APPENDIX R

Draft EA/EAW Comments and Responses

This page is left intentionally blank.

APPENDIX R Draft EA/EAW Comments and Responses

Introduction

The Draft EA/EAW was released for agency and public review and comment on August 30^{th} , 2012. Written comments on the Draft EA/EAW were accepted from August 30^{th} to October 11^{th} , 2012. Oral comments were accepted at the public hearing held on October 1, 2012. The comment letters, emails and comment portion of the public hearing transcript are included in this appendix. The public hearing transcript in its entirety may be found in *Appendix N*.

Based upon a review of the comments, the MAC and the FAA recognized that the Draft EA may not have clearly explained a few issues, including how Performance Based Navigation (PBN) relates to the proposed project, future operations and airfield capacity. Therefore, this appendix begins with a discussion to clarify these outstanding issues. Following this discussion are general responses for concerns that were raised by numerous commenters and then the individual responses. The MAC and the FAA addressed each individual comment in the comment letters, e-mails and the public hearing transcript. This appendix includes the comment letters, e-mails and public hearing transcript with individual comments demarcated and numbered. A response to each numbered comment is provided on the right hand side of the page where the comment appears. When one of the General Responses is applicable, the response will reference the appropriate General Response number, for example GR # 01.

This appendix also includes an attachment (Attachment 1 - Update on Air Monitoring near the Minneapolis St. Paul International Airport (Minnesota Pollution Control Agency, May 2006)), which is referenced in the responses to some comments.

Many commenters appear to believe that the Proposed Action includes the Performance Based Navigation (PBN) procedures, which includes Area Navigation (RNAV) and Required Navigation Performance (RNP). Under the National Environmental Policy Act (NEPA) and the Minnesota Environmental Policy Act (MEPA), the PBN project is separate from the proposed 2020 Improvement Projects reviewed in this EA. The proposed 2020 Improvement Project, do not trigger the PBN project in any way, and do not depend on the PBN project for their justification. The purpose of the proposed 2020 Improvement Projects is to provide an acceptable level of service and to accommodate demand throughout MSP's terminal and landside facilities through 2020 and accommodate regional roadway system demands through 2030. The proposed PBN procedures are the subject of a separate NEPA process. Although the PBN procedures are a separate project, they have been included in the analysis of cumulative impacts for all

alternatives, including the No Action alternative, for the future years. For additional information regarding the environmental impacts of the proposed RNAV procedures contact:

FAA PBN Integration Group, AJV-14 490 L'Enfant Plaza, S.W. Suite 4102 Washington, DC 20024.

There were numerous comments about how the Proposed Action will result in an increase in forecasted operations. The growth in operations would occur naturally with or without the improvements proposed in this EA. In other words, the forecasted number of aircraft operations is the same for all alternatives, including the No Action alternative. While the No Action Alternative represents a much more crowded condition, the projected daily and annual demand can be accommodated, albeit at a reduced level of service for the passengers using terminal and landside facilities.

The last item to be clarified involves airfield capacity and the potential for the Proposed Action to increase airfield capacity. MSP has adequate airfield (runways, taxiways, etc.) capacity beyond the 20-year planning horizon. The Proposed Action is needed to address congestion and overcrowding at MSP terminal and landside (parking, airport roads, etc.) facilities under current and 2020 conditions as well as to address congestion on regional roadways through the 2030 planning timeframe.

General Responses

The following responses were developed to address general concerns that were consistent among the comments received on the Draft EA/EAW. When one of the General Responses is applicable to the individual comment, the response will reference the appropriate General Response number, for example GR # 01.

General Response (GR) # 01: An EIS is Not Required:

The proposed airport projects were reviewed to identify the appropriate level of environmental review based on the information known. The National Environmental Policy Act (NEPA) provides three levels of environmental review and documentation for actions requiring Federal funding or approval: categorical exclusion (CE); environmental assessment (EA); or environmental impact statement (EIS). For Federal Aviation Administration (FAA) funded or approved projects, the appropriate level of NEPA review is determined in accordance with FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures* and FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions.*

Chapter 3 of FAA Order 1050.1E includes a list of categorically excluded actions. The list identifies actions that the FAA has found do not normally require an EA or EIS except in the case of extraordinary circumstances. If the proposed airport project is not included in paragraphs 307 through 312 of FAA Order 1050.1E, an EA or EIS must be prepared. A few components of the proposed airport projects at Minneapolis-St. Paul International Airport (MSP) are included in the list of categorically excluded actions. However, several are not and therefore, an EA or EIS must be prepared.

According to Chapter 4 of FAA Order 1050.1E, an EA is prepared if the proposed action does not normally require an EIS and is not categorically excluded. Chapter 5 of FAA Order 1050.1E summarizes and supplements the Council on Environmental Quality (CEQ) regulations for EISs prepared by the FAA. An EIS is necessary only for federal actions significantly affecting the quality of the human environment. FAA Order 1050.1E, paragraph 501; 40 C.F.R. § 1508.18. Appendix A of FAA Order 1050.1E discusses FAA's NEPA significance levels for 19 potential impact categories, including aircraft noise. As discussed in the Draft EA/EAW and in these responses to comments, the Preferred Alternative will not result in any significant impacts. An EIS, therefore, is not required.

The Draft EA/EAW also satisfies the requirements of the Minnesota Environmental Policy Act (MEPA). Similar to NEPA, there are three levels of environmental review for actions by "governmental units" (any Minnesota state agency or general or special purpose unit of government in the state of Minnesota) under MEPA: exempt projects; environmental assessment worksheet (EAW); and environmental impact statement (EIS). A federal EA under NEPA may be circulated in place of an EAW if the EA addressed each of the environmental effects in the EAW form. Minn. R. 4410.1300.

The MAC, as the responsible governmental unit (RGU), participated in preparation of the EA/EAW because, under MEPA, the proposed development at MSP is not exempt from environmental review and may have the potential for significant environmental effects. Minn. R. 4410.1000. However, as with NEPA, an EIS is only necessary under MEPA if a project would result in a significant environmental effect and mitigation would not reduce the effect below the threshold of significance. The MEPA criteria for determining the potential for significance are: (1) the type, extent, and reversibility of environmental effects; (2) cumulative potential effects of related or anticipated future projects; (3) the extent to which the environmental effects are subject to mitigation; and (4) the extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies. Minn. R. 4410.1000. As discussed in the Draft EA/EAW and in these responses to comments, the Preferred Alternative will not result in any significant impacts. An EIS, therefore, is not required.

General Response (GR) # 02: Air Quality – General:

The Air Quality Assessment was conducted in accordance with United States Environmental Protection Agency (USEPA) and Federal Aviation Administration (FAA) guidance. The Air Quality Assessment included aircraft operations, ground support equipment, motor vehicles, and stationary sources associated with the airport. The USEPA Region 5 completed a review of the Air Quality Assessment and concluded in their October 10, 2012 response to comment letter that the "...EPA commends the thorough assessment of air quality..." No other comments were received from the USEPA on the Air Quality Assessment.

The two principle components of the air quality assessment are (1) an emissions inventory which is designed to evaluate the impacts of the airport improvements at Minneapolis-St. Paul International Airport (MSP) on regional air quality conditions; and (2) dispersion modeling which is designed to evaluate the carbon monoxide impacts of the alternatives on local air quality. Operational and construction-related emissions inventories for all criteria pollutants were generated using the FAA's Emissions and Dispersion Modeling System (EDMS) and emission factors from the USEPA NONROAD and MOBILE6.2 models.

In May 2006, the MPCA published a study of ambient monitoring conditions near MSP^1 . The monitoring study included measurements of air toxics (including benzene) and $PM_{2.5}$ at two locations within MSP and at Wenonah School and Richfield Intermediate School. Overall, median and average concentrations of pollutants monitored near MSP were similar to concentrations monitored at other locations in the Twin Cities Metropolitan Area.

MSP is in an area designated as in attainment for all criteria pollutants except CO, for which MSP is in a maintenance area. The difference in operational and construction CO emissions between each Action Alternative and the No Action Alternative would not exceed conformity deminimis levels of 100 tons per year. Secondly, CO concentrations with any of the alternatives would not exceed federal or state standards at receptors surrounding the airport and near project-related roadway intersections. The emissions for the Action Alternatives would be similar to the No Action Alternative and the differences would not be significant. Lastly, the project would improve highway operations without adding substantial new capacity therefore there would be no meaningful increase in mobile source air toxics emissions. As a result, the Action Alternatives are not expected to adversely affect ambient air quality.

During construction activities, fugitive dust emissions from excavated areas and construction equipment emissions may result in temporary impacts to air quality. Fugitive dust would be minimized by enforcing best management practices (BMPs) during construction, including minimizing the periods and extent of exposed and/or graded areas, watering disturbed areas during periods of high winds or high levels of construction activity, and minimizing the use of vehicles on unpaved surfaces.

