled child to each of these TRI facilities operating in the year of blood draw.

Legacy use of lead-based paint remains an exposure risk to children. Exposure to lead-based paint is primarily a problem in older homes. By 1960, use of lead-based paint subsided by more than 90% from peak usage in the 1920s. Still, children in the United States may ingest paint chips or may be exposed to dust from deteriorating or haphazardly removed lead-based paint in homes built in the era before 1960. We collected American Community Survey data on the fraction of homes in a child's neighborhood built before 1960. In analyses that follow, each sampled child in our data is assigned a lead-based paint exposure risk according to the neighborhood of residence and year of blood draw, as captured by the percentage of homes built before 1960.

Studies show that children of low socioeconomic status are at greater risk of presenting with elevated BLLs (Campanella and Mielke, 2008; Zahran et al., 2010). Socioeconomic status proxies for household resources, knowledge about the dangers of, and protective actions taken against lead exposure (Zahran et al., 2017a). In addition to demographic information present in CDPH data, we measured the percentage of adults with a college degree, median home prices, and median household incomes to characterize the socioeconomic status of a child's residential neighborhood. These data were also collected from the American Community Survey.

Statistical Methods

To assess whether child BLLs (measured in units of $\mu\text{g}/\text{dL}$) are statistically associated with indicators of aviation gasoline exposure risk, net of other factors, we deploy a least squares estimator with census block fixed effects, and with bootstrapped standard errors to account for heteroskedasticity and to relax distributional assumptions. To allow for non-linear associations, we use flexible specifications with categorical versions of continuous variables of interest, such as distance to the airport and PEA traffic. In extended analyses, we reconstitute our response variable in ordered categorical terms, defining mutually exclusive BLL categories ranging from 0 to exceedance of the CDPH-defined threshold of action of $\geq 4.5 \mu\text{g}/\text{dL}$. The purpose here is to investigate threshold effects with respect to our main indicators of aviation gasoline exposure risk and to relax the assumption of precisely measured BLLs. Within this framework, we execute a series of Ordered Logit models estimating the odds that a sampled child's BLL exceeds a specified blood lead category as potentially resulting from exposure risk to lead-formulated aviation gasoline.

Main Results

Residential Distance Results

Evidence presented in Table 3 and Figure 9 indicates that children proximate to Reid-Hillview Airport present with systematically higher BLLs, net of other measured sources of lead exposure risk, child characteristics, and neighborhood conditions. This result is compatible with exposure risk to aviation gasoline, and consistent in direction and magnitude with previous studies (Miranda et al., 2011; Zahran et al., 2017a). As shown in Table 3, children within 0.5 miles of Reid-Hillview Airport have BLLs that are about $1/5^{\text{th}}$ of a $\mu\text{g}/\text{dL}$ higher than statistically similar children more distant from Reid-Hillview Airport. This calculated difference is equivalent to about 50% of the estimated surge in child BLLs at the height of the Flint Water Crisis (FWC) of 0.35 to 0.45 $\mu\text{g}/\text{dL}$ over baseline BLLs in Flint (Zahran et al., 2017c). These results are supported by analyses involving models

with residential distance measured continuously and applying various transformations to both distance and child BLLs. As shown in Table 4, across all such models, child BLLs decrease statistically significantly with distance from Reid-Hillview Airport.

Residential Near Angle Results

Evidence presented in Table 5 and Figure 10 indicates that sampled children residing East and downwind of Reid-Hillview Airport have substantively higher BLLs. As compared to sampled children residing West (and predominately upwind) of Reid-Hillview Airport, sampled children residing East (and predominately downwind) of Reid-Hillview, present with BLLs that are 0.4 $\mu\text{g}/\text{dL}$ higher, other things held equal. This estimated margin of difference of 0.4 $\mu\text{g}/\text{dL}$ is approximately equal to the measured difference between children sampled at the peak of the FWC relative to children sampled before the FWC (Zahran et al., 2017c). These results are also supported by ancillary analyses involving the calculation of downwind days, showing that BLLs among sampled children increase significantly in the count of wind days drifting in the direction of a child's residence.

Piston-Engine Aircraft Results

Evidence presented in Table 6 and Figure 11 indicates that child BLLs increase significantly with exposure to piston-engine aircraft operations at Reid-Hillview Airport, net of all other factors. In going from the minimum to the maximum of child PEA traffic exposure, we find that child BLLs increase by 0.163 to 0.387 $\mu\text{g}/\text{dL}$, depending on the presence of control variables. This result holds with the division of PEA traffic into terciles, suggesting that child BLLs increase dose-responsively with PEA traffic. Moreover, as shown in Figure 13, the estimated positive association between child BLLs and PEA traffic is robust to the substitution of PEA traffic for the quantity of aviation gasoline sold at Reid-Hillview Airport, an independent indicator of lead exposure risk.

Extended Results

Blood Lead Threshold Results

Results on BLL threshold outcomes reported in Table 7 and Figure 14 are consistent with linear model results reported in Section 4. All indicators of aviation gasoline exposure risk – residential proximity to Reid-Hillview Airport, residing East and predominately downwind of Reid-Hillview Airport, and exposure to high PEA traffic – meaningfully increase the odds that a sampled child presents with a BLL $\geq 4.5 \mu\text{g}/\text{dL}$ relative to the combined odds of presenting with a lower category of blood lead. Specifically, we estimate that the probability of exceeding $4.5 \mu\text{g}/\text{dL}$ for sampled children in the nearest orbit is 20% and 27% higher than children in outer orbits of 0.5 to 1 mile and 1 to 1.5 miles, respectively. With respect to near angle, the probability of a sampled child residing East (predominantly downwind) of RHV presenting with a BLL $\geq 4.5 \mu\text{g}/\text{dL}$ is about 200% higher than sampled children West of Reid-Hillview Airport (and predominantly upwind). With respect to PEA traffic exposure, children exposed to maximum traffic have an estimated probability of superseding $4.5 \mu\text{g}/\text{dL}$ that is about 29% higher than children sampled in moments of minimum PEA traffic.

PEA Traffic Exposure × Residential Distance Results

The evidence presented in Table 8 and Figure 15 suggests that children residing within 0.5 miles of Reid-Hillview Airport are especially vulnerable to increases in PEA traffic. Children more distant from Reid-Hillview Airport (0.5 to 1.5 miles) experience a modest increase in BLLs of about $1/10^{\text{th}}$ of $\mu\text{g}/\text{dL}$ from an increase in PEA traffic from the minimum to the maximum. By contrast, among sampled children at < 0.5 miles of Reid-Hillview Airport, an increase from the minimum to maximum exposure to PEA traffic is associated with an estimated $0.83 \mu\text{g}/\text{dL}$ increase in BLLs – an effect that is substantively higher than the increase in BLLs caused by water system failures during the FWC. These results are supported by ancillary analyses presented in Figure 16 involving the statistical interaction between distance and aviation gasoline sales at Reid-Hillview Airport.

PEA Traffic Contraction Period Results

As the COVID-19 pandemic gripped the country, state and local governments enacted various restrictions on the behavior of households and firms to limit the spread of the disease. Corresponding with these efforts in Santa Clara County, PEA traffic declined over baseline levels by an estimated 35-45% at Reid-Hillview Airport over the months of February to July of 2020. As shown in Table 10 and Figure 17, children sampled in this PEA traffic contraction period presented with significantly lower BLLs – about 1/4th of a $\mu\text{g}/\text{dL}$ lower – than children sampled outside this contraction window.

School Commuting Results

Knowing where school-aged children reside and assuming that such children attend the nearest grade-serving school, one can compute the distance a child commutes toward or away from Reid-Hillview Airport to attend school. Other things held equal, the evidence presented in Table 11 and Figure 19 indicates that commuting away from Reid-Hillview Airport to attend school is negatively correlated with child BLLs. Sampled children that commute toward Reid-Hillview Airport for school by 1 mile from their place of residence have predicted BLLs that are $0.65 \mu\text{g}/\text{dL}$ higher than sampled children commuting away from Reid-Hillview Airport for school by 1 mile.

Inclusion of All Airports Results

As indicated in Federal Aviation Administration (FAA) data, four other airports located in Santa Clara County service piston-engine aircraft, including Moffett Federal Airfield (NUQ), Palo Alto Airport (PAO), Norman Y. Mineta San Jose International Airport (SJC), and San Martin Airport (E16). Across an ensemble of tests, the results reported in Section 4 and Section 5 pertaining to Reid-Hillview Airport are statistically upheld with the inclusion of children proximate to other airports in Santa Clara County with non-zero piston-engine aircraft activity. Estimated coefficients are similar in direction and magnitude as RHV-specific analyses.

Reduction Scenario

To provide additional quantitative meaning to our results, we conservatively estimate the social benefits of a simulated reduction in PEA traffic from the 50th (observed median) to the 1st percentile (observed minimum). Social benefits are quantified with a standard syllogism in environmental health economics (PEA Traffic → Child BLLs → IQ → Lifetime Earnings) linking lead exposure source to child BLLs to IQ points and to the net present value of future earnings. Leveraging coefficients from our Distance × PEA Traffic test reported in Table 8 and visualized in Figure 15, we estimate a gain of \$11.0 to \$24.9 million in discounted net present value of earnings for the cohort of children ≤ 18 years of age residing within 1.5 miles of Reid-Hillview Airport from a simulated reduction in PEA traffic. Our social benefit estimate is not comprehensive since it reflect gains to a subset of the population (children ≤ 18 years of age), and only one benefit channel (lifetime earnings from expected gains in IQ).

Concluding Remarks

At the height of the Flint Water Crisis, child BLLs surged over pre-crisis levels by an estimated 0.35 to 0.45 $\mu\text{g}/\text{dL}$. Under periods of high piston-engine aircraft traffic, children proximate to Reid-Hillview Airport experience an increase in BLLs excess of what the children of Flint experienced during the FWC. Because negative cognitive and behavioral outcomes in lead-exposed children are higher at lower blood lead levels – the dose-response is non-linear – limiting exposure to lead-formulated aviation gasoline can deliver sizable and lasting social benefits. On the matter of aviation gasoline exposure risk to families and children proximate to general aviation airports, the National Academies of Sciences, Engineering, and Medicine maintains: “Because lead does not appear to exhibit a minimum concentration in blood below which there are no health effects, there is a compelling reason to reduce or eliminate aviation lead emissions.” The ensemble of evidence compiled in this study supports the “compelling” need to limit aviation lead emissions to safeguard the welfare and life chances of at-risk children around Reid-Hillview.

1 Introduction and Background

Lead (Pb) is a naturally occurring and ubiquitous metal. Its physical properties of high malleability, ductility, low melting point, and resistance to corrosion invited widespread usage in human industry since antiquity (Flora et al., 2012). Lead persists in the lived environment because it is non-biodegradable. Lead enters the human body via inhalation or ingestion. The half-life of lead in the human bloodstream is about thirty days (Papanikolaou et al., 2005), but can persist in human tissue, the brain, and the skeletal system for many decades after an exposure event. Lead has no known biological purpose in the human body. The estimated pre-industrial concentration of lead in the human bloodstream is $0.016 \mu\text{g/dL}$, more than 100-fold lower than the typical level observed in children in the United States today (Flegal and Smith, 1992).

1.1 Health and Human Capital Effects of Lead

While knowledge of the toxic effects of lead stretch back millennia, the evidence amassed by modern science indicates that the health and human capital costs of lead exposure in childhood are substantial, long lasting, and possibly irreversible. Numerous studies have linked elevated blood lead levels (BLLs) in children to cognitive and intellectual impairments, poor academic achievement, and higher risk of attention-deficit and hyperactivity disorders. Importantly, estimated marginal effects with respect to negative cognitive and behavioral outcomes in lead-exposed children are higher at lower BLLs (Nigg et al., 2010; Needleman and Gatsonis, 1990; Mielke and Zahran, 2012; Lanphear et al., 2005; Dietrich et al., 2001; Canfield et al., 2003).

Studies have also shown that lead exposure in childhood causes abnormal psychology and behavior in adolescence (Graff Zivin and Neidell, 2013). Curci and Masera (2018) find that childhood lead exposure results in higher incidents of juvenile delinquency in adolescence. Reyes (2015) links childhood lead exposure to “an unfolding series of adverse behavioral outcomes” that stretch into adolescence and early adulthood.

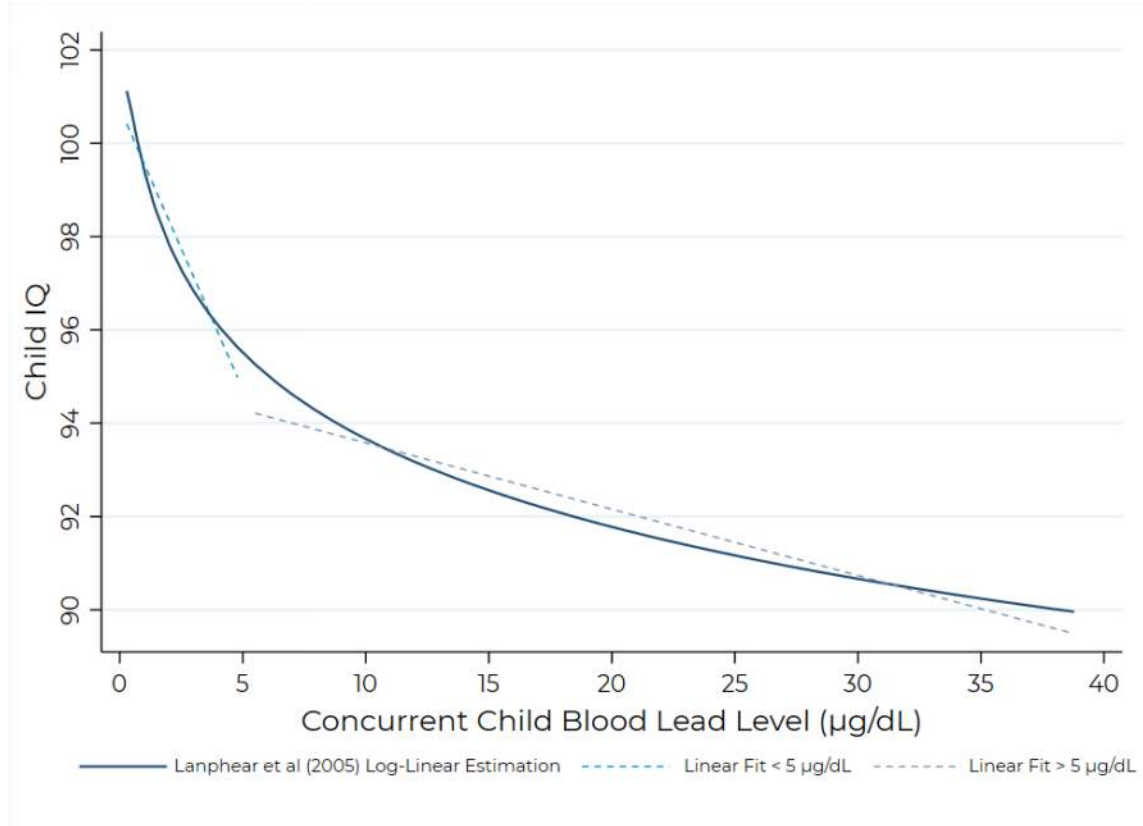
Childhood lead exposure has also been linked to adult-onset physical health problems, including hypertensive disorders, the malfunction of renal and cardiovascular systems, and all-cause and motor neuron disease mortality (Needleman and Gatsonis, 1990; Dietrich et al., 2001; Canfield et al., 2003; Lanphear et al., 2005; Nigg et al., 2010; Mielke and Zahran, 2012; Zahran et al., 2017b). Brain imaging studies find that adults exposed to lead as children present with volumetric loss in brain regions that govern judgment, decision-making and mood regulation (Cecil et al., 2008; Cecil, 2011), cognitive and socio-emotional traits that economists have linked to long-term life outcomes (Cunha et al., 2010; Almond and Currie, 2011; Doyle et al., 2013). In a recent study on the lasting consequences of child lead exposure, Reuben et al. (2017) find that adults in New Zealand exposed to lead in childhood had measurable reductions in IQ and occupational status in midlife, with these negative effects appearing to amplify over the life-course.

1.2 No Safe Blood Lead Level in Children

As noted by Bellinger and Bellinger (2006), because “lead serves no useful purpose in the body, exposure to it – regardless of route – can lead to toxic effects.” Indeed, numerous studies (Needleman, 2004; Lanphear et al., 2005; Desrochers-Couture et al., 2018) find that the dose-response relationship between child cognitive ability and blood lead is non-linear, with the loss in ability proportionately steeper at lower BLLs (see Figure 1). In an analysis of about 5,000 children ages 6 to 16, for example, Lanphear et al. (2000) report that performance on Wide Range Achievement Tests in arithmetic, reading, verbal comprehension, and perceptual reasoning decline discernibly at the lowest measurable levels of blood lead. As compared to children with negligible BLLs of $\leq 1 \mu\text{g}/\text{dL}$, average performance for children at 2 to 3 $\mu\text{g}/\text{dL}$ was lower by 4% to 6% across cognitive tests, with observable differences persisting in the presence of statistical controls.

Despite scientific evidence of decelerating dose-response curves with measurable deleterious effects in children at very low BLLs (Lanphear et al., 2005), the current reference value of the U.S. Centers for Disease Control and Prevention (CDC) of 5 $\mu\text{g}/\text{dL}$ is still rou-

Figure 1: Non-Linear IQ Response to Concurrent Child Blood Lead Level



Note: The data are from Lanphear et al. (2005) Figure 4, based on an international pooled analysis of low-level environmental lead exposure and children's intellectual function.

tinely and incorrectly used as a threshold for concern. The CDC is explicit on the statistical, not medical or epidemiological, meaning of this reference value. The threshold defines children with abnormally high BLLs – children that present with BLLs in the highest 2.5% of children tested.

Given the statistical nature of this threshold, the CDC reference value has undergone numerous revisions in time ¹ as child BLLs have declined and evidence amassed for harm at lower BLLs: 1971: 40 $\mu\text{g}/\text{dL}$; 1975: 35 $\mu\text{g}/\text{dL}$; 1985: 25 $\mu\text{g}/\text{dL}$; 1991: 10 $\mu\text{g}/\text{dL}$; 2012: 5 $\mu\text{g}/\text{dL}$. According to Bellinger and Bellinger (2006), each revision has been followed by a series of studies to determine “whether the new level used to define *normal* provided children with an adequate margin of safety.” The CDC summarizes the margin of safety question: “No safe blood lead level in children has been identified. Even low levels of lead in blood have been shown to affect IQ, ability to pay attention, and academic achievement.”

1.3 Tetraethyl Lead (TEL) in Aviation Gasoline

It might be tempting to assume that lead exposure in the United States is a rear-view or legacy problem. BLLs in children of the United States have declined substantially over the last four decades, coincident with a series of regulatory actions that expelled lead from paint, plumbing, food cans and automotive gasoline. Most effective among these interventions was the phase-out of tetraethyl lead (TEL) from automotive gasoline induced by provisions of the Clean Air Act (CAA) of 1970.²

¹Recent research indicates “The 97.5th percentile BLL based on NHANES 2011 to 2014 results in children 1 to 5 years is 3.48 $\mu\text{g}/\text{dL}$, 30 percent lower than the current reference value of 5 $\mu\text{g}/\text{dL}$ (Caldwell et al., 2017)

²Under the CAA, the removal of lead from gasoline launched in 1975. Over the next two decades, lead entering the environment from automobile emissions declined precipitously. Though the policy was enforced at the national level, the incentive structure for compliance, and the characteristics of the petroleum and automobile industries, produced significant variation in lead emissions across states between 1975 and 1990. Leveraging this between-state variation in phase-out efforts, Keyes and Zahran (2021) estimate that child BLLs decreased by about 40% for every g/gal reduction in TEL concentrations over this phase-out period.

While TEL is no longer used as an additive in automotive gasoline, it remains a constituent in aviation gasoline used by an estimated 170,000 piston-engine aircraft (PEA). These aircraft constitute about 70% of the U.S. air fleet. The rationale for continued use of TEL in aviation gasoline is aircraft safety. TEL is one of the best-known additives for mitigating the risk of *knocking* that can lead to sudden engine failure (Ells, 2006). The high intensity at which aircraft engines operate explains why TEL remains an additive in aviation gasoline even though it has been effectively banned from other transportation fuels. While Swift Fuels, LLC has produced an effective substitute to lead-formulated aviation gasoline covering an estimated two-thirds of aircraft in the general aviation fleet, more investment in airport infrastructure is necessary to enable transition.

Tens of millions of gallons of TEL-formulated gasoline are consumed by piston-engine aircraft (PEA) annually. The consequent emissions from this consumption accounts for about half to two thirds of current lead emissions in the United States (Kessler, 2013). In a recently published consensus study on *Options for Reducing Lead Emissions by Piston-Engine Aircraft* by the National Academies of Sciences, Engineering, and Medicine, the authors note: “While the elimination of lead pollution has been a U.S. public policy goal for decades, the GA [General Aviation] sector continues to be a major source of lead emissions” (2021, pg. 10-11).

1.4 Deposition of Lead from Aviation Gasoline

While the quantity of aviation gasoline consumed by PEA is historically low by comparison to the consumption of lead-formulated automotive gasoline, the emissions from piston-engine aircraft are highly spatially concentrated. Lead from aviation gasoline deposits near airports. The U.S. Environmental Protection Agency (EPA) estimates that around four million persons reside within 500 meters of PEA-servicing airports, including approximately six hundred K-12th grade schools (EPA, 2020b). Zahran et al. (2017a) estimate that sixteen million persons – and about three million children – live within a kilometer of such airport facilities. The disposition of aviation gasoline around such air-

ports may be a meaningful source of child lead exposure.

Several studies have linked aviation gasoline use to elevated atmospheric lead levels in the vicinity of airports.³ On the basis of such studies, various public interest organizations have petitioned the EPA to find endangerment from aviation gasoline emissions. While the EPA recognizes that there is no known safe level of lead exposure, it has cautioned that additional scientific research is needed “to differentiate aircraft lead emissions from other sources of ambient air lead” (EPA, 2010) that may cause elevated BLLs in nearby children.

1.5 Lead from Aviation Gasoline and Child BLLs

To date, only two studies have explicitly linked aviation gasoline usage to blood lead levels of children residing in the vicinity of general aviation airports. In a study involving over 125,000 BLL observations across six counties and 66 airports in North Carolina, Miranda et al. (2011) reported a striking correlation between child BLLs and airport proximity. “The estimated effect on blood lead levels exhibited a monotonically decreasing dose-response pattern” with children at 500 and 1,000 meters of an airport at greatest risk of elevated BLLs. Reported results statistically controlled for the age of housing stock, neighborhood socioeconomic conditions, and seasonality.

In a study involving over 1 million children and 448 airports in Michigan, Zahran et al. (2017a) found that child BLLs: 1) increased dose-responsively in proximity to airports, 2) declined measurably among children sampled in the months after the tragic events of 9-11, resulting from an exogenous reduction in PEA traffic, 3) increased dose-responsively in the flow of piston-engine aircraft traffic across a subset of airports, and 4) increased in the percent of prevailing wind days drifting in the direction of a child’s residence.

With a standard syllogism linking BLLs to IQ and IQ to lifetime earnings, Zahran et al.

³See recent findings from McCumber and Strevett (2017); Altuntas (2020); Matthews and Pandey (2020) along with previous research from Piazza (1999); Callahan (2010); Carr et al. (2011).

(2017a) estimate a 5-year cohort benefit from a hypothetical reduction in PEA traffic from the 50th to the 10th percentile at \$126 million for Michigan and \$4.9 billion nationwide. Using a Community Multi-Scale Air Quality model, Wolfe et al. (2016) arrive at a similar estimate, reporting a 1-year cohort cost of \$1.06 billion in economic damages from exposure to elevated atmospheric lead at general aviation airports nationwide. Calculations by Zahran et al. (2017a) and Wolfe et al. (2016) understate the gains available to society from reduced use of leaded aviation gasoline because the negative impacts of lead operate through many more channels than compromised cognitive abilities.

1.6 Studying Exposure Risk at Reid-Hillview Airport

The risk of aviation gasoline exposure for children varies considerably by airport, depending on the volume of PEA traffic, as well as neighborhood proximity and near angle to airport runways. Reid-Hillview (RHV) is among seventeen airports identified by the U.S. EPA with the highest potential of approaching or exceeding National Ambient Air Quality Standards for lead due to the local combustion of leaded aviation gasoline.

In this study, data scientists at Mountain Data Group assess whether child exposure to lead from aviation-related sources in Santa Clara County is statistically associated with the BLLs of sampled children, independent of other lead exposure pathways. Specifically, statistical relationships between the BLLs of sampled children and the following indicators of aviation gasoline exposure risk are assessed: 1) child residential proximity to Reid-Hillview Airport, 2) variation in piston aircraft operations at Reid-Hillview Airport, and 3) child residential near angle to Reid-Hillview Airport.

Materials and methods to conduct statistical assessments are detailed below. Section 2 describes the data sources leveraged in this study, as well as the various measurement decisions made to estimate exposure risk to lead-formulated aviation gasoline. Section 3 describes the logic of statistical strategies used to assess whether indicators of aviation gasoline exposure risk are independently correlated with the BLLs of sampled children.

Section 4 presents main statistical results, and Section 5 presents statistical findings from various extension and robustness tests. Section 6 considers results in the context of a simulation involving a reduction in piston-engine aircraft operations at Reid-Hillview Airport and Section 7 concludes the study with a recapitulation of key results.

2 Data and Measurement

2.1 Childhood Lead Poisoning Prevention Data

Permission to analyze blood lead was granted by agreement with the Childhood Lead Poisoning Prevention Branch (CLPPB) of the California Department of Public Health (CDPH). All blood lead results from sampled children in California are reported to CDPH. In California, children in publicly supported programs (such as Medi-Cal and WIC) are mandated to be tested at 1 and 2 years with catch-up testing up to 6 years of age. Children not in publicly supported programs are mandated to be asked by a health care provider: “Does your child live in, or spend a lot of time in, a place built before 1978 that has peeling or chipped paint or that has been recently renovated?” to determine whether the child should be tested. Providers also test for lead poisoning if a change in circumstance has placed a child at risk of lead exposure. Laboratories and health providers submit HL7 formatted blood lead test information to WEBCOLLECT – a web-based data management platform that centralizes blood lead data on children statewide.

HL7 submitted data pass through successive quality checks, and deposit in the Response and Surveillance System for Childhood Lead Exposures (RASSCLE II) database. Tables in the RASSCLE II database contain demographic and clinical information on a sampled person, including residential address, date of birth, sex/gender, clinical information on the date and method of blood draw, and the laboratory performing analysis on blood samples. Some children are sampled repeatedly in the first few years of life.

The RASSCLE II database was queried for records with: 1) an indication of residence in Santa Clara County, 2) a date of blood draw occurring within the last 10 years, 3) a date of birth for the sampled person, and 4) a reported blood lead value. Candidate records extracted from RASSCLE II were interrogated for anomalies and completeness. Unprocessed HL7 records not appearing in RASSCLE II were also examined for inclusion.

RASSCLE II and HL7 Records with indication of a residential address were independently

geo-coded. Address records were matched to latitude and longitude coordinates. This process enabled the assignment of a unique geographic identifier (FIPS), defined by the U.S. Census Bureau. Between processed RASSCLE II and unprocessed HL7 files, and restricting to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles of Reid-Hillview Airport, and observed from January 1st, 2011 to December 31st, 2020, we arrived at 17,241 blood lead sample observations amenable to statistical analysis.

2.1.1 Child Blood Lead Data

The main response or outcome variable of analytic interest is *Blood Lead Level* (BLL) measured in micro-grams per deciliter of blood ($\mu\text{g}/\text{dL}$ units). Restricting to children ≤ 18 years of age at the moment of blood sample, residing < 1.5 miles of Reid-Hillview, and observed from January 1st, 2011 to December 31st, 2020, the unconditional mean BLL of sampled children was $1.83 \mu\text{g}/\text{dL}$. About 1.7% of sampled children present with BLLs in excess of $4.5 \mu\text{g}/\text{dL}$, the CLPPB-defined threshold for action.

Five control variables from RASSCLE II/HL7 known to be correlated with child BLLs were collected from CDPH data, including: child gender, child age, method of blood draw, sample detection limit, and sample order. *Gender* is measured as 1 = female; child *age* is measured in years (ranging from 0 to 18); the *method of blood draw* = 1 if capillary, and 0 = otherwise; sample *detection limit* is measured as 1 = if the reported BLL is at or below the limit of quantification, and 0 = otherwise; and *sample order* which codes the count of blood samples (0=singleton observation, 1,...,n = repeated n times).

2.2 Aviation Gasoline Exposure Risk Data

2.2.1 Residential Distance

Following others (Miranda et al., 2011; Zahran et al., 2017a), we calculate the distance from the residential address of a sampled child to Reid-Hillview Airport. Using distance information on each child as an indicator of exposure risk, we test whether the BLLs of sampled children increase measurably with proximity to Reid-Hillview Airport.

Over the Landing-Takeoff (LTO) cycle, studies find that the bulk of aircraft emissions are released during departure phases of run-up, takeoff, and climb-out (Song and Shon, 2012; Feinberg et al., 2016; Mazaheri et al., 2011). According to Carr et al. (2011), total fuel consumed by piston aircraft in departure phases of the LTO cycle is estimated at 82% for twin-engine aircraft and 85% for single-engine aircraft. About 80% of lead emissions are released during departure phases of the LTO cycle (Carr et al., 2011).

Given that the bulk of lead emissions are released during departure phases of the LTO cycle, we capture child proximity by calculating the Haversine distance⁴ from the child's residence at the date of blood draw to the northwest tip of Reid-Hillview Airport (longitude and latitude point coordinates -121.8230194, 37.3362252). In addition to measuring distance continuously, residential distance is also divided into three even categories: < 0.5 miles, 0.5 to 1 mile, and 1 to 1.5 miles from Reid-Hillview Airport⁵.

⁴The haversine of the central angle, which is d over the r , is calculated by: $\left(\frac{d}{r}\right) = \text{haversine}(\Phi_2 - \Phi_1) + \cos(\Phi_1)\cos(\Phi_2)\text{haversine}(\lambda_2 - \lambda_1)$, where r is the radius of earth(6,371 km), d is the distance between a child's residence and Reid-Hillview Airport, ϕ_1, ϕ_2 is latitude and λ_1, λ_2 is longitude of the child's residence and Reid-Hillview, respectively. We solve for d by the inverse sine function, getting: $d = rhav^{-1}(h) = 2rsin^{-1}(\sqrt{h})$.

⁵Our inner orbit of exposure risk at < 0.5 miles conforms to previous research. Recall, Miranda et al. (2011) find that children at 500m to 1km from a general aviation airport in North Carolina are at highest at-risk of presenting with elevated BLLs. Zahran et al. (2017a) find that sampled children within 1km of 448 airports in Michigan are at greatest risk. The EPA (U.S. Environmental Protection Agency, 2020) maintains that children within 500m of PEA-servicing airports are at highest risk of exposure to aviation-related atmospheric lead. Our inner distance of < 0.5 miles sits between the consensus range of exposure risk at 500m to 1km.

Figure 2 shows the spatial distribution of blood lead samples by distance categories. Over the period of January 1st, 2011 to December 31st, 2020, we observe a total of 1,065 records at < 0.5 miles, 6,472 records at 0.5 to 1 mile, and 9,704 at 1 to 1.5 miles from Reid-Hillview Airport. Insofar as aviation gasoline exposure is a source of risk, sampled children in the nearest orbit to Reid-Hillview Airport should present with higher BLLs as compared to sampled children in outer orbits.

2.2.2 Residential Near Angle

Airport proximity, by itself, is an imperfect measure of aviation gasoline exposure risk. The fate and transport of lead emissions depend on the direction of prevailing winds that vary in and across airport facilities. Insofar as aviation gasoline is an independent source of lead exposure, two children equidistant to the same airport face different risk of elevated blood lead depending on the child's residential near angle to the airport.

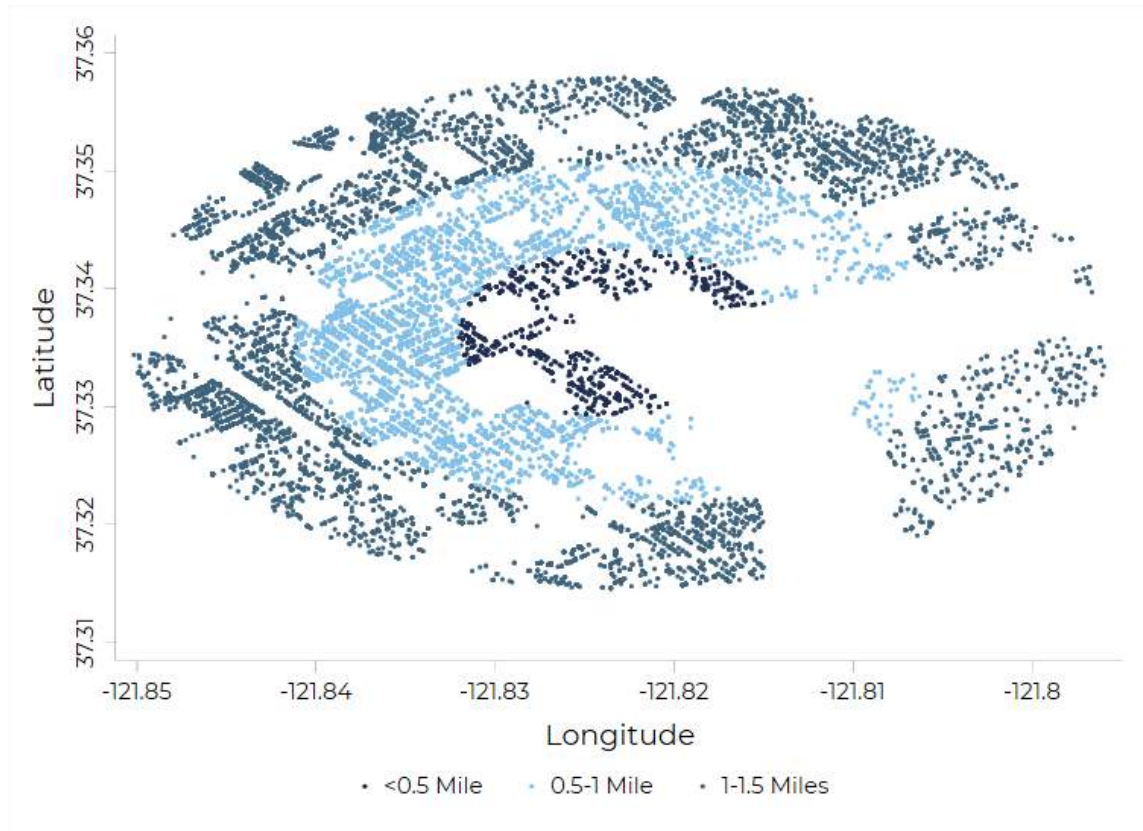
A near angle group was assigned to each address by calculating the compass bearing (degrees) between a child's residential location and Reid-Hillview Airport.⁶ We define near angle groups by the four cardinal directions: North (*N*), East (*E*), South (*S*) and West (*W*). For a BLL sample from child *i* in time *t*, with range of possible compass bearings $b_{it} \in [0, 360)$, we assign near angle group a_{it} as:

$$a_{it} = \begin{cases} E, & \text{if } b_{it} \in [45^\circ, 135^\circ), \\ S, & \text{if } b_{it} \in [135^\circ, 225^\circ), \\ W, & \text{if } b_{it} \in [225^\circ, 315^\circ), \\ N, & \text{otherwise.} \end{cases} \quad (1)$$

Figure 3 shows the spatial distribution of BLL samples over our observation period by near angle groups. We observe 5,962 records residing North of Reid-Hillview Airport, 1,170 records East, 3,495 records South, and 6,614 records West of the airport. As

⁶See Appendix Figure A.1 for example calculations.

Figure 2: BLL Samples by Distance Categories to Reid-Hillview Airport



Note: Distance is calculated as the Haversine distance to North tip of runway at Reid-Hillview Airport, (-121.823, 37.336). BLL samples are restricted to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles of Reid-Hillview Airport, and observed from 1/1/2011 to 12/31/2020. Over the observation period, we observe a total of 1,065 records at < 0.5 miles, 6,472 records at 0.5 to 1 mile, and 9,704 at 1 to 1.5 miles from Reid-Hillview Airport. On recommendation of scientific staff from (CLPPB), three sample locations have been suppressed to protect the anonymity of sampled children.

shown in Appendix Figure A.2, prevailing winds at Reid-Hillview Airport emanate from the West and Northwest. Insofar as aviation gasoline exposure is a source of risk, children East of Reid-Hillview Airport should present with higher BLLs.

In addition to residential near angle, we collected prevailing wind direction data from ©Dark Sky. Daily weather data include average daily wind bearing (degrees) and were collected at Reid-Hillveiw Airport from 2011 to 2020. Prevailing wind bearing was assigned a near angle group as in Equation 1. For a given day, an address is defined as downwind if the assigned near angle groups of the wind and address are equal. Because the half-life of lead in the bloodstream is estimated at around 30 days (Lidsky and Schneider, 2003), we calculate the number of days in the last 60 (from date of blood draw) that a child is downwind from Reid-Hillview Airport. This measurement decision assumes that children have continuity of residence for 60 days.

2.2.3 Piston-Engine Aircraft Traffic and Aviation Gasoline Sales

The volume of PEA traffic varies meaningfully between airports and within an airport in time. Therefore, two children residing in the same household but sampled at different moments in a calendar year may present with different BLLs, depending on the coincidence of PEA traffic. To capture this channel of risk, we collected data on PEA departures and arrivals from Federal Aviation Administration Traffic Flow Management System Counts (TFMSC) .

Daily piston-engine aircraft data were available for Reid-Hillview Airport and all other operational PEA-servicing airports in Santa Clara County, including Palo Alto Airport (PAO), Moffett Federal Airfield (NUQ), San Martin Airport (E16), and Norman Y. Mineta San Jose International Airport (SJC).⁷ Because the half-life for lead in blood is about 30 days (Lidsky and Schneider, 2003), we back calculated a rolling average of PEA operations over

⁷General aviation count data was also available for RHV, SJC, and PAO in the TFMS system, but departure and arrival information was not distinguishable by physical class (i.e., piston, turbine, or jet).

Figure 3: BLL Samples by Residential Near Angle to Reid-Hillview Airport

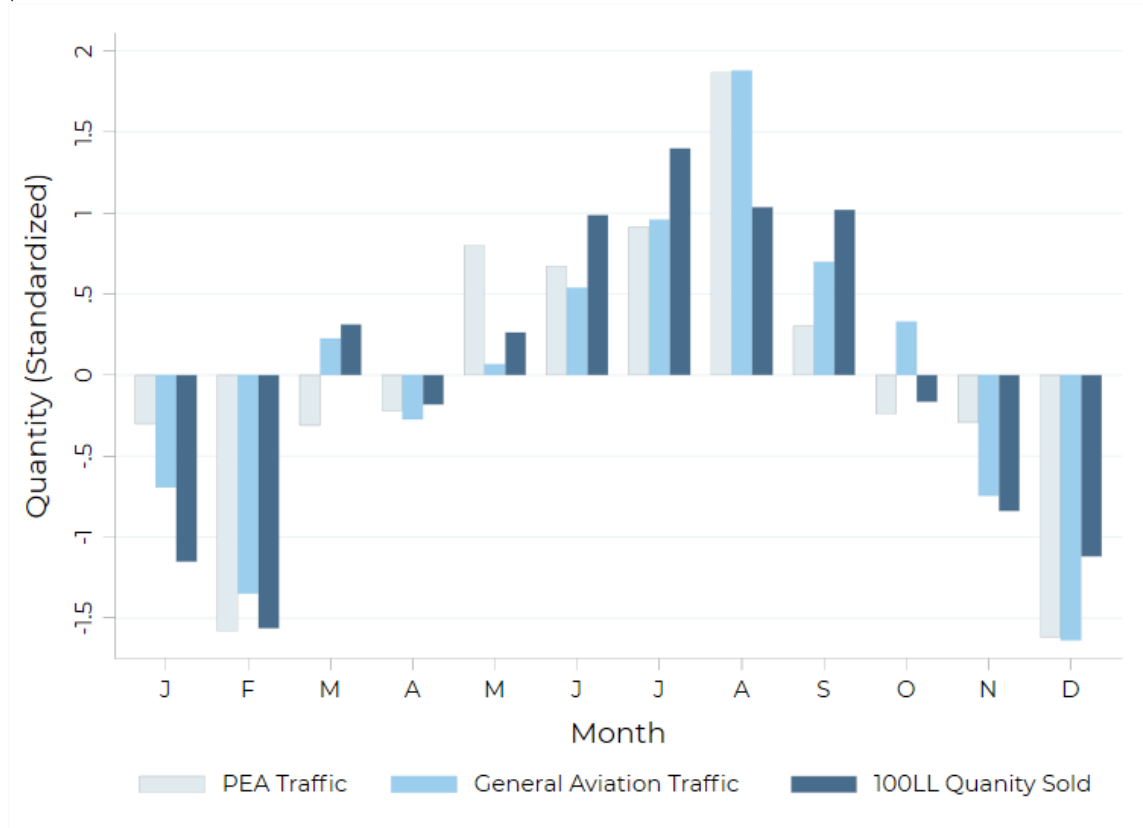


Note: Near angle groups assigned using Equation 1 and relative to Reid-Hillview Airport. BLL samples are restricted to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles of Reid-Hillview, and observed from 1/1/2011 to 12/31/2020. Over the observation period, We observe 5,962 records residing North of Reid-Hillview, 1,170 records East, 3,495 records South, and 6,614 records West of Reid-Hillview Airport. On recommendation of scientific staff from (CLPPB), three sample locations have been suppressed to protect the anonymity of sampled children.

60 days from the date of a child's blood draw. With the date of blood draw linked to the quantity of PEA traffic, one can test whether child BLLs are dose-responsive with the volume of PEA traffic. Our measurement of PEA traffic exposure assumes that children have continuity of residence for 60 days.

Also, fuel flowage fee (FFE) data were obtained from personnel at the Roads and Airports Department of Santa Clara County. The FFE data track monthly quantities of aviation gasoline (100LL) sold to fixed-base operators at Reid-Hillview Airport from 2011 to 2019. Each child is matched to the two-month rolling average of quantities of 100LL sold from date of blood draw. As with PEA traffic, we test whether child BLLs are dose-responsive with aviation gasoline sales at Reid-Hillview Airport. Figure 4 shows high statistical agreement between quantities of 100LL sold and Federal Aviation Administration (FAA) traffic data by month at Reid-Hillview Airport.

Figure 4: Monthly Variation in Quantity of FAA Traffic & 100LL Sold at Reid-Hillview Airport



Note: Because aircraft traffic and gallons of 100LL sold are measured differently, we use standardization by z-score to resolve unit incommensurability. The z-score is calculated by taking the observed value for a given month minus the series mean over the series standard deviation. Data from 1/1/2011-12/31/2020 for general aviation traffic and piston-engine aircraft traffic (arrivals and departures). Gallons of 100LL sold to fixed-base operators at Reid-Hillview Airport are from 1/2011 till 12/2019.

Under Section 313 of the Emergency Planning and Community Right to Know Act, firms that release, transfer, or dispose of listed chemicals are required to submit annual reports to the EPA. Firms that exceed thresholds for listed chemicals must report to the EPA under the TRI system, detailing quantities of toxins used. Default thresholds for both private and federal facilities are 25,000lbs for manufacturing and processing activities, and 10,000lbs for toxic chemicals otherwise used. In 2001, the EPA determined that lower reporting thresholds for lead and lead compounds were warranted because lead persists in the environment, posing substantial health risk to human populations. The reporting threshold for lead was lowered to 100lbs across all uses of the toxicant (Zahran et al., 2014).

We collected records on all facilities in Santa Clara County with reported on-site releases of lead between 2011 to 2020. Following Zahran et al. (2017a), with the location of each facility and the year of reported release event, we counted the number of lead-emitting TRI facilities ≤ 2 miles of a child's residence in the corresponding year of blood draw. All results pertaining to the assessment of statistical relationships of child BLLs and indicators of aviation gasoline exposure risk control for the presence of this alternative source of lead exposure. Figure 5 illustrates the measurement logic, showing the distribution of unique TRI facilities countywide and zooming to the hypothetical residential location of a sampled child.

2.3.2 Lead-Based Paint Risk

Legacy use of lead-based paint remains an exposure risk to children. Exposure to lead-based paint is primarily a problem in older homes. Figure 6 traces lead use in the United States over the 20th century by two major sources, namely lead in paint and lead in automotive gasoline. By 1960, the use of lead-based paint subsided over 90% from peak usage in the 1920s. Nonetheless, children in the United States may consume lead directly or may be exposed to leaded dust associated with deteriorating or haphazardly removed lead-based paint in homes from this era (Rabito et al., 2007; Farfel et al., 2003,

2005).

Moreover, in Michigan, Zahran et al. (2017a) report that the percentage of homes built in the era of widespread lead-based paint usage were almost twice as high in neighborhoods proximate to airports as compared to neighborhoods more distant from airports. In other words, children most at-risk to aviation gasoline exposure simultaneously face higher lead-based paint exposure risk.

To account for this potential confounding factor, we collected American Community Survey (ACS) data from the U.S. Census Bureau on the fraction of homes in a neighborhood (census tract) built before 1960. In analyses that follow, each child in our analytic set is assigned a lead-based paint exposure risk according to the neighborhood of residence and year of blood draw, as captured by the percentage of homes built before 1960.⁸ Figure 7 shows the spatial distribution of the percentage of housing stock built before 1960 at the census tract scale in Santa Clara County as of 2019.

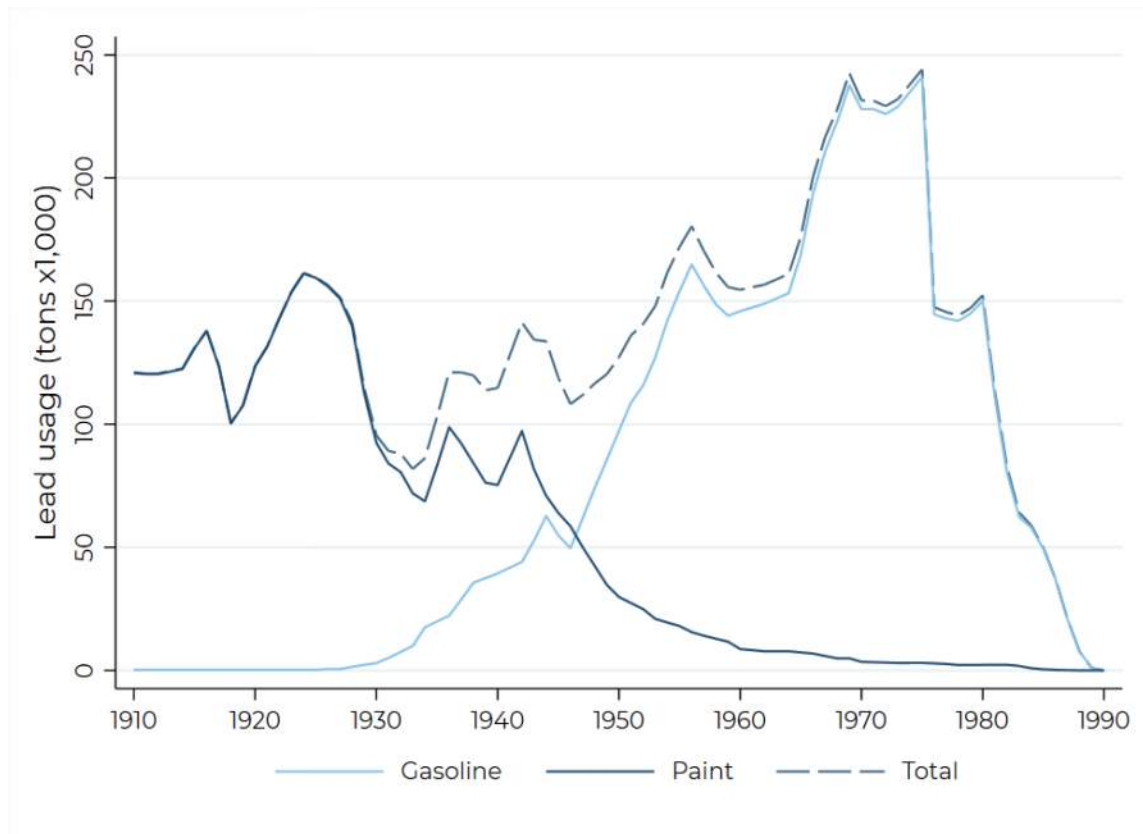
2.3.3 Neighborhood Socioeconomic Status

Studies show that children of low socioeconomic status are at greater risk of presenting with elevated BLLs (Campanella and Mielke, 2008; Zahran et al., 2010). Socioeconomic status proxies for resource access, knowledge about the dangers of, and protective actions taken against lead exposure (Zahran et al., 2017a).

In addition to the use of socio-demographic information present in RASSCLE II/HL7 data (described in Section 2.1.1), we measured the percentage of adults with a college degree, median home prices, and median household incomes to characterize the socioe-

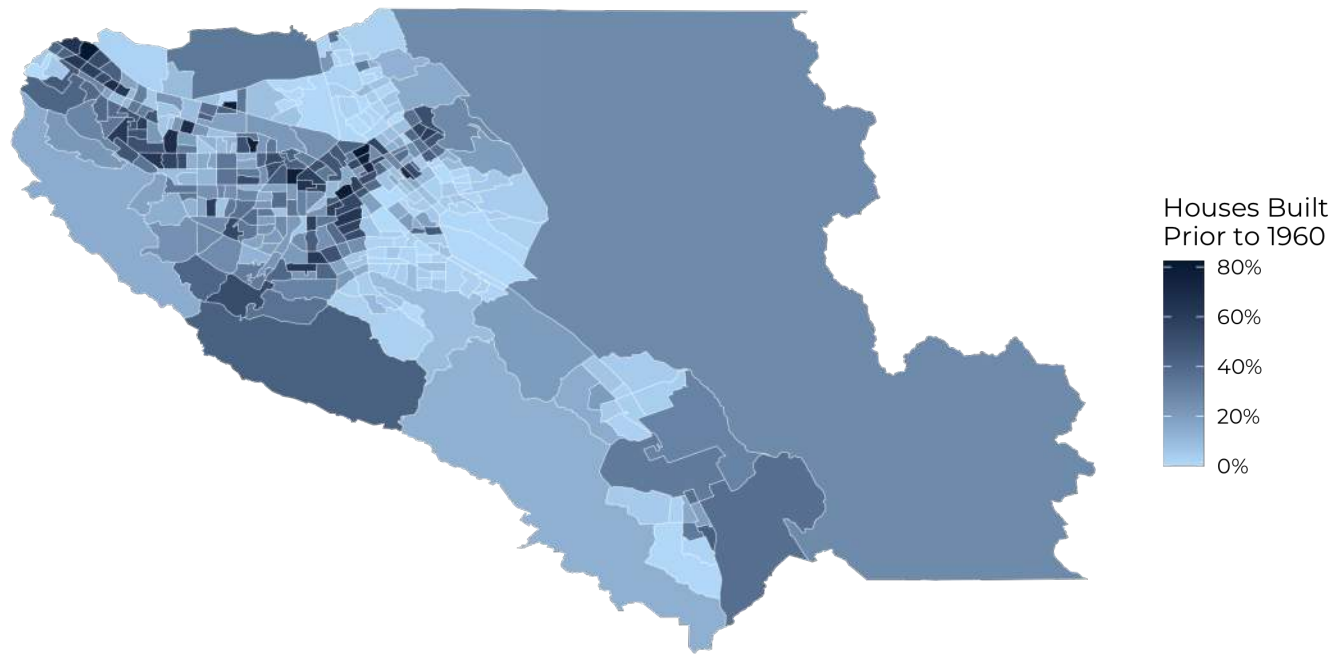
⁸This measurement strategy capitalizes on the fact that the age of homes within a neighborhood (or census tract) are more alike than the age of homes across neighborhoods. We also considered a more involved strategy of linking RASSCLE II/HL7 residential information on a sampled child to the same residential address in Santa Clara County Assessor files, where the age of a home is typically indicated. This effort produced intolerably high listwise deletion from imperfect matching across files.

Figure 6: Lead Use (in tons × 1,000) in the United States over 20th Century by Major Source



Note: Estimates of the legacy use of lead-based paint and lead in automotive gasoline in tonnages are from Laidlaw and Filippelli (2008).

Figure 7: Lead-Based Paint Exposure Risk by Neighborhood in Santa Clara County

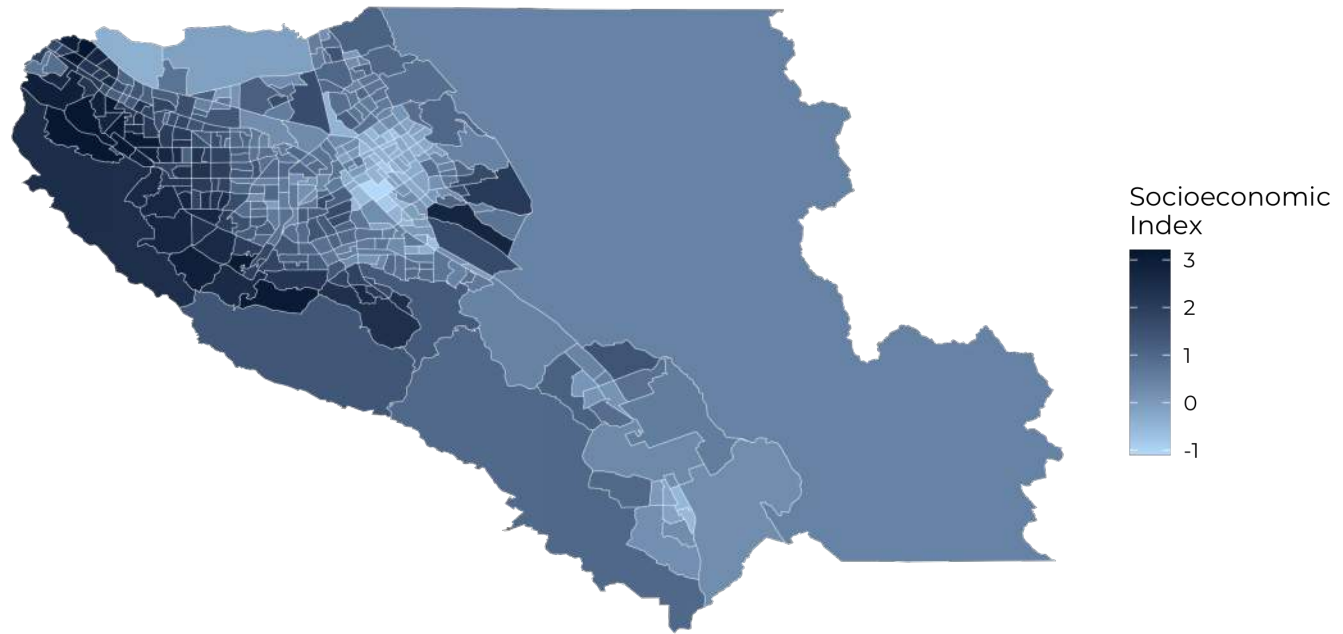


Note: The data displaying the percentage of housing stock in a census tract built prior to 1960 are from the U.S. Census Bureau ACS for the observation year of 2019.

conomic status of a child's neighborhood (i.e., census tract). These data were collected from the American Community Survey. Given the very high correlation across these variables, we distilled the data to a single Socioeconomic Index value for each neighborhood in Santa Clara County by year and matched to each child's residential location and year of blood draw. The index was computed by averaging standardized scores across indicators of neighborhood socioeconomic status. Figure 8 shows the spatial distribution of the neighborhood socioeconomic status index across Santa Clara County as of 2019.

In the next section we detail the logic of statistical strategies used to assess whether indicators of aviation gasoline exposure risk are independently correlated with the BLLs of sampled children. Accompanying the description of each statistical strategy is a stated expectation on the behavior of estimated coefficients corresponding to each indicator of aviation gasoline exposure, net of other factors.

Figure 8: Socioeconomic Status Index by Neighborhood in Santa Clara County



Notes: The neighborhood socioeconomic index was calculated by taking the average of standardized scores across the three variables of the percentage of adults with a college degree, median home prices, and median household incomes. Displayed data are from the U.S. Census Bureau American Community Survey for the observation year of 2019. Darker colors reflect higher socioeconomic status.

3 Empirical Methods

3.1 Main Effects

To assess whether the BLLs of sampled children are statistically associated with indicators of aviation gasoline exposure risk we deploy a linear least squares estimator with census block fixed effects, accounting for heteroskedasticity and relaxing distributional assumptions with bootstrapped standard errors.

The outcome of interest is child BLL, measured as a continuous variable in $\mu\text{g/dL}$. For sampled child i in neighborhood block j at time t , we estimate the responsiveness of child blood lead Y_{ijt} to indicators of aviation gasoline exposure risk with the following linear model:

$$\begin{aligned} Y_{ijt} = & \beta_0 + \beta_1 D_{it}^n + \beta_2 D_{it}^f + \beta_3 T_{it} + \beta_4 W_{it}^e + \beta_5 W_{it}^s + \beta_6 W_{it}^w \\ & + \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} + \Gamma_6 L_{it} \\ & + \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 I_{jt} + \lambda_4 Q_{it} + \gamma_j + \varepsilon_{ijt} \quad (2) \end{aligned}$$

Knowing that relationships of interest are possibly non-linear, we use a flexible specification where distance D is measured as a series of dichotomous variables, where $D_{it}^n = 1$ if child i in time t resides 0.5-1 miles from Reid-Hillview Airport, 0 = otherwise, and $D_{it}^f = 1$ if child i in time t resides 1-1.5 miles from Reid-Hillview Airport, and 0 otherwise. Children most proximate to Reid-Hillview Airport (< 0.5 miles) constitute the reference distance. The flow of lead emitted from the aircraft traffic T_{it} is the count of PEA operations (measured in percentile terms) in the last 60 days relative to the draw date t of child i . Insofar as lead emitted from PEA traffic is not distributed uniformly over the distance gradient, but is a function of the prevailing wind direction, we include a series of dummy variables W for the location of child i in time t relative to the airport, with North being the reference direction, and: $W_{it}^e = 1$ if a child resides East of RHV, 0 = otherwise, $W_{it}^s = 1$ if a child resides South of RHV, 0 = otherwise, and $W_{it}^w = 1$ if a child resides West of RHV, 0 = otherwise.

A series of variables are included to control for the timing, method, quantification limit, and order of blood draw, where C_{it} is whether or not the method of blood draw is capillary, L_{it} is whether the measured BLL is at or below the limit of test detection, Z_{it} is the year and quarter of the blood draw, and S_i is the order of sample for children sampled repeatedly.⁹ Child demographic characteristics include the child's age A_{it} measured in years, and an indicator for whether the child is female G_i .

A suite of controls are included to account for confounding sources of lead exposure and neighborhood socioeconomic status corresponding to the residential location of a sampled child and date of blood draw. F_{it} is the count of nearby lead-emitting toxic release inventory facilities ≤ 2 miles of a child's residence, and H_{jt} is the percent of homes built ≤ 1960 in child's neighborhood of residence, proxying for lead-based paint exposure risk. Because atmospheric concentrations of lead fluctuate seasonally – in part because of the re-suspension of lead-contaminated surface soils by turbulence (Laidlaw et al., 2012; Zahran et al., 2013) – our statistical models proxy for this phenomenon with a series of dummy variables corresponding to the season of blood draw, Q_{it} , with winter as our reference season. Also included is I_{jt} , estimating the socioeconomic status of a neighborhood by an quantitative index that incorporates measures of educational attainment, median household income, and property values (proxying for household wealth).

Importantly, γ_j is the neighborhood or census block fixed effect. Inclusion of γ accounts for non-time varying unobservable factors which may influence BLLs that are common to sampled children within a given neighborhood but varying across neighborhoods. Fixed effects absorb omitted variables by estimating a distinct mean BLL value (or intercept) for each neighborhood. Finally, ε_{ijt} is the random error term associated to the observed Y_{ijt} .

⁹For a singleton observation (non-repeated child) i , $S_i = 0$. Otherwise, $S_i = 1, \dots, n$ for child i repeated n times over the observation period, January 1st, 2011 to December 31st, 2020. The date of birth, child sex, child name, and date of blood draw were used to identify sample order for each child. The majority of children (53.8%) appearing in CDPH data were sampled only once.

3.2 Parameter Direction Expectations

3.2.1 Residential Distance

Insofar as aviation gasoline exposure is a source of risk, sampled children in the nearest orbit to Reid-Hillview Airport should present with higher BLLs as compared to children in outer orbits. Therefore, other things held equal, we expect β_1 and β_2 in Equation 2 corresponding to D_{it}^n and D_{it}^f to be negative, reflecting lower exposure risk for children residing at 0.5-1 mile and 1-1.5 miles, respectively, relative to children at < 0.5 miles from Reid-Hillview Airport. In addition to treating residential distance to Reid-Hillview Airport categorically, we estimate a series of linear models with residential distance measured continuously, applying various linear transformations to Equation 2. The expectation here is estimated coefficients should be negative, indicating that BLLs of sampled children decline with distance from Reid-Hillview Airport, other things held equal.

3.2.2 Residential Near Angle

The atmospheric transport of lead emissions from aviation gasoline used by piston-engine aircraft depend on the direction of prevailing winds that vary in and across airport facilities. As shown Appendix Figure A.2, prevailing winds at Reid-Hillview Airport emanate predominately from the West and Northwest. Insofar as exposure to aviation gasoline is a source of risk, then sampled children residing East of Reid-Hillview Airport should present with higher BLLs. Therefore, other things held equal, we expect β_4 corresponding to W_{it}^e to be positive, indicating that sampled children residing east of Reid-Hillview Airport (and predominantly downwind) have higher BLLs than other children (not residing predominantly downwind of RHV).

We also execute a version of Equation 2 that substitutes our indicator variables for residential near angle with a continuous measure of downwind risk (DW_{it}) that captures the number of days in the last 60 (from date of blood draw) where prevailing winds drift in the residential direction of a child. In this model, β_4 is expected to be positive, indicating

that other things held equal, child BLLs increase with days of downwind drift. A graphical summary of results from this additional exercise is presented in Appendix Figure A.3.

3.2.3 Piston-Engine Aircraft Traffic Exposure

Following Zahran et al. (2017a), the inclusion of daily PEA traffic (T) shown in Equation 2 and detailed in Section 2.2.3 is meant to capture variation in the flow of atmospheric lead emissions attributable to aviation gasoline at Reid-Hillview Airport that may impact the BLLs of sampled children nearby. Other things held equal, then, we expect β_3 corresponding to T_{it} to be positive, indicating that BLLs increase with measured PEA operations at Reid-Hillview Airport.

We extend this test by converting our continuous PEA operations variable into a series of indicators corresponding to PEA traffic terciles at each airport. Denoting medium (m) and high (h) terciles of PEA traffic at Reid-Hillview Airport and letting the first tercile be the reference group, we modify Equation 2 by replacing the continuous variable T_{it} with dummy variables T_{it}^m and T_{it}^h for medium and high traffic terciles respectively. We expect β_{3a} and β_{3b} , corresponding to T_{it}^m and T_{it}^h , to be positive, indicating that BLLs are higher for children exposed to medium and high levels of PEA traffic in the last 60 days from draw date relative to children exposed to low levels of PEA traffic.

We also estimate a version of Equation 2 where measured PEA traffic is substituted for the monthly quantities of aviation gasoline (AG_{it}) sold to fixed-base operators at Reid-Hillview Airport. In this external validation exercise, we similarly expect β_3 to be positive, indicating that child BLLs increase with monthly quantities of aviation gasoline sold at Reid-Hillview Airport.

4 Main Results

4.1 Descriptive Statistics

Appendix Table A.1 reports descriptive statistics on our study population. The average age of sampled children is 2.82 years, with 51.2% identified as male and 48.8% identified as female. Table 1 shows descriptive statistics on child BLLs by residential distance, residential near angle, and terciles of piston-engine aircraft traffic at Reid-Hillview Airport over the entire observation period of January 1st 2011 to December 31st 2020. Across all conditions, mean BLLs behave as expected. Sampled children proximate to Reid-Hillview Airport (< 0.5 miles) present with higher mean BLLs than more distant children. Combining children in the outer orbits, we find that mean BLLs of near vs far children are modestly different (1.93 vs 1.83 $\mu\text{g}/\text{dL}$), but statistically discernible from chance (one-tailed $t = 1.92$, $p = 0.027$).¹⁰

Column 2 of Table 2, shows mean BLLs of children at the four cardinal directions from Reid-Hillview Airport. Combining blood lead samples of children not east of Reid-Hillview Airport, we find that mean BLLs of children East vs not East of Reid-Hillview Airport are modestly different (1.94 vs 1.82 $\mu\text{g}/\text{dL}$) and statistically significant (one-tailed $t = 2.59$, $p = 0.005$). Finally, Column 3 shows mean BLLs by low, medium, and high PEA traffic terciles. Indicative of an aviation gasoline exposure effect, we find that mean BLLs graduate upward across PEA traffic terciles, increasing from 1.72 to 1.81 to 1.96 $\mu\text{g}/\text{dL}$, respectively.