¹ Minnesota Pollution Control Agency, Update on Air Monitoring near the Minneapolis St. Paul International Airport, May 2006. <u>http://www.pca.state.mn.us/index.php/view-document.html?gid=227</u>

Although there are no federal standards for aviation-related greenhouse gas (GHG) emissions, it is well established that GHG emissions can affect climate. Greenhouse gases were inventoried in accordance with Airport Cooperative Research Program (ACRP) *Guidebook on Preparing Airport Greenhouse Gas Emission Inventories* (ACRP Report 11), Minnesota Pollution Control Agency's *General Guidance for Carbon Footprint Development in Environmental Review*, and FAA guidance. FAA guidance states that estimated levels of GHG emissions can serve as a reasonable proxy for assessing potential climate change impacts, and provide decision makers and the public with useful information for a reasoned choice among alternatives. Thus, the incremental differences in GHG emissions between the No Action Alternative and the Action Alternatives were compared. In addition, the incremental differences were considered in the context of US and global emissions. The Action Alternatives are not expected to adversely affect climate change.

In September 2009, the FAA released its guidance for quantifying airport-related Hazardous Air Pollutant (HAP) emissions from airport sources (FAA, Guidance for Quantifying Speciated Organic Gas Emissions from Airport Sources, September 2, 2009 and FAA/EPA Recommended Best Practices for Quantifying Speciated Gas Phase Organic Gas Emissions from Aircraft Equipped with Turbofan, Turbojet and Turboprop Engines, May 27, 2009). The guidance provides detailed recommendations on the preparation of the analysis and references HAPs speciation profiles for airport emission sources. It is the FAA's current policy and guidance to address HAPs in the form of emissions inventories of existing (baseline), future-year "build" and future-year "no-build" (No-Action) conditions associated with proposed projects.

The FAA and MAC prepared a HAPs emission inventory that complies with FAA and EPA guidance and that is based on what is known currently about airport-related emissions. See Final EA/EAW, Appendix E Air Quality Technical Report, Section 6.

The September 2009 FAA guidance provides that, other than HAP emission inventories within this EA/EAW, NEPA reports must not include any other type of HAP assessment including, but not limited to, hazards identification, dispersion modeling (fate and chemical transformation), toxicity weighting, dose-response exposure evaluation, assessment, health risk characterization, health care impact cost estimates, or cost-benefit analysis of mitigation measures. As the guidance explains, such assessments require a complete understanding of both the reaction of HAPs in the atmosphere and downstream plume evolution. Because the science of atmospheric reactions with respect to airport-related HAP emissions is still evolving, the related level of understanding is currently limited. The approach to preparing an emission inventory is based on what is currently known about airport-related emissions. Both the FAA and the EPA recognize that even though the amount of aircraft engine emission test data is growing, the data is still limited and research gaps need to be addressed. Through measurement and study, the FAA, in partnership with other federal agencies and the scientific community, is currently collecting additional emissions data and performing analysis regarding the ultimate fate of airport-related HAP emissions in the atmosphere.

General Response (GR) # 03: Air Quality – Lead

In 2008, the United States Environmental Protection Agency (USEPA) lowered the National Ambient Air Quality Standard (NAAQS) for lead to 0.15 micrograms per cubic meter of air (μ g/m3) over a rolling three-month average, meaning that any area with a three month average exceeding 0.15 μ g/m3 would be classified as nonattainment of the NAAQS. Consistent with recommendations by the Minnesota Pollution Control Agency (MPCA), the only area within the state of Minnesota that has been designated as nonattainment of the current NAAQS for lead is Eagan (District 15 of the Minneapolis-St. Paul seven-county metropolitan area).

To assess whether the existing lead ambient air monitoring network was adequate to assess the attainment status of areas across the country relative to the NAAQS promulgated in 2008, the USEPA codified revisions to the ambient air monitoring requirements at 40 Code of Federal Regulations (CFR) Part 58 in December 2010. These revisions require lead monitors to be installed near airports emitting more than 1.0 ton per year of lead (a total of six airports nationwide; none in Minnesota), as calculated by the USEPA's most recent National Emissions Inventory. Airports subject to this requirement must operate the monitors for no less than three years. There are no requirements for MSP to monitor lead emissions as MSP was not identified as an airport subject to these monitoring requirements.

Lead emissions are not typically considered in emission inventories for commercial service airports because lead emissions result primarily from piston engine aircraft and the use of aviation gasoline (avgas or 100LL), which typically represent a small share of operations at a commercial service facility. Piston engine aircraft operations at MSP total less than two percent of total MSP operations. Avgas usage by these aircraft has decreased from approximately 67,000 gallons in 2005 to less than 20,000 gallons during each of the past three years; as piston aircraft operations have decreased at MSP.

Nonetheless, lead emissions were quantified for the MSP Air Quality Assessment and compared to the USEPA air monitoring requirement threshold of 1.0 ton per year for all No Action and Action Alternatives. Notably, the estimated lead emissions at MSP totals less than 0.04 tons per year, or only four percent of the applicable one ton threshold. In addition, there is virtually no difference in lead emissions between the No Action Alternative and the Action Alternatives, including the Preferred Alternative. No further analysis of lead emissions is required to satisfy NEPA and MEPA.

General Response (GR) # 04: Air Quality - PM_{2.5}

Hennepin County, including the area surrounding the Minneapolis-St. Paul International Airport (MSP), is currently designated as attainment for particulate matter equal to or less than 2.5 micrometers (fine particulates or $PM_{2.5}$). An attainment area is any area that meets the air quality standard for a given pollutant. Minnesota Pollution Control Agency (MPCA) operates several ambient ("outdoor") air quality monitoring stations in the Minneapolis/St. Paul area as part of its permanent, state-wide air monitoring program. These stations sample and record levels of the United States Environmental Protection Agency (USEPA) criteria air pollutants, including $PM_{2.5}$. **Table 1** provides the most recent data (2008 through 2011) from $PM_{2.5}$ air monitoring stations near the airport. The closest air monitoring stations are located at H.C. Anderson School² and Ramsey Health Center³. As shown, the $PM_{2.5}$ concentrations steadily decrease from 2009 to 2010 to 2011 and are well within the National Ambient Air Quality Standards (NAAQS); in part due to regulatory rulemaking and improvements in combustion efficiencies. Of note, the highest measured $PM_{2.5}$ concentrations in the region generally occur in St Paul, not at the monitors near the airport.

Site Name & ID	Pollutant	Averaging	NAAQS	Year ¹		
Site Maine & ID	ronutant	Period		2009	2010	2011 ²
HC Anderson School		Annual ³	15 μg/m³	10.1	9.15	8.62
2727 10 th Avenue.	PM _{2.5}		-hour (98 th) ⁴ 35 μg/m ³	38.7	28.4	24.9
Minneapolis 027-053-0963	2.5	24-hour (98 [™])⁴			30.7 ⁴	I
Ramsey Health Center		Annual ³	15 μg/m ³	10.7	9.97	9.40
555 Cedar Street	PM _{2.5}		35 μg/m ³	39.7	35.9	25.6
St. Paul 027-123-0868	2.5	24-hour (98 th) ⁴			33.7 ⁴	I

Table 1	

Air Monitoring Data (μ g/m³) for PM_{2.5} in the MSP Area (2009-2011)

Note:

(1) Indicates highest reading recorded for the year, unless indicated otherwise.

(2) Annual concentrations for 2011 do not meet completeness requirements due to a three week shutdown in July 2011 while MPCA was unable to collect and analyze our PM_{2.5} filters.

(3) Not to be exceeded.

(4) 98th percent of the daily concentration, averaged over three years, not to be exceeded.

 $\mu g/m^3$ = micrograms/cubic meter

Source: Email correspondence from Kellie Gavin, Minnesota Pollution Control Agency, dated October 10, 2012.

² This monitoring site is located on the roof of the Hans Christian Andersen School in the Phillips Neighborhood of Minneapolis. It is approximately two miles south of downtown Minneapolis and is bordered by major roadways. This location provides air quality data representative of urban neighborhoods which are dominated by residential and commercial land use.

³ This neighborhood scale monitoring site is located at the intersection of Cedar and 10th Street on the roof of the Ramsey County Health Center in Saint Paul. The monitors are positioned on the north side of the building approximately 60 meters south of the I-94 corridor and interchange with I-35E. The location was selected to demonstrate NAAQS compliance in areas where commercial and residential land use is in close proximity to major roadways.

In May 2006, the MPCA published a study of ambient monitoring conditions near MSP^4 . The monitoring study included measurements of air toxics and $PM_{2.5}$ at two locations within MSP and at Wenonah School and Richfield Intermediate School. Overall, median and average concentrations of pollutants monitored near MSP were similar to concentrations monitored at other locations in the Twin Cities Metropolitan Area.

As shown in Table 5.1.5 and 5.1.6 of the Draft EA/EAW, there is no difference in PM_{2.5} emissions⁵ between the Action Alternatives (Airlines Remain and Airlines Relocate Alternatives) and the No Action Alternative during 2020 and 2025. For all alternatives, the PM_{2.5} emissions during 2020 are 36 tons and during 2025 are 39 tons for the No Action and both Action alternatives. Thus, the Action Alternatives are not expected to adversely affect PM₂₅ concentrations. For many conditions (pollutants and analysis years) the Action Alternative emissions are lower than the No Action Alternative, as a result of reduced aircraft taxi times. Implementation of the Action Alternatives requires construction, which may create temporary fugitive dust emissions. Emissions from construction activities associated with the Proposed Action, such as fugitive dust, will be minimized by implementing best management practices (BMPs). These BMPs will include minimizing the time that disturbed or graded areas are exposed, minimizing the size of exposed or graded areas, watering disturbed areas during periods of high winds or high levels of construction activity, and minimizing the use of vehicles on unpaved surfaces. As a result, the Action Alternatives temporary construction emissions will be minimal and will not adversely affect ambient air quality or human health.