While results in Table 2 are consistent with expectations, they do not control for the demographic characteristics of sampled children, blood testing method, timing and order of blood draw, alternative sources of lead, or neighborhood conditions, both observable and unobservable. In the next section we present regression results that account for

¹⁰As shown in Table 1, sampled children in outer orbits (of 0.5 to 1.5 miles from Reid-Hillview Airport) have different demographic and neighborhood characteristics that are likely to attenuate observed differences in unconditional means by residential distance categories.

these factors. We begin with the question of residential distance, then move to results on residential near angle and downwind effects, and then complete our main effects investigation with results on piston-engine aircraft traffic and aviation gasoline sales.

4.2 Residential Distance

Before estimating regression coefficients pertaining to residential distance we compare sampled children in the inner orbit of proximity to Reid-Hillview Airport (< 0.5 miles) against children in outer orbits (0.5-1.5 miles) with respect to aviation gasoline exposure variables, and observable demographic and neighborhood characteristics. Table 1 shows means by distance categories on variables of interest, with computed p -values pertaining to one-tailed t -tests. The purpose here is to assess comparability of children by airport proximity. Sampled children are statistically similar with respect gender, residential near angle, age, PEA traffic exposure, sample order, and year or timing of blood draw, where $p > 0.05$.

We do observe statistically significant differences with respect to the proportion of children sampled by capillary method (0.24 vs 0.26, $p = 0.024$), the percentage of neighborhood homes built prior to 1960 (23.8 vs 27.94, $p < 0.001$), the count of lead-emitting TRI facilities within 2 miles of a child's residence (2.38 vs 2.51, $p < 0.001$), and neighborhood socioeconomic status (-0.21 vs -0.25, $p = 0.006$). On variables where statistically significant differences are observed, all function to inflate the BLLs of sampled children in outer orbits as opposed to sampled children most proximate to Reid-Hillview Airport. Therefore, whatever differences in estimated BLLs that may obtain between sampled children by residential distance in regression analyses that follow, we may regard these differences as possibly attenuated.

Table 3 reports regression coefficients on residential distance to Reid-Hillview Airport. Recall, our response variable of child BLL is measured in $\mu\text{g}/\text{dL}$ units. Distance is measured categorically with our reference group being children residing within 0.5 miles of

Table 1: Comparison of Variable Means by Residential Distance, (t-Test)

	Home <0.5 Miles	Home 0.5-1.5 Miles	<i>p</i> value
PEA Traffic Exposure	0.50	0.51	0.239
Residence East of RHV	0.06	0.07	0.098
Age (years)	2.71	2.82	0.057
Female	0.48	0.49	0.373
Capillary Blood Draw	0.24	0.26	0.024
Sample Order	0.83	0.82	0.369
Tri Facilities < 2 miles	2.38	2.51	<0.001
Neighborhood % Stock < 1960	23.80	27.94	<0.001
Neighborhood SES	-0.21	-0.25	0.006
Year of Sample	2015.4	2015.5	0.094

Note: *p* values correspond to one-tailed t-tests with equal variances assumed across variables.

Table 2: Cross-tabulations of BLLs by Distance, Near Angle, and PEA Traffic at RHV

Distance	Blood Lead Level ($\mu\text{g/dL}$)	Near Angle	Blood Lead Level ($\mu\text{g/dL}$)	Operations	Blood Lead Level ($\mu\text{g/dL}$)
0-0.5 Miles	1.93	North	1.83	Low	1.72
	(1.93)		(1.27)		(1.91)
0.5-1 Miles	1.85	East	1.94	Medium	1.81
	(2.01)		(1.49)		(1.37)
1-1.5 Miles	1.81 (1.41)	South	1.77 (2.24)	High	1.96 (1.63)
		West	1.82 (1.59)		
		Total	1.83 (1.69)		1.82 (1.66)

Notes: Mean blood lead values are in $\mu\text{g/dL}$; Standard deviations in parentheses; The unconditional sample mean is shown as Total; Near angle groups are assigned using Equation 1 and calculated from residential address relative to Reid-Hillview Airport; Airport operations are calculated as PEA traffic terciles;

Reid-Hillview Airport. Reported coefficients therefore have the interpretation of an estimated difference in mean BLLs (in $\mu\text{g}/\text{dL}$ units) for children at 0.5 to 1 mile and 1 to 1.5 miles, respectively, vis-à-vis children most proximate to Reid-Hillview Airport.

Coefficients are reported from seven different models that graduate in their saturation of control variables. Coefficients pertaining to both outer distances behave relatively consistently across models of varying saturation. Focusing our interpretation on model (7) including all possible control variables, we find that sampled children at 0.5 to 1 mile present with BLLs that are $0.179 \mu\text{g}/\text{dL}$ lower on average than sampled children nearest to Reid-Hillview Airport (< 0.5 miles). This observed difference is statistically distinguishable from chance. Other things held equal, we also find that blood lead samples of children at 1 to 1.5 miles are, on average, $0.202 \mu\text{g}/\text{dL}$ lower than statistically similar children proximate to Reid-Hillview Airport. Even though coefficients appear to decrease with distanced categories, the estimated difference in BLLs of sampled children at 0.5 to 1 mile vs 1 to 1.5 miles is not statistically significant.

Figure 9 displays predicted BLLs by categories of distance to Reid-Hillview Airport. Predicted values are from model (7) in Table 3 where all other model variables are fixed at their sample means. Under this prediction scenario, we find that sampled children most proximate to Reid-Hillview Airport (< 0.5 miles) present with BLLs that are 9.8% and 11.2% higher than sampled children at 0.5 to 1 mile and 1 to 1.5 miles, respectively.

Next, Table 4 reports results involving the estimation of a series of linear models with residential distance measured continuously and applying various transformations to both distance and child BLLs. All things held equal, we find that no matter the measurement or transformation – distance measured linearly, log or square root transformed and child BLLs measured linearly or log transformed – child BLLs decrease statistically significantly with residential distance from Reid-Hillview Airport.

Table 3: Residential Distance to Reid-Hillview Airport and Child BLLs

BLL ($\mu\text{g}/\text{dL}$)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Distance (Reference < 0.5 miles)							
0.5 to 1 miles	-0.148*	-0.152**	-0.143*	-0.149*	-0.175**	-0.179**	-0.179**
	(0.078)	(0.077)	(0.078)	(0.078)	(0.074)	(0.074)	(0.074)
1 to 1.5 miles	-0.162**	-0.167**	-0.163**	-0.165**	-0.182**	-0.192**	-0.202***
	(0.079)	(0.080)	(0.079)	(0.079)	(0.075)	(0.075)	(0.075)
Constant	1.977***	1.797***	1.789***	1.703***	2.043***	1.988***	2.131***
	(0.075)	(0.076)	(0.080)	(0.086)	(0.097)	(0.094)	(0.308)
Observations	17,241	17,162	17,162	17,162	17,162	17,162	17,162
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	No	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	No	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

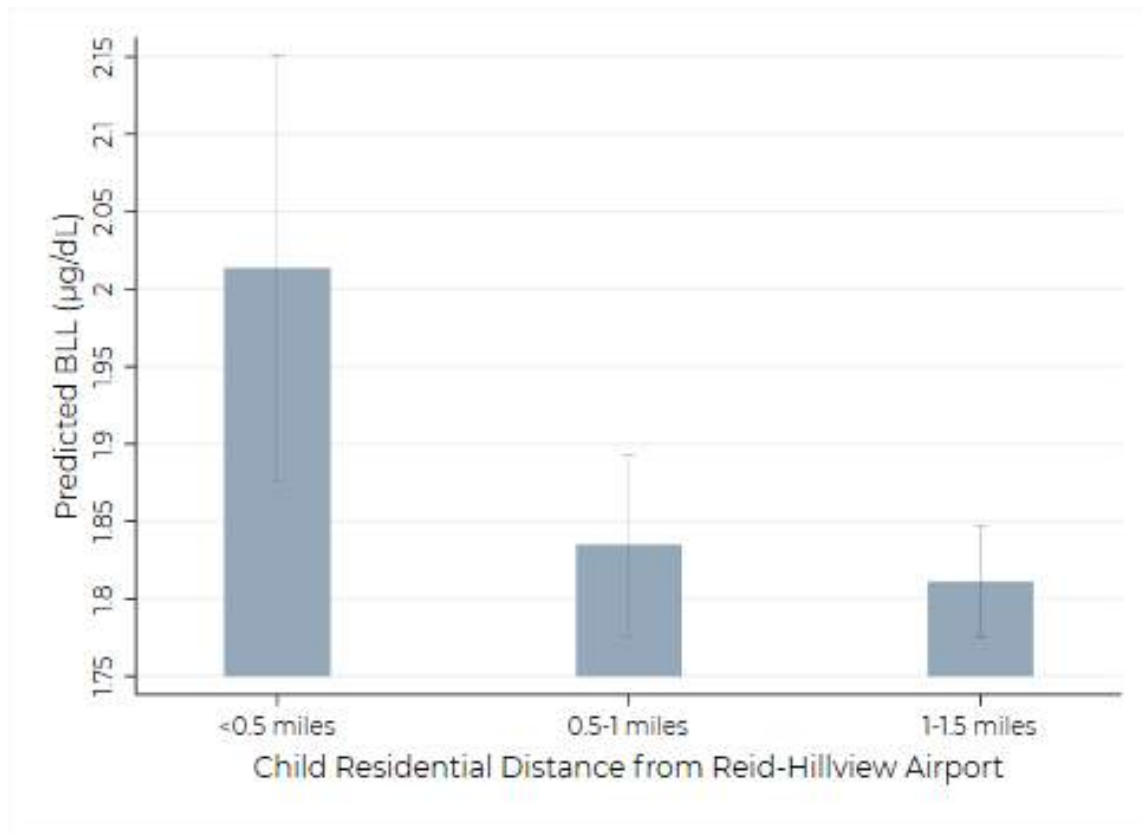
Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ($\mu\text{g}/\text{dL}$); Distance groups are assigned using the distance (miles) between RHV and the child's place of residence; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities ≤ 2 miles from residential address, and percent of neighborhood housing stock built ≤ 1960 ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table 4: Functions of Residential Distance to Reid-Hillview and Child BLLs

	(1)	(2)	(3)	(4)	(5)	(6)
	BLL	BLL	BLL	Log BLL	Log BLL	Log BLL
Linear Distance	-0.102** (0.047)			-0.040*** (0.012)		
Sqrt Distance		-0.197** (0.086)			-0.077*** (0.022)	
Log Distance			-0.090** (0.037)			-0.034*** (0.010)
Constant	2.057*** (0.325)	2.144*** (0.327)	1.940*** (0.329)	0.845*** (0.101)	0.879*** (0.101)	0.800*** (0.102)
Observations	17,162	17,162	17,162	17,162	17,162	17,162
Fully Saturated	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable in Models (1) to (3) is child BLL ($\mu\text{g}/\text{dL}$); Dependent variable in Models (4) to (6) is the natural log of child BLL ($\mu\text{g}/\text{dL}$); Distances are assigned using the distance (miles) between RHV and the child's place of residence; Full saturation of controls includes: child's age (years) and sex (1=female, 0=otherwise), draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times), count of TRI facilities ≤ 2 miles from residential address, and percent of neighborhood housing stock built ≤ 1960 , neighborhood socioeconomic status index, and a set of indicators for season and year-quarter of the date of draw;

Figure 9: Residential Distance to Reid-Hillview Airport and Predicted Child BLLs



Note: Predictions are from model (7) in Table 3, with all other model variables fixed at their sample means.

4.2.1 Results Summary, Section 4.2

The evidence presented in Table 3 and Figure 9 indicates that children proximate to Reid-Hillview Airport present with systematically higher BLLs, net of other measured sources of lead exposure risk, child demographic characteristics, and observed and unobserved neighborhood conditions. This result is compatible with exposure risk to aviation gasoline, and consistent in both direction and magnitude with previous studies (Miranda et al., 2011; Zahran et al., 2017a).

To contextualize the meaning of estimated conditional mean differences in BLLs by categories of distance, we compare our results to the estimated increase in BLLs of children in Flint during the much publicized Flint Water Crisis (FWC). At the height of the FWC, child BLLs surged by an estimated 0.35 to 0.45 $\mu\text{g}/\text{dL}$ over baseline levels (Zahran et al., 2017c)¹¹. As shown in Table 3, children within 0.5 miles of RHV have BLLs that are about 1/5th $\mu\text{g}/\text{dL}$ higher than statistically similar children more distant from Reid-Hillview Airport. This difference is equivalent to about 50% of the estimated increase in BLLs of sampled children at the height of the FWC.

4.3 Residential Near Angle

Regression results of residential near angle relative to Reid-Hillview Airport are presented in Table 5. Again, the response variable is child BLL and is measured in $\mu\text{g}/\text{dL}$ units. As detailed in Section 2.2.2, the near angle groups are mutually exclusive and correspond to the four cardinal directions. Parameter estimates have the interpretation of an estimated difference in mean BLLs (in $\mu\text{g}/\text{dL}$ units) for sampled children in their respective near angle group, relative to sampled children North of Reid-Hillview Airport.

¹¹With over 21,000 time-stamped blood lead samples from children in Genesee County drawn from January 01, 2013 to July 19, 2016, Zahran et al. (2017c) pursued a series of quasi-experimental tests to identify the causal effects of water-lead exposure, finding that the switch in water source in Flint caused child BLLs to increase by about 0.35 to 0.45 $\mu\text{g}/\text{dL}$ from a pre-crisis baseline of about 2.3 $\mu\text{g}/\text{dL}$.

As in the analysis of residential distance above, Table 5 presents a series of models with increasing degrees of saturation in terms of included control variables. Coefficient estimates across all models behave as expected, with sampled children residing East of Reid-Hillview Airport having higher BLLs relative to their counterparts North of Reid-Hillview Airport, all else equal. The estimated difference in mean BLLs for sampled children to the South and West of Reid-Hillview Airport relative to children North of the airport are near zero and indistinguishable from chance. Focusing on saturated model (7), we find that mean BLLs among sampled children in the East near angle group have an estimated mean BLL that is 0.4 $\mu\text{g}/\text{dL}$ higher than those to the North of Reid-Hillview Airport, all else equal.

Using the estimates from Table 5 and fixing control variables at their means, Figure 10 illustrates the difference in predicted mean BLL across near angle groups. Other things held equal, children predominantly downwind of Reid-Hillview Airport (East) present with BLLs that are 25.5% higher than sampled children living North of Reid-Hillview Airport. Estimated mean BLL values for children in the North, South, and West near angle groups are not statistically different from one another. Consistent with these results, analyses involving the calculation of downwind days show that BLLs increase significantly with the count of wind days drifting in the residential direction of a child from the date of blood draw (see Appendix Figure A.3) An increase from the minimum to maximum number of downwind days is associated with an increase in BLLs of about $1/4^{\text{th}}$ $\mu\text{g}/\text{dL}$.

4.3.1 Results Summary, Section 4.3

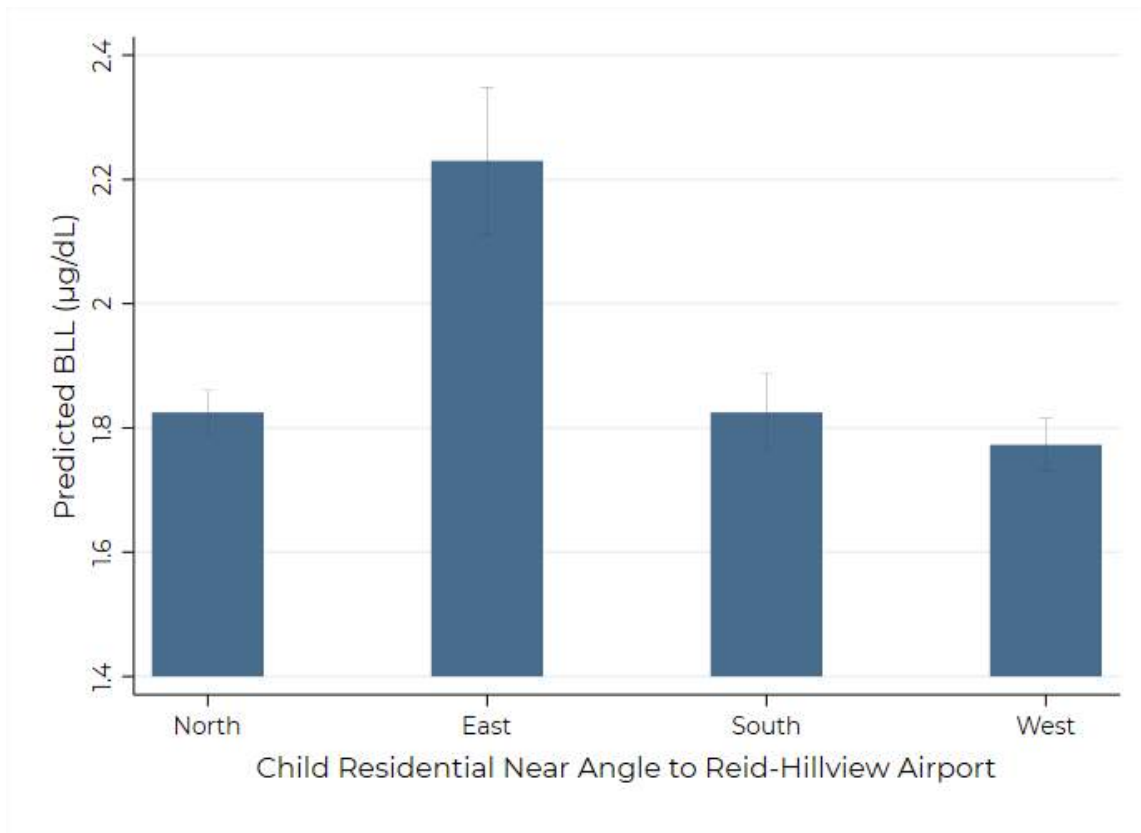
Overall, the findings presented in Table 5 and Figure 10 support the hypothesis that residing predominantly downwind of Reid-Hillview Airport is associated with substantively and statistically significantly higher BLLs. Returning to our comparison with the FWC, the margin of difference ($\sim 0.4 \mu\text{g}/\text{dL}$) in average BLLs of sampled children East (and predominantly downwind) of Reid-Hillview Airport compared to children West (pre-

Table 5: Residential Near Angle to Reid-Hillview Airport and Child BLLs

BLL ($\mu\text{g}/\text{dL}$)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Near Angle (Reference North)							
East	0.130*** (0.049)	0.131** (0.051)	0.144*** (0.047)	0.139*** (0.047)	0.265*** (0.045)	0.272*** (0.045)	0.405*** (0.060)
South	-0.022 (0.036)	-0.018 (0.038)	-0.014 (0.036)	-0.013 (0.035)	0.027 (0.036)	0.009 (0.035)	0.000 (0.037)
West	-0.022 (0.029)	-0.017 (0.028)	-0.017 (0.030)	-0.013 (0.030)	-0.028 (0.028)	-0.047 (0.031)	-0.052* (0.031)
Constant	1.821*** (0.039)	1.965*** (0.088)	1.794*** (0.083)	1.715*** (0.087)	2.036*** (0.094)	1.983*** (0.092)	2.131*** (0.318)
Observations	17,241	17,241	17,162	17,162	17,162	17,162	17,162
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	No	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	No	No	Yes	Yes	Yes	Yes	Yes
Near Angle FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ($\mu\text{g}/\text{dL}$); Near angle groups are defined in Section 2.2.2 and assigned using the angle between RHV and child's place of residence; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities ≤ 2 miles from residential address, and percent of neighborhood housing stock built ≤ 1960 ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Figure 10: Residential Near Angle to Reid-Hillview Airport and Predicted Child BLLs



Note: Predictions are from model (7) in Table 5, with all other model variables fixed at their sample means.

dominantly upwind) of Reid-Hillview Airport is approximately equal to the margin of difference between children sampled at the peak of the FWC relative to children sampled before the crisis. These results are also supported by ancillary analyses involving the calculation of downwind days, showing that BLLs increase significantly with the count of downwind days from the date of blood draw (see Appendix Figure A.3).

4.4 PEA Traffic Exposure

Table 6 reports regression coefficients on piston-engine aircraft traffic to Reid-Hillview Airport. Recall, because the half-life for lead in blood is about 30 days (Lidsky and Schneider, 2003), we measure PEA traffic exposure as a rolling average of PEA operations over 60 days from the date of a child's blood draw. This quantity is converted to a percentile ranging from 0 to 1. Reported coefficients therefore have the interpretation of the estimated change in child BLLs (in $\mu\text{g}/\text{dL}$ units) associated with an increase in PEA traffic exposure from the observed minimum to the maximum.

As before, we present coefficients from seven different models that increase successively in the saturation of control variables. Across models (1) through (7), we find that an increase in piston-engine aircraft exposure from the min to the max is associated with a 0.163 to 0.387 $\mu\text{g}/\text{dL}$ increase in child BLLs, depending on the presence of control variables. For reference, a change in PEA traffic exposure from the min to max is equivalent to a 2.5 \times increase in the daily volume of PEA traffic. All estimated coefficients are distinguishable from chance occurrence, with $p < 0.01$.

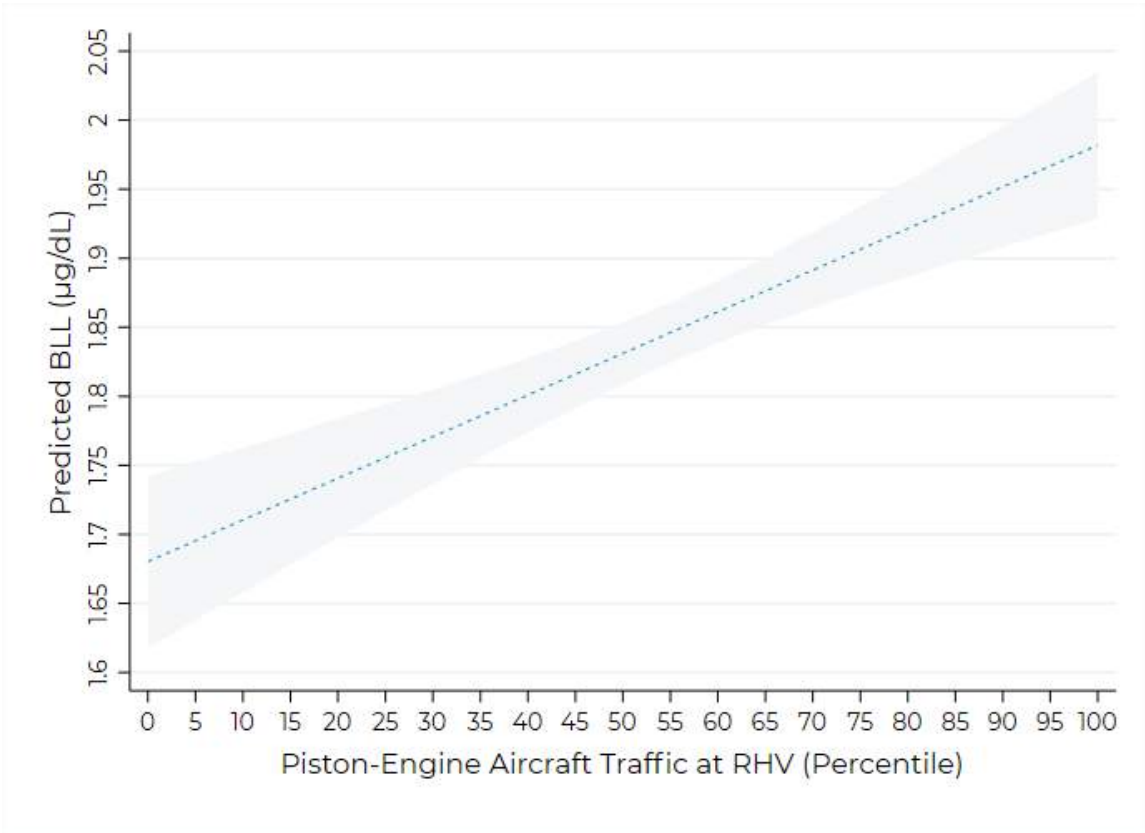
Figure 11 shows predicted BLLs over the observed range of child PEA traffic exposure at Reid-Hillview Airport. Predicted values are from model (6) in Table 6 where, again, all other model variables are fixed at their sample means. Under this prediction scenario, we find that child BLLs increase measurably with the volume of PEA traffic exposure, other factors held equal. In going from the minimum to the maximum of child PEA traffic exposure, we find that child BLLs increase by about 0.3 $\mu\text{g}/\text{dL}$.

Table 6: Piston-Engine Aircraft Traffic to Reid-Hillview Airport and Child BLLs

BLL ($\mu\text{g}/\text{dL}$)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PEA Traffic	0.370*** (0.054)	0.371*** (0.054)	0.374*** (0.053)	0.387*** (0.054)	0.296*** (0.056)	0.302*** (0.054)	0.163*** (0.058)
Constant	1.640*** (0.047)	1.798*** (0.080)	1.794*** (0.083)	1.715*** (0.087)	2.036*** (0.094)	1.983*** (0.092)	2.131*** (0.318)
Observations	17,162	17,162	17,162	17,162	17,162	17,162	17,162
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	No	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	No	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

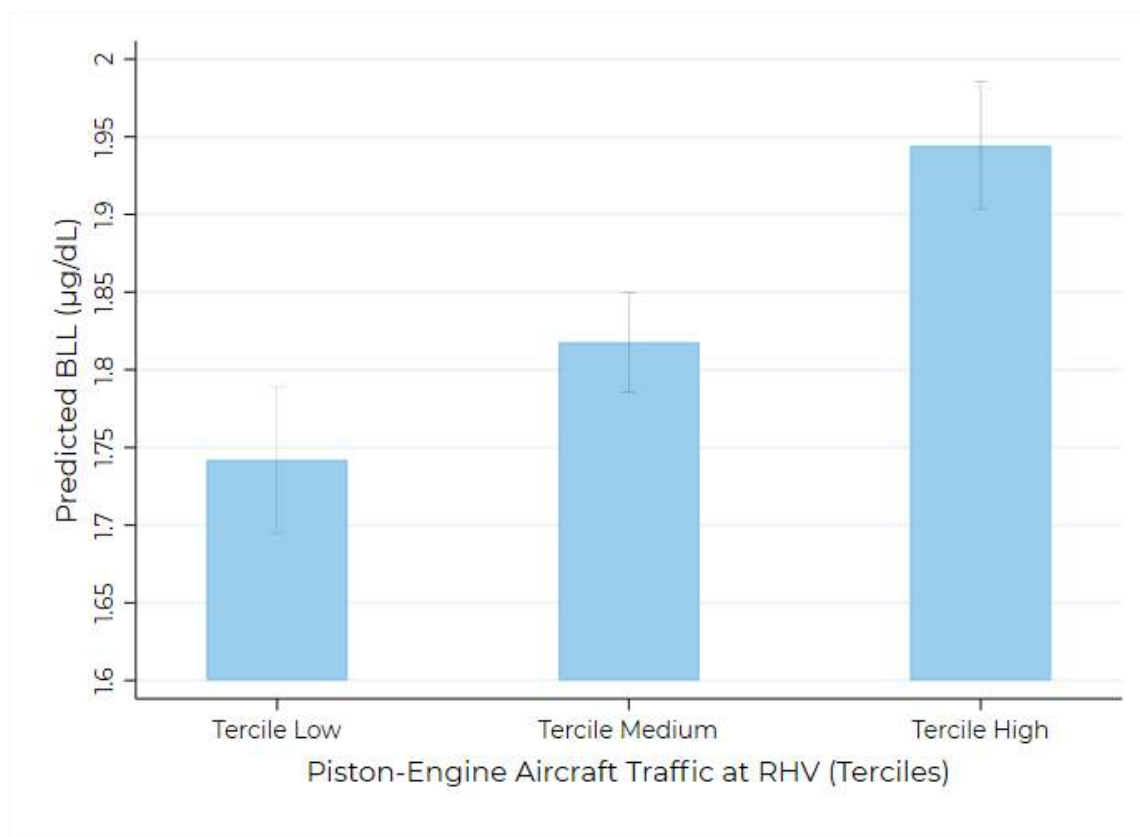
Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ($\mu\text{g}/\text{dL}$); PEA traffic is average daily PEA operations at RHV, calculated over 60 days from child's date of draw and converted to percentiles; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities ≤ 2 miles from residential address, and percent of neighborhood housing stock built ≤ 1960 ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Figure 11: Piston-Engine Aircraft Traffic at Reid-Hillview Airport and Child BLLs



Note: Predictions are from model (6) in Table 6, with all other model variables fixed at their sample means.

Figure 12: Piston-Engine Aircraft Traffic Terciles at Reid-Hillview and Child BLLs



Note: Predictions are from model (6) in Table 6, with all other model variables fixed at their sample means.

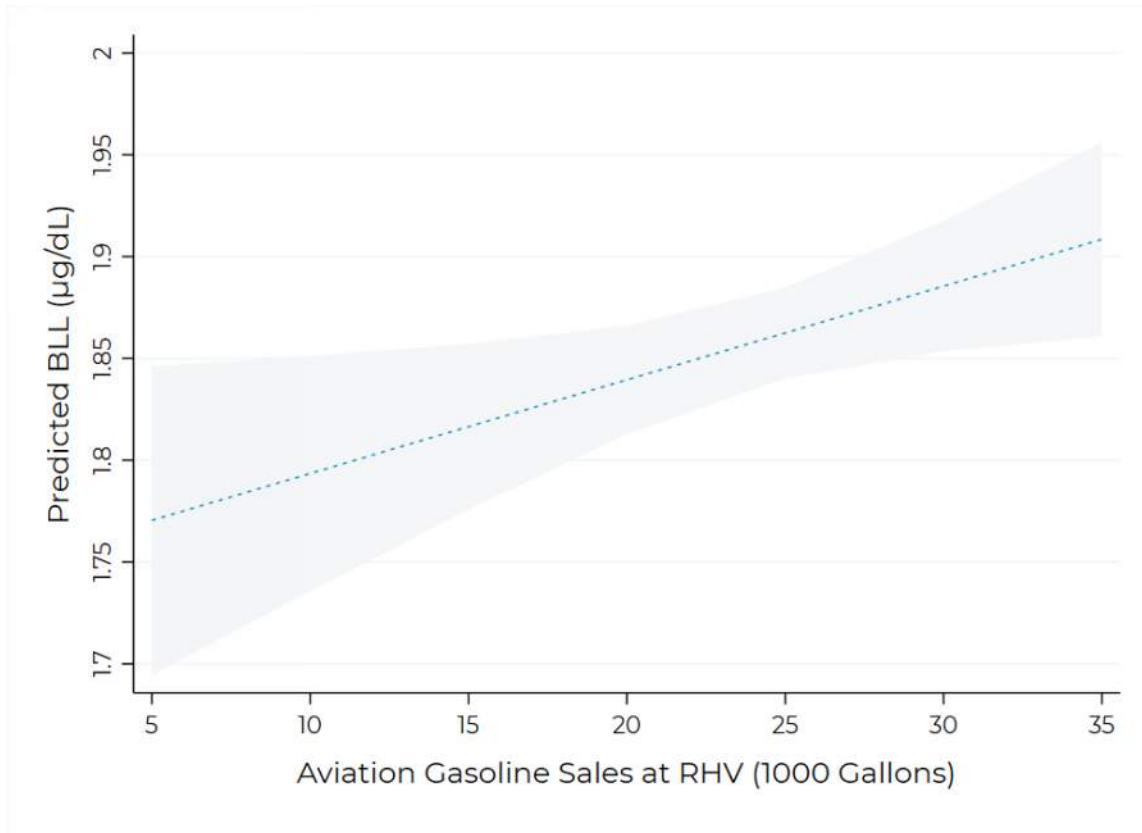
Figure 12 provides evidence of the dose-responsiveness of results reported in Table 6 and Figure 11, showing predicted child BLLs at terciles of low, medium and high PEA traffic exposure. Terciles are derived by dividing the distribution of PEA traffic exposure into three equal-sized groupings in terms of the count of blood samples observed. Other things held equal, we find that child BLLs graduate upward with PEA traffic exposure terciles, increasing from 1.74 to 1.82 to 1.94 $\mu\text{g}/\text{dL}$, respectively.

Substituting PEA traffic exposure for aviation gasoline sales (in 1,000s of gallons) and recapitulating model (7) in Table 6, Figure 13 shows predicted BLLs over the observed range of aviation gasoline sold at Reid-Hillview Airport. Predicted values are derived with all other model variables fixed at their sample means. As with PEA traffic, we find that the BLLs of sampled children increase linearly with the quantity of aviation gasoline sold to fixed-base operators at Reid-Hillview Airport, other factors held equal. A change in the quantity of aviation gasoline sold from the observed minimum to the maximum is associated with an increase in child BLLs by about 0.18 $\mu\text{g}/\text{dL}$.

4.4.1 Results Summary, Section 4.4

On balance, the evidence presented in Table 6, Figure 11 indicates that the BLLs of sampled children increase with exposure to piston-engine aircraft operations at Reid-Hillview Airport, net of all other factors. This result holds with the division of PEA traffic into terciles, suggesting that child BLLs increase dose-responsively with PEA traffic. Moreover, as evidenced in Figure 13, the estimated positive association between child BLLs and PEA traffic is robust to the substitution of PEA traffic for the quantity of aviation gasoline sold at Reid-Hillview Airport, an analogous and independent indicator of lead exposure. The size of the estimated increase in child BLLs in going from the minimum to maximum PEA traffic exposure is on par with the increase in child BLLs caused by failures in the water system during the FWC.

Figure 13: Aviation Gasoline Sales at Reid-Hillview Airport and Child BLLs



Note: Predictions are from model (6) in Table 6, with all other model variables fixed at their sample means.

4.5 Robustness

In Table A.9, Table A.10, Table A.11, Table A.12, and Table A.13 of our appendices, we report results from various robustness tests involving successively restricting observations to highest-confidence geo-coded residences, highly sampled neighborhoods (≥ 100 blood lead samples), introducing a new variable that accounts for possible variation in BLL measurement precision across laboratories, the inclusion of clustering of standard errors by sample order, the restriction of observations to children ≤ 6 years of age, and the introduction of a series of single imputation operations for test results at or below the limit of quantification. Across all robustness tests rendered, results pertaining to our main indicators of aviation gasoline exposure risk behave similarly.

This Page Left Blank Intentionally

5 Extended Results

While results reported in Section 4 on child residential distance, residential near angle, and exposure to piston-engine aircraft traffic all support the supposition that child BLLs are statistically associated with the risk of exposure to aviation gasoline, in this section we report results from various exercises involving the reconstitution of child BLLs in ordered categorical terms to analyze threshold effects, tests involving the statistical interaction of residential distance and piston-engine aircraft traffic, a natural experiment exploiting an observed contraction in PEA aircraft at Reid-Hillview Airport following social distancing measures enacted countywide, a test of school-aged children that exploits relative distances to Reid-Hillview Airport from a child's place of residence and nearest assigned school, and from a battery of tests involving the inclusion of sampled children proximate to other airports in Santa Clara County.

5.1 Blood Lead Thresholds

We begin with the analysis of threshold effects. We reconstitute our response variable in ordered categorical terms, defining mutually exclusive BLL categories ranging from 0 to the exceedance of the CDPH-defined threshold of $4.5 \mu\text{g}/\text{dL}$. The purpose here is to investigate threshold effects with respect to our main operations of aviation gasoline exposure risk and to relax the assumption of precisely measured BLLs, given uncertain laboratory test precision.

Under the premise that a given blood lead concentration is an imperfectly observed variable, we execute an ordered logistic regression, modeling BLL as a set of ordinal categories. Moving in increments of $1.5 \mu\text{g}/\text{dL}$ we convert the continuous measure of blood

lead concentration Y_{it} to a categorical variable B_{it} , with cutpoints defined as:

$$B_{it} = \begin{cases} 1, & \text{if } Y_{it} < 1.5, \\ 2, & \text{if } 1.5 \leq Y_{it} < 3, \\ 3, & \text{if } 3 \leq Y_{it} < 4.5, \\ 4, & \text{if } Y_{it} \geq 4.5, \end{cases}$$

where Y_{it} is in units of $\mu\text{g}/\text{dL}$.¹² Within this framework, one can estimate the proportional odds a given blood lead concentration is in exceedance of a specified blood lead category. For child i with corresponding BLL observation in time t , B_{it} takes on the ordinal values $k = 1, \dots, 4$, then we define the cumulative response probabilities as:

$$b_{itk} = \text{Prob}(B_{it} \leq k | \mathbf{X}_{it}), \quad k = 1, \dots, 4 \quad (3)$$

where \mathbf{X}_{it} is a vector of explanatory values related to child i in time t . Using Equation 3, we can represent a generalized logistic model as:

$$\begin{aligned} \text{logit}(b_{itk}) &= \ln\left(\frac{b_{itk}}{1 - b_{itk}}\right) \\ &= \theta_k + \mathbf{X}_{it}'\beta \end{aligned} \quad (4)$$

where $\theta_1 \leq \theta_2 \dots \leq \theta_k$. Taking the generalized model in Equation 4 and the suite of covariates defined in Equation 2, the fully specified model used to estimate the log-odds of sampled child i in neighborhood block j at time t being in BLL category B_{it} becomes:

$$\begin{aligned} \text{logit}(b_{ijt}) &= \theta_k + \beta_1 D_{it}^n + \beta_2 D_{it}^f + \beta_3 T_{it} + \beta_4 W_{it}^e + \beta_5 W_{it}^s + \beta_6 W_{it}^w \\ &\quad + \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} + \Gamma_6 L_{it} \\ &\quad + \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 I_{jt} + \lambda_4 Q_{it} + \gamma_j, \quad k = 1, \dots, 4 \end{aligned} \quad (5)$$

¹²For sampled children within 1.5 miles of Reid-Hillview, we observe 7,341 records at $< 1.5 \mu\text{g}/\text{dL}$, 7,980 records at 1.5 to $< 3 \mu\text{g}/\text{dL}$, 1,633 records at 3 to $< 4.5 \mu\text{g}/\text{dL}$, and 287 records at $\geq 4.5 \mu\text{g}/\text{dL}$.

Our expectation is that the exponentiated log-odds corresponding to D_{it}^n and D_{it}^f will be < 1.0 reflecting lower risk of exceeding the threshold of $4.5 \mu\text{g/dL}$ among children in outer orbits of Reid-Hillview Airport relative to children nearest to Reid-Hillview Airport. We also expect that exponentiated log-odds corresponding W_{it}^e to be > 1.0 , reflecting higher odds of maximum categorical blood lead for sampled children East of Reid-Hillview Airport relative to children North of Reid-Hillview Airport. Similarly, we expect the exponentiated coefficient on T_{it} to be > 1.0 , indicating that the risk of exceeding the CDPH-defined threshold of $4.5 \mu\text{g/dL}$ increases with exposure to piston-engine aircraft traffic.

Table 7 reports odds ratios and 95% intervals of confidence in square brackets for our main indicators of aviation gasoline exposure risk. Given the ordered categorical measurement of our response variable, reported odds ratios have the interpretation of the expected change in the odds of a child's blood lead sample exceeding $4.5 \mu\text{g/dL}$ relative to the combined odds of appearing in lower BLL categories. Focusing on saturated model (3), as compared to children < 0.5 miles of Reid-Hillview Airport, sampled children residing 0.5 to 1 mile from Reid-Hillview Airport have $0.858\times$ lower odds of superseding $4.5 \mu\text{g/dL}$ relative to the combined odds of lower BLL categories. For children at 1 to 1.5 miles, the probability of a blood lead sample exceeding $4.5 \mu\text{g/dL}$ is 22.1% lower than statistically similar children at < 0.5 miles. With respect to residential near angle, children residing East of Reid-Hillview Airport are $2.37\times$ (95% Confidence Intervals: 1.98, 2.85) more likely to present with BLLs $\geq 4.5 \mu\text{g/dL}$ than children residing North of Reid-Hillview Airport, all else held equal. On the question of PEA traffic exposure, we find that an increase from minimum to maximum exposure increases the odds of eclipsing $4.5 \mu\text{g/dL}$ relative to the combined odds of presenting with a lower BLL category by a multiplicative factor of 1.30 (95% CI: 1.12, 1.50).

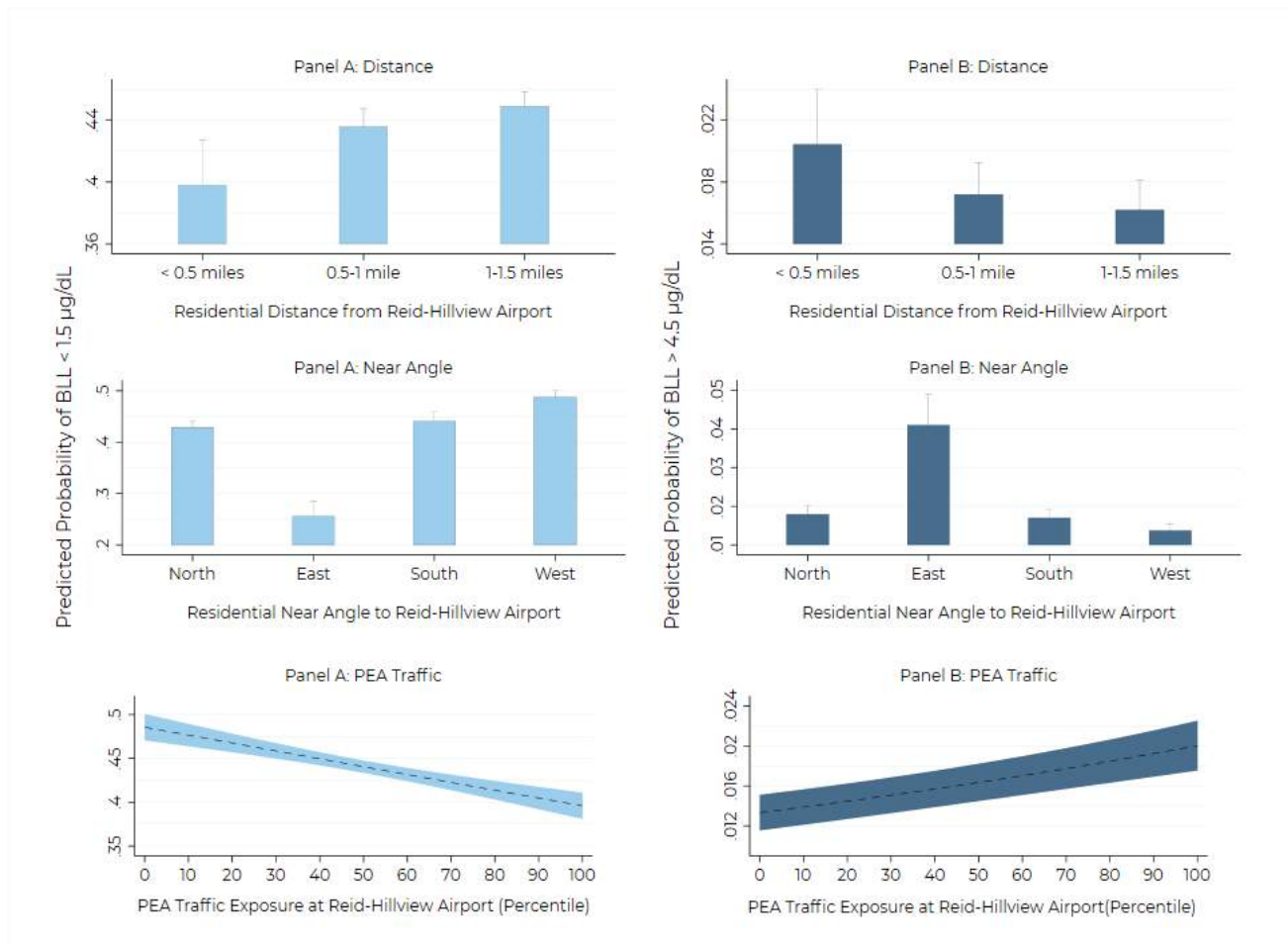
Figure 14 shows predicted probabilities of a sampled child appearing in the minimum ($< 1.5 \mu\text{g/dL}$) and maximum ($\geq 4.5 \mu\text{g/dL}$) specified categories of blood lead. Predicted probabilities are from model (3) in Table 7 where all other model variables are set to their

Table 7: Distance, Near Angle, PEA Traffic and Child BLL Categories, Proportional Odds

BLL Category	(1)	(2)	(3)
Distance RHV (Reference < 0.5 miles)			
0.5 to 1 miles	0.858** [0.740, 0.996]	0.823** [0.707, 0.957]	0.830** [0.713, 0.966]
1 to 1.5 miles	0.830** [0.716, 0.963]	0.793*** [0.681, 0.924]	0.779*** [0.668, 0.909]
Near Angle RHV (Reference North)			
East	1.768*** [1.533, 2.048]	1.888*** [1.626, 2.193]	2.374*** [1.979, 2.848]
PEA Traffic	2.020*** [1.811, 2.252]	2.030*** [1.817, 2.267]	1.298*** [1.122, 1.502]
Observations	17,162	17,162	17,162
Block FE	Yes	Yes	Yes
Distance	Yes	Yes	Yes
PEA Traffic	Yes	Yes	Yes
Near Angle FE	Yes	Yes	Yes
Demography	Yes	Yes	Yes
Draw Controls	Yes	Yes	Yes
Other Exposures	No	Yes	Yes
SES	No	No	Yes
Timing Controls	No	No	Yes

Notes: Estimates are presented as odds ratios; 95% Confidence intervals in square parentheses, bootstrapped standard errors *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL categories defined in Section 5.1; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities ≤ 2 miles from residential address, and percent of neighborhood housing stock built ≤ 1960 ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Figure 14: Predicted Probabilities of Child BLLs by Distance, Near Angle, and PEA Traffic



Note: Across all panels, predictions are from model (3) in Table 7, with all other model variables fixed at their sample means.

means. Results displayed in Panels A (light blue) for each test variable of interest – distance, near angle, and PEA traffic exposure – correspond to predicted probabilities that a sampled child presents with a BLL $<1.5 \mu\text{g/dL}$. Results in Panels B (dark blue) pertain to predicted probabilities of a sampled child exceeding the CDPH-defined threshold of action of $\geq 4.5 \mu\text{g/dL}$. Graphics in Panels A versus B by indicator of aviation gasoline exposure risk are mirror-like opposites of each other.

Focusing on Panels B, we find that the probability of a sampled child presenting with a BLL in excess of the CDPH-defined threshold decreases measurably with distance from Reid-Hillview Airport, all else held equal. Specifically, we estimate that the probability of exceedance for sampled children in the nearest orbit is 20% and 27% higher than children in outer orbits of 0.5 to 1 mile and 1 to 1.5 miles, respectively. With respect to near angle, the probability of a blood lead sample taken from a child East (and predominantly downwind) of Reid-Hillview Airport is about 200% higher than samples from children West (and predominantly upwind) of Reid-Hillview Airport. With respect to PEA traffic exposure, children exposed to maximum traffic have an estimated probability of exceeding $4.5 \mu\text{g/dL}$ that is about 29% higher than children sampled in moments of minimum PEA traffic exposure.

5.1.1 Results Summary, Section 5.1

Overall, results on threshold effects reported in Table 7 and Figure 14 are consistent with linear model results reported in Section 4. All indicators of aviation gasoline exposure risk – residential proximity to Reid-Hillview Airport, residing East and predominately downwind of Reid-Hillview Airport, and exposure to high PEA traffic – meaningfully increase the odds that a sampled child presents with a BLL $\geq 4.5 \mu\text{g/dL}$ relative to combined odds of presenting with a lower category of blood lead.

5.2 PEA Traffic Exposure × Residential Distance

Next, we consider a statistical interaction between piston-engine aircraft traffic exposure and residential distance. Insofar as aviation gasoline exposure is a source of risk, we expect that the BLLs of sampled children proximate to Reid-Hillview Airport will be more responsive to the flow of PEA traffic than children more distant from the airport. Toward this analytic aim, we estimate the following:

$$\begin{aligned}
 Y_{ijt} = & \beta_0 + \beta_1 D_{it}^{nf} + \beta_2 CT_{it} + \beta_3 W_{it}^e + \beta_4 W_{it}^s + \beta_5 W_{it}^w + \delta \left(D_{it}^{nf} \times CT_{it} \right) \\
 & + \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} + \Gamma_6 L_{it} \\
 & + \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 I_{jt} + \lambda_4 Q_{it} + \gamma_j + \varepsilon_{ijt} \quad (6)
 \end{aligned}$$

where, the meaning of all terms carry from Equation 2 with the exception of D_{it}^{nf} that now assumes a value of 1 if a sampled child resides in the outer orbit of 0.5-1.5 miles of Reid-Hillview Airport and 0 if a sampled child resides within 0.5 miles of Reid-Hillview Airport. Outer orbits are collapsed given insignificance of difference observed in Table 3. We expect β_1 corresponding D_{it}^{nf} to be negative, reflecting lower BLLs among distant children (0.5-1.5 miles) relative to proximate children (< 0.5 miles). CT_{it} is the statistically centered value of PEA traffic exposure that is equal to $T_{it} - \bar{T}_{it}$ or the observed PEA traffic exposure (T_{it}) minus the mean of PEA traffic exposure (\bar{T}_{it}). We expect the corresponding parameter β_2 to be positive, indicating that BLLs increase with the PEA traffic exposure. Finally, we expect δ corresponding to $D_{it}^{nf} \times CT_{it}$ to be negative, indicating that the BLLs of sampled children proximate to Reid-Hillview Airport (< 0.5 miles) are more responsive to PEA traffic than children distant from Reid-Hillview Airport (0.5-1.5 miles).

As before, Table 8 presents coefficients for many different models that increase successively in the saturation of control variables. Across models (1) through (6), estimated coefficients behave as theoretically expected and are distinguishable from chance. Concentrating interpretation on model (6), the main effect of residential distance indicates that sampled children at 0.5 to 1.5 miles from Reid-Hillview Airport present with BLLs

Table 8: PEA Traffic × Residential Distance at Reid-Hillview Airport and Child BLLs

BLL ($\mu\text{g}/\text{dL}$)	(1)	(2)	(3)	(4)	(5)	(6)
Distance (Reference < 0.5 miles)						
0.5 to 1.5 miles	-0.164** (0.077)	-0.158** (0.076)	-0.161** (0.076)	-0.183** (0.072)	-0.190*** (0.072)	-0.196*** (0.072)
PEA Traffic	1.002*** (0.195)	1.005*** (0.196)	1.009*** (0.195)	0.964*** (0.192)	0.970*** (0.193)	0.833*** (0.190)
0.5 to 1.5 miles × PEA Traffic	-0.670*** (0.205)	-0.670*** (0.206)	-0.661*** (0.206)	-0.709*** (0.201)	-0.711*** (0.202)	-0.712*** (0.202)
Constant	1.986*** (0.075)	1.980*** (0.081)	1.902*** (0.087)	2.197*** (0.094)	2.147*** (0.096)	2.238*** (0.302)
Observations	17,162	17,162	17,162	17,162	17,162	17,162
Block FE	Yes	Yes	Yes	Yes	Yes	Yes
Distance	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ($\mu\text{g}/\text{dL}$); Distance groups are assigned using the distance (miles) between RHV and the child's place of residence; PEA traffic is average daily PEA operations at nearest airport, calculated over 60 days from child's date of draw and converted to percentiles then centered (mean=0) for ease of interpretation; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities ≤ 2 miles from residential address, and percent of neighborhood housing stock built ≤ 1960 ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

that are about $1/5^{th}$ of a $\mu\text{g}/\text{dL}$ lower than children nearest to the airport. Because PEA traffic is centered at the mean, the coefficient on PEA traffic exposure indicates that a doubling of PEA traffic from the mean is associated with a $0.833 \mu\text{g}/\text{dL}$ increase in child BLLs, all else held equal. The estimated coefficient of interaction is negative ($\hat{\delta} = -0.712$), implying that an increase in PEA traffic exposure affects the BLLs of sampled children more distant from Reid-Hillview Airport less than children proximate to Reid-Hillview Airport.

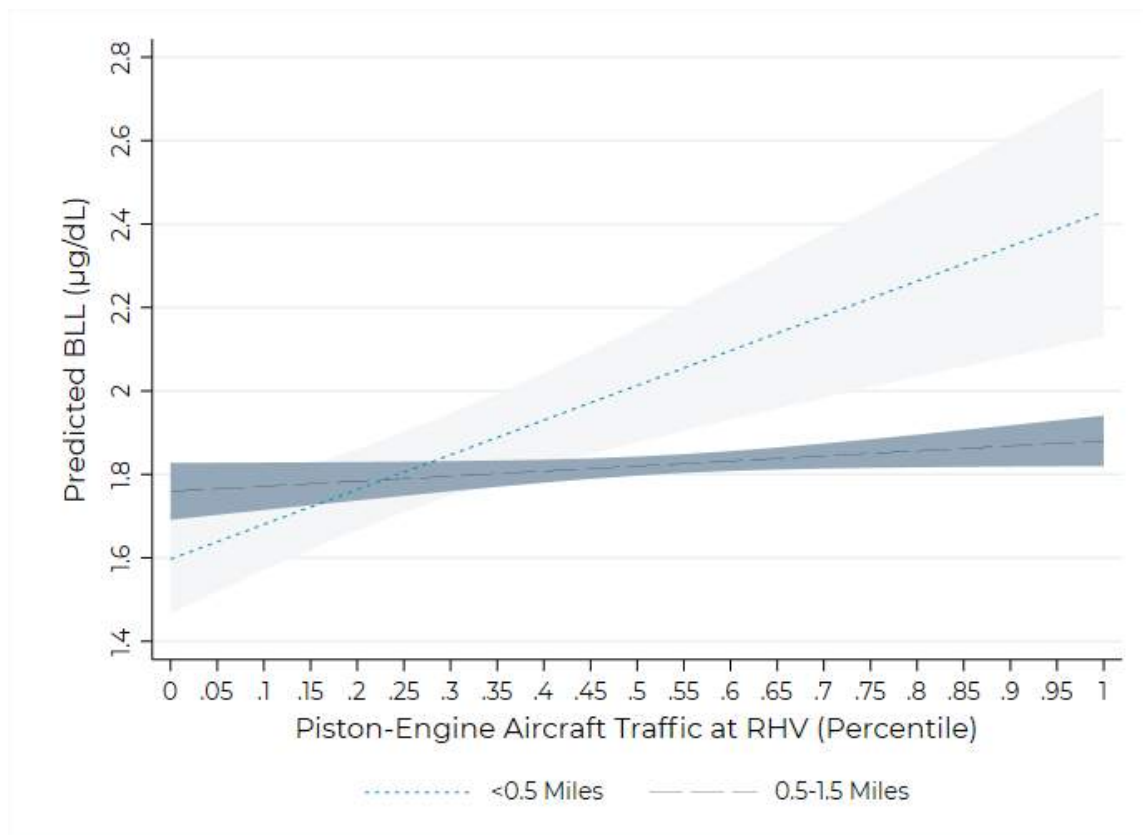
Figure 15 visualizes the effects reported in Table 8, showing predicted BLLs of sampled children at two distances – within 0.5 miles and 0.5-1.5 miles from Reid-Hillview Airport – over the range of observed PEA traffic exposure. Predictions are from model (6) in Table 8, with all other model covariates set to their means. Figure 15 shows that, all else held equal, a movement from the minimum to maximum PEA traffic exposure increases the BLLs of sampled children proximate to Reid-Hillview Airport by $0.83 \mu\text{g}/\text{dL}$ (1.60 to $2.43 \mu\text{g}/\text{dL}$). By comparison, children more distant from Reid-Hillview Airport (0.5 to 1.5 miles) experience a more modest increase in BLLs of about $1/10^{th}$ of $\mu\text{g}/\text{dL}$ (1.76 to $1.88 \mu\text{g}/\text{dL}$) for an increase in PEA traffic from the minimum to the maximum.

In Figure 16 we visualize results where we substitute our PEA traffic variable for aviation gasoline sales at Reid-Hillview Airport. Recall, the quantity of lead-formulated gasoline sold to fixed-base operators at Reid-Hillview Airport is measured monthly and available from January 2011 till July of 2019. As before, predicted BLLs are from model (6) with other model covariates set at their sample means. Results in Figure 16 are qualitatively similar to results displayed in Figure 15, showing that BLLs of sampled children proximate to Reid-Hillview Airport increase more substantially in response to aviation gasoline sales than children more distant from the airport.

5.2.1 Results Summary, Section 5.2

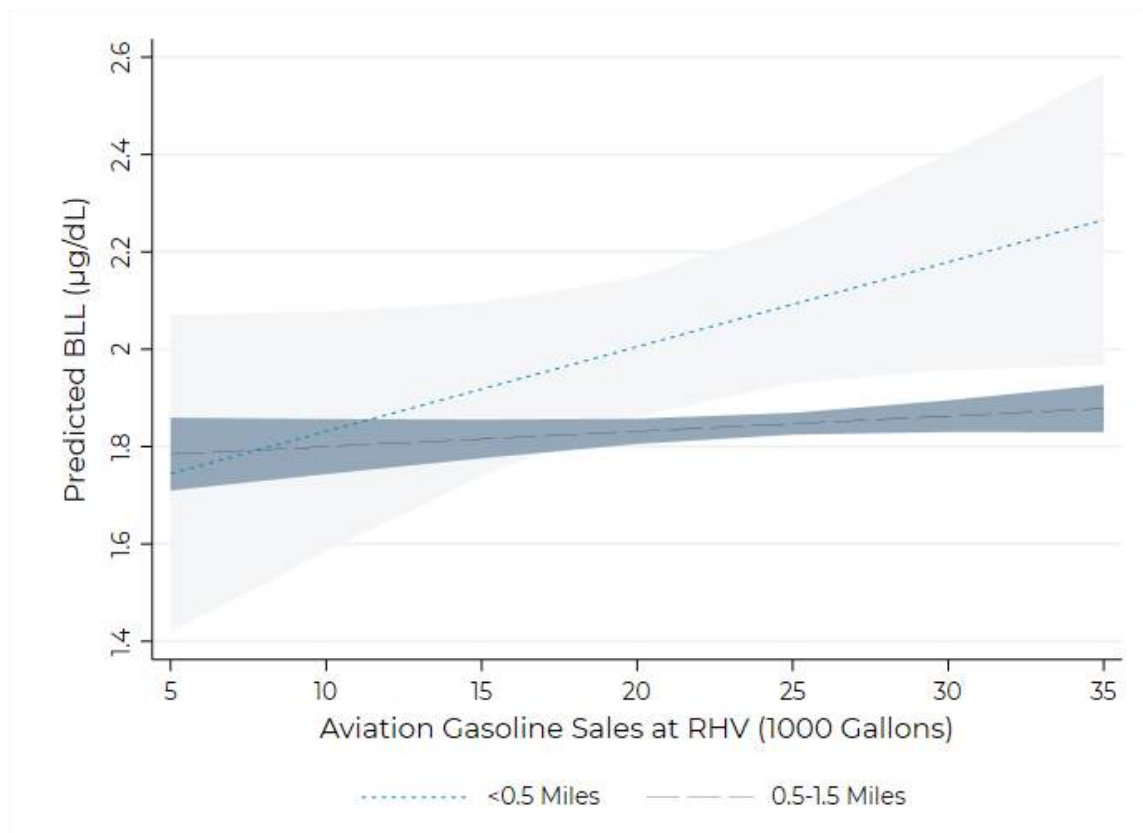
On balance, the evidence suggests that children residing within 0.5 miles of Reid-Hillview Airport are especially vulnerable to increases in PEA traffic. Increasing the distance of

Figure 15: PEA Traffic × Residential Distance and Predicted Child BLLs



Note: Predictions are from model (6) in Table 8, with all other model variables fixed at their sample means.

Figure 16: Aviation Gasoline Sales × Residential Distance and Predicted Child BLLs



Note: Predictions are based on model (6) in Table 8 with aviation gasoline sales replacing PEA traffic. All other model variables fixed at their sample means.

a child from Reid-Hillview Airport (beyond 0.5 miles) appears to insulate that sampled child from the BLL effects of an increase in the volume of PEA traffic. Children more distant from Reid-Hillview Airport (0.5 to 1.5 miles) experience a modest increase in BLLs of about $1/10^{th}$ of $\mu\text{g}/\text{dL}$ from an increase in PEA traffic from the minimum to the maximum. By contrast, among children at < 0.5 miles of Reid-Hillview Airport, an increase from the minimum to maximum exposure to PEA traffic is associated with an estimated $0.83 \mu\text{g}/\text{dL}$ increase in BLLs. These results are supported by ancillary analyses involving the statistical interaction between distance and aviation gasoline sales at Reid-Hillview Airport.

5.3 PEA Traffic Contraction

As the COVID-19 pandemic gripped the country, state and local governments enacted various restrictions on the behavior of households and firms to limit the spread of the disease. Corresponding with these efforts, PEA traffic declined measurably at Reid-Hillview Airport over the months of February to July of 2020. As compared to three baseline control periods – 2011-2019, 2015-2019, and 2018-2019 – PEA traffic declined by 34 to 44%. Intriguingly, PEA traffic at Reid-Hillview Airport returned to pre-pandemic levels in August to December of 2020. The pandemic-caused dynamics in piston-engine aircraft operations at Reid-Hillview Airport present us with a natural experiment.

Insofar as aviation gasoline exposure is a source of risk, then we should observe a reduction in the BLLs of children sampled in this PEA traffic contraction period, other things held equal. To test whether child blood levels behaved differently in the contraction moment, we estimate the following linear model:

$$\begin{aligned}
 Y_{ijt} = & \beta_0 + \beta_1 D_{it}^n + \beta_2 D_{it}^f + \beta_3 T_{it} + \beta_4 W_{it}^e + \beta_5 W_{it}^s + \beta_6 W_{it}^w + \beta_7 COV_t \\
 & + \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} + \Gamma_6 L_{it} \\
 & + \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 I_{jt} + \lambda_4 Q_{it} + \gamma_j + \varepsilon_{ijt} \quad (7)
 \end{aligned}$$

where, all terms carry from Equation 2 with the exception COV_t that is an indicator variable equal to 1 if a child is sampled in the PEA traffic contraction moment and 0 otherwise. Other things held equal, we expect the coefficient β_7 , corresponding to COV_t , to be negative, indicating that children sampled in the PEA traffic contraction moment present with lower BLLs than children not sampled in this period.

A reasonable concern with this analytic exercise is that the kind of children sampled in the PEA contraction moment may be characteristically different than children sampled outside this moment. Table 9 compares means on model variables by children sampled in versus out of the PEA traffic contraction period. Sampled children are statistically indistinguishable in terms of residential distance to Reid-Hillview Airport (0.93 vs 0.94 miles, $p = 0.442$), fraction living East of Reid-Hillview Airport (0.07 vs 0.07, $p = 0.294$), child age (2.81 vs 2.91, $p = 0.180$), the proportion children that are female (0.49 vs 0.51, $p = 0.199$), and sample order (0.82 vs 0.87, $p = 0.136$). We do observe significant differences on the proportion of samples drawn by capillary method (0.27 vs 0.17, $p < 0.001$), the percentage of housing stock in a child's residential neighborhood at-risk of presenting with lead-based paint (27.79 vs 24.41, $p < 0.001$), and neighborhood socioeconomic status (-0.27 vs 0.33, $p < 0.001$). Importantly, across every variable for which we observe differences, all function to increase the BLLs of children sampled outside the contraction period relative to children sampled in the PEA traffic contraction period, likely rendering our test results conservative.