⁴ Minnesota pollution Control Agency, Update on Air Monitoring near the Minneapolis St. Paul International Airport, May 2006. <u>http://www.pca.state.mn.us/index.php/view-document.html?gid=227</u>

⁵ PM_{2.5} emission inventory include the incorporation of FAA's "first-order-approximation" (FOA3a) method for calculating aircraft engine emissions, which estimates the non-volatile portion of particulate emissions based on engine type (turbofan versus internally-mixed turbofan), estimates of PM_{2.5} emissions from APUs, and PM_{2.5} emissions from motor vehicles based on MOBILE6.2, and stationary sources.

General Response (GR) # 05: Noise - General

Typically, aircraft noise impacts are associated with airfield improvements and/or substantial changes in aircraft operations. Airfield projects, such as new or extended runways, usually result in aviation noise changes. Operational related changes, such as shifts in runway use, can result in noise impacts. Improvements to terminal and landside facilities are not usually associated with aircraft noise impacts particularly when there is no difference in the forecast number of aircraft operations.

The alternatives evaluated in the Draft EA/EAW do not include the type of airfield improvements that are associated with aviation noise impacts. The Action Alternatives include primarily terminal (including gates) and landside improvements. The proposed "airfield" improvements are limited to those needed to accommodate the terminal improvements such as extended service roads, relocated fuel lines and expanded aprons. The proposed improvements do not include changes to the runways.

The alternatives would not substantially change aircraft operations. The proposed terminal and landside developments would not increase the number of aircraft operations. The forecast number of aircraft operations and the fleet mix are the same for all alternatives. While the No Action Alternative represents a much more crowded condition, the projected daily and annual demand can be accommodated, albeit at a reduced level of service, for the passengers using terminal and landside facilities. In addition, as explained in the introduction to this appendix, the alternatives do not include the proposed PBN (RNAV) procedures.

Therefore, the alternatives evaluated in the Draft EA/EAW would not be expected to result in noise impacts. Regardless, a noise analysis was conducted. The results showed that there would be only minor variations between the No Action Alternative and the Action Alternatives in terms of noise contour acreages, and the unit and population counts within each contour.

The MAC proposed noise mitigation in the Draft EA/EAW. The mitigation addresses the change in noise due to the natural growth of operations. The MAC proposed mitigation because it regards aircraft noise as a major consideration in the ongoing operation, and possible future development, of Minneapolis-St. Paul International Airport (MSP). Since the early 1990s the MAC has spent approximately \$500 million on the residential sound mitigation program around MSP. This program has provided various levels of noise mitigation to over 13,000 homes located in eligible aircraft noise mitigation areas around MSP. Expansion of this program is recommended as part of this Final Draft EA/EAW.

Although the residential noise mitigation program has been successful in reducing noise impacts for many around MSP, it does not resolve noise concerns for those who reside outside the mitigation eligibility areas or for outdoor activities. In these circumstances, efforts to address noise concerns typically take the form of operational measures which, if approved by the Federal Aviation Administration (FAA), can help to provide some reduction in noise.

The FAA controls the airspace around MSP and all operations that arrive into, and depart from, the airport. The MAC, with assistance from the MSP Noise Oversight Committee (NOC),

remains committed to working with the FAA to address airport noise concerns from an operational perspective when feasible. A good example of this collaboration occurred in July 2012 when, after concerns were expressed by residents north of the Runway 30R extended centerline, the MSP NOC evaluated the issue. The NOC requested the FAA to consider increased the use of the 340- and 320-degree departure headings to help divert traffic from the 360-degree departure heading. The FAA implemented these changes in response to the NOC request.

The MAC also attempted to address the impacts of low-frequency aircraft noise. The MAC considered a measure to reduce the impact of low-frequency aircraft noise through the Part 150 process after studying the potential impacts through an independent study [Low-Frequency Noise Policy Committee]. MAC endorsed the measure on September 18, 2000, and indicated that it should be included in the revised NCP. The low-frequency noise mitigation measure was included in the November 2001 Study as proposed measure LU-10. The FAA and the Federal Interagency Committee on Aviation Noise (FICAN) reviewed the study and met with representatives from the study. Both the FAA and FICAN concluded that the study failed to demonstrate that there would be increased annoyance to residents due to low-frequency aircraft noise but agreed that additional study was warranted.

Although the NOC and the MAC continue to explore new and innovative ways to reduce noise impacts around MSP, there remain many circumstances when the impacts from the airport simply cannot be abated. Federal grant dollar provisions require that the airport be operated in a manner that is neither discriminatory nor poses an undue burden on interstate commerce. Similarly, the 1990 Airport Noise and Capacity Act (ANCA) limits the ability of airports to impose access or use restrictions based on aircraft noise. The result is that it is extremely difficult to restrict aircraft operations at an airport to control noise. The access or use restrictions designed for noise control that currently exist at some U.S. airports pre-date the 1990 ANCA and were grandfathered by an act of Congress.

The MAC's noise programs are documented on the Internet at www.macnoise.com. At this site one may explore the many MAC initiatives to reduce noise around MSP and find information on how to participate in the NOC process.

General Response (GR) # 06: Noise - – Performance Based Navigation (PBN)

This EA/EAW does not provide environmental review or approval of the proposed Performance Based Navigation (PBN) procedures, which include Area Navigation (RNAV) and Required Navigation Performance (RNP) procedures. Environmental review and approval of the proposed procedures is provided under a separate environmental process conducted by the FAA Air Traffic Organization. The discussion herein is to facilitate understanding of PBN (a separate project) and for purposes of disclosure only.

Since 2007 the Minneapolis-St. Paul International Airport (MSP) Noise Oversight Committee (NOC) has been analyzing possible air traffic procedures to reduce aircraft noise impacts around MSP. Early in this effort it was established that a critical element of the initiative would be the use of RNAV. RNAV is one of the main components of Performance Based Navigation (PBN). "PBN provides a basis for the design and implementation of automated flight paths as well as for airspace design and obstacle clearance."⁶ PBN is part of a national effort to modernize the national airspace system known as the Next Generation Air Transportation System (NextGen). NextGen is designed to allow aircraft to use airspace more efficiently, reduce aircraft fuel consumption, and reduce aircraft emissions and noise when possible. RNAV is a method of navigation that permits aircraft operations on any desired course within the coverage of station-referenced navigation signals or within the limits of a self-contained system capability, or a combination of both. In short, RNAV technology provides the capability for aircraft to fly a desired track in a manner that is reproducible and allows for more accurate concentration of aircraft overflights in a desired area. RNAV also allows for more seamless transition to Required Navigation Performance (RNP), the other main component of PBN, operations in the future. "RNP is RNAV with the addition of an onboard performance monitoring and alerting capability."⁷

Following the NOC's initial review of RNAV in the context of enhancing existing noise abatement procedures at MSP, in 2010 the FAA determined that MSP was an excellent airport for airspace-wide RNAV and RNP implementation. FAA made its determination based on MSP's present airspace design and MSP's lack of conflicts with other airport airspaces. Local FAA Control Tower personnel moved forward with the airspace-wide PBN implementation at MSP.

In 2011, the NOC began the process of establishing criteria for the FAA to consider in the development and implementation of PBN at MSP (NOC RNAV Criteria). At the March 16, 2011 NOC meeting, the Committee took unanimous action adopting the following criteria (NOC RNAV Criteria) to be forwarded to the FAA:

• Provide a noise analysis using the MSP 2010 actual noise data analyzing the effects of the procedures on the noise contours and other noise metrics that evaluate the time above impact and single event noise impacts along a given RNAV track at MSP.

⁶ FAA, Fact Sheet – NextGen Goal: Performance-Based Navigation, April 24, 2009, http://www.faa.gov/news/fact_sheets/news_story.cfm?newsid=8768.

⁷ Ibid.

- Provide a public information program to inform the public.
- Reduce the number of sensitive land use overflights. (This could be done through increased Eagan-Mendota Heights Departure Corridor compliance, maximizing the concentration of westbound Runway 17 departures directly over the Minnesota River Valley, noise-sensitive departure tracks for operations east of runway heading off Runway 17, and evaluating the impacts of focusing operations to the northwest over major road corridors, where possible.)
- Reduce aircraft arrival noise.
- Maximize use of RNAV noise tracks as part of the Runway Use System. (An example would be, during southeast operational flows, focusing easterly-bound departure operations on Runways 12L and 12R on Corridor Compliant RNAV tracks, while focusing southbound and westbound departures on Runway 17 on the River RNAV track.)

At the September 19, 2012 NOC meeting the FAA presented the RNAV procedure tracks including 13 Standard Instrument Departures (SIDs) and six Standard Terminal Arrival Routes (STARs) and reviewed the design process and the noise considerations that were made in the FAA's design process. The review detailed how the procedures will tighten existing routes that aircraft fly away from the airport upon departure, provide continuous aircraft climb profiles for departing aircraft, and make it possible for pilots to descend their planes into MSP's airspace with the engines set at or near idle, referred to as Optimized Profile Descents (OPD). Additionally, a detailed noise analysis was reviewed consistent with the related NOC RNAV criteria.