Table 10 presents estimated coefficients pertaining to the PEA traffic contraction period. As expected from an aviation gasoline exposure risk standpoint, and other things held equal, the BLLs of sampled children in the PEA traffic contraction moment are significantly lower vis-à-vis children sampled outside this moment. Across models (1-6), we find that BLLs decreased by 0.22 to 0.35 $\mu\text{g}/\text{dL}$, depending on the presence of control variables. The period indicator coefficient attenuates intuitively with the inclusion of measured PEA traffic exposure in model (7). Figure 17 illustrates results from model (6) in Table 10, showing predicted BLLs for children sampled inside versus outside the PEA

Table 9: Comparison of Means on Variables by Contraction Period, (t-Test)

	Non-Contraction Period	Contraction Period	<i>p</i> value
PEA Traffic Exposure	0.52	0.15	<0.001
Distance to RHV	0.93	0.94	0.442
Residence East of RHV	0.07	0.07	0.294
Age (years)	2.81	2.91	0.180
Female	0.49	0.51	0.199
Capillary Blood Draw	0.27	0.17	<0.001
Sample Order	0.82	0.87	0.136
Tri Facilities < 2 miles	2.50	2.55	0.059
Neighborhood % Stock < 1960	27.79	24.41	<0.001
Neighborhood SES	-0.27	0.33	<0.001

Note: *p* values correspond to one-tailed t-tests with equal variances assumed across variables.

traffic contraction period. Fixing other covariates at their means, we find that child BLLs decreased by around $1/4^{th}$ $\mu\text{g}/\text{dL}$ in the contraction period.

5.3.1 Results Summary, Section 5.3

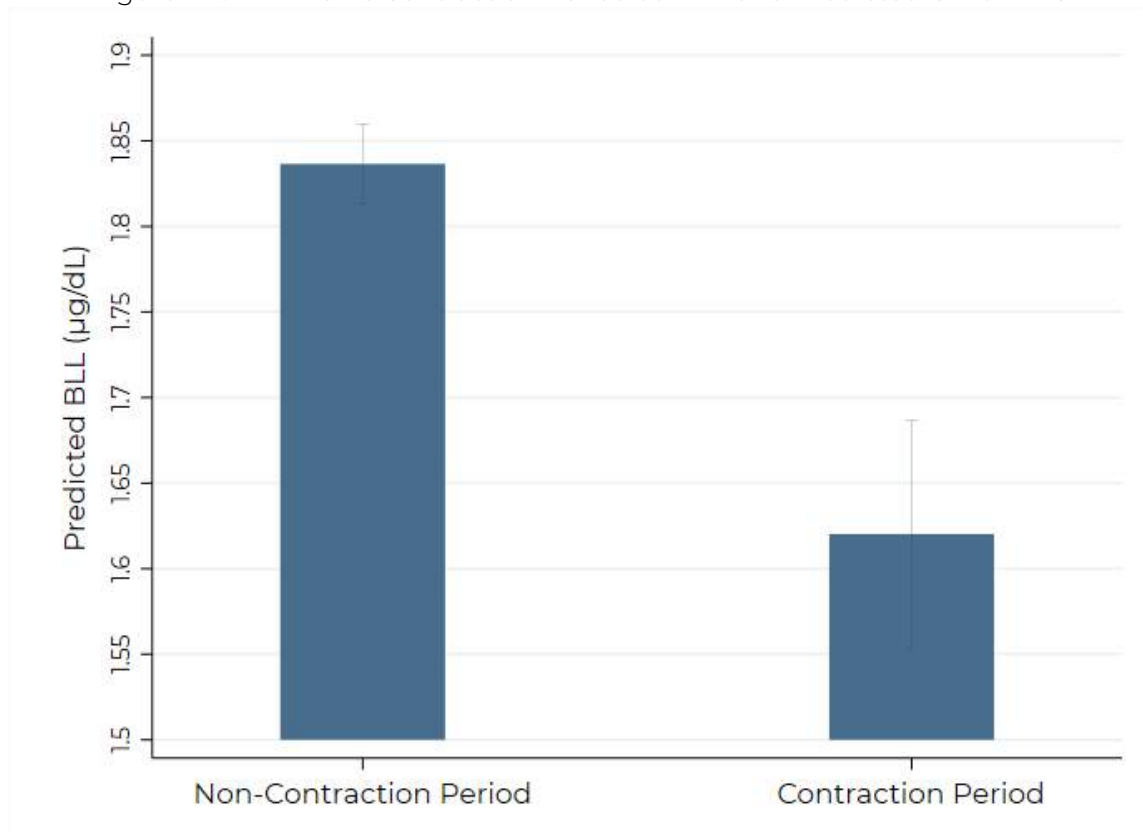
PEA traffic at Reid-Hillview Airport declined measurably from February to July in 2020, recovering to historically normal levels in August through December. Children sampled in this PEA traffic contraction period presented with significantly lower BLLs – about $1/4^{th}$ of a $\mu\text{g}/\text{dL}$ lower – than children not sampled in this contraction window. Given the reduction in PEA traffic of ~ 34 to 44% , the size of the estimated reduction in BLLs of $1/4^{th}$ of a $\mu\text{g}/\text{dL}$ is approximately equal in magnitude to what we observe in main results pertaining to PEA traffic. The estimated statistical association may be understated given characteristic differences in children sampled across periods.

Table 10: PEA Traffic Contraction Period at Reid-Hillview and Child BLLs

BLL ($\mu\text{g/dL}$)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Contraction Period	-0.348*** (0.040)	-0.348*** (0.040)	-0.349*** (0.040)	-0.352*** (0.040)	-0.217*** (0.034)	-0.216*** (0.034)	-0.066 (0.051)
Constant	1.840*** (0.013)	1.987*** (0.075)	1.983*** (0.081)	1.905*** (0.087)	2.192*** (0.094)	2.167*** (0.094)	2.084*** (0.323)
Observations	17,241	17,241	17,241	17,241	17,241	17,241	17,162
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	No	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	No	No	No	No	No	No	Yes
Near Angle FE	No	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles of RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ($\mu\text{g/dL}$); Contraction period is an indicator equaling 1 if draw date occurs February, 2020 thru July, 2020, zero otherwise; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities ≤ 2 miles from residential address, and percent of neighborhood housing stock built ≤ 1960 ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Figure 17: PEA Traffic Contraction Period at RHV and Predicted Child BLLs



Note: Predictions are from model (6) in Table 10, with all other model variables fixed at their sample means.

5.4 Relative School Distance

When schools are in session, school-aged children spend a considerable amount of their day away from home. In our context, the school a child attends may be more or less distant from Reid-Hillview Airport than their place of residence. Insofar as aviation gasoline exposure is a source of risk, school-aged children that commute away from Reid-Hillview Airport to attend school might present with lower BLLs, other things held constant.

With a complete inventory of elementary, middle and high schools in Santa Clara County from the National Center for Education Statistics, we assigned each school-aged child (≥ 4 years of age) at the time of blood draw to the nearest grade-serving school. This matching process assumes that a child attends the nearest available school, and that all children are in typical age-based grades. To test whether the blood lead levels of sampled children behave differently by the relative distance of their residence and assigned school to Reid-Hillview Airport, we estimate the following linear model:

$$\begin{aligned} Y_{ijt} = & \beta_0 + \beta_1 D_{it}^n + \beta_2 D_{it}^f + \beta_3 T_{it} + \beta_4 W_{it}^e + \beta_5 W_{it}^s + \beta_6 W_{it}^w + \beta_7 SC_{it} \\ & + \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} + \Gamma_6 L_{it} \\ & + \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 I_{jt} + \lambda_4 Q_{it} + \gamma_j + \varepsilon_{ijt} \quad (8) \end{aligned}$$

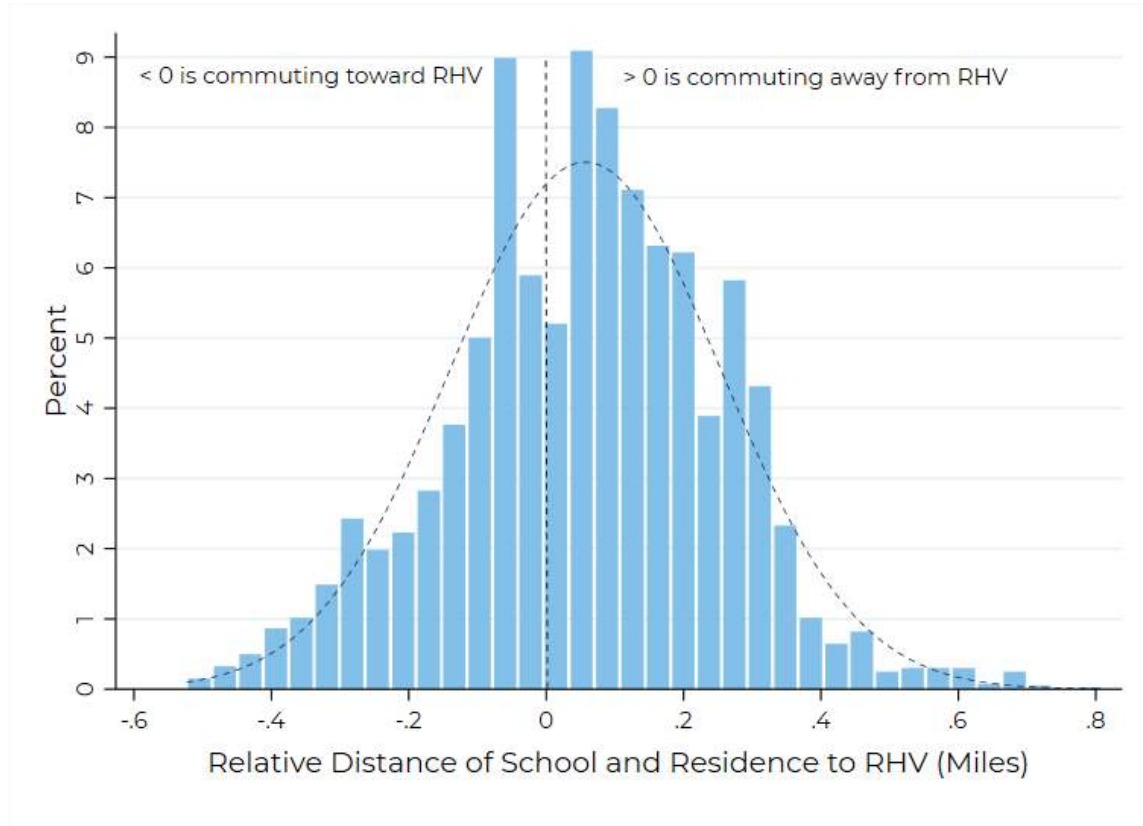
where, all terms carry from Equation 2 with the exception SC_{it} , our school commute variable, measuring the relative distance between a child's assigned school and residence in time t to Reid-Hillview Airport. Relative distance is calculated by subtracting the residential distance of a sampled child to Reid-Hillview Airport from the distance of the assigned school to Reid-Hillview Airport. Negative values indicate that a child commutes toward Reid-Hillview Airport during the school day, and positive values mean that a child commutes away from Reid-Hillview Airport during the school day. Other things held equal, we expect the coefficient of β_7 corresponding to SC_{it} to be negative, indicating that the BLLs of children decrease as one increases the distance that they commute away from Reid-Hillview Airport during the school day.

We extend this test by reconstituting our school commute variable into a series of tercile indicators, dividing the distribution into three even piles. Denoting medium (*m*) and high (*h*) terciles of school commuting and letting the first tercile be the reference group, we modify Equation 8 by replacing the continuous variable SC_{it} with dummy variables SC_{it}^m and SC_{it}^h for medium and high commuting terciles, respectively. We expect β_{3a} and β_{3b} , corresponding to SC_{it}^m and SC_{it}^h , to be negative, indicating that BLLs are lower among sampled children that commute longer distances away from Reid-Hillview Airport than children that commute toward Reid-Hillview Airport for school, other things held equal.

Figure 18 is a histogram of the school commuting behavior of elementary and middle school-aged children that reside within 1.5 miles of Reid-Hillview Airport. On the x-axis we plot relative distance, which recall is the distance of the assigned school to Reid-Hillview Airport minus the distance of residence to Reid-Hillview Airport. The distribution is approximately normal with faint kurtosis ($K = 3.13$) and the absence of skew ($S = -0.05$). Of all observable characteristics, only child age and residential distance are correlated with relative distance, with older children (particularly children of high school age) traveling longer distances away from Reid-Hillview Airport, and with children residing 1 to 1.5 miles being more likely to travel toward Reid-Hillview Airport for school. With these exceptions, moving toward or away from Reid-Hillview Airport appears to be statistically independent of observable child characteristics.

Table 11 reports coefficients for relative distance measured continuously (in miles) – models (1) to (3) – and categorically (in terciles) in models (4) to (6). Models (1) and (4) report results for all school-aged children. Beginning with model (1), we find that a 1-mile increase in relative distance is associated with a reduction in child BLLs of 0.32 $\mu\text{g}/\text{dL}$. Sampled children that commute away from Reid-Hillview Airport to attend school witness a reduction in their BLLs, and vice-versa. The results in model (4) show that as compared to children that commute toward RHV for school – our reference group of Low Tercile – children in the Medium Tercile (that commute shorter distances away from RHV) and the High Tercile (that commute longer distances away from Reid-Hillview Airport)

Figure 18: Histogram of Relative Distance of School and Residence to RHV



Note: The calculation of relative distance involves taking the distance of the assigned nearest school to Reid-Hillview Airport minus the residential distance of the sampled child to Reid-Hillview Airport. Negative values indicate that a child commutes toward Reid-Hillview Airport and a positive value indicates that a child commutes away from Reid-Hillview Airport during the school day.

Table 11: School and Residential Distance Difference to Reid-Hillview Airport and Child BLLs

BLLs ($\mu\text{g}/\text{dL}$)	(1)	(2)	(3)	(4)	(5)	(6)
Difference (miles)	-0.318*** (0.069)	-0.340*** (0.080)	-0.248 (0.152)			
Difference (Reference Low Tercile)						
Medium Tercile				-0.190** (0.081)	-0.225*** (0.085)	0.055 (0.182)
High Tercile				-0.330*** (0.075)	-0.359*** (0.084)	-0.131 (0.139)
Constant	2.550*** (0.572)	2.743*** (0.655)	3.033*** (1.140)	2.812*** (0.568)	3.005*** (0.655)	2.962** (1.197)
Observations	4,347	3,352	995	4,315	3,325	990
Block FE	Yes	Yes	Yes	Yes	Yes	Yes
Distance	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	Yes	Yes	Yes	Yes	Yes	Yes
Demography	Yes	Yes	Yes	Yes	Yes	Yes
Draw Controls	Yes	Yes	Yes	Yes	Yes	Yes
Other Exposures	Yes	Yes	Yes	Yes	Yes	Yes
SES	Yes	Yes	Yes	Yes	Yes	Yes
Timing Controls	Yes	Yes	Yes	Yes	Yes	Yes
School in Session	Yes	Yes	No	Yes	Yes	No

Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ($\mu\text{g}/\text{dL}$); Difference is distance from child's place of residence to RHV less the distance of assigned school to RHV (miles); Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities ≤ 2 miles from residential address, and percent of neighborhood housing stock built ≤ 1960 ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

present with BLLs that are -0.19 and -0.33 $\mu\text{g}/\text{dL}$ lower, respectively.

Models (2) and (5) restrict analysis to children sampled in periods when school *is* in session. Models (3) and (6) censor observations to children sampled in periods when school *is not* in session.¹³ As expected, and as compared to models (1) and (3) where all school-aged children are observed, coefficients in models (2) and (5) amplify with the *exclusion* of children sampled in periods when school is not session. In models (3) and (6), we observe an attenuation of relative distance coefficients when restricting to children sampled in periods when school is not in session. Subgroup analyses behave logically, with the relative distance mechanism operating statistically significantly in periods when school is in session.

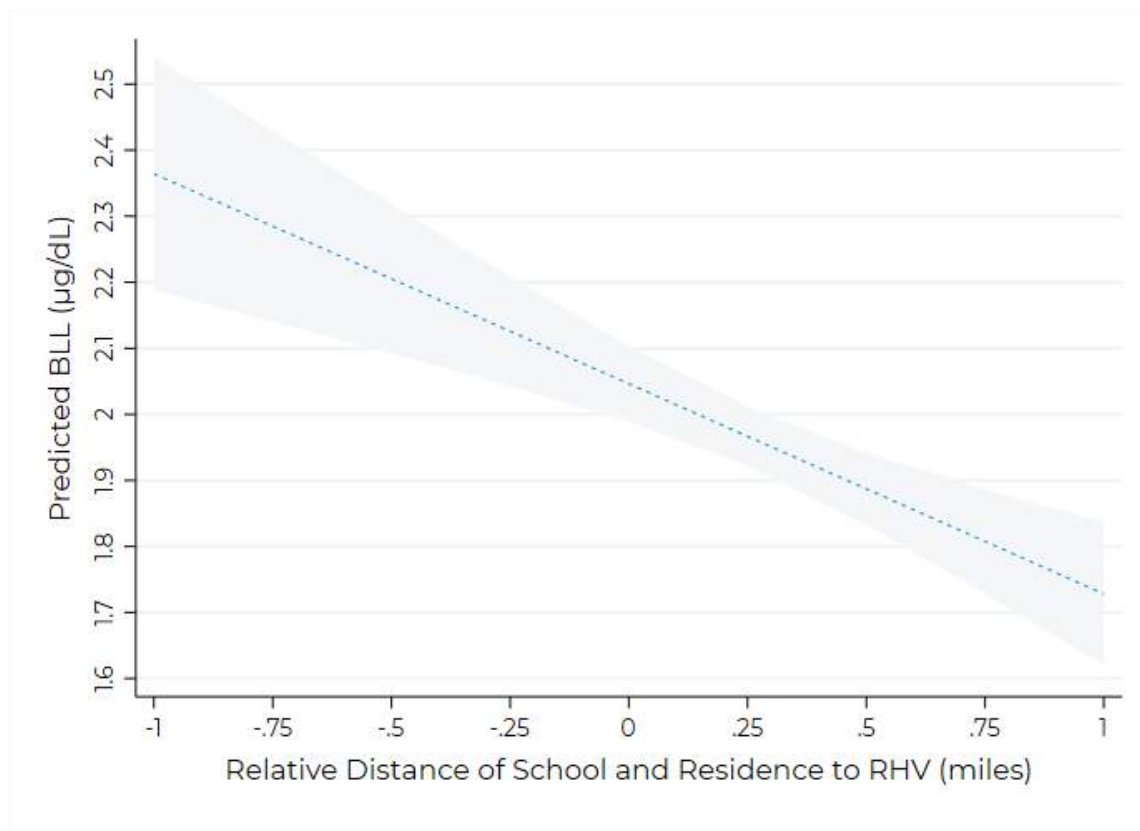
Figure 19 and Figure 20 visualize results from models (1) and (4) in Table 11. On the x-axis in Figure 19 we plot the relative distance of a child's assigned school and residence to Reid-Hillview Airport, and on the y-axis we have predicted BLL. As before, all other model covariates in Equation 8 are fixed at their sample means. Other things held equal, sampled children that *commute toward* Reid-Hillview Airport for school by 1 mile have predicted BLLs of 2.37 $\mu\text{g}/\text{dL}$ (95% CI: 2.15, 2.59). By contrast, sampled children that *commute away* Reid-Hillview Airport for school by 1 mile have predicted BLLs of 1.72 $\mu\text{g}/\text{dL}$ (95% CI: 1.53, 1.92). Figure 20 divides our distribution of relative distance into terciles. In support of the linear dose-response displayed in Figure 19, we find that the predicted BLLs of sampled child decrease incrementally across relative distance terciles, going from 2.20 to 2.03 to 1.85 $\mu\text{g}/\text{dL}$, respectively.

5.4.1 Results Summary, Section 5.4

By matching school-aged children to the nearest grade-serving school, we tested whether the blood lead levels of sampled children decline measurably with the distance that they

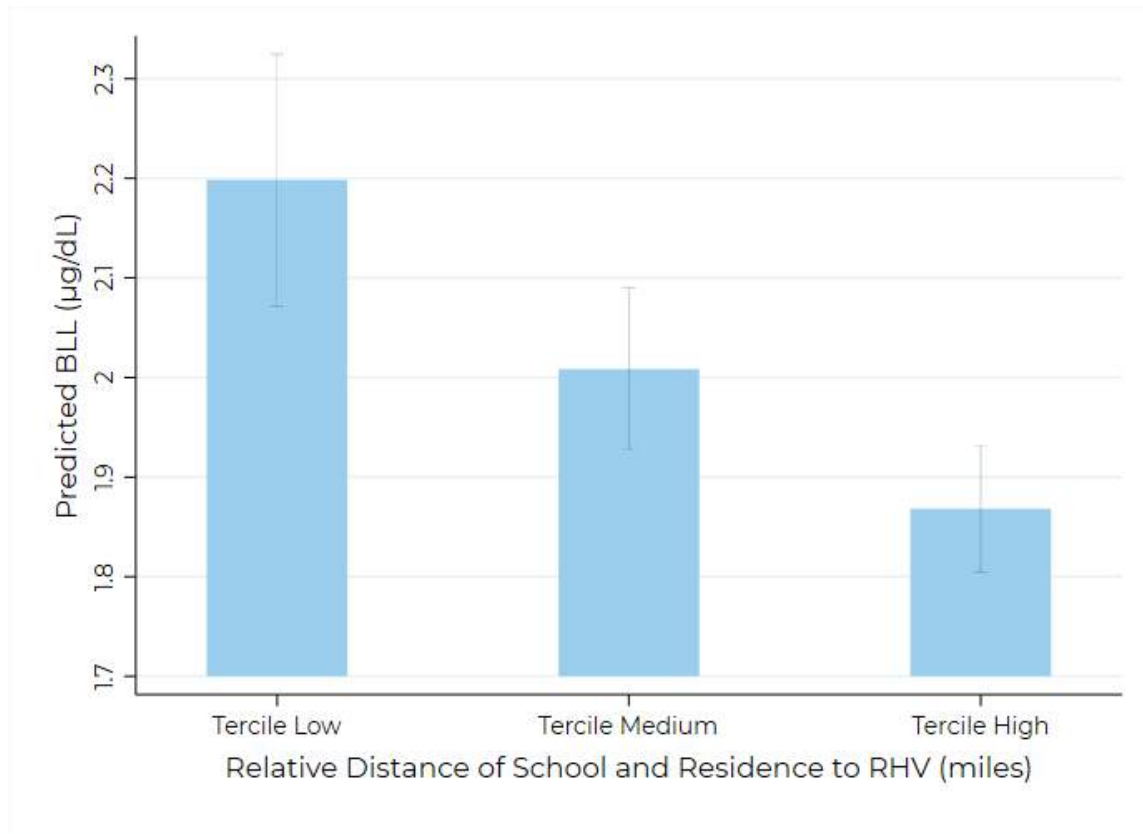
¹³In Santa Clara County, public schools are typically not in session from the first week of June till the second week of August – extended summer break – and closed from the third week of December till the first week of January – extended winter break.

Figure 19: Relative Distance of School and Residence to RHV and Predicted Child BLLs



Note: Predictions are from model (1) in Table 11, with all other covariates fixed at their sample means. The calculation of relative distance involves taking the distance of the assigned nearest school to Reid-Hillview Airport minus the residential distance of the sampled child to Reid-Hillview Airport. Negative values indicate that a child commutes toward Reid-Hillview Airport and a positive value indicates that a child commutes away from Reid-Hillview Airport during the school day.

Figure 20: Relative Distance Terciles of School and Residence to RHV and Predicted Child BLLs



Note: Predictions are from model (4) in Table 11, with all other covariates fixed at their sample means. Terciles divide the distribution of relative of school and residence to Reid-Hillview Airport into three even piles. The average relative distances in Terciles Low, Medium and High are -0.17, 0.07, and 0.32 miles, respectively.

commute away from Reid-Hillview Airport to attend school. Results reported in Table 11 and Figure 19 corroborate the notion that exposure to aviation gasoline is likely a statistically independent source of risk. Children commuting toward Reid-Hillview Airport to attend school present with substantially higher BLLs than sampled children commuting away from Reid-Hillview Airport for school. This relative distance effect appears to be dose-responsive.

5.5 Extension to All Airports

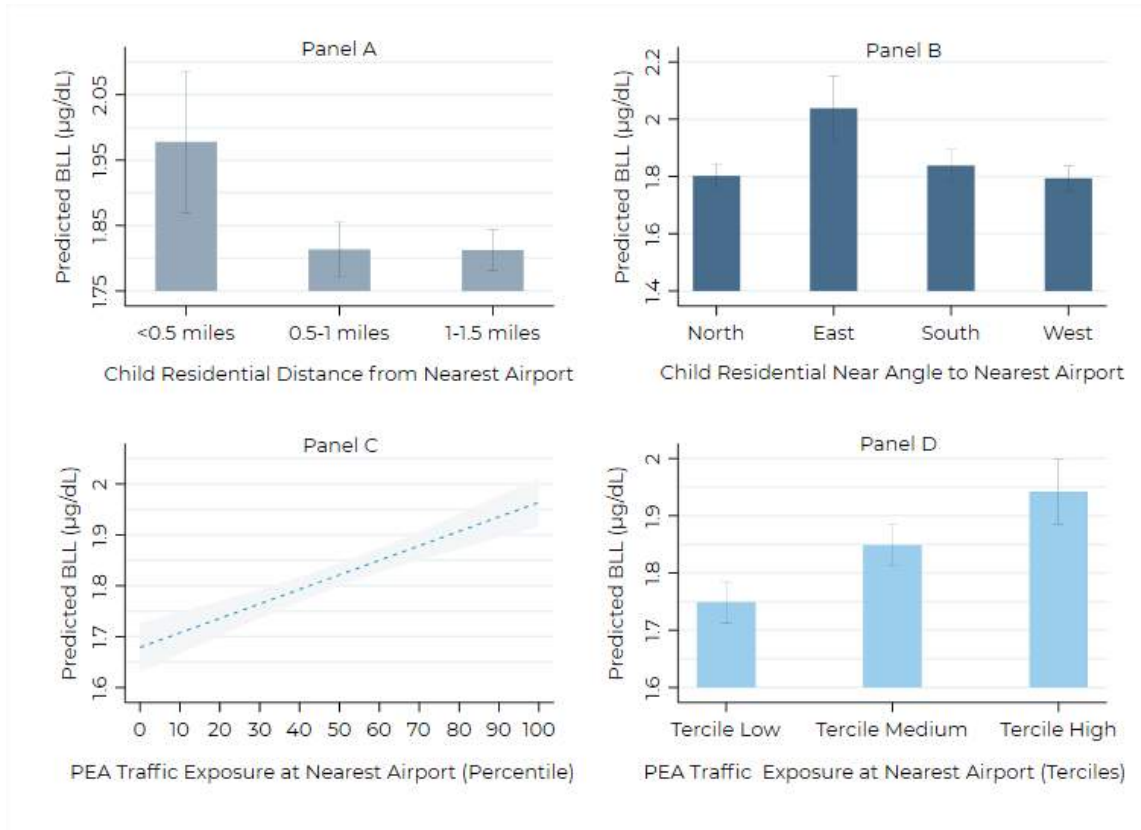
As indicated in FAA data, four other airports located in Santa Clara County service piston-engine aircraft, including NUQ, PAO, SJC, and E16. As with RHV, we extracted all valid CDPH records on children ≤ 18 years of age, residing within 1.5 miles of acnuq, PAO, SJC, or E16, and sampled in the last 10 years (January 1, 2011 to December 31, 2011). By adding the 2,500 records obtained from this extraction process to our set of observations, we test the persistence of results reported in Section 4 and Section 5 pertaining to Reid-Hillview Airport.

Figure 21 displays the medley of analyses pursued in Section 4, pertaining to residential distance (Panel A), residential near angle (Panel B), and piston-engine aircraft traffic exposure (Panels C and D). Detailed tables with estimated coefficients corresponding to Panels A through D in Figure 21 are presented in the Appendix.¹⁴

As shown in Figure 21, the results reported in Section 4 are robust to the inclusion of children proximate to other airports in Santa Clara County that service piston-engine aircraft. Again, we find that child BLLs decrease with distance from the nearest airport, are significantly higher among children residing East (and predominantly downwind) of the nearest airport, and increase with the volume of PEA traffic (whether measured continuously or categorically).

¹⁴See Appendix Table A.2, Table A.3, Table A.4, Table A.5, Table A.6, and Table A.7.

Figure 21: Main Results on Aviation Gasoline Exposure Risk at Nearest Airports



Note: Residential distance (Panel A) and residential near angle (Panel B) pertain to the nearest airport. PEA traffic in percentile terms (Panel C) and division into terciles (Panel D) correspond to observed PEA traffic at the nearest airport. Across predictions, other model variables are fixed at their sample means.

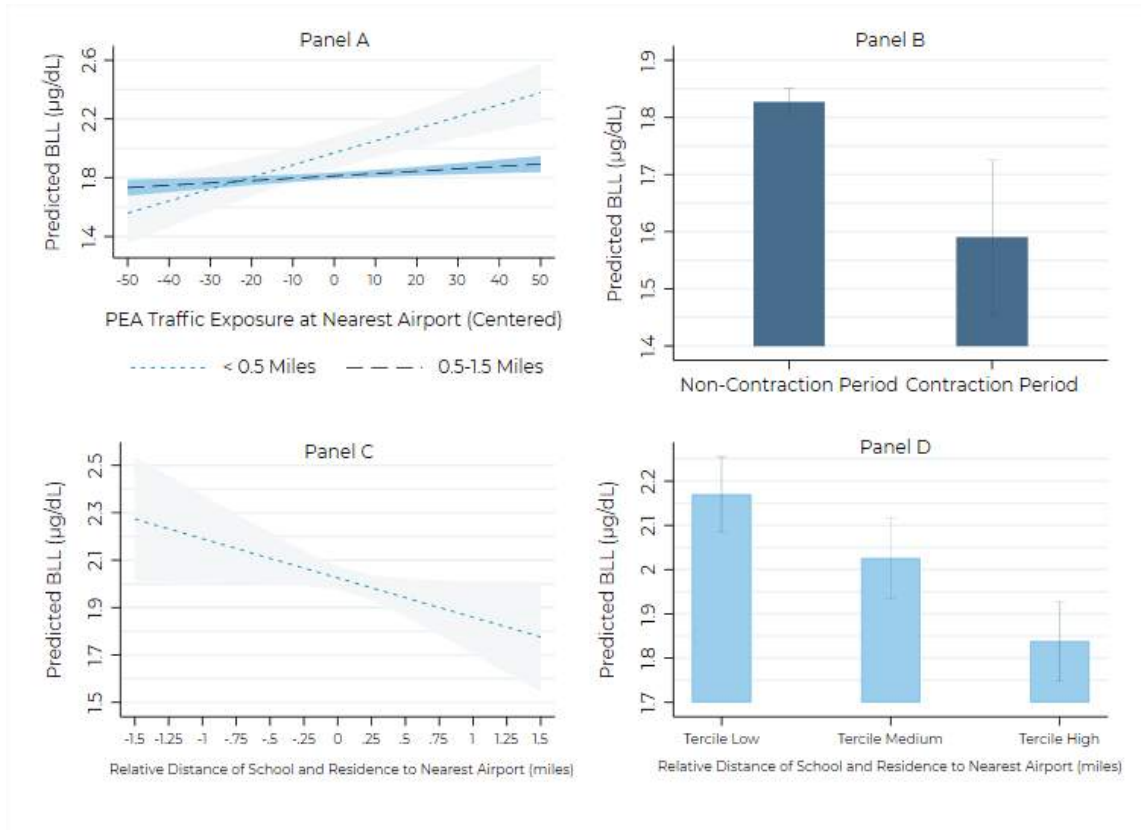
Figure 22 presents an assortment of extended analyses pursued in Section 5, including the statistical interaction of piston-engine aircraft traffic and residential distance (Panel A), the behavior of BLLs of sampled children during the PEA traffic contraction period in 2020 corresponding with the onset of protection efforts to limit the spread of COVID-19 (Panel B), and exposure insulation effects of commuting away from the nearest airport to attend school (Panels C and D). Again, detailed tables with estimated coefficients corresponding to Panels A through D in Figure 22 are presented in the Appendix.

With the inclusion of sampled children proximate to other airports in Santa Clara County, Panel A in Figure 22 shows, once again, that children residing within 0.5 miles of the nearest airport are especially vulnerable to fluctuations in PEA traffic. In Panel B we find that children sampled in the PEA traffic contraction moment present with substantially lower BLLs than statistically similar children sampled outside this moment. In Panels C and D we find that school-aged children commuting away from the nearest airport to attend school realize substantially lower BLLs than children commuting toward PEA-servicing airports for school.

5.5.1 Results Summary, Section 5.5

Across an ensemble of tests that incorporate children proximate to other airports in Santa Clara County with non-zero piston-engine aircraft activity, we find that all results reported in Section 4 and Section 5 pertaining to Reid-Hillview Airport are statistically upheld. Estimated coefficients are similar in direction and magnitude, supporting the hypothesis that exposure to aviation gasoline is a significant source of risk for children proximate to PEA-servicing airports.

Figure 22: Extended Results on Aviation Gasoline Exposure Risk at Nearest Airports



Note: PEA Traffic \times Residential distance (Panel A) and contraction period (Panel B) pertain to the nearest airport. Relative distance (Panel C) and division into terciles (Panel D) correspond to relative distances from residence and assigned school to the nearest airport. Across predictions, other model variables are fixed at their sample means.

This Page Left Blank Intentionally

6 Reduction Scenario

To provide additional quantitative meaning to our results, we conservatively estimate the social benefits of a simulated reduction in PEA traffic from the 50th (observed median) to the 1st percentile (observed minimum). Social benefits are quantified with a standard syllogism in environmental health economics (PEA Traffic → Child BLLs → IQ → Lifetime Earnings) linking lead exposure source to child BLLs to IQ points and to the net present value of future earnings (Schwartz, 1994; Gould, 2009; Grosse et al., 2002).

With coefficients from our Distance × PEA Traffic test reported in Table 8 and visualized in Figure 15, we calculate that a reduction in PEA traffic from the 50th to the 1st percentile results in an estimated reduction in average BLLs from 2.01 to 1.60 $\mu\text{g}/\text{dL}$ among sampled children residing within 0.5 miles of Reid-Hillview Airport, and a reduction of 1.82 to 1.76 $\mu\text{g}/\text{dL}$ among sampled children within 0.5-1.5 miles of the airport. These expected reductions in average BLLs are a health benefit conferred on the population of children (≤ 18 years) residing around Reid-Hillview Airport. This calculation completes the first step of the syllogism of PEA Traffic → Child BLLs.

In an international pooled analysis of low-level environmental lead exposure and children's intellectual function, Lanphear et al. (2005) report that 1 $\mu\text{g}/\text{dL}$ increase of lead in a child's bloodstream is statistically associated with a 0.56 point (95% CI: 0.35, 0.78) reduction in measured IQ¹⁵. With the Lanphear et al. (2005) estimate of 0.56 IQ points (95% CI: 0.35, 0.78) for every $\mu\text{g}/\text{dL}$ of lead, one can translate the estimated reduction in average BLLs from our PEA traffic reduction scenario of 0.41 $\mu\text{g}/\text{dL}$ into an expected gain in IQ for children within 0.5 miles of RHV, and 0.06 $\mu\text{g}/\text{dL}$ for children at 0.5-1.5 miles, completing the second step of the syllogism of Child BLLs → IQ.

¹⁵It should be noted that this coefficient of 0.56 IQ points is likely underestimated in the context of aviation gasoline exposure at Reid-Hillview Airport. Recall, Figure 1 showing that the relationship between IQ and child BLL is non-linear, with the steeper losses in IQ at lower BLLs. At $\leq 5 \mu\text{g}/\text{dL}$, the relationship approaches and possibly exceeds 1 to 1. Therefore, we may regard the final tally of potential gains from a reduction in PEA traffic presented in Table 12 as likely conservative.

The final step of the syllogism, IQ \rightarrow Lifetime Earnings, involves the known statistical relationship between IQ and lifetime earnings. Following other (Schwartz, 1994; Salkever, 1995; Grosse et al., 2002; Nevin et al., 2008), each IQ point gained corresponds to an estimated gain in the present discounted value of lifetime earnings of \$22,871 (2020 U.S.\$). One can complete the social benefits exercise by translating the expected gain in IQ over the estimated number of children residing around Reid-Hillview Airport (over the observation period of January 1st, 2011 to December 31st, 2020) to get the expected gain in lifetime earnings resulting from a simulated reduction in piston-engine aircraft traffic from the 50th to 1st percentile.

Table 12 summarizes calculated social benefits for a simulated reduction in PEA traffic from the 50th (observed median) to the 1st percentile (observed minimum). To illustrate the logic, take the first row corresponding to children residing within 0.5 miles of Reid-Hillview. Column (A) is the estimated number of children \leq 18 years of age residing $<$ 0.5 miles of Reid-Hillview Airport from January 1st, 2011 to December 31st, 2020 of 3,000. Column (B) is the expected reduction in child BLLs of 0.41 $\mu\text{g/dL}$ resulting from the simulated reduction in piston-engine aircraft traffic from the 50th to 1st percentile. Column (C) is the expected gain in IQ for each $\mu\text{g/dL}$ reduced in a child's bloodstream of 0.56 IQ points. In parentheses we report the interval of confidence around this estimated gain of 0.56 IQ points (of 0.35 to 0.78). Data in Column (C) are from the Lanphear et al. (2005) international pooled analysis of low-level environmental lead exposure and children's intellectual function.

Column (D) is the estimated IQ points gained over the cohort of children \leq 18 years of age residing within 0.5 miles of Reid-Hillview Airport from the simulated reduction in piston-engine aircraft traffic from the 50th to the 1st percentile. The number of 347 is derived by Column (A) \times Column (B) \times Column (C). The numbers in parentheses in Column (D) of 213 and 481 correspond to the intervals of confidence in Column (C), providing a range estimate of the cohort gain in IQ from the PEA traffic reduction scenario.

Table 12: Estimated Gain in Cohort Lifetime Earnings from IQ Gain from PEA Traffic Reduction of 50th to 1st Percentile

Distance	(A) Cohort ≤ 18 yrs	(B) Expected BLL Decrease	(C) IQ Gain per μg/dL	(D) Cohort IQ Points Gained	(E) Lifetime \$ per IQ Point	(F) Cohort Benefit (\$ Millions)
0-0.5 Miles	1,500	0.41 μg/dL	0.56 (0.35, 0.78)	347 (213, 481)	\$22,871	\$7.9 (\$4.9, \$11.0)
0.5-1.5 Miles	13,000	0.06 μg/dL	0.56 (0.35, 0.78)	440 (270, 610)	\$22,871	\$10.1 (\$6.2, \$14.0)

Notes: The cohort of potentially affected children in Column A is estimated from American Community Survey data on age structure for neighborhoods around RHV over the ten-year period of Jan 1st, 2011 to December 31st, 2020. Column D is derived by A × B × C. Column F is calculated by D × E. Estimated range in Column F is from the estimated intervals on BLL to IQ relationship in (C).

Finally, Column (F) completes the syllogism by taking the cohort gain in IQ in column (D) and multiplying by the estimated gain in lifetime earnings for a unit gain in IQ (E). From this, we arrive at the estimated gain in discounted net present value of earnings of \$11.0 to \$24.9 million for the cohort of children ≤ 18 years of age residing within 0.5 miles of Reid-Hillview Airport. If one assumes that this PEA traffic reduction scenario is permanent, the estimated gain in lifetime earnings would benefit all subsequent cohorts of children in the vicinity of Reid-Hillview Airport going forward.

We repeat the exercise but this time imagining a reduction in monthly aviation gasoline sales at Reid-Hillview Airport from the 50th (25,000 gal) to the 1st (9,000 gal) percentile. This reduction aviation gasoline usage is approximately equal to what is accomplishable by the percentage of piston-engine aircraft that can safely transition to an unleaded fuel alternative (Kessler, 2013). Leveraging underlying coefficients in Figure 16, Table A.8 summarizes calculations, indicating a cohort gain of about \$15.3 million for a reduction in aviation gasoline sales at Reid-Hillview Airport from the 50th to the 1st percentile.

Importantly, these estimates are not meant to be a full accounting of the social bene-

fits associated with a reduction in population exposure to leaded aviation gasoline. Our estimates are not comprehensive since they reflect gains to a subset of the population (children ≤ 18 years of age), and only one benefit channel (lifetime earnings from an expected gain in IQ). Including health care and special education costs averted, as well as behavioral, physical health, and mortality costs saved, and more than one age stratum of the population would lead to substantially higher estimates (Schwartz, 1994; Gould, 2009).

This Page Left Blank Intentionally

7 Conclusions

In this study, we assessed whether the BLLs of sampled children around Reid-Hillview Airport are statistically associated with indicators of aviation-related lead exposure, net of other lead exposure pathways. In service of this assessment effort, data were amassed from various sources and analyzed with established statistical and econometric technologies. The conclusions one can reach with applied statistical analyses of this kind rest on the consistency of an ensemble of evidence.

7.1 Main Results

Controlling for other known sources of lead exposure both explicitly and indirectly, demographic characteristics, and neighborhood conditions, the evidence from main analyses (in Section 4) of a statistical link between aviation gasoline exposure risk and child blood lead levels includes:

1. As evidenced in Section 4.2, the BLLs of sampled children increase significantly and dose-responsively with proximity to Reid-Hillview Airport. As shown in Table 4, this relationship between child BLLs and distance to Reid-Hillview Airport is robust to various linear and nonlinear transformations of both input and response variables. Children residing within 0.5 miles of Reid-Hillview Airport present with significantly higher BLLs than children more distant of Reid-Hillview Airport.
2. As evidenced in Section 4.3, BLLs are significantly and substantively higher among sampled children residing East (and predominantly downwind) of Reid-Hillview Airport, and significantly increase in the estimated downwind days drifting in the residential direction of a sampled child from the date of blood draw.
3. As evidenced in Section 4.4, the BLLs of sampled children increase significantly with the volume of measured piston-engine aircraft traffic at Reid-Hillview Airport from the date of blood draw. Moreover, the BLLs of sampled children increase sig-

nificantly with monthly quantities of aviation gasoline sold to fixed-base operators at Reid-Hillview Airport from the date blood draw.

Estimated relationships between BLLs and our main indicators of aviation gasoline exposure risk are quantitatively similar to results of other studies (Miranda et al., 2011; Zahran et al., 2017a). As shown in Table A.9 all main results are robust to the use of clustered errors by sample order, high confidence geo-coded records, richly sampled neighborhoods, and the inclusion of lab fixed effects to account for unmeasured factors present in laboratories performing blood lead tests. Results across main indicators also behave similarly when limiting the analysis to children ≤ 6 years of age, as shown in Table A.10, Table A.11, and Table A.12. Finally, results are robust to various single imputation operations in accounting for possible biases from test detection, as shown in Table A.13.

7.2 Extended Results

Again, controlling for other known sources of lead, child demographic characteristics and neighborhood conditions, the evidence for a statistical link between child BLLs and aviation gasoline exposure from extended analyses (in Section 5), include:

1. As evidenced in Section 5.1 the probability that a sampled child's BLL exceeds the CDPH-defined threshold of $4.5 \mu\text{g}/\text{dL}$ increases significantly with proximity to Reid-Hillview Airport, is higher among children residing East of Reid-Hillview Airport, and increases with the volume of piston-engine aircraft traffic.
2. As evidenced in Section 5.2, the BLLs of sampled children proximate to Reid-Hilview are significantly more dose-responsive to piston-engine aircraft traffic and aviation gasoline sales at Reid-Hillview Airport than quantitatively similar children more distant from the airport.
3. Subsequent to social distancing efforts in Santa Clara County to stem the spread of COVID-19, piston-engine aircraft traffic declined significantly in the months of

February to July at Reid-Hillview Airport. As evidenced in Section 5.3, the BLLs of children sampled in this PEA traffic contraction period declined significantly.

4. As evidenced in Section 5.4, children commuting toward Reid-Hillview to attend school present with substantially higher BLLs than sampled children commuting away from Reid-Hillview for school.
5. As evidenced in Section 5.5, all main and extended results pertaining to Reid-Hillview are statistically upheld with the inclusion of sampled children proximate to other piston-engine aircraft servicing airports in Santa Clara County.

While it is statistically improbable that the ensemble of evidence presented above arises for chance alone, there are important caveats to note. First, the generalization of our analysis to San Martin Airport (E16) independent of observations from Reid-Hillview is limited. In CDPH data, we observe only 68 blood lead samples for children ≤ 18 years of age and residing < 0.5 miles of E16 over the 10 year window of analysis. Future analyses of other GA airports in California on the list of EPA-tracked airports (i.e., McClellan-Palomar Airport, San Carlos Airport) can help adjudicate the generalization question.

Second, and following the EPA's (2020) procedure of taking 3-month averages, we find that the measured count of piston-engine aircraft traffic in Federal Aviation Administration data as well as the monthly quantity of aviation gasoline sold to fixed-base operators at Reid-Hillview Airport are puzzlingly modestly positively correlated with measured levels of atmospheric lead at Reid-Hillview Airport (from Feb 2012 to March 2018). While beyond the scope of the current study, more research is needed in the direction of atmospheric sampling and modeling of lead emissions in and around general aviation airports.

More research on the BLLs of sampled children proximate to other general aviation airports in California tracked by the EPA, coupled with research on best atmospheric sampling and modeling of lead emissions around PEA-servicing airports can help provide

scientific support on options for reducing aviation-related lead exposure. On the matter of aviation gasoline exposure risk to families and children proximate to general aviation airports, the National Academies of Sciences, Engineering, and Medicine maintains: “Because lead does not appear to exhibit a minimum concentration in blood below which there are no health effects, there is a compelling reason to reduce or eliminate aviation lead emissions.” The ensemble evidence compiled in this study supports the “compelling” need to limit aviation lead emissions to safeguard the welfare and life chances of at-risk children.

References

- Options for reducing lead emissions from piston-engine aircraft. In *Demographic and economic change in developed countries*, pages 10–11. Transportation Research Board and National Academies of Sciences, Engineering, and Medicine, 2021.
- Almond, D. and Currie, J. Killing me softly: The fetal origins hypothesis. *Journal of Economic Perspectives*, 25(3):153–72, 2011.
- Altuntas, O. Lead emissions from the use of leaded avgas in Turkey. *Aircraft Engineering and Aerospace Technology*, 2020.
- Bellinger, D. C. and Bellinger, A. M. Childhood lead poisoning: The torturous path from science to policy. *The Journal of Clinical Investigation*, 116(4):853–857, 2006.
- Caldwell, K. L., Cheng, P.-Y., Jarrett, J. M., Makhmudov, A., Vance, K., Ward, C. D., Jones, R. L., and Mortensen, M. E. Measurement challenges at low blood lead levels. *Pediatrics*, 140(2), 2017.
- Callahan, C. *The plane truth: Air quality impacts of airport operations and strategies for sustainability: Case study of the Los Angeles World Airports*. PhD thesis, UCLA, 2010.
- Campanella, R. and Mielke, H. W. Human geography of New Orleans' high-lead geochemical setting. *Environmental Geochemistry and Health*, 30(6):531–540, 2008.
- Canfield, R. L., Henderson Jr, C. R., Cory-Slechta, D. A., Cox, C., Jusko, T. A., and Lanphear, B. P. Intellectual impairment in children with blood lead concentrations below 10 μg per deciliter. *New England Journal of Medicine*, 348(16):1517–1526, 2003.
- Carr, E., Lee, M., Marin, K., Holder, C., Hoyer, M., Pedde, M., Cook, R., and Touma, J. Development and evaluation of an air quality modeling approach to assess near-field impacts of lead emissions from piston-engine aircraft operating on leaded aviation gasoline. *Atmospheric Environment*, 45(32):5795–5804, 2011.
- Cecil, K. M. Effects of early low-level lead exposure on human brain structure, organization

- and functions. *Journal of Developmental Origins of Health and Disease*, 2(1):17–24, 2011.
- Cecil, K. M., Brubaker, C. J., Adler, C. M., Dietrich, K. N., Altaye, M., Egelhoff, J. C., Wessel, S., Elangovan, I., Hornung, R., Jarvis, K., et al. Decreased brain volume in adults with childhood lead exposure. *PLoS Medicine*, 5(5):e112, 2008.
- Cunha, F., Heckman, J. J., and Schennach, S. M. Estimating the technology of cognitive and noncognitive skill formation. *Econometrica*, 78(3):883–931, 2010.
- Curci, F. and Masera, F. Flight from urban blight: Lead poisoning, crime and suburbanization. 2018.
- Desrochers-Couture, M., Oulhote, Y., Arbuckle, T. E., Fraser, W. D., Séguin, J. R., Ouellet, E., Forget-Dubois, N., Ayotte, P., Boivin, M., Lanphear, B. P., et al. Prenatal, concurrent, and sex-specific associations between blood lead concentrations and IQ in preschool Canadian children. *Environment International*, 121:1235–1242, 2018.
- Dietrich, K. N., Douglas, R. M., Succop, P. A., Berger, O. G., and Bornschein, R. L. Early exposure to lead and juvenile delinquency. *Neurotoxicology and Teratology*, 23(6): 511–518, 2001.
- Doyle, O., Harmon, C., Heckman, J. J., Logue, C., and Moon, S. Measuring investment in human capital formation: An experimental analysis of early life outcomes. Technical report, National Bureau of Economic Research, 2013.
- Ells, S. W. Lead is still king. *AOPA Pilot*, 49(5), 2006.
- Farfel, M. R., Orlova, A. O., Lees, P. S., Rohde, C., Ashley, P. J., and Chisolm Jr, J. J. A study of urban housing demolitions as sources of lead in ambient dust: Demolition practices and exterior dust fall. *Environmental Health Perspectives*, 111(9):1228–1234, 2003.
- Farfel, M. R., Orlova, A. O., Chaney, R. L., Lees, P. S., Rohde, C., and Ashley, P. J. Biosolids compost amendment for reducing soil lead hazards: A pilot study of Orgro® amend-

- ment and grass seeding in urban yards. *Science of the Total Environment*, 340(1-3): 81–95, 2005.
- Feinberg, S. N., Heiken, J. G., Valdez, M. P., Lyons, J. M., and Turner, J. R. Modeling of lead concentrations and hot spots at general aviation airports. *Transportation Research Record*, 2569(1):80–87, 2016.
- Flegal, R. and Smith, D. Lead levels in preindustrial humans. *The New England journal of medicine*, 326(19):1293–1294, 1992.
- Flora, G., Gupta, D., and Tiwari, A. Toxicity of lead: A review with recent updates. *Interdisciplinary Toxicology*, 5(2):47–58, 2012.
- Gould, E. Childhood lead poisoning: Conservative estimates of the social and economic benefits of lead hazard control. *Environmental Health Perspectives*, 117(7):1162–1167, 2009.
- Graff Zivin, J. and Neidell, M. Environment, health, and human capital. *Journal of Economic Literature*, 51(3):689–730, 2013.
- Grosse, S. D., Matte, T. D., Schwartz, J., and Jackson, R. J. Economic gains resulting from the reduction in children’s exposure to lead in the United States. *Environmental Health Perspectives*, 110(6):563–569, 2002.
- Kessler, R. Sunset for leaded aviation gasoline? *Environmental Health Perspectives*, 121(2):A54–A57, 2013.
- Keyes, C. *Health and Human Capital Effects of Lead Exposure*. PhD thesis, Colorado State University, 2020.
- Laidlaw, M. A. and Filippelli, G. M. Re-suspension of urban soils as a persistent source of lead poisoning in children: A review and new directions. *Applied Geochemistry*, 23(8): 2021–2039, 2008.
- Laidlaw, M. A., Zahran, S., Mielke, H. W., Taylor, M. P., and Filippelli, G. M. Re-suspension of lead contaminated urban soil as a dominant source of atmospheric lead in Birmingham

- ham, Chicago, Detroit and Pittsburgh, USA. *Atmospheric Environment*, 49:302–310, 2012.
- Lanphear, B. P., Dietrich, K., Auinger, P., and Cox, C. Cognitive deficits associated with blood lead concentrations < 10 $\mu\text{g}/\text{dl}$ in US children and adolescents. *Public Health Reports*, 115(6):521, 2000.
- Lanphear, B. P., Hornung, R., Khoury, J., Yolton, K., Baghurst, P., Bellinger, D. C., Canfield, R. L., Dietrich, K. N., Bornschein, R., Greene, T., et al. Low-level environmental lead exposure and children’s intellectual function: An international pooled analysis. *Environmental Health Perspectives*, 113(7):894, 2005.
- Lidsky, T. I. and Schneider, J. S. Lead neurotoxicity in children: Basic mechanisms and clinical correlates. *Brain*, 126(1):5–19, 2003.
- Matthews, J. and Pandey, M. Leaded aviation fuel may present long-term effects on campus life from the adjacent Albert Whitted Airport. Technical report, ChemRxiv, 2020. Available: <https://doi.org/10.26434/chemrxiv.12824741.v1>.
- Mazaheri, M., Johnson, G., and Morawska, L. An inventory of particle and gaseous emissions from large aircraft thrust engine operations at an airport. *Atmospheric Environment*, 45(20):3500–3507, 2011.
- McCumber, A. and Strevett, K. A geospatial analysis of soil lead concentrations around regional Oklahoma airports. *Chemosphere*, 167:62–70, 2017.
- Mielke, H. W. and Zahran, S. The urban rise and fall of air lead (Pb) and the latent surge and retreat of societal violence. *Environment International*, 43:48–55, 2012.
- Miranda, M. L., Kim, D., Galeano, M. A. O., Paul, C. J., Hull, A. P., and Morgan, S. P. The relationship between early childhood blood lead levels and performance on end-of-grade tests. *Environmental Health Perspectives*, 115(8):1242–1247, 2007.
- Miranda, M. L., Kim, D., Reiter, J., Galeano, M. A. O., and Maxson, P. Environmental contributors to the achievement gap. *Neurotoxicology*, 30(6):1019–1024, 2009.

- Miranda, M. L., Anthopolos, R., and Hastings, D. A geospatial analysis of the effects of aviation gasoline on childhood blood lead levels. *Environmental Health Perspectives*, 119(10):1513–1516, 2011.
- Needleman, H. Lead poisoning. *Annual Review of Medicine*, 55:209–222, 2004.
- Needleman, H. L. and Gatsonis, C. A. Low-level lead exposure and the IQ of children: a meta-analysis of modern studies. *Jama*, 263(5):673–678, 1990.
- Nevin, R., Jacobs, D. E., Berg, M., and Cohen, J. Monetary benefits of preventing childhood lead poisoning with lead-safe window replacement. *Environmental Research*, 106(3): 410–419, 2008.
- Nigg, J. T., Nikolas, M., Mark Knottnerus, G., Cavanagh, K., and Friderici, K. Confirmation and extension of association of blood lead with attention-deficit/hyperactivity disorder (ADHD) and ADHD symptom domains at population-typical exposure levels. *Journal of Child Psychology and Psychiatry*, 51(1):58–65, 2010.
- Papanikolaou, N. C., Hatzidaki, E. G., Belivanis, S., Tzanakakis, G. N., and Tsatsakis, A. M. Lead toxicity update. A brief review. *Medical Science Monitor*, 11(10):RA329–RA336, 2005.
- Piazza, B. Santa Monica Municipal Airport. *Report on the Generation and Downwind Extent of Emissions Generated From Aircraft and Ground Support Operations*, 1999.
- Rabito, F. A., Iqbal, S., Shorter, C. F., Osman, P., Philips, P., Langlois, E., and White, L. The association between demolition activity and children's blood lead levels. *Environmental Research*, 103(3):345–351, 2007.
- Reuben, A., Caspi, A., Belsky, D. W., Broadbent, J., Harrington, H., Sugden, K., Houts, R. M., Ramrakha, S., Poulton, R., and Moffitt, T. E. Association of childhood blood lead levels with cognitive function and socioeconomic status at age 38 years and with IQ change and socioeconomic mobility between childhood and adulthood. *Journal of the American Medical Association*, 317(12):1244–1251, 2017.

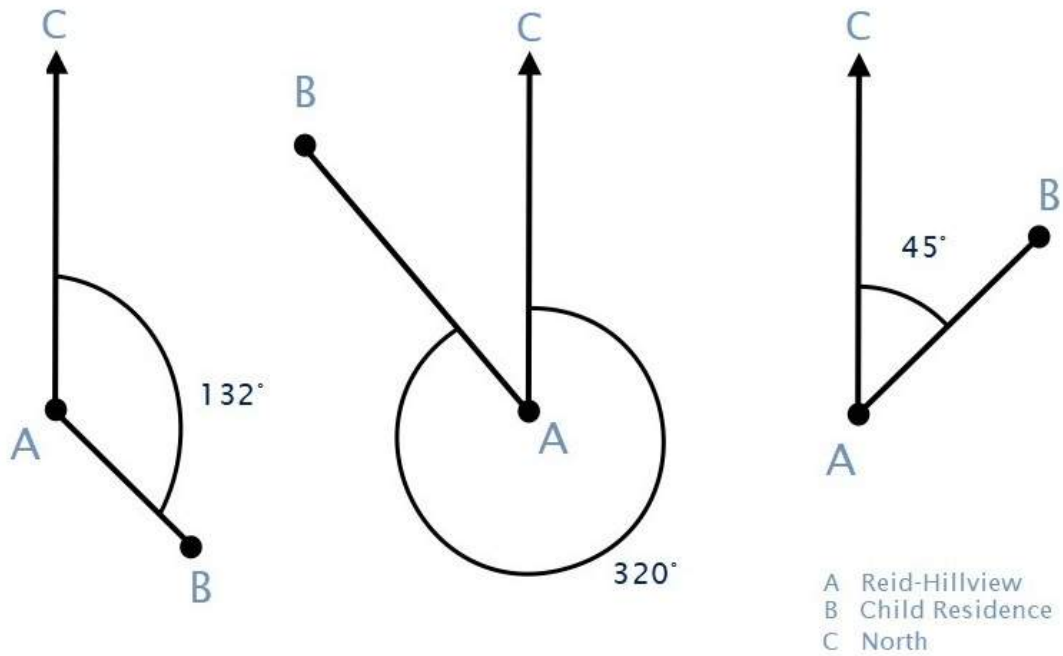
- Reyes, J. W. Lead exposure and behavior: Effects on antisocial and risky behavior among children and adolescents. *Economic Inquiry*, 53(3):1580–1605, 2015.
- Salkever, D. S. Updated estimates of earnings benefits from reduced exposure of children to environmental lead. *Environmental Research*, 70(1):1–6, 1995.
- Schwartz, J. Low-level lead exposure and children's IQ: A metaanalysis and search for a threshold. *Environmental Research*, 65(1):42–55, 1994.
- Song, S.-K. and Shon, Z.-H. Emissions of greenhouse gases and air pollutants from commercial aircraft at international airports in Korea. *Atmospheric Environment*, 61:148–158, 2012.
- U.S. Environmental Protection Agency. National analysis of the populations residing near or attending school near U.S. airports. Technical report, Office of Air Quality Planning & Standards, Research Triangle Park, NC, 2008.
- U.S. Environmental Protection Agency. Development and evaluation of an air quality modeling approach for lead emissions from piston-engine aircraft operating on leaded aviation gasoline. Technical report, Office of Transportation and Air Quality Planning & Standards, Research Triangle Park, NC, 2010.
- U.S. Environmental Protection Agency. Model-extrapolated estimates of airborne lead concentrations at U.S. airports. Technical report, Office of Air Quality Planning & Standards, Research Triangle Park, NC, 2020.
- Wolfe, P. J., Giang, A., Ashok, A., Selin, N. E., and Barrett, S. R. Costs of IQ loss from leaded aviation gasoline emissions. *Environmental science & technology*, 50(17):9026–9033, 2016.
- Zahran, S., Mielke, H. W., Gonzales, C. R., Powell, E. T., and Weiler, S. New Orleans before and after Hurricanes Katrina/Rita: A quasi-experiment of the association between soil lead and children's blood lead. *Environmental Science and Technology*, 44(12):4433–4440, 2010.

- Zahran, S., Laidlaw, M. A., McElmurry, S. P., Filippelli, G. M., and Taylor, M. Linking source and effect: Resuspended soil lead, air lead, and children's blood lead levels in Detroit, Michigan. *Environmental Science and Technology*, 47(6):2839–2845, 2013.
- Zahran, S., Iverson, T., Weiler, S., and Underwood, A. Evidence that the accuracy of self-reported lead emissions data improved: A puzzle and discussion. *Journal of Risk and Uncertainty*, 49(3):235–257, 2014.
- Zahran, S., Iverson, T., McElmurry, S. P., and Weiler, S. The effect of leaded aviation gasoline on blood lead in children. *Journal of the Association of Environmental and Resource Economists*, 4(2):575–610, 2017a.
- Zahran, S., Laidlaw, M., Rowe, D., Ball, A., and Mielke, H. W. Motor neuron disease mortality and lifetime petrol lead exposure: Evidence from national age-specific and state-level age-standardized death rates in Australia. *Environmental Research*, 153:181–190, 2017b.
- Zahran, S., McElmurry, S. P., and Sadler, R. C. Four phases of the Flint Water Crisis: Evidence from blood lead levels in children. *Environmental Research*, 157:160–172, 2017c.

This Page Left Blank Intentionally

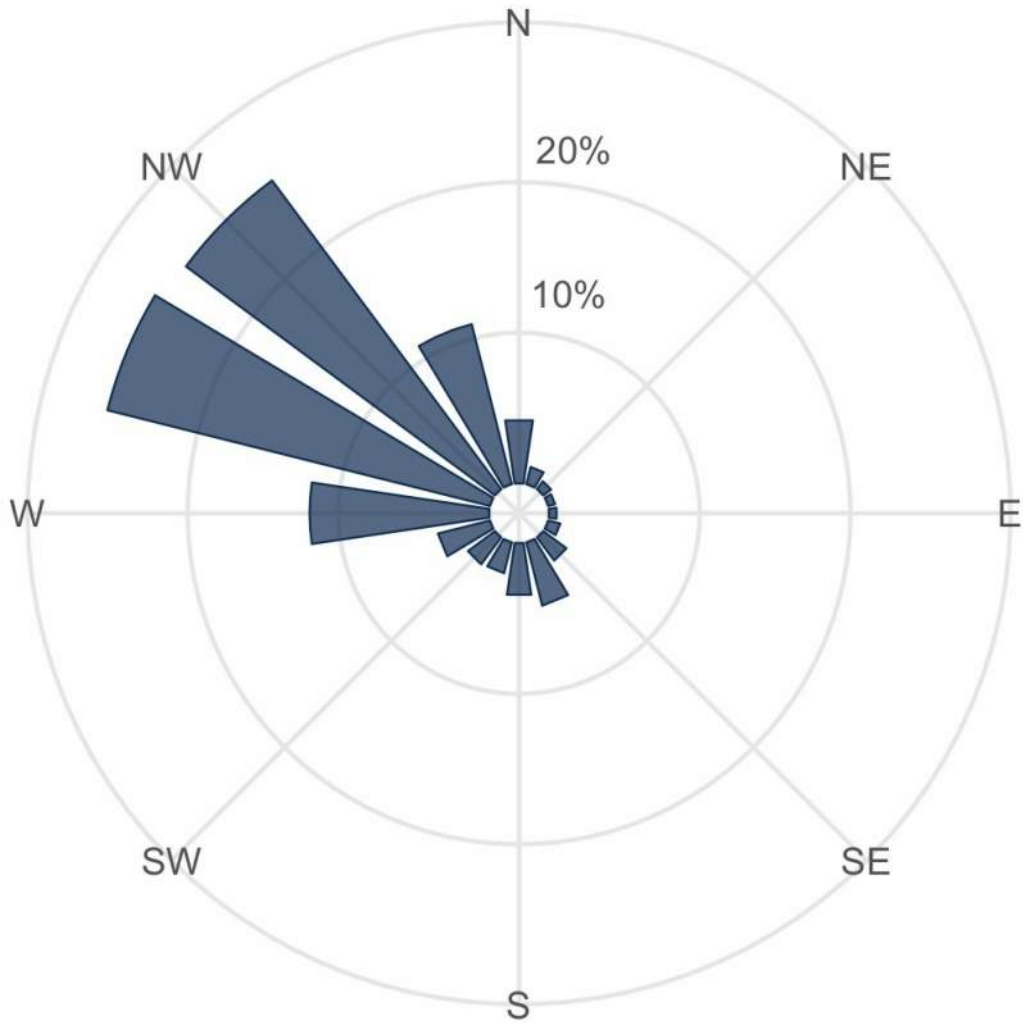
Appendix

Figure A.1: Examples of Residential Near Angle Calculations at Reid-Hillview Airport



Note: Near angles are calculated relative to Reid-Hillview Airport (A), and the angle created between due North (vector C) and a given address (B).