Following the September NOC meeting, several presentations detailing the procedures, the noise considerations made by the FAA, and the noise analysis were made to various city councils around MSP. The NOC sponsored two public open houses on the FAA's proposed RNAV procedures. These open houses were designed to help residents understand how the use of the FAA-proposed procedures could affect flight patterns at MSP. The open houses were held on November 8, 2012 at the Crosstown Covenant Church in Minneapolis and on November 13, 2012 open house held at the Eagan Community Center. The open house dates and time were published widely in local newspapers and on various websites. There were 109 people that attended the Minneapolis open house and 203 people attended the Eagan open house. Depending on where people lived, the feedback ranged from positive to very concerned. The predominant concern was with the concentration of overflights over certain residential areas. A large volume of communication was received by the MAC from residents and elected officials following the open houses expressing concern relative to concentrating flights over the residential area of South Minneapolis, Edina, etc., and the speed of the process, among other concerns.

Based on extensive input from community leaders and airport neighbors, the MAC board voted on November 19, 2012 to provide support for the FAA's plan except for departures on Runways 30L and 30R that fly to the northwest of the airport over communities such as South Minneapolis, Edina, etc. Specifically, the MAC passed the following action: "The MAC supports implementation of the Area Navigation (RNAV) procedures as designed by the Federal Aviation Administration with the exception of RNAV departure procedures off Runways 30L and 30R at MSP."

If the FAA moves forward with partial implementation of PBN as recommended by the MAC, the procedures would be implemented to the south and east of the airport. Regarding next steps, the FAA has stated, "the vote taken November 19 approved a "partial" package of RNAV procedures that must be studied and reviewed before any further action can be taken. At this time, there is no time line for completion of that review."

The RNAV departure tracks off Runways 12L, 12R and 17 have been incorporated into the forecasted scenarios noise contours in the Final EA/EAW. In the case of arrival operations, the INM arrival tracks used for the Draft EA/EAW Forecast Contours were maintained. The Draft EA/EAW arrival tracks were used for the RNAV noise analysis because: 1) the RNAV arrival tracks are overlays of existing arrival procedures; and 2) any possible benefit from OPD procedures occur when the aircraft is above 3,000 feet above ground level (AGL), which is located well beyond the 60 DNL noise contour at MSP.

General Response (GR) # 07: Noise - Noise Metric

The Federal Aviation Administration (FAA) requires use of the Day-Night Average Sound Level (DNL) noise metric to determine and analyze aircraft noise exposure and land use compatibility issues around U.S. airports. Because the DNL metric correlates well with the degree of community annoyance from aircraft noise, DNL has been formally adopted by most federal agencies dealing with noise exposure. In addition to the FAA, these agencies include the Environmental Protection Agency, Department of Defense, Department of Housing and Urban Development and the Veterans Administration. The use of the Integrated Noise Model (INM) and DNL is a national standard.

The MAC will continue to report, and consider the use of, alternative noise metrics. Before the MAC makes policy decisions that have a noise component, the MAC receives input from the Noise Oversight Committee (NOC), which often analyzes noise impacts using alternative noise metrics and single-event noise descriptors. The recent NOC Area Navigation (RNAV) analysis is an example using alternative and single event noise metrics to develop information on aircraft noise. Alternative single event noise metrics are reported monthly in the NOC Technical Advisor's Reports and are published on the MAC Noise Program website at www.macnoise.com.

However, DNL remains FAA's accepted noise metric, and MAC has used FAA's INM-generated DNL noise contours as the mechanism for implementing a \$500 million noise mitigation program at MSP since the early 1990s. The noise mitigation program, relying on DNL and INM, has substantial community support. Nevertheless, the MAC will continue to support efforts at the national level by the FAA and others to evaluate the effects of aircraft noise and to examine alternate ways to quantify noise impacts. As an example, on March 19, 2012 the MAC sent letters to the Airport Cooperative Research Program (ACRP) and the Partnership for AiR Transportation Noise and Emission Reduction (PARTNER) programs offering MSP as a willing participant in their ongoing studies of methods for understanding aircraft annoyance and sleep disturbance.

General Response (GR) # 08: Noise - Health Effects

While many studies draw correlations between aircraft noise exposure and health effects, the science in this area remains undeveloped. The current body of studies are problematic and sometimes contradictory as discussed in two recent literature reviews.

The Partnership for Air Transportation Noise and Emission Reduction Project 19 final report titled "*A Review of the Literature Related to Potential Health Effects of Aircraft Noise*," summarized the flaws in existing studies that attempt to correlate aircraft noise exposure and health effects. According to the report:

"There are several potential problems that arise in health studies, e.g., unaccounted for confounding factors; removal of the impacts of certain factors which are known to be risk factors for cardiovascular disease but might also be outcomes of the noise exposure; inaccurate prediction of exposure to noise sources of interest; difficulties disambiguating impacts of total

noise exposure versus exposure to a particular noise source of interest. In addition, adequate control of other factors like air quality, which may also be influenced by noise producing infrastructure, may pose challenges and increase the diversity of expertise needed for an effective study."⁸

Similarly, a 2008 report by the Airport Cooperative Research Program entitled Synthesis 9, *Effects of Aircraft Noise: Research Update on Selected Topics* found the following:

"In the 20-plus years since publication of the FAA's Aviation Noise Effects, considerable research, review of previous research with new thought, and new independent research, as well as collaborative efforts to identify health effects related to aviation noise, have been completed. Some studies have identified a potential correlation between aviation or road noise above certain noise thresholds, typically a day-night average noise level (DNL) value of 70 dBA, and increased hypertension; however, other studies contradict such findings. Occupational noise is also an intricate concern. Health effects on children, particularly those with decreased cognitive abilities, mental disturbances, or other psychological stressors, and studies of pregnancy and low infant birth weights, all indicate either little correlation or conflicting results of relationships between aviation noise and childhood psychiatric disorders, environmental factors, or low infant birth weights. Additionally, recent studies conclude that aviation noise does not pose a risk factor for child or teenage hearing loss. Because aviation and typical community noise levels near airports are not comparable to the occupational or recreational noise exposures associated with hearing loss, hearing impairment resulting from community aviation noise has not been identified. However, newer studies suggest there may be a potential relationship between aviation noise levels and hypertension or ischemic heart disease at noise levels as low as 50 dBA L_{eq}.

Despite decades of research, including review of old data and multiple new research efforts, health effects of aviation noise continue to be complicated and the need for additional research is crucial to understanding."⁹

Therefore, additional research is needed to understand the relationship between aviation noise and health before any conclusions can be made. The MAC continues to support research efforts by the FAA and others to evaluate the effects of aircraft noise and to examine alternate ways to quantify noise impacts. As an example, on March 19, 2012, the MAC sent letters to the Airport Cooperative Research Program (ACRP) and the Partnership for Air Transportation Noise and Emission Reduction (PARTNER) offering MSP as a willing participant in ongoing studies of methods for understanding aircraft annoyance and sleep disturbance.

⁸ Partnership for AiR Transportation Noise Emissions Reduction (PARTNER), PARTNER Project 19 Final Report, A Review of the Literature Related to Potential Health Effects of Aircraft Noise, July 2010, p. iv.

⁹ Transportation Research Board of the National Academies, ACRP Synthesis 9 Effect of Aircraft Noise: Research Update on Selected Topics, 2008, pp. 1-2.

General Response (GR) # 09: Noise - Aircraft Operations – Runway Use

Runway Use Systems describe how aircraft typically use the existing runways and the variables that affect runway selection. Runway use is determined by four variables: prevailing wind, types of activity, aircraft type and traffic demand. The prevailing wind determines the direction of arrivals and departures. Aircraft typically arrive and depart into the wind. Operational factors, such as wind, weather and aircraft destination are primary determination factors for selection of runways. Aircraft type, performance capabilities, and gross weight may also effect runway selection.

FAA and MAC plan to continue using the Runway Use System as defined and contained in Table A-3 and Table A-5 of the Final Environmental Assessment (FEA) for the Implementation of a Departure Procedure off of Runway 17.

Demand	Traffic Demand	RUS Status
Period	(Operations per 15-	
	Minute segment)	
LOW	Less than 3.4	Traffic levels allow for maximum flexibility in runway selection and
		RUS implementation, including the use of unique procedures
		such as the Head-to Head Procedure in the Corridor.
Mid	Between 3.5 and 15	Traffic levels allow for efficient selection of runways based on
		noise considerations, given requirements for runway crossings,
		capacity, etc.; moderate use of the RUS.
High	Greater than 15	The need to maintain operational capacity does not allow ATC
		flexibility in runway selection; limited use of the RUS.

Table A-3

Traffic Demand Period Criteria

Source: ATC HNTB Analysis.

Table A-5

Revised Runway Use System

The revised RUS established the following runway use preferences:

Departures

- 1. Runways 12L and 12R
- 2. Runway 17
- 3. Balanced Use of Runway 4/22
- 4. Runways 30L and 30R

Arrivals

- 1. Runways 30L and 30R
- 2. Runway 35
- 3. Balanced Use of Runway 4/22
- 4. Runways 12L and 12R

FAA and MAC continue to comply with Tables A-3 and A-5.