Figure A.2: Prevailing Wind Direction at Reid-Hillview Airport



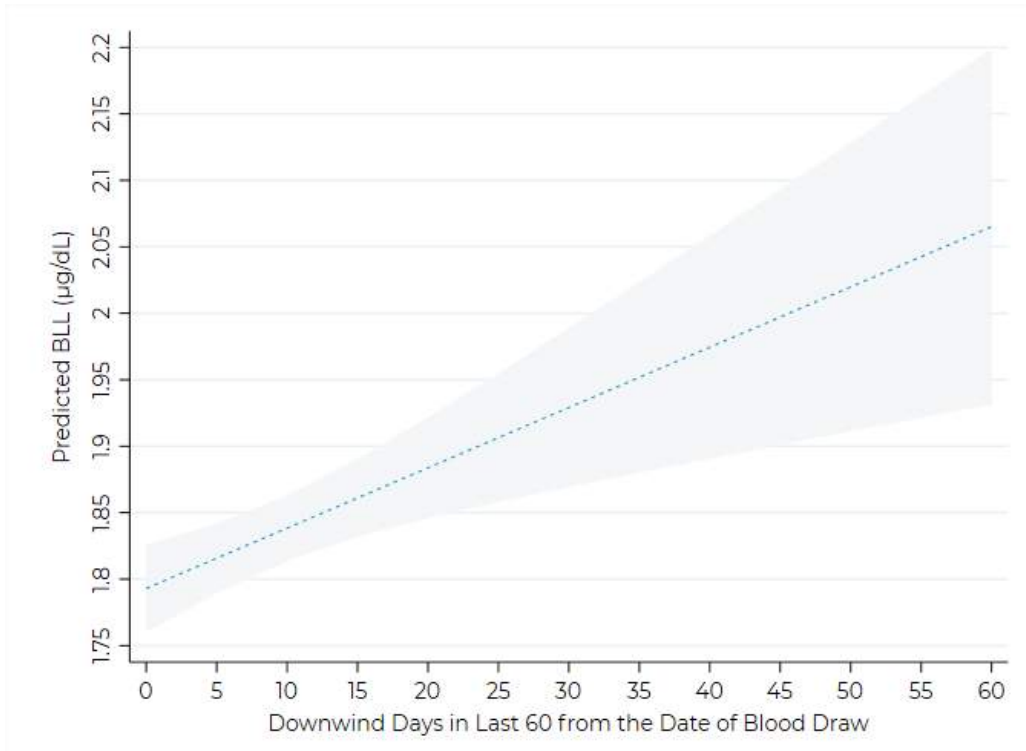
Note: Prevailing wind data are over observation period 1/1/2011 to 12/31/2020 as measured from Reid-Hillview Airport. Wind direction reflects the compass bearing of origination relative to the origin. Data collected from ©Dark Sky API.

Table A.1: Sample Descriptive Statistics

	Mean	Std. Dev.		Mean	Std. Dev.
Response Variables			Demographic Variables		
BLL ($\mu\text{g}/\text{dL}$)	1.83	1.689	Age (Years)	2.816	2.29
BLL (< 1.5)	0.426	0.494	Male	0.512	0.5
BLL (1.5 to 3)	0.463	0.499	Female	0.488	0.5
BLL (3 to 4.5)	0.095	0.293	Timing Controls		
BLL (> 4.5)	0.017	0.128	2011	0.1	0.301
Exposure Risk Variables			2012	0.094	0.291
Distance to RHV (Miles)	1.019	0.315	2013	0.088	0.284
Distance (0-0.5 miles)	0.062	0.241	2014	0.083	0.276
Distance (0.5-1 miles)	0.375	0.484	2015	0.119	0.323
Distance (1-1.5 miles)	0.563	0.496	2016	0.125	0.33
PEA Traffic (Percentile)	0.505	0.289	2017	0.12	0.325
Tercile (low)	0.346	0.476	2018	0.106	0.308
Tercile (Medium)	0.328	0.47	2019	0.103	0.305
Tercile (High)	0.325	0.469	2020	0.06	0.238
Aviation Gasoline (1,000 Gallon)	23.935	5.72	2021	0.001	0.038
North	0.346	0.476	Spring	0.255	0.436
East	0.068	0.252	Summer	0.274	0.446
South	0.203	0.402	Fall	0.246	0.431
West	0.384	0.486	Winter	0.225	0.418
Draw Controls			Neighborhood SES		
Non-Capillary Draw	0.737	0.44	Median Household Income	\$69,147.62	\$19,888.28
Capillary Draw	0.263	0.44	Median Home Values	\$456,985.9	\$118,451.1
Sample Order	0.822	1.074	College Educated	13.101	5.981
			Other Exposure Sources		
			Pre-1960 Homes	27.688	21.444
			TRI Facilities (<2 Miles)	2.503	0.73

Notes: Data for all children residing ≤ 1.5 miles of RHV with a valid address, date of birth, and date of sample between Jan 1st, 2011 and Dec. 31st, 2020. Total sample size of 17,241 observations;

Figure A.3: Downwind Days in Last 60 and Predicted Child BLLs



Note: Predictions are from model (7) in Table 5, with all other model variables fixed at their sample means.

Table A.2: Residential Distance to Nearest Airport and Child BLLs

BLL ($\mu\text{g}/\text{dL}$)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Distance (Reference < 0.5 miles)							
0.5 to 1 miles	-0.138*	-0.137**	-0.127*	-0.133**	-0.159**	-0.171***	-0.172***
	(0.073)	(0.064)	(0.065)	(0.065)	(0.062)	(0.062)	(0.062)
1 to 1.5 miles	-0.137*	-0.136**	-0.131**	-0.136**	-0.145**	-0.171***	-0.173***
	(0.072)	(0.067)	(0.066)	(0.066)	(0.063)	(0.063)	(0.063)
Constant	1.950***	1.756***	1.746***	1.673***	2.027***	1.966***	2.393***
	(0.068)	(0.067)	(0.071)	(0.075)	(0.087)	(0.091)	(0.298)
Observations	19,818	19,725	19,725	19,725	19,725	19,725	19,725
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	No	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	No	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles to Santa Clara County, CA airport, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ($\mu\text{g}/\text{dL}$); Nearest airport is assigned by the minimum distance between child's place of residence to each airport, among: RHV, E16, SJO, PAO; Distance is child's place of residence to nearest airport (miles); Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities ≤ 2 miles from residential address, and percent of neighborhood housing stock built ≤ 1960 ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table A.3: Residential Near Angle to Nearest Airport and Child BLLs

BLL ($\mu\text{g/dL}$)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Near Angle (Reference North)							
East	0.127*** (0.046)	0.124*** (0.048)	0.123*** (0.044)	0.118*** (0.044)	0.225*** (0.045)	0.255*** (0.044)	0.238*** (0.048)
South	-0.008 (0.033)	-0.006 (0.035)	0.008 (0.036)	0.01 (0.036)	0.052 (0.036)	0.039 (0.034)	0.034 (0.035)
West	-0.021 (0.028)	-0.018 (0.027)	-0.013 (0.029)	-0.008 (0.029)	-0.028 (0.028)	-0.032 (0.027)	-0.029 (0.027)
Constant	1.821*** (0.017)	1.943*** (0.074)	1.746*** (0.071)	1.673*** (0.075)	2.027*** (0.087)	1.966*** (0.091)	2.393*** (0.298)
Observations	19,818	19,818	19,725	19,725	19,725	19,725	19,725
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	No	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	No	No	Yes	Yes	Yes	Yes	Yes
Near Angle FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles to Santa Clara County, CA airport, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ($\mu\text{g/dL}$); Nearest airport is assigned by the minimum distance between child's place of residence to each airport, among: RHV, E16, SJO, PAO; Near angle groups are defined in Section 2.2.2 and assigned using the angle between nearest airport and child's place of residence; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities ≤ 2 miles from residential address, and percent of neighborhood housing stock built ≤ 1960 ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table A.4: Piston-Engine Aircraft Traffic at Nearest Airport and Child BLLs

BLL ($\mu\text{g}/\text{dL}$)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PEA Traffic	0.387*** (0.054)	0.387*** (0.054)	0.385*** (0.053)	0.396*** (0.053)	0.287*** (0.057)	0.313*** (0.056)	0.216*** (0.053)
Constant	1.628*** (0.033)	1.756*** (0.067)	1.746*** (0.071)	1.673*** (0.075)	2.027*** (0.087)	1.966*** (0.091)	2.590*** (0.291)
Observations	19,725	19,725	19,725	19,725	19,725	19,725	19,725
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	No	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	No	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles to Santa Clara County, CA airport, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ($\mu\text{g}/\text{dL}$); Nearest airport is assigned by the minimum distance between child's place of residence to each airport, among: RHV, E16, SJO, PAO; PEA traffic is average daily PEA operations at nearest airport, calculated over 60 days from child's date of draw and converted to percentiles; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities ≤ 2 miles from residential address, and percent of neighborhood housing stock built ≤ 1960 ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table A.5: PEA Traffic × Residential Distance at Nearest Airport and Child BLLs

BLL ($\mu\text{g/dL}$)	(1)	(2)	(3)	(4)	(5)	(6)
Distance (Reference < 0.5 miles)						
0.5 to 1.5 miles	-0.130** (0.062)	-0.123** (0.061)	-0.128** (0.061)	-0.144** (0.058)	-0.164*** (0.058)	-0.164*** (0.058)
PEA Traffic	1.038*** (0.192)	1.043*** (0.191)	1.044*** (0.190)	0.956*** (0.184)	0.948*** (0.184)	0.859*** (0.180)
Distance × PEA Traffic	-0.689*** (0.202)	-0.696*** (0.202)	-0.686*** (0.201)	-0.708*** (0.193)	-0.674*** (0.193)	-0.684*** (0.193)
Constant	1.944*** (0.061)	1.932*** (0.067)	1.865*** (0.071)	2.165*** (0.079)	2.119*** (0.082)	2.706*** (0.291)
Observations	19,725	19,725	19,725	19,725	19,725	19,725
Distance	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	Yes	Yes	Yes
Block FE	Yes	Yes	Yes	Yes	Yes	Yes
Other Exposures	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles to Santa Clara County, CA airport, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ($\mu\text{g/dL}$); Nearest airport is assigned by the minimum distance between child's place of residence to each airport, among: RHV, E16, SJO, PAO; Distance is child's place of residence to nearest airport (miles); PEA traffic is average daily PEA operations at nearest airport, calculated over 60 days from child's date of draw and converted to percentiles then centered (mean=0) for ease of interpretation; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities ≤ 2 miles from residential address, and percent of neighborhood housing stock built ≤ 1960 ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table A.6: School and Residential Distance Difference to Nearest Airport and Child BLLs

BLLs ($\mu\text{g/dL}$)	(1)	(2)	(3)	(4)	(5)	(6)
Difference (miles)	-0.156*** (0.060)	-0.170** (0.068)	-0.227 (0.146)			
Difference (Reference Low Tercile)						
Medium Tercile				-0.177** (0.072)	-0.221*** (0.073)	0.087 (0.167)
High Tercile				-0.304*** (0.068)	-0.320*** (0.075)	-0.169 (0.124)
Constant	2.863*** (0.505)	2.733*** (0.593)	5.072*** (0.985)	2.986*** (0.470)	2.827*** (0.565)	5.056*** (0.996)
Observations	4,980	3,804	1,176	4,929	3,762	1,167
Block FE	Yes	Yes	Yes	Yes	Yes	Yes
Distance	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	Yes	Yes	Yes	Yes	Yes	Yes
Demography	Yes	Yes	Yes	Yes	Yes	Yes
Draw Controls	Yes	Yes	Yes	Yes	Yes	Yes
Other Exposures	Yes	Yes	Yes	Yes	Yes	Yes
SES	Yes	Yes	Yes	Yes	Yes	Yes
Timing Controls	Yes	Yes	Yes	Yes	Yes	Yes
School in Session	Yes	Yes	No	Yes	Yes	No

Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; Models limited to children ≤ 18 years at blood draw, residing < 1.5 miles to Santa Clara County, CA airport, and observed from 1/1/2011 to 12/31/2020; Dependent variable is child BLL ($\mu\text{g/dL}$); Nearest airport is minimum distance between child's residence to each airport (RHV, E16, SJO, NUQ, PAO); Difference is distance from child's residence to nearest airport less the distance of school to child's nearest airport; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: TRI facilities ≤ 2 miles from child address, and % of neighborhood housing stock built ≤ 1960 ; SES is neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table A.7: PEA Traffic Contraction Period at Nearest Airport and Child BLLs

BLL ($\mu\text{g}/\text{dL}$)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Contraction Period	-0.327*** (0.040)	-0.327*** (0.040)	-0.328*** (0.040)	-0.329*** (0.040)	-0.197*** (0.036)	-0.194*** (0.036)	-0.069 (0.052)
Constant	1.830*** (0.012)	1.959*** (0.068)	1.952*** (0.074)	1.886*** (0.078)	2.176*** (0.085)	2.134*** (0.088)	2.537*** (0.312)
Observations	19,818	19,818	19,818	19,818	19,818	19,818	19,725
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	No	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	No	No	No	No	No	No	Yes
Near Angle FE	No	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children ≤ 18 years of age at the time of blood draw, residing < 1.5 miles to Santa Clara County, CA airport, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ($\mu\text{g}/\text{dL}$); Nearest airport is assigned by the minimum distance between child's place of residence to each airport, among: RHV, E16, SJO, PAO; Contraction period is an indicator equaling 1 if draw date occurs February, 2020 thru July, 2020, zero otherwise; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities ≤ 2 miles from residential address, and percent of neighborhood housing stock built ≤ 1960 ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table A.8: Estimated Gain in Cohort Lifetime Earnings from IQ Gain from Aviation Gasoline Sales Reduction of 50th to 1st Percentile

Distance	(A) Cohort ≤ 18 yrs	(B) Expected BLL Decrease	(C) IQ Gain per μg/dL	(D) Cohort IQ Points Gained	(E) Lifetime \$ per IQ Point	(F) Cohort Benefit (\$ Millions)
0-0.5 Miles	1,500	0.27 μg/dL	0.56 (0.35, 0.78)	228 (140, 317)	\$22,871	\$5.2 (\$3.2, \$7.2)
0.5-1.5 Miles	13,000	0.06 μg/dL	0.56 (0.35, 0.78)	440 (270, 610)	\$22,871	\$10.1 (\$6.2, \$14.0)

Notes: The cohort of potentially affected children in Column A is estimated from American Community Survey data on age structure for neighborhoods around RHV over the ten-year period of Jan 1st, 2011 to December 31st, 2020. Column D is derived by A × B × C. Column F is calculated by D × E. Estimated range in Column F is from the estimated intervals on BLL to IQ relationship in (C).

This Page Left Blank Intentionally

A.1 Robustness Tests: Restrictions and Clustering

We begin with a recapitulation of Equation 2, then successively restrict observations to highest-confidence geocoded residences, then highly sampled neighborhoods (≥ 100 blood lead samples), and then introducing a new variable that accounts for possible variation in BLL measurement precision across laboratories. We also introduce clustering of standard errors by sample order.

Again, we estimate the responsiveness of child blood lead Y_{ijt} to indicators of aviation gasoline exposure risk with the following linear model:

$$\begin{aligned} Y_{ijt} = & \beta_0 + \beta_1 D_{it}^n + \beta_2 D_{it}^f + \beta_3 T_{it} + \beta_4 W_{it}^e + \beta_5 W_{it}^s + \beta_6 W_{it}^w \\ & + \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} + \Gamma_6 L_{it} \\ & + \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 I_{jt} + \lambda_4 Q_{it} + \gamma_j + \phi_i + \varepsilon_{ijt} \quad (\text{A.3}) \end{aligned}$$

where, the meaning of all terms carry from Equation 2 with the exception of ϕ_i , which is a fixed effect for one of twenty-three laboratories performing analyses on blood samples from children residing in Santa Clara County. The inclusion of ϕ_i accounts for unobservable factors present in laboratories that may systematically affect measured BLLs in children. Table A.9 summarizes results from four models that successively restrict observations, introduce clustering of errors by sample order, and add our new control variable. Across all tests executed, coefficients with respect to our three main indicators of aviation gasoline risk behave as expected.

Table A.9: Robustness Tests: Restrictions and Clustering

BLL ($\mu\text{g/dL}$)	(1)	(2)	(3)	(4)
Distance (Reference < 0.5 miles)				
0.5 to 1 miles	-0.179** (0.074)	-0.183** (0.075)	-0.200** (0.079)	-0.132* (0.077)
1 to 1.5 miles	-0.202*** (0.073)	-0.206*** (0.077)	-0.215*** (0.076)	-0.152** (0.073)
PEA Traffic	0.163** (0.067)	0.167*** (0.062)	0.153** (0.062)	0.243*** (0.076)
Near Angle (Reference North)				
East	0.405*** (0.068)	0.400*** (0.059)	0.393*** (0.065)	0.255*** (0.069)
South	0.00 (0.039)	-0.006 (0.039)	-0.002 (0.040)	0.016 (0.041)
West	-0.052 (0.033)	-0.057* (0.031)	-0.057* (0.031)	0.025 (0.032)
Constant	2.131*** (0.371)	2.114*** (0.349)	2.128*** (0.366)	1.551*** (0.407)
Observations	17,162	16,823	15,807	15,807
Fully Saturated	Yes	Yes	Yes	Yes
Bootstrapped Errors	No	Yes	Yes	No
Clustered Errors	Yes	No	No	Yes
Confident Geocoding	No	Yes	Yes	Yes
Highly Sampled	No	No	Yes	Yes
Lab Effects	No	No	No	Yes

Notes: Standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; Models (1) and (4) standard errors are clustered by sample order; Models (2) and (3) standard errors are bootstrapped; All models limited to children residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020, and ≤ 18 years of age unless noted otherwise; Dependent variable is child BLL ($\mu\text{g/dL}$); Fully saturated controls include all covariates; Lab effects include fixed effect indicators for unique lab id;

A.2 Robustness Tests: Children Under 6 Years of Age

Next we recapitulate Equation 2, restricting observations to children ≤ 6 years of age. Results are presented in three successive tables, beginning with residential distance, then piston-engine aircraft traffic, and then child residential near angle to Reid-Hillview Airport. Across all tests rendered, results behave similarly to what is reported in the manuscript pertaining to all children ≤ 18 years of age.

Table A.10: Distance to Reid-Hillview Airport and Child BLLs, Age 0-6

BLL ($\mu\text{g}/\text{dL}$)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Distance (Reference < 0.5 miles)							
0.5 to 1 miles	-0.161**	-0.166**	-0.171**	-0.178**	-0.202**	-0.213***	-0.214***
	-0.082	-0.08	-0.081	-0.081	-0.079	-0.079	-0.078
1 to 1.5 miles	-0.162**	-0.168**	-0.170**	-0.173**	-0.191**	-0.211***	-0.218***
	-0.079	-0.082	-0.081	-0.081	-0.079	-0.078	-0.078
Constant	1.967***	1.770***	1.771***	1.611***	2.000***	1.908***	2.184***
	-0.076	-0.08	-0.085	-0.094	-0.108	-0.103	-0.346
Observations	16,169	16,092	16,092	16,092	16,092	16,092	16,092
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	No	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	No	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children ≤ 6 years of age at the time of blood draw, residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ($\mu\text{g}/\text{dL}$); Distance groups are assigned using the distance (miles) between RHV and the child's place of residence; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities ≤ 2 miles from residential address, and percent of neighborhood housing stock built ≤ 1960 ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table A.11: Piston-Engine Aircraft Traffic to Reid-Hillview Airport and Child BLLs, Age 0-6

BLL ($\mu\text{g}/\text{dL}$)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PEA Traffic	0.402*** (0.061)	0.403*** (0.061)	0.403*** (0.061)	0.406*** (0.061)	0.310*** (0.066)	0.317*** (0.063)	0.195*** (0.063)
Constant	1.614*** (0.037)	1.770*** (0.077)	1.771*** (0.081)	1.611*** (0.090)	2.000*** (0.103)	1.908*** (0.094)	2.184*** (0.340)
Observations	16,092	16,092	16,092	16,092	16,092	16,092	16,092
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	No	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	No	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children ≤ 6 years of age at the time of blood draw, residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ($\mu\text{g}/\text{dL}$); PEA traffic is average daily PEA operations at RHV, calculated over 60 days from child's date of draw and converted to percentiles; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities ≤ 2 miles from residential address, and percent of neighborhood housing stock built ≤ 1960 ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table A.12: Residential Near Angle to Reid-Hillview Airport and Child BLLs, Age 0-6

BLL ($\mu\text{g/dL}$)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Near Angle (Reference North)							
East	0.002 (0.030)	0 (0.030)	0.012 (0.031)	0.013 (0.031)	0.148*** (0.033)	0.167*** (0.034)	0.250*** (0.042)
South	-0.039 (0.038)	-0.038 (0.040)	-0.032 (0.040)	-0.03 (0.039)	0.012 (0.041)	-0.01 (0.035)	-0.018 (0.038)
West	0.011 (0.030)	0.017 (0.029)	0.019 (0.031)	0.022 (0.031)	0.005 (0.030)	-0.027 (0.034)	-0.032 (0.033)
Constant	1.819*** (0.017)	1.971*** (0.083)	1.771*** (0.081)	1.611*** (0.090)	2.000*** (0.103)	1.908*** (0.094)	2.184*** (0.340)
Observations	16,169	16,169	16,092	16,092	16,092	16,092	16,092
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	No	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	No	No	Yes	Yes	Yes	Yes	Yes
Near Angle FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children ≤ 6 years of age at the time of blood draw, residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ($\mu\text{g/dL}$); Near angle groups are defined in Section 2.2.2 and assigned using the angle between RHV and child's place of residence; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities ≤ 2 miles from residential address, and percent of neighborhood housing stock built ≤ 1960 ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

A.3 Robustness Tests: Detection Limit

While our statistical models explicitly control for the limit of test detection and the method of blood draw throughout, we nonetheless perform a series of additional tests to address possible concerns that test detection limits drive our reported results. First, we find that the likelihood of a child receiving an under-powered test is statistically independent of child residential distance (Odds Ratio = 0.96, 95% CI: 0.86 to 1.08) and piston-engine aircraft traffic at the point of blood draw (Odds Ratio = 1.01, 95% CI: 0.89 to 1.14). We do find that children residing East of RHV are 1.24X (95% CI: 1.06 to 1.45) more likely to receive an under-powered test, suggesting that absent explicit control for test detection, our near angle coefficients would be overstated. Additionally, we recapitulate Equation 2, introducing a series of standard single imputation operations for test results at or below the limit of quantification, including: 1) $BLL/2$; 2) $BLL/\sqrt{2}$; and an extreme deflation of the observed value by 3) $BLL/5$. The results are presented in the table below. With the exception of a deflation in the size of the coefficient pertaining to child residence East of RHV under the extreme suppression scenario of $BLL/5$, results behave similarly throughout. Importantly, even under extreme scenario, BLLs are substantively and statistically significantly higher among sampled children East of the airport.

Table A.13: Robustness Tests: Detection Limit

BLL ($\mu\text{g/dL}$)	(1)	(2)	(3)	(4)
Distance (Reference < 0.5 miles)				
0.5 to 1 miles	-0.179*** (0.069)	-0.160** (0.067)	-0.168** (0.068)	-0.149** (0.067)
1 to 1.5 miles	-0.202*** (0.073)	-0.177*** (0.071)	-0.187** (0.072)	-0.161** (0.071)
PEA Traffic	0.163*** (0.058)	0.167*** (0.055)	0.166*** (0.056)	0.170*** (0.054)
Near Angle (Reference North)				
East	0.405*** (0.062)	0.268*** (0.058)	0.325*** (0.060)	0.186*** (0.057)
Constant	2.131*** (0.307)	2.254*** (0.293)	2.203*** (0.297)	2.328*** (0.291)
Observations	17,162	17,162	17,162	17,162
All Controls	Yes	Yes	Yes	Yes
BLL/2	No	Yes	No	No
BLL/ $\sqrt{2}$	No	No	Yes	No
BLL/5	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; All models limited to children residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020, and ≤ 18 years of age unless noted otherwise; Distance groups are assigned using the distance (miles) between RHV and the child's residence; Near angle groups are defined in Section 2.2.2 using the angle between RHV and child's residence; PEA traffic is average daily PEA operations at RHV, calculated over 60 days from child's date of draw; Fully saturated controls include: child's age (years) and sex (1=female, 0=otherwise), draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL \leq limit of quantification, 0=otherwise), sample order (0=singleton observation, 1,...,n=repeated n times), TRI facilities ≤ 2 miles from residential address, housing stock built ≤ 1960 , neighborhood socioeconomic status index, a set of season and year-quarter indicators corresponding to date of draw;

To whom it may concern:

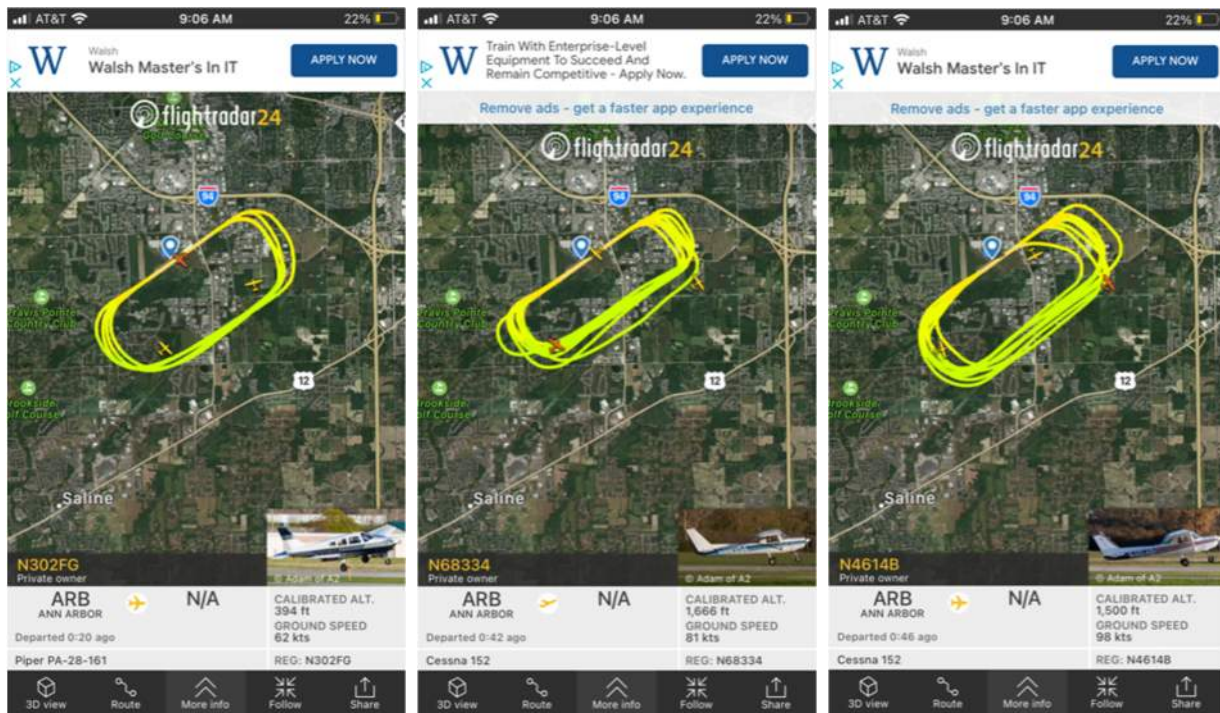
Thank you for the opportunity to provide comment on the Ann Arbor Airport Expansion Environmental Assessment and the attempt again to expand the runway. I am a resident of Pittsfield Township who lives South of the airport. I am going to comment primarily on the noise impact of runway expansion as many others will comment on the other facets including environmental, financial, and safety impacts of runway expansion should it occur.

The assumptions made in the EA models for noise simply do not correlate with the experience of those living near the airport and especially those West and South of the airport where the predominant take-off and pattern flights occur. Almost every plane that enters the pattern elevates the noise for those in these communities by 15dB into the low 70s. This is even worse when planes make the initial downwind turn well before Lohr Rd and can be less than 500 ft in elevation. In addition, some of the planes will reach above 75dB or even 80db (the local sportcopter N339SC is the airport's worst noise pollutant when in the pattern). In addition to the level of noise, the frequency and constant flow of touch-and-go planes within the pattern is significantly different than the impact of a single plane taking off.

See Noise Responses #1, #2, #5, #7, and #9.

This includes multiple simultaneous planes, single aircraft performing excessive patterns with touch-and-go landings, and days of near constant touch-and-go patterns. First, a recent example of simultaneous planes is from just this past Saturday, January 7th 2023 where screen shots from Flightradar 24 show the activity by 9:06AM making for over an hour of nearly continuous noise pollution by three concurrent planes over our communities on an early Saturday (non-football) morning. Having three concurrent planes in the pattern is not an isolated event and occurs quite frequently.

See Noise Responses #7 and #9.



Second, there are also frequent examples (seen below) of planes performing between 15 to 20 touch-and-go patterns which seems to be excessive while creating both safety and noise concerns for the surrounding communities.

See Noise Responses #7 and #9.



Third, there have been days of over 100+ pattern flights resulting in a near constant source of noise (and likely environmental) pollution. For example, on Dec 20, 2021 there were 119 flights in the pattern (this does not include normal take-off and landing activities, only touch-and-gos) in an 9hr period

between 8:30 and 5:30 means an airplane at maybe 1000ft (since most are still in takeoff, it is probably less) every 5 minutes overhead. Communications (including follow-up attempts), related to this volume of flights along with transgressions of the noise abatement recommendations, with the airport were left unanswered.

See Noise Responses #7 and #9.

The airport has continued to have growth in activity further impacting the environmental, noise, and safety concerns of the local community. 2022 activity through November is already 11.81% higher than 2021 and is already greater (not even including December) compared to any year since at least 2016 based on Airport Advisory Committee Data. The impact that the increased volume on noise pollution is felt, not primarily by the citizens of Ann Arbor, but by those in Pittsfield township who surround the airport. Even without runway expansion, the current trajectory of growth is harmful to the surrounding community – adding larger planes, more dual engine planes, and jets will only further worsen the problem.

See Noise Responses #1, #2, and #3 and Safety/Health Responses #2, #5, #6, and #14.

The airports most recent contract with a new FBO is demonstrates that the expansion of the airport is for larger planes and not because of safety. In their proposal (available in the May 18, 2022 AAC minutes), the new FBO owners specifically include training for “Twin piston aircraft, Cheyenne, Conquest, King Air”. All of these categories of planes would be significantly different than the primary single engine prop planes that are currently house at the Ann Arbor Airport. In addition, the proposal included a request for additional T-hangars with an increased size of 50’ wingspan to accommodate a plan for larger planes. For reference, current Ann Arbor Airport hangars 40-44 feet. Thus, it is clearly evident that the goals of the Ann Arbor Airport are to increase the volume and size of planes using the facility. The bigger concern is that by recently agreeing to a lease with the new FBO owner and plans for larger airplanes, this will now be used as justification for why the runway needs expansion!

See Noise Response #3, Safety/Health Responses #7 and #16, and General Responses #3 and #14.

In summary, noise pollution remains a significant problem at the Ann Arbor Airport that continues to grow over the past couple of years. Runway expansion is not only not necessary based on safety requirements, but is simply irresponsible with respect to the surrounding community.

See Noise Responses #1, #2, and #3, Safety/Health Responses #7 and #16, and General Responses #3 and #14.

Sincerely,

Jeff Kozlow

January 5, 2023

To: Mr Matthew Kulhanek,
Ann Arbor Municipal Airport,
801 Airport Drive,
Ann Arbor, Michigan 48108.
Email: mjkulhanek@a2gov.org

Cc: Mr. Steve Houtteman,
MDOT-AERONAUTICS,
2700 Port Lansing Road, MI 48906.
Email: houttemans@michigan.gov

Gentlemen,

I am writing to express my opposition to the Ann Arbor Airport's application to lengthen their runway. I live at 1872 Stonebridge Dr. S, in Stonebridge Estates. In my opinion (which is supported by the facts in this letter) the aircraft that already fly over our home, represent an increased level of safety, environmental concerns, soil contamination, sound contamination, and health risks.

1) This is a public safety and environmental issue of serious magnitude that is being pursued by the airport for no good reason. I say no good reason because, as you know, there is no study that demonstrates a public interest, or need, or economic justification for this expansion.

See Safety/Health Responses #7 and #16 and General Responses #3 and #14.

For example, we are well aware of the airport's SRDEA contention that "aircraft that routinely use ARB suffer "undue concessions in reduced fuel passengers, and / or cargo loads. . .diversions to other airports are also commonly needed when the runway surface is wet, or during summer months when higher temperatures reduce aircraft performance. We are also aware that the SRDEA provided no actual data in support of the claimed concessions or diversions. To further this point, the FAA noted, "the rate of users taking weight restrictions has not been documented."

See Technical Responses #7 and #9

The reality is that nearby Willow Run and Detroit Metro Airport will always handle the bulk of the traffic related to larger aircraft because they already have facilities that provide a much safer facility with much better accommodations for larger aircraft. These airports are only 15 to 30 minutes from Ann Arbor. Because of this, I am suspicious that the ongoing, mis-guided effort to pursue this runway expansion is being funded by a select group of people offering to fund the expansion in return for the airports ongoing effort to pursue this mis-guided effort. There is no pot of gold for the airport or the community associated with lengthening the runway.

See Noise Response #3, Financial/Economic Response #11, and General Responses #5 and #10.

2) The Arbor Airport already is a facility that can accommodate aircraft up to the size of the Citation XLS class's 263 and others on your target audience for this expansion, but they don't come. In fact, the airport is already are aware of the data which substantiates that the Ann Arbor Airport is not the airport of choice for the target market that you claim will justify this expansion. 3 of the 4 jet types you hope to attract, can already land at the airport, and the 4th type, the Citation XLS class's 263, would only incur weight penalties with the existing runway less than 50 times per year. How many planes doe sthis represent? Is it 50 different planes or one wealthy Citation XLS class's 263 owners that is annoyed and funding this effort. Where is the money coming from to fund the airport efforts for the consultants to lengthen the runway. Who is going to pay to lengthen the runway, the taxpayer????

See Technical Response #2 and General Response #3.

To put this into perspective, the expansion you are requesting is not necessary for 99.00062% of the airports documented usage. This lack of justification prompts me to ask, is this a Field of Dreams rerun? Do you think that by lengthening the runway that the larger jets will come? Show me the economic justification data to support that this dream will come true. I suspect the reason why you haven't presented an economic justification is because you can't come up with data makes economic sense. For over 10 years, the airport has been asked multiple times to come up with plan showing a public need or

See Noise Response #3, Safety/Health Responses #7 and #16, Financial/Economic Responses #4 and #12, Technical Response #2, and General Responses #3 and #14.

interest but they sidestep this all-important issue every time they make a new application as if to say they hope no one will notice. If I am wrong, then why don't you do your market research and prove it, show the public the data. This decision must be made based on the public interest, not the interests or 50 or less, wealthy the Citation XLS class's 263 owners.

- 3) To the person that made the estimate of the geese, I would say;
- a) If you come at certain times of the year, you may find no geese
 - b) If you come in the fall, when the geese are here, your estimate of 70-100 geese grossly understates the safety risk that exists here.
 - c) Looking at geese on the airport property, fails to identify the risks to pilots, passengers, aircraft, residential homes and the people that live in these homes as the planes fly east even from the existing runway.

This is already a public safety issue. The MDOT and FAA and the airport must consider the risks associated with an aircraft – goose collision immediately. Sooner or later, this will occur and the most likely location is the area east of Lohr Road and also above the ponds on the north and south side of Stonebridge Drive E. (to the west side of Lohr Road). Such a collision is a realistic concern for the homes and people that live in Stonebridge Estates and has been grossly under estimated.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

In support of this claim, I have attached 4 different photographs that I took this fall, at the same time, on the same day. Huge flocks of geese are an annual occurrence in the neighborhood and farm area west of the airport.

The table below lists the number of geese I can count in each photo if I use the zoom tool in Adobe Acrobat (at 400%) to count the geese in each photo. These counts don't include the geese in the ponds south of Stonebridge Dr West.

Photo Number	Location	Number of Geese in attached photos	
1	Northern portion of the farm field east of Lohr Road	246	
2	Southern portion of the farm field east of Lohr Road	557	
TOTAL GEESE EAST of LOHR ROAD			803
3	Western Portion of the Pond East of Stonebridge Dr. E	412	
4	Eastern portion of the pond East of Stonebridge Dr S	44	
TOTAL GEESE WEST of LOHR ROAD			456
TOTAL GEESE OBSERVED		1,259	

4) Another concern is that combustion by-product fallout increases with plane size, lower plane altitude and increased air traffic. There are many articles on this subject that can be readily accessed on the internet. Below is a link to one article detailing these risks to environmental health from Springer Nature.

[A review of health effects associated with exposure to jet engine emissions in and around airports | Environmental Health | Full Text \(biomedcentral.com\)](#)

This article notes in part that “Proximity to running jet engines or to the airport as such for residential areas is associated with increased exposure and with increased risk of disease, increased hospital admissions and self-reported lung symptoms”.

In addition, studies have shown *“The toxicity of (unburned) jet fuel as such has been considered in many studies (reviewed in [10]) since the early 1950’s, where the specifications of the hydrocarbon-based jet fuel, JP-4 (jet propellant-4), was published by the US air force. Major toxic effects reported for JP-4 were skin irritation, neurotoxicity, nephrotoxicity, and renal carcinogenicity”*. See Noise Response #3 and Air Quality Response #1.

5) In Stonebridge estates, we routinely experience aircraft flying at excessively low attitudes and sound levels that interrupt normal conversations outdoors. This is a public nuisance with the existing runway. Given the lack of concern as evidenced by the lack of FAA standards concerning noise levels, residents are basically left with little to no recourse. Further trying to document the altitude of planes flying over our home at a level (even though I can read the letters on a plane) is most difficult when I have no way to measure the altitude of the aircraft. Lengthening the runway will only serve to further exacerbate this public nuisance and public safety concern. See Noise Responses #1, #2, #3, #7 and #9.

Sincerely,

Joe Arnold

Joe Arnold
248-880-9084









Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 17, 2023 7:39 AM
To: William Ballard
Subject: FW: Comments to ARB 2022 Draft Environmental Assessment

From: kathewun@aol.com <kathewun@aol.com>
Sent: Friday, January 13, 2023 10:00 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: Steve Houtterman <houttermans@michigan.gov>
Subject: Comments to ARB 2022 Draft Environmental Assessment

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Dear Mr. Houtteman and Mr. Kulhanek,

Please find my comments regarding the ARB 2022 Draft Environmental Assessment. Also, please confirm receipt. Thanks very much.

Kathe Wunderlich

Comments on the Ann Arbor Municipal Airport 2022 Draft Environmental Assessment

I oppose the proposed Ann Arbor Airport expansion described in the 2022 Draft Environmental Assessment and its bland, poorly-detailed narrative because the important facts are not supported in the voluminous appendices.

The City of Ann Arbor purchased the land in Pittsfield Charter Township that the airport now sits on about a century ago for the water rights to the aquifer under it. Ann Arbor was not able to legally annex the property because it's too far away, although it tried.

The City also, along with FAA, had the opportunity to purchase the land west of the airport where one of several developments now has over 700 homes, built after the City Council several times turned down expanding the airport, resulting in homeowner confidence that it would never be expanded (as one past AA City Council resolved).

But both AA and FAA rejected the offer, allowing the developments to the west and Pittsfield Township to grow and prosper.

With this last attempt to expand the airport, Pittsfield and neighboring Lodi Township have passed resolutions in opposition. It is this very Pittsfield opposition—because Pittsfield totally surrounds an airport on all sides that it opposes expanding – that has allowed it to petition directly to FAA in Washington DC.

With this background -- acting not as the good neighbor Ann Arbor has been for rejecting the past proposals to expand ARB -- Ann Arbor is now taking taxpayer grant funding through the FAA to once again approve an Environmental Assessment on this now 13 year-old-proposal that MDOT still has not been able to get approved, that it identified as a safety runway extension until the FAA told it that it couldn't.

And MDOT, acting as FAA in the now Michigan Block Grant state, is not just proposing the expansion through its EA, it's also judge and jury. Hardly a democratic model for working on behalf of the citizens of Michigan as opposed to working on behalf of one, select, group of flyers who have been using the airport without causing any incidents related to runway length—ever.

While its first attempt at publishing an Environmental Assessment was so riddled with faults that it took 13 years to produce another Draft EA, this third attempt's narrative purports many statements that are not supported by the many substantial appendices and no support for meeting need and purpose.

Based on this background, here are a few of the many problems with this current draft EA.

- **Canada Geese.** The SRDEA acknowledges for the first time the presence of Canada geese surrounding the airport, with a U.S. Department of Agriculture inspector observing 75-100 Canada geese at the airport, feeding in a tilled fallow field. The inspector also reported “flocks of 5 to 15 geese arrived on the airfield at different times. . . Geese were observed within 10 yards of the runway.” The inspector concluded that, “Canada geese are a real and present danger, and will need to be managed for the foreseeable future. KARB is surrounded by ideal resident / migratory Canada goose habitat.” However, the SRDEA presents no plan for such mitigation – and makes no mention of any risks posed by the Canada geese.

See Wildlife Response #1 and Safety/Health Responses #1 and #8

- **Economic impact.** This EA does not explore the reduced home and tax values that follow residential neighborhoods next to airports. Nor does it explore how that will reduce Ann Arbor public school funding every year in perpetuity. Estimated from real estate analysis to exceed \$1 million annually.

See Financial/Economic Response #2.

- **Number of Operations.** The SRDEA suggests that the UM's six / seven home football weekends and Michigan International Speedway two annual NASCAR events bring increased aircraft activity to the area, and that “should Runway 6 / 24 be extended, additional aircraft activity could occur at ARB due to its proximity to

special event venues.” However, the SRDEA contained no actual forecasts of such potential activity. [See Technical Response #3.](#)

- However, a less sanitized version of the SRDEA, contained in an earlier draft submitted to the FAA and reviewed under the Freedom of Information Act, projected an immediate tripling of annual jet operations if the ARB runway were extended to over 1,000 per year, with another 500-665 operations from jets, which currently utilize Willow Run Airport, possibly moving to an extended ARB on football weekends. That earlier draft SRDEA suggested up to 40% of the 9,313 annual small and medium jet operations at Willow Run “would likely shift to ARB if additional runway length were available,” thus increasing jet operations from the 360 in 2019 to upwards of 3,660 jet operations per year – ultimately turning ARB into a jetport!

[See Technical Response #4](#)

- Safety. This EA looks only at the airport itself; there is no mention about the safety of neighborhoods adjacent or even nearby. All fatal plane crashes in Ann Arbor happened in neighborhoods, some in the city of Ann Arbor, not on the airport. Serious crashes in the country, piloted often by company executives, would have been disastrous here because neighboring homes are so close. How can MDOT as a block grant state disregard the lives of these citizens whether they live in Ann Arbor or Pittsfield?

[See Safety/Health Responses #2, #5, #6, and #14.](#)

- Safety. No incident at ARB has ever been caused by the runway length; they have all been pilot error or equipment failure.

[See Safety/Health Response #16.](#)

- Safety. Lack of sight from the Control Tower at the east end of the runway, as used in this EA as rationale for the 150 foot shift, has not caused one accident. No other alternatives—like using a camera—were explored.

[See Safety/Health Response #7 and General Response #25.](#)

- Safety. Noise levels were only tested by simulation and only at the airport, not in the neighborhoods that must cope with it. Even if a jet plane by itself is less loud than the instructor prop planes, more of them flying closer to neighbor roof tops was not studied. And the proposed increase in pilot schools will increase noise even further.

[See Noise Responses #1, #2, #3 and #5.](#)

- Safety. Because ARB is a municipal airport, any pilot who wants to try using it in any season or weather cannot be stopped. No one. Ever. Recent crashes nationally and even in Howell, MI, were piloted by businessmen who owned their planes and misjudged.

[See General Response #18](#)

- Safety. Close by Willow Run Airport is safe, with police, fire and rescue and with de-icing in the airport. ARB has none of these. It must rely on Pittsfield (which opposes the dangerous extension) police, rescue and fire to cover its problems and protect its pilots.

[See Safety/Health Response #3.](#)

- Safety. Ann Arbor water—the 20 % more or less of its drinking water that AA is draining from the aquifer under Pittsfield—potentially diminishing Pittsfield ponds and quality of life if AA needs to increase that percentage from Huron River contaminates—comes from the well heads at ARB. The EA provides no information on when they were last tested. Leaded gas sales at the airport—including toxic lead that gets spewed into the environment on takeoff and landing—was not discussed in the EA.

See Water Resources/Water Quality Response #1 and Air Quality Response #1.

- Safety. Jets will be flying 93 feet or less over some houses. The EA doesn't expect that this will be a problem. Those homeowners do. And so should MDOT.

See Safety/Health Responses #2, #5, #6, and #14.

- Safety. No mention is made of jet fuel burning much hotter than avgas fuel in an accident. Or that lawsuits for loss of life and home would be enormous.

See Safety/Health Responses #2, #5, #6, and #14.

- Safety. FAA told MDOT that the airport is already safe as is.

See Safety/Health Responses #7 and #16 and General Responses #3 and #14.

There is much more to add to this list, as others have and as Pittsfield Township and the grassroots Committee for Preserving Community Quality are writing in their letter to ARB and MDOT-AERO.

Bottom line is that for just these reasons alone, the safety of thousands of Ann Arbor, Pittsfield and Lodi citizens should be as or more important to MDOT than the imagined lack of safety is to the ARB pilots and MDOT who support this proposal. The benefit for a couple planes to take off fully loaded with cargo and fuel on some days should not jeopardize the well-being of the people who live in surrounding neighborhoods. That's unconscionable. We are all Michigan taxpayers and neighbors. Let's keep our airport safe for all.

See General Response #13.

Sincerely,

Kathe Wunderlich

5221 Crooked Stick Dr.

Ann Arbor, MI 48108

Kathe Wunderlich
kathewun@aol.com
734-944-9455

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 17, 2023 7:39 AM
To: William Ballard
Subject: FW: opposition to proposed ARB expansion

From: Kimberly Ellis <elliskime@hotmail.com>
Sent: Friday, January 13, 2023 5:04 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: houttemans@michigan.gov; kathewun@aol.com
Subject: opposition to proposed ARB expansion

You don't often get email from elliskime@hotmail.com. [Learn why this is important](#)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

I am writing to express my strong opposition to the proposed expansion of the runway at Ann Arbor Municipal Airport.

1. The need for an expanded runway is very poorly supported in Chapter 1 of the Draft EA titled "Purpose and Need." This proposal, in previous years called a safety enhancement, now clearly states that the purpose of expanding the runway is to accommodate larger, heavier, and more aircraft which can be accommodated if the runway is expanded. This circular reasoning is obvious in the following two paragraphs from Chapter 1 of the Draft EA. Please note my comments inserted in the text:

See Noise Response #3, Safety/Health Response #7, and General Responses #3, #14, and #25.

1.5.2 Need for the Proposed Action

"The proposed action is needed because Runway 6/24 was designed to serve primarily small piston driven aircraft; however, the Airport receives regular use by small turboprop aircraft and occasional business jet aircraft that require a **longer** runway to operate at a **greater** payload than they do today." ***The need for greater payloads has not been explained, just alluded to by listing some of the types of business and industry in and around Ann Arbor.*** (my emphases in bold, comments in bold italics)

"The intent of the Justification Study was to document, justify, and recommend alternatives to meet the needs of aircraft types regularly using ARB, factoring in operating weight, takeoff on a hot day, and landing on a wet runway. The Justification Study documented the types of aircraft that operate at ARB and then determined the number of current and projected operations the Airport **could expect in the future [IF the airport is expanded! This does not justify a need.]**. The Justification Study then developed prudent and feasible alternatives to meet the performance requirements of **current [presumably current users' performance**

requirements are already being met] and future users **[if the airport is expanded to be able to accommodate them].**" (my emphases in bold, comments in bold italics)

See Safety/Health Response #7 and General Responses #3, #14, and #25

2. Water safety concerns have not been adequately addressed. Any fuel leakage or spills whether from storage tanks at ARB or from crashes could contaminate ground water in one or both watersheds that the Airport spans in addition to the drinking water wells on and near the site. Additional air traffic, including larger planes with heavier payloads, means more fuel on those planes and most likely larger stores of fuel in tanks at ARB. The responses I have seen in "Appendix N Past Public Comments and Responses" to concerns about water quality do not address the increased possibility of contamination of ground water or wells by virtue of the proposed increase in traffic of larger planes. The responses just state that the aquifers are not sole sources of drinking water, that wells are not within the proposed project area, and that ARB is in a wellhead protection area.

See Water Resources/Water Quality Response #1.

The responses also state that the proposal would add more impervious surfaces, slightly decreasing groundwater infiltration. Obviously, any water would run off of the additional impervious surfaces and into the surrounding soil, so this appears to be an attempt to confuse and obfuscate.

3. Safety concerns around wildlife have not been adequately addressed. The responses in "Appendix N Past Public Comments and Responses" to concerns about Canada Geese and other wildlife say that the proposed expansion wouldn't "increase wildlife attractants or introduce new wildlife" (nobody was saying that it might), but don't address the concern that increased air traffic means increased chance of wildlife encounters. The current situation with fairly abundant wildlife on and near ARB is already bad, but more traffic with larger, heavier planes would obviously be worse.

See Noise Response #3, Wildlife Response #1, and Safety/Health Responses #1 and #8.

I have numerous additional concerns that I believe others have included in detail in their submitted comments, including the likelihood of increased noise in the surrounding area and the safety to residents whose homes would be closer to the end of the proposed runway, but let me just end by saying that if Ann Arbor says it is trying to go green, this is a step in the opposite direction. It is also unnecessary when we already have two nearby airports that can handle more and larger planes with heavier payloads.

See Noise Responses #1, #2, and #3, Safety/Health Responses #2, #5, #6, and #14, Financial/Economic Response #11, and General Responses #5 and #10.

I would also like to say that the Draft Environmental Assessment is poorly written, using roundabout logic, circular reasoning, and obfuscatory language. In an area like Ann Arbor, often ranking among the "most-educated cities," I would expect more effort to be put into producing documents like these.

Thank you for considering my concerns.

Sincerely,

Kimberly Ellis

5089 Fox Ridge Ct

Ann Arbor, MI 48103

Dave Clawson

From: Kulhanek, Matthew <MKulhanek@a2gov.org>
Sent: Tuesday, January 17, 2023 7:40 AM
To: William Ballard
Subject: FW: Airport Environmental Assessment - Support of Finding of No Significant Impact (FONSI)
Attachments: Notice of Public Hearing and Availability of Draft EA.pdf; FW_ Airport Stuff.pdf

From: mperry07@comcast.net <mperry07@comcast.net>
Sent: Friday, January 13, 2023 11:40 PM
To: Kulhanek, Matthew <MKulhanek@a2gov.org>
Cc: 'Greg Farris' <greg.t.farris@gmail.com>; Briggs, Erica <EBriggs@a2gov.org>; Watson, Chris <CWatson@a2gov.org>; Kyle Lewis <kyle.lewis@aopa.org>
Subject: RE: Airport Environmental Assessment - Support of Finding of No Significant Impact (FONSI)

This message was sent from outside of the City of Ann Arbor. Please do not click links, open attachments, or follow directions unless you recognize the source of this email and know the content is safe.

Good evening, Matt.

I am writing in support of the environmental assessment (“EA”) study report of “finding of no significant impact” (“FONSI”) as well as supporting the proposed runway safety margin enhancements.

In the spirit of complete disclosure, my affiliation with Ann Arbor Municipal Airport (“ARB”) has been an ARB based pilot for more than 20-years, hangar tenant, current member and past chairperson of the ARB Municipal Airport Advisory Committee (“AAC”), member of the Michigan Department of Transportation Aeronautics (“MDOT AERO”) General Aviation Advisory Committee, and current Washtenaw County representative serving on the Joint Wayne County Airport Authority Zoning Board. In addition to my volunteer duties representing the city, county, and state aviation community, I also volunteer as national Airplane Owners & Pilots Association (“AOPA”) Airport Support Network (“ASN”) ARB representative. It is in my capacity as AOPA ARB ASN representative, I am writing in support of the EA study report FONSI.

Background

I will begin by saying that I have been directly involved with ARB’s EA study since the fall of 2005 when the AAC received the first draft of the airport layout plan (“ALP”) presented to City Council Members (“CM”) for adoption in January 2007. During the January 2007 CM meeting before adopting the recommended APL and on the heels of 9/11, a CM directed a question to now retired airport manager, Jim Hawley, asking if the APL addressed all known security and safety concerns: Mr. Hawley responded, NO.

Mr. Hawley explained there are (3) known safety concerns expressed by pilots and ARB tower staff: 1) close proximity and clearance of approach end of Rwy 24 over State Road; 2) there was no clear line of sight between the FAA control tower and the Rwy 24 hold short line/run-up area; and, 3) the unusual high number of runway overruns. CM’s said they would approve the proposed 2007 ALP conditioned upon the airport manager and AAC returning with a runway safety margin plan addressing all three identified safety concerns.

In late 3rd quarter of 2007, AAC returned to CM's with (2) recommendations curing all three cited safety concerns. The first recommendation curing the State Road obstacle clearance as well as eliminate the line of site obstruction between the control tower and end of Rwy 24, was simply shift the approach end of Rwy 24 150' to the southwest. The 2nd recommendation lowering the risk of runway overruns was add up to 750' or extend the runway from 3,500' to 4,300'. Of course, the final runway length recommended by the aviation civil engineers was reduce the safety margin extension to 720' and overall length of 4,225'. During the February 2008 CM meeting, CM's endorsed AAC's (2) safety margin recommendations and adopted the 2008 ALP.

Since adopting the 2008 ALP and, ARB and MDOT having hosted several civilian advisory committee public meetings, the initial 2010 EA study was approved by CM's and advanced to MDOT for approval recommendation to the FAA/EPA in 2010 for FONSI or FONSI with corrective action required. Since 2010, the EA has undergone extensive review and debate at all levels of FAA/EPA as well as unsuccessful legal challenge by a single issue group. Due to passage of time, the 2010 EA required updating so the EA was updated with fresh data and public comment in 2017. Since 2017, with changes to the environmental review process that have occurred since the start of this project in 2010, the EA was revised again in 2019 addressing newer standards. The updated November 2022 draft EA is what has currently been presented for public comment and support of my comment and support.

Rather than going into a detailed discussion of the nuisances of the runway safety margin project, I have attached an email outlining the talking points prepared by critics of the project soliciting public opposition and refer you to the details of the 2022 EA study and in particular Appendix N. Appendix N factually and satisfactorily addresses the comments and questions from the public. See Support Response #22.

Matt, in closing, I want to thank you, the AAC, and the many independent 3rd party civil aviation engineers for their objective thoughtful critical research and study of the proposed project over the past decade reaching over and again the same "finding of no significant impact" conclusion.

Mark

Reference Material

[2008 Airport Layout Plan](#)

Draft EA

 [2022 Draft EA Part 1.pdf](#)

 [2022 Draft EA Part 2.pdf](#)

 [2022 Draft EA Part 3.pdf](#)

 [2022 Draft EA Part 4.pdf](#)

 [2022 Draft EA Part 5.pdf](#)

 [2022 Draft EA Part 6.pdf](#)

 [2022 Draft EA Part 7.pdf](#)

 [2022 Draft EA Part 8.pdf](#)

Draft EA Appendices

 [Appendix A Section 163 Determination.pdf](#)

 [Appendix B Airport Layout Plan.pdf](#)

 [Appendix C Runway Justification Study.pdf](#)

- [!\[\]\(effbd7993c63c039a58fd3395789cf3f_img.jpg\) Appendix D Runway Protection Zone Analysis.pdf](#)
- [!\[\]\(144980d038f2541d7b588a8a9132bd70_img.jpg\) Appendix E Early Agency Coordination.pdf](#)
- [!\[\]\(c4ce2d477989700c971cf3d240ad9283_img.jpg\) Appendix F Air Quality Analysis.pdf](#)
- [!\[\]\(5013555a72072875cb154b597e002a46_img.jpg\) Appendix G Biological Resources.pdf](#)
- [!\[\]\(bf2038c114ec21ea58ad011774351c98_img.jpg\) Appendix H Farmland.pdf](#)
- [!\[\]\(1ad0c3425edfa4762c2f20e33e3e5bbf_img.jpg\) Appendix I Hazardous Materials - Abridged Version.pdf](#)
- [!\[\]\(74d2fc5645add84f8511beb934060048_img.jpg\) Appendix J Section 106 Report.pdf](#)
- [!\[\]\(ddc5533caa0187e636e3d3234e0983a3_img.jpg\) Appendix K Wildlife Site Visit.pdf](#)
- [!\[\]\(7c207f8f59385c6dd11f9d9bdc7a0d1d_img.jpg\) Appendix L Noise Analysis.pdf](#)
- [!\[\]\(57a1bf910af99362b80b3ac4f2eecbac_img.jpg\) Appendix M Water Resources.pdf](#)
- [!\[\]\(6b114000ab07dda576e2920e2dc838fa_img.jpg\) Appendix N Past Public Comments and Responses.pdf](#)

[Noise Abatement Program Pilot Brochure](#)

Mark Perry

T: (734) 730-0964 | mperry07@comcast.net

From: Kulhanek, Matthew <MJKulhanek@a2gov.org>

Sent: Tuesday, December 13, 2022 7:35 AM

To: Watson, Chris <CWatson@a2gov.org>; Briggs, Erica <EBriggs@a2gov.org>; Greg Farris <greg.t.farris@gmail.com>; Jan Godek <Jan@loditownshipmi.org>; Kelly Burris (kelly@burrisiplaw.com) <kelly@burrisiplaw.com>; Mark Perry <mperry07@comcast.net>; Matt Harshberger <harshbergerm@pittsfield-mi.gov>; Melanie McNicholas <mcnichom9@me.com>; Theresa Whiting <theresa.whiting@gmail.com>

Subject: Airport Environmental Assessment - Public Hearing Tonight

AAC Members,

Just a reminder that the public hearing on the draft environmental assessment (EA) for the runway safety extension project is this evening. It will take place during the hours of 5:30-8:00 pm at the 2nd floor Council Chambers at City Hall. With the open house style format, the public will be able to visit various stations that address each component of the EA. Each station will have findings from the EA and professionals will be available at each station to address questions or concerns. The public will be encouraged to make written comments or utilize the on site court recorder to have their comments transcribed.

If you are available to attend, it should be a great learning opportunity about the project and the significant effort that went into the environmental review. Hope to see you at some point this evening. Let me know if you have any questions. Thanks.

Matthew J. Kulhanek
Airport Manager

City of Ann Arbor | Ann Arbor Municipal Airport | 801 Airport Drive · Ann Arbor · MI · 48108
734.794.6312 Office | 734.972.9112 Cell | Internal Extension 43113
mjkulhanek@a2gov.org | www.a2gov.org



Virus-free. www.avg.com

January 10, 2023

Dear Mr. Houtteman:

RE: OBJECTION TO AIRPORT EXPANSION

After many failed attempts to expand the Ann Arbor airport, it is difficult to comprehend why requests to allow larger planes at the small local airport are still at issue. There is NO purpose to the expansion, NO need for the expansion. The request for expansion has been denied 13 times. The airport expansion is not necessary. The "convenience for a few" does not take precedent over the lives of many.

The aircraft would pass over the residential areas at a much lower altitude than the planes currently allowed to fly out of the Ann Arbor Airport. The nearby Willow Run Airport is available for larger aircraft and more planes.

The effects of the expansion are harmful in many ways:

See Noise Responses #1 and #3, Safety/Health Responses #7 and #16, Financial/Economic Response #11, and General Responses #3, #5, #10, and #14.

SAFETY: The area is home to many birds and geese and the danger of a crash is very real, especially with the low flying altitude of these planes.

See Wildlife Response #1 and Safety/Health Responses #1 and #8.

HEALTH: The noise generated by an expansion is harmful to all.

See Noise Responses #1, #2, and #3.

FINANCIAL: The disruption to the quiet residential areas will lower property values has been proven time and again.

See Financial/Economic Response #2.

Every person with the authority and power to stop these expansion requests now and in the future needs to ask themselves one question: Is this something I would want where I live?.

Please use your position to protect and serve the people who live here from the self-serving people who put their "wants" over the "needs" of the many people who would be negatively impacted.

See General Response #13.

Sincerely,

Norman Otton

4682 Sawgrass Dr E

Ann Arbor, MI 48108

January 9, 2023

Matthew Kulhanek
801 Airport Drive
Ann Arbor, MI 48108

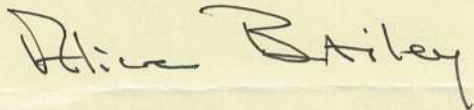
Dear Mr. Kulhanek,

I am writing in opposition to the proposed expansion of the Ann Arbor Municipal Airport. I believe that it poses serious safety risks to residents around the airport while benefiting a minute number of ARB operations. It appears that it is the intention of the airport to increase air traffic which would increase noise pollution for local residents. I am one of those local residents!

See General Response #13,
Noise Responses #1, #2, and
#3.

I have not seen any information that justifies the purpose or need for expanding the airport. Such an expansion would have adverse effects on the quality of life for me and my family. Therefore, I urge you to reject the proposed expansion.

Sincerely,



Alice Bailey
4751 Sawgrass Drive E

9 January, 2023

Matthew Kulhanek
801 Airport Drive
Ann Arbor, MI 48108

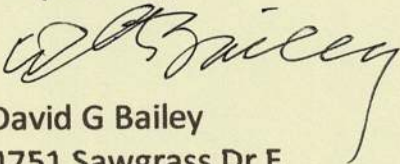
Dear Mr Kulhanek,

I would like to respectfully register my opposition to the proposed expansion of the Ann Arbor Municipal Airport. There appears to be a clear intention to increase air traffic at ARB, but equally clear are the increased safety issues that will go hand in hand with more takeoffs and landings. Not to mention the increased noise pollution for local residents.

See General Response #13,
Noise Responses #1, #2, and
#3.

This expansion will certainly have adverse effects on the quality of life for my family. I urge you to reject the proposed expansion.

Respectfully,



David G Bailey
4751 Sawgrass Dr E

January 10, 2023

From: Dean S. Wise
4765 Sawgrass Dr E
Ann Arbor, MI 48108

To: [via email]
Matthew Kulhanek
Ann Arbor Municipal Airport
mjkulhanek@a2gov.org

Steve Houtteman
MDOT-AERONAUTICS
houttemans@michigan.gov

Kathe Wunderlich
kathewun@aol.com

RE: Proposed Expansion of the Ann Arbor Municipal Airport, specifically,
The 2022 Second Revised Draft Environmental Assessment
("SRDEA")

To Whom it May Concern:

I am very strongly opposed to the proposed SRDEA.

I do not see any benefits to individuals or the community at large in the proposed expansion. Increased noise cannot be denied. Even more importantly are possible health issues to certain populations from increased exhaust, or even the general public if the Ann Arbor water wells become accidentally contaminated.

See Noise Responses #1, #2, and #3, Air Quality Response #1, and Water Resources/Quality Response #1.

Property values will certainly decrease, which will impact revenues that fund community benefits, including roads, schools, etc. Additionally, individuals who purchased homes in the area because the homes were in a nice neighborhood and expected to appreciate, will lose any financial gain from their large investment in real property.

See Financial/Economic Response #2.



January 12, 2023

Mr. Matt Kulhanek

Manager, Ann Arbor Airport

Hello Matt. As you already know, I've been working at Ann Arbor Airport since April, 1985. At that time, and for some years later, the property currently known as Stonebridge was farm crops and marsh. The concept of a longer, safer runway had already been pursued for several years. The opposition always came from residents who didn't feel that a "world class" city needs a "world class" airport. So many people don't realize what an asset a first class airport can be to a community. Then we have those that move in next door to an airport, then complain about the noise.

I watched the Channel 7 News report and take exception to the tactics used by the media and residents to slant the facts. Mr. Andrew Dallas is mistaken when he said the Federal Aviation Administration ever disapproved extension of the runway. The FAA has always been a proponent of any plans to provide a better, safer airport, including a runway extension.

The other issue I have with the "fake news" is the reference to my flight school plane that lost power and landed in a bean field. The footage shown was of a badly damaged aircraft. That was not my plane. After following the procedures for engine power loss the instructor safely landed the aircraft while incurring no injuries or damage to the aircraft. The irony is, if we had the runway extension, he would have landed on a runway, not in a bean field.

In closing, I'd like to say that as a business owner here at KARB, I realize the need to improve our airport in order to continue to provide better safety and the airport services the community needs.

Sincerely,

See Support Response #23.

John M. Solo