The 2020 Draft EA/EAW includes information on the distribution of operations across runways in Appendix G.

General Response # 10: Noise - Mitigation

The MAC proposed noise mitigation in the Draft EA/EAW. The mitigation addresses the change in noise due to the natural growth in aircraft operations that would occur with or without the Preferred Alternative.

The noise mitigation in the Draft EA/EAW was proposed in a manner consistent with the noise mitigation program set forth in the Consent Decree in City of Minneapolis, et al. v. Metropolitan Airports Commission, Case No. 05-5474 (Hennepin County District Court). The noise mitigation proposal included a trigger for the commencement of mitigation (484,879 annual operations or the year 2020, whichever comes first); with mitigation eligibility based on the 2020 Preferred Alternative noise contours. Residential properties within the 2020 Preferred Alternative noise contours located in a higher aircraft noise mitigation area when compared to the Consent Decree were proposed to receive noise mitigation in a manner consistent with the Consent Decree, per respective noise impact area.

The proposed noise mitigation program was revised after the publication of the Draft EA/EAW. The revised proposed noise mitigation program in the Final EA/EAW is also consistent with the Consent Decree mitigation packages per respective noise impact area. The proposed mitigation in the Draft EA/EAW was modified to base mitigation eligibility and timing on annually-developed actual noise contours instead of the 2020 Preferred Alternative noise contours. Below is an outline of the program elements that define the new mitigation proposal in the Final EA/EAW:

- Mitigation eligibility is assessed annually based on the actual noise contours for the previous year.
- The annual mitigation assessment would begin with the actual noise contour for the year in which the ROD was approved.
- For a home to be considered eligible for mitigation it must be located in the actual 60+ Day-Night Average Sound Level (DNL) noise contour, within a higher noise impact mitigation area when compared to its status relative to the Consent Decree noise mitigation program, for a total of three consecutive years, with the first of the three years beginning no later than 2020.
- The noise contour boundary would be based on the block intersect methodology.
- Homes would be mitigated in the year following their eligibility determination.

The revised mitigation plan provides a flexible framework that will consider actual noise impacts at the airport moving forward in a manner that will consider future airport development scenarios and FAA operational initiatives.

General Response # 11: Noise - Property Values

The relationship between cumulative noise levels and property values is complex. The property value impacts of aviation noise have been studied on multiple occasions, with published study results beginning in the mid-1970s. The results of these studies differ because there are numerous airport-specific variables, including: (1) the level and frequency of noise; (2) the property location with respect to overflights; (3) the perceived amenities and quality of the affected neighborhood/community; (4) the local supply and demand for housing; (5) the local and regional economy; and (6) other market conditions that cannot be controlled or are difficult to predict. The Airport Cooperative Research Program Synthesis 9, *Effects of Aircraft Noise: Research Update on Selected Topics* provides the following overview of research conducted to determine the effect of aviation noise on property value:

"In summary, the studies of the effects of aviation noise on property values are highly complex owing to the differences in methodologies, airport/community environments, market conditions, and demand variables involved. Whereas most studies concluded that aviation noise effects on property value range from some negative impacts to significant negative impacts, some studies combined airport noise and proximity and concluded that the net effect on property value was positive."¹⁰

In the case of MSP, aggressive measures have been taken to upgrade the local housing stock through the implementation of an expansive residential noise mitigation program. Since the early 1990s, the MAC has spent approximately \$500 million on the residential noise mitigation program in the proximity of MSP. This program has provided noise mitigation to over 13,000 homes located in eligible aircraft noise mitigation areas around the airport. (Expansion of this program is recommended as part of the Final EA/EAW.) In addition to reducing noise levels within homes, the program has provided community stabilization in the neighborhoods around MSP.

General Response # 11: Noise - Awakenings

Nighttime awakenings due to aircraft noise have been studied for many years and the Federal Interagency Committee on Aviation Noise (FICAN) has recommended prediction methods. Most recently, in 2008, FICAN recommended the use of ANSI S12.9-2008 *Quantities and Procedures for Description of Measurement of Environmental Sound* – Part 6: *Methods for Estimation of Awakenings Associated with Outdoor Noise Events Heard in Homes* to analyze behavioral awakenings from aircraft noise.¹¹

While there is a recommended approach to predicting awakenings, there is no established criteria for an exposure limit. In addition, the FAA does not determine the significance of noise impacts based on awakenings. The FAA determines the significance of aircraft noise impacts based on the DNL metric that includes a 10 dB penalty for nighttime aircraft operations.

¹⁰ Transportation Research Board of the National Academies, ACRP Synthesis 9 Effect of Aircraft Noise: Research Update on Selected Topics, 2008, p. 20.

¹¹ Federal Interagency Committee on Aviation Noise (FICAN), FICAN Recommendation for use of ANSI Standard to Predict Awakenings from Aircraft Noise, December 2008.

Draft EA/EAW Comments with Responses

Comment regarding the Draft EA/EAW were received from the following:

- 1. Sally Carlson-Bancroft
- 2. Alanna Tabaka
- 3. Patricia Ward
- 4. Michael Corbett MnDOT
- 5. Nathan Lind
- 6. Birdie Golden
- 7. Jim Spensley SMAAC
- 8. Sandra Krebsbach City of Mendota Heights
- 9. John Frederickson Sun Country Airlines
- 10. Mike Maquire City of Eagan
- 11. Mary Gorman
- 12. John White
- 13. Mollie O'Connor
- 14. Elizabeth Jarrett Andrew
- 15. Gene Winstead City of Bloomington
- 16. R.T. Rybak City of Minneapolis
- 17. John Donnelly
- 18. Steven Devich City of Richfield
- 19. Georgia Wegner
- 20. Lisa Schmid
- 21. Karen Kromar MPCA
- 22. Karen Batdorf
- 23. Pat Engstrand
- 24. Ronald Goldser
- 25. Mary Vrabel
- 26. Kenneth Wenzel
- 27. Kenneth Westlake EPA, Region 5
- 28. Charlene Shaeffer
- 29. Jill Boldenow
- 30. Michael Kehoe
- 31. Marie Morzenti
- 32. Eric Weiss
- 33. Vanessa Stephens Coldwater

- 34. Sarah Guillet
- 35. Lynnea Forness
- 36. Susan Taylor
- 37. Joanne Jongsma
- 38. Emily Resseger, PE
- 39. Kathleen Regan
- 40. Nicole Miller
- 41. Steve Erickson
- 42. Lisa Barajas, Met Council
- 43. Brendan Downes
- 44. Michael Corbett, MnDOT
- 45. Nancy Larson
- 46. Cate Long
- 47. Representative Jim Davnie
- 48. Guy Heide, Airport Noise Reduction Committee
- 49. Jean Wagenius, State Representative
- 50. October 1, 2012 Public hearing comments from the following:
 - Councilwoman Sandy Colvin Roy
 - James Easton
 - Rob Mehta
 - Bryan Barnes
 - Guy Heide
 - Bob Friedman
 - Lucinda Nelson
 - Judy Arginteanu
 - Kevin Kirsch
 - Tom Nickelbine
 - Steve Watson

The comment letters, e-mails and public hearing transcript with individual comments demarcated and numbered are provided in the order listed above. A response to each numbered comment is provided on the right hand side of the page where the comment appears.

001-1. The preference for Alternative 2 is noted; this is the 001 Sponsor's Preferred Alternative. MSP 2020 Improvements Draft Environmental Assessment / Moving the airport is not a Environmental Assessment Worksheet (EA/EAW) Public Open House – Lake Nokomis Community Center Tuesday, 18 September 2012 feasible alternative because the Minnesota Legislature prohibited COMMENTS the MAC from constructing, 18/12 Date: equipping, or acquiring land for a Carlson-Bancro Name: Dally major new airport to replace the 12+h Aves Address: 5705 existing Minneapolis-St. Paul City: Mals 55417 International Airport. (Minnesota ZIP Code: Statues 1996, 473.608). PLEASE WRITE YOUR COMMENTS BELOW refer Alternative The alternative to divert the arport monna passengers to another airport operations away trom thi was studied as part of the Draft op mated area homa nn-Considered really Sometimes EA/EAW. See Section 3.1.1 of the Suffer at our hous attack Draft EA/EAW. It was concluded that (1) neither the development app ly pressure You any of a competing hub nor a mes regarding or The ars 2 supplemental airport appears When they amive elepart or how GUI likely given current airline house +hay ease NON behavior and trends and, (2) even if the studied airports were able to capture 100 percent of their respective markets, the need for MSP terminal and landside improvements would be delayed Written comments may also be submitted via USPS mail or e-mail to the address below. only temporarily. Therefore, the Comments will be accepted until 5:00 pm on October 11, 2012. Other Airports Alternative was MSP 2020 Improvements Draft EA/EAW File dismissed from further C/O Environment Department consideration. Metropolitan Airports Commission 6040 - 28th Avenue South Minneapolis, MN 55450-2799 Phone: 612-726-8100 The MAC is adhering to the 2030 Email: msp2020draftEAW@mspmac.org Long Term Comprehensive Plan for MSP. The Metropolitan Council confirmed that the Draft EA/EAW is consistent with the Long Term Comprehensive Plan adopted by the MAC. See Comment # 042-10. There is noise associated with the airport and in response the MAC has implemented a very robust noise mitigation program. **001-2.** Neither the MAC nor the FAA determine the airline schedules. However, the MAC has worked very aggressively and

in cooperation with the FAA, airlines and the surrounding communities through the Noise Oversight Committee to enact voluntary measures to reduce noise impacts. The MAC, in consultation with the NOC and FAA, has facilitated the Implementation of Noise Abatement Departure Profiles, and the FAA is currently considering the implementation of Optimized Profile Descent arrival operations. These procedures are intended to provide some noise relief in the form of aircraft altitudes during both departure and arrival phases of flight. The MAC, under advisement from the NOC, will continue to evaluate and pursue opportunities in this area with the FAA. See General Response GR # 05, and GR # 09.

		002
MSP	2020 Improvements Draft Environmental Assessment / Environmental Assessment Worksheet (EA/EAW) Public Open House – MAC General Offices Building Monday, 1 October 2012	Minneepolis - Saint Paul Bangara Saint Paul going your way
Date: Name: Address: City: ZIP Code:	COMMENTS 10-01-12 Alenne Tebeke 6013 Logen AV SO Mignec polis 55417	
See	PLEASE WRITE YOUR COMMENTS BELOW	
	nay also be submitted via USPS mail or e-mail to the ar its will be accepted until 5:00 pm on October 11, 201 MSP 2020 Improvements Draft EA/EAW File C/O Environment Department Metropolitan Airports Commission 6040 – 28th Avenue South Minneapolis, MN 55450-2799 Phone: 612-726-8100 Email: msp2020draftEAW@mspmac.org	

002

1

2

3

4

October 1, 2012 Metropolitan Airport Commission

To whom it may concern:

I am deeply concerned about the proposal to expand the airport in the current location. I am a resident of South Minneapolis and find the air traffic noise already intolerable. Planes fly over my house starting early in the morning, continuing all day, sometimes as late as 10:45 at night. The noise is relentless. The thought of more traffic is disturbing. For example, this is an actual list of times that planes flew over my house in one hour on a recent day:

 $9{:}42$ AM, 09{:}45, 09{:}52, 09{:}55, 10{:}04, 10{:}12, 10{:}15, 10{:}16, 10{:}19, 10{:}21, 10{:}22, 10{:}24, 10{:}27, 10{:}32, 10{:}35 and 10{:}38

Noise abatement would be welcome, however it does not allow me to sit in my yard and have moments of quiet. It does not allow me to entertain guests. It does not allow me to work outside in peace.

There does not seem to be any recourse. The airlines have no limits on noise they create, or hours of operation. Complaints do not change anything.

South Minneapolis and much of the metro area is plagued by airplane noise. It was a mistake not to re-locate the airport in 1996, however it is also a mistake to continue expanding a facility so close to the metropolitan area. It is time to re think a second airport site away from such a large populated area. The future health of the city is at stake as well as the health of the citizens that live here. I urge you to vote this proposal down.

Sincerely Juna Jalake

Alanna Tabaka 6013 Logan Ave South Minneapolis, MN 55419 612-869-8177 **002-1.** As discussed in the introduction to this appendix, the growth in aircraft operations would occur naturally with or without the Proposed Action.

The alternatives evaluated in the Draft EA/EAW do not include the type of airfield improvements that are associated with aviation noise impacts. Typically, aircraft noise impacts are associated with airfield improvements and/or substantial changes in aircraft operations. Airfield type projects such as new or extended runways usually result in aviation noise changes. Operational related changes such as shifts in runway use can result in noise impacts. Improvements to terminal and landside facilities are not usually associated with aircraft noise impacts particularly when there is no difference in the forecast number of aircraft operations.

A noise analysis of the alternatives is included in the EA/EAW. The results showed that there would be only minor variations between the No Action Alternative and the Action Alternatives in terms of noise contour acreages, and the unit and population counts within each contour. See General Responses GR # 05, GR # 09, and GR # 10.

002-2. See General Responses GR # 05, GR # 09, and GR # 10.

002-3. See General Response GR # 05, GR # 09, and GR # 10.

002-4. Moving the airport is not a feasible alternative because the Minnesota Legislature prohibited the MAC from constructing, equipping, or acquiring land for a major new airport to replace the

existing Minneapolis-St. Paul International Airport. (Minnesota Statues 1996, 473.608).

The alternative to divert passengers to another airport was studied as part of the Draft EA/EAW. See Section 3.1.1 of the Draft EA/EAW. It was concluded that (1) neither the development of a competing hub nor a supplemental airport appears likely given current airline behavior and trends and, (2) even if the studied airports were able to capture 100 percent of their respective markets, the need for MSP terminal and landside improvements would be delayed only temporarily. Therefore, the Other Airports Alternative was dismissed from further consideration.

The MAC is adhering to the 2030 Long Term Comprehensive Plan for MSP. The Metropolitan Council confirmed that the Draft EA/EAW is consistent with the Long Term Comprehensive Plan adopted by the MAC. See Comment # 042-10.

The Purpose and Need in Chapter 2 of the EA/EAW demonstrated the need and justification for the proposed project. As discussed in the introduction to this appendix, the growth in aircraft operations would occur naturally with or without the Proposed Action. We have noted your comment against the proposed development.

Also, see General Responses GR # 05, GR # 09, and GR # 10.

10-01-12P05:24 RCVD 13+00892P6688289R6VD 10/1/12	003	003-1. As discussed in the introduction to this appendix, the growth in aircraft operations would occur naturally with or without the Proposed Action.
 C/O Roy Fuhrman- Director of Environment Metropolitan Airports Commission 6040 28th Ave. South Minneapolis, MN 55450-2799 Dear Airport Decision-Makers, I am unable to attend the 10/1/12 meeting so I'm writing to let you know my concerns about MSP 2020 Improvements Draft EA/EAW file. The assessment doesn't go far enough to adequately determine the actual impact of a 20% increase in air traffic on the health and quality of life for those who live in the path or imprint of the airport. Airport noise and pollution are not accounted for in a manner that reflects the actual experience of the disruption and impact on health due to increase noise and air traffic. Better measures are needed. 1) Measure are needed to evaluate how sustained noise of the low sounds of airplanes effect the neighborhood. Improvements are needed to the current methods of measuring sound from airplanes. 2) What are effects of the vibrations that are caused when plane takes off to homes and people? 3) What are the health affects of the stress caused by an increase of noise and loss of sleep? 4) What are the levels of benzene from jet fuel in the neighborhoods surrounding the airport? Benzene is toxic. Studies are needed to truly understand what effect this will have on public health. 5) I am particularly concerned about low flying planes with both noise, light and air pollution effects. I should not see the red lights of night-flying planes reflected on the side of my house as I do now. It was also noted that no provision was made for any type of noise mitigation as MAC has done in the past. I love my home and neighborhood and would like to stay here. Please consider the community and be agood neighbor by doing a full environmental impact study that addresses the concerns I mentioned above. Thank you. Patricia Ward 5220 38th Ave. S. Minneapolis, MN 55417 	1 2 3 4 5 6 7 8	The Air Quality Assessment was conducted in accordance with USEPA and FAA regulations and guidance. The Air Quality Assessment included aircraft operations, ground support equipment, motor vehicles, and stationary sources associated with the airport. On pages 5-13 through 5-16, the Draft EA/EAW demonstrates compliance with the National Ambient Air Quality Standards (NAAQS), which are determined based on health and welfare criteria, and General Conformity requirements for carbon monoxide. In addition, the difference in estimated emissions for all pollutants between the future year No Action Alternative and the Action Alternatives is not significant. For many conditions estimated emissions associated with the No Action Alternative, as a result of reduced aircraft taxi times. Moreover, emissions from construction activities associated with the Proposed Action, such as fugitive dust, will be minimized by implementing best management practices. Thus, the Action Alternatives would not be expected to adversely affect ambient air quality or human health.
		The Air Quality Assessment also addressed hazardous air pollutants (HAPs). HAPs are pollutants that do not have established NAAQS but present potential human health risks from short (acute) or long-term (chronic) exposures. The FAA

and MAC prepared a HAPs
emission inventory that complies
with FAA and EPA guidance and
that is based on what is known
currently about airport-related
emissions. See Final EA/EAW,
Appendix E Air Quality Technical
Report, Section 6.
As explained in General Response
GR # 02, there are no existing
federal regulatory guidelines
specific to hazardous air pollution
(HAP) emissions from aircraft
engines. Although there are FAA
and EPA/FAA guidance
documents recommending best
practices for quantifying
speciated organic gas emissions
from aircraft engines, the
methods for measuring air
emissions associated with aircraft
engines is an evolving process
that is still under development.
The guidance specifically warns
against preparing any type of
HAPs assessment for aircraft
emissions under NEPA—other
than the type of emission
inventory provided in the Draft
EA/EAW—because such
assessments "require a complete
understanding of both the
reaction of OGs/HAPS in the
atmosphere and downstream
plume evolution," and the
science of such atmospheric
reactions is "currently limited"
and "still evolving." <i>Id. See also</i>
40 C.F.R. § 1502.22.
See also General Responses GR #
02, GR # 03, GR # 04, GR # 05, GR
07 and GR # 08.
003-2. The FAA requires use of
the DNL noise metric to
determine and analyze aircraft
noise exposure and land use
-
compatibility issues around U.S.
airports. Because the DNL metric
correlates well with the degree of

and MAC prepared a HAPs

community annoyance from aircraft noise, DNL has been formally adopted by most federal agencies dealing with noise exposure. In addition to the FAA, these agencies include the Environmental Protection Agency, Department of Defense, Department of Housing and Urban Development and the Veterans Administration. See General Responses GR # 05 (information on low frequency noise) and GR # 07 for additional information.

003-3. The general conclusion from studies is that vibration from low-frequency noise can induce structural building response that may cause rattle of windows, fixtures, pictures, and the like. However, at the present time there is no universallyaccepted method of describing low-frequency noise and its impact on communities around airports.

003-4. See General Response GR # 08.

003-5. In May 2006, the MPCA published a study of ambient monitoring conditions near MSP. The monitoring study included measurements of air toxics (including benzene) and PM_{2.5} at two locations at the MSP Airport and at Wenonah School and Richfield Intermediate School. Overall, median and average concentrations of pollutants monitored near MSP were similar to concentrations monitored at other locations in the Twin Cities Metropolitan Area. Benzene concentrations were within health benchmark values. Also average benzene concentrations near MSP were lower than at some of the other monitoring

locations in the Twin Cities Metropolitan Area. The Action Alternatives are not expected to affect ambient air quality adversely nor change the air toxics emissions at MSP significantly.
A HAP emissions inventory is included in Section 5.1.5.6 of the Final EA/EAW. As with criteria pollutant such as PM _{2.5} , there is little difference between the air toxics emissions (including benzene) for the Action Alternatives and the No Action Alternative. For most conditions (pollutants and analysis years) the Action Alternative emissions are less than the No Action Alternative due to lower aircraft taxi times and other airfield improvements. Also, see General Responses GR # 02 and GR # 04.
003-6. Visual effects are inherently more difficult to define and assess because they involve subjectivity. The visual sight of aircraft or aircraft lights at night should not be assumed to be an adverse impact (FAA Order 1050.1E). The climb rate/departure rate of an aircraft is determined the by the aircraft's performance characteristics, weather, load factors, company policies and the individual flights crews. Neither the FAA nor the MAC controls this. Construction of the Proposed Action will not result in an increase in operations. See General Responses GR # 02 and GR # 05.
003-7. See General Response GR # 10.
003-8. See General Response GR # 01.

003 3 N16 4 Gue 5 55417 pls. 6 q 28 NUM 554 50 -2799

Metropolitan Airports Commission	The MAC met with MnDOT on
Vice President, Management & Operations	October 10 th , 2012 to discuss the
6040 28 th Avenue South	comments in this letter.
Minneapolis, MN 55450	Subsequent coordination
SUBJECT: MSP 2020 Improvements Draft EA/EAW	between the MAC and MnDOT
MnDOT Review # EAW12-007	resulted in resolution of the
West Side of TH 5, north of 1-494	comments contained in this
Fort Snelling, Hennepin County	letter. Refer to letter 044 from
Dear Mr. Fuhrmann:	MnDOT.
Image: Series of the series	 004-1. The airport sponsor is completing a MnDOT Level 1 Layout for the I-494 and 34th Avenue South Interchange. Level 1 Layouts will be completed by the project sponsor for the other roadway projects located on I-494 and TH 5. These Level 1 Layouts will be completed prior to developing the final construction plans for each project. 004-2. A MnDOT drainage permit will be obtained for the projects affecting drainage on MnDOT right-of-way. 004-3. Figure 5.18.1 has been revised to clearly identify the Almaz Pond and its outlet. The Almaz Pond and its outlet. The Almaz Pond tributary area extends well beyond the limits of Figure 5.18.1. Mn/DOT and MAC staff agreed, in lieu of showing tributary boundaries, to show the locations of proposed projects that would affect areas within the tributary to the Almaz pond. These are shown on Attachment 3 to Appendix L, Hydrology and Stormwater Pond Analysis.

004 🔸

4

5

6

7

8

9

The study discusses TSS removal and assumes continuing to achieve 80% TSS removal is satisfactory. It doesn't look like phosphorous loading or volume control where evaluated. The validity of the rationale that the increase of 6.5 acres or 27.5 acres of new impervious area, depending upon the Alternative, is insignificant compared to the existing impervious area of MSP of 1880 acres is questionable. Volume control standards will still need to be met from Lower MN River WD and MPCA in order to construct.

The plan states that "the existing system is capable of conveying the 10-year storm event without flooding pavements" (pg. 5-100). This is not a suitable design criterion. To say that "Changes in the MnDOT Almaz Pond drainage area are not significant enough to show measurable increases in peak flow" makes sense on one level but there are many things for which the change would be difficult to measure. There is surcharging on the existing 1-494 system during a 5-year storm further upstream in the system. Bringing in more water will not improve the situation.

(Page 5-102) For the Airlines Remain Alternative, "Additionally, 3.7 acres of net new impervious surface will be constructed outside the MnDOT Almaz Pond drainage areas in association with roadway improvements." MnDOT will need to know how this additional runoff will be attenuated and treated. Additionally, MnDOT will need to know how where the volume control will be provided.

For the Airlines Relocate Alternative, "the projected decrease in Pond 1 treatment efficiency from 93.6% to 92.4% TSS removal." MnDOT will need to know if the effluent from Pond 1 has been measured to verify or calibrate the high removal efficiencies predicted by the models used. Additional information is also needed as to why is there no mention of phosphorous removal efficiency.

"The post 2020 regional roadway improvements only impact the MnDOT Almaz Pond. Modeling shows that the TSS removal in the MnDOT Almaz Pond would be reduced from 84.60% to 84.30%. The TSS treatment efficiency is greater than 80% which is deemed acceptable." (Page 5-102) Please provide information as to who deems 80% acceptable. Again, further information is need on whether there were any empirical studies that verified/calibrated the predictive models. Additional information is also needed concerning the phosphorous and volume control.

Appendix L Section 5 (page L-7) reports that 2030 Traffic/Roadway Plan Impacts will result in a net increase of 6.5 acres (5.2 acres of impervious and 1.3 acres pervious) tributary to the MnDOT Almaz Pond. It is concluded that this increase in loading will only reduce TSS removal efficiency from 87.31% to 87.18%, but nothing is said about volume control requirements. MnDOT realizes that volume control for the airport doesn't make sense due to the use of deicing chemicals and fuel. Volume control is required for Roadway Plan Impacts, so a preliminary concept of where this volume control will be provided should be shown.

004-4. The Draft EA/EAW indicated that the airport sponsor will comply with the SWPPP and will meet construction NPDES and Lower Minnesota Watershed District permit requirements. See Section 5.18 of the Draft EA/EAW. Phosphorus loading will be address as part of permitting. Additionally, proposed volume and rate control was considered for additional drainage area to the Almaz pond. Currently the applicable requirements call for $\frac{1}{2}$ " runoff over the new impervious surfaces to be treated via infiltration best management practice(s) to address volume control. Appendix L, Hydrology and Stormwater Pond Analysis Attachment 3 - Post 2020 Roadway Improvements & Conceptual Volume Control BMP Site presents a conceptual site for this infiltration practice along with a rough grading design.

004-5. FHWI-NHI-10-009 Hydraulic Engineering Circular No. 22, 3rd Edition – Urban Drainage Design Manual recommends a 10-year storm event be used on high-volume roadways. Regarding I-494 drainage, the Final EA/EAW states that "Prior to addition of new impervious areas to the Almaz pond, the project sponsor will investigate design options to address additional runoff to the system".

004-6. The Airlines Remain Alternative is not the Preferred Alternative and therefore, the MAC is not proposing to implement this alternative. The Preferred Alternative, Airlines Relocate, will be constructed in accordance with Minnesota

Pollution Control Agency (MPCA) National Pollution Discharge Elimination System (NPDES) Construction Stormwater permit and Lower Minnesota River Watershed District permit requirements.

004-7. The MAC has over 10 years of monitoring of the MSP ponds to verify pond performance. These monitoring results constitute much of the basis of the Appendix L hydrology and stormwater pond analysis. The extensive monitoring has also shown that MSP is not a major source of phosphorus, as evidenced by the most recent NPDES permit amendment to reduce phosphorus monitoring.

004-8. The MPCA General NPDES Permit for Construction Activity Part IIIC Permanent Stormwater Management Item 5 requires that Alternative Methods achieve approximately 80% TSS removal on an annual average basis. EPA Management Measures for Urban Areas [January 13, 2010 www.epa.gov/owow/NPS/MMGI/ Chapter4/chr-2a.html] provides the same guidance. As noted in the Response to Comment #004-07, monitoring verifies pond performance and phosphorus loading for MSP ponds. Monitoring data is not available for the MnDOT Almaz pond. However, since the MnDOT Almaz pond was designed and built to the same standard as the MSP ponds, it is reasonable to assume the MnDOT Almaz pond will perform in a similar manner and thus actual treatment efficiency will be likewise greater than the DetPOND calculations. Any applicable volume control and phosphorus removal

requirements will be addressed in the LMRWD and NPDES permitting processes.
004-9. A figure was added to Appendix L to show a preliminary concept of where volume control measures can be implemented to address the post-2020 improvements along I-494.

004

10

There needs to be text added to the Final EA that talks about additional analysis needed for the highway improvements. MnDOT has flooding issues on I-494 now – portions surcharge during 5-year storm event. Adding more water to the trunk line system will make conditions worse. Stormwater hydraulic modeling of the system will need to be done before any future water is added to the system. Based on watershed and MPCA regulations regarding volume control, on-site treatment will be needed. Right-of-way will need to be provided for this. All of this needs to be documented in the EA text. For questions concerning these issues, please contact Bruce Irish (651-234-7537 or bruce.irish@state.mn.us).

Review Submittal Options:

MnDOT's goal is to complete the review of plans within 30 days. Submittals sent in electronically can usually be turned around faster. There are four submittal options. Please submit either:

- One (1) electronic pdf. version of the plans. MnDOT can accept the plans via e-mail at <u>metrodevreviews.dot@state.mn.us</u> provided that each separate email is under 20 megabytes.
- 2. Three (3) sets of full size plans. Although submitting seven sets of full size plans will expedite the review process. Plans can be sent to:

MnDOT – Metro District Planning Section Development Reviews Coordinator 1500 West County Road B-2 Roseville, MN 55113

3. One (1) compact disc.

4. Plans can also be submitted to MnDOT's External FTP Site. Please send files to: <u>ftp://ftp2.dot.state.mn.us/pub/incoming/MetroWatersEdge/Planning</u> Internet Explorer doesn't work using ftp so please use an FTP Client or your Windows Explorer (My Computer). Also, please send a note to <u>metrodevreviews.dot@state.mn.us</u> indicating that the plans have been submitted on the FTP site.

If you have any questions concerning this review, please feel free to contact me at (651) 234-7793.

Sincerely,

Michael J. Corbett

Michael J. Corbett, PE Senior Planner **004-10.** The following text was added to Section 5.18.1.5 of the Final EA/EAW, "Peak discharges from the MSP Pond 1,2 and Almaz pond are not expected to increase measurably at TH 5 as a result of these drainage area increases. However, Mn/DOT reports that areas upstream of the proposed improvements surcharge the I-494 system in 5year storm events. Prior to addition of new impervious areas to the Almaz pond, the project sponsor will investigate design options to address additional runoff to the system."

Additionally, proposed volume and rate control was considered for additional drainage area to the Almaz pond. Currently the applicable requirements call for 1/2" runoff over the new impervious surfaces to be treated via infiltration best management practice(s) to address volume control. Appendix L, Hydrology and Stormwater Pond Analysis Attachment 3 - Post 2020 Roadway Improvements & Conceptual Volume Control BMP Site presents a conceptual site for this infiltration practice along with a rough grading design.

Any applicable volume control and phosphorus removal requirements will be addressed in the LMRWD and NPDES permitting processes.

	· · · · · · · · · · · · · · · · · · ·	
	004	
Copy sent via E-Mail:		
Bruce Irish, Water Resources		
Bryce Fossand, Water Resources		
Copy sent via E-Mail: Bruce Irish, Water Resources Bryce Fossand, Water Resources Scott Pedersen, Area Manager Ron Rauchle, Area Engineer John Griffith, Area Manager Tony Fischer, Freeways Nancy Jacobson, Design Buck Craig, Permits Becky Parzyck, Right-of-Way Ryan Coddington, Traffic Engineering Clare Lackey, Traffic Engineering Deb Sorenson, Aeronautics Ann Braden, Metropolitan Council		
John Griffith, Area Manager		
Tony Fischer, Freeways		
Buck Craig. Permits		
Becky Parzyck, Right-of-Way		
Ryan Coddington, Traffic Engineering		
Deb Sorenson, Aeronautics		
Ann Braden, Metropolitan Council		

		004 yahulavaso ni kureno Tanano na kureno Ortano na kureno Ortano na kureno	
		Minnesota Department of Transportation Metropolitan District Waters Edge 1500 West County Road B-2 Roseville, MN 55113-3174	
55450279999	Mr. Roy Fuhrmann Metropolitan Airports Commission 6040 28th Avenue South Minneapolis, MN 55450	f Transportation ters Edge	
ենեմենեն Ասունքին Անդենեն են Անդե	nmission South 150	DE OCT 2012 FM2 1	
hladdad llad		02 1R 02 1R 02 1R 02 1R 02 1R 00 200 2731 0C T 03 2012 0C T 03 2012 0C T 03 2012	

005-1. See General Responses 005 GR # 01, Gr # 02, GR # 05, GR # 08 Sirois Kron, Christene and GR # 11. nathanlind@gmail.com Monday, October 01, 2012 4:43 PM From: Sent: Moliday, Colume of Lanz and minimission and the second sec To: Cc: **005-2.** On July 11, 2012 the Minneapolis-St. Paul International Subject: Airport Noise Oversight To: Committee (NOC) completed a MSP 2020 Improvements Draft EA/EAW File C/O Roy Fuhrmann - Director of Environment Metropolitan Airports Commission noise evaluation of NADPs at Minneapolis-St. Paul International From: Nathan Lind Airport. Based on this evaluation, 3939 Standish Ave Minneapolis, MN 55407 the NOC took no action to change from the current Distant NADP on I have three requests of the MAC, NOC, and FAA: all runways based on their 1.) We must have an Environmental Impact Statement prepared after thoroughly studying the affects on evaluation. Noise analysis health, the environment, and home values from airplane noise and vibration and pollution from current and 1 demonstrates that the use of the future flights into and out of the Minneapolis St. Paul International Airport. Distant NADP provides more 2.) We want aircraft flightpaths and throttle settings adhere to near-favoring Noise Abatement Departure Profiles. Airplanes must maintain the heading of the 30R/L runways longer, and attain higher altitudes (as noise relief than the Close-in 2 rapidly as possible) before being allowed to turn to the 360 heading, over unmitigated homes and lakes and Procedure for residents north of public parkland. the Hiawatha Golf Course in 3.) Decrease the maximum number of flight operations allowed per hour, and spread out flights to decrease 3 rush hours when flights take the same track minute after minute after minute. South Minneapolis. We neighbors straight north of MSP have suffered more than ever before due to changes made by the FAA and MAC. These changes at first were denied, then minimized. It is finally time for some relief for our families and **005-3.** Flight schedules and the our neighborhoods. number of operations are Just because we are not in large numbers at every meeting doesn't mean our concerns are no longer valid. Dan determined by the Air Carriers Boivin admitted he had never seen such a turnout at a NOC meeting before the October 2011 meeting, where Standish, Ericsson, Corcoran, and Powderhorn neighbors turned out in large numbers. We have attended many and other airport users. Neither other meetings with MAC and NOC staff, both at MAC offices, and offsite at Keewaydin School, and at Nokomis the FAA nor the MAC has any Community Center, Please internalize what we have expressed already and work for relief for us, without requiring us to keep showing up at yet another meeting to prove this airplane noise is still an issue. Showing up control over arrival/departure at your work meetings is not our full-time job. I cannot make tonight's meeting due to other commitments I've already made. times or the number of operations, as long as all flights can be handled safely and efficiently. See General Response GR # 05. 005-4. There are numerous factors involved in the perceived change in flight paths since September 2010. The fleet mix has evolved at MSP and now there are more regional jets using the airport than ever before. The regional jets have replaced turbo props. The increase in regional jets coupled with the decrease in turbo props has created a more compatible fleet mix that requires less of a need to fan out to ensure safe operations. In addition, the Air Traffic Control Tower returned to a more rigorous adherence to existing

runway assignment procedures due to the near miss in September 2010. This has resulted in some northbound departures being moved back to an area they were prior to the downturn in traffic but did not create new flight paths or procedures. The net result is a higher percentage of jets that fly in a narrower corridor (due to compatibility of mix) at a lower altitude (due to operating characteristics of the aircraft). The communities responded to this change with concern. As a result, the Minneapolis-St. Paul International Airport NOC evaluated the issue in consultation with the City of Minneapolis and facilitated implementation of an operational solution by the FAA. See GR # 05. **005-5.** Comment noted.

Sirois Kron, Christene	Page 1 of 2 006	
From: Fuhrmann, Roy		
Sent: Monday, October 01, 2012 11:42 AM To: Sirois Kron, Christene		
Subject: Re: Form submission from: Public Input Meeting Form		
Yes, we should error on inclusion.		
Sent from my HTC on the Now Network from Sprint!		
Reply message From: "Sirois Kron, Christene" <christene.siroiskron@mspmac.org></christene.siroiskron@mspmac.org>		
Date: Mon, Oct 1, 2012 11:38 am Subject: Form submission from: Public Input Meeting Form To: "Fuhrmann, Roy" <roy.fuhrmann@mspmac.org></roy.fuhrmann@mspmac.org>		
Roy,		
This email is a NOC Public Input Meeting form that was submitted via the macnoise.com web site. Whenever someone completes one of those forms on line, the submission comes to my email inbox. The content of the message appears to be somewhat related, possibly, to the Draft EA/EAW but it was not received in the msp2020ea email inbox - should this be accepted as a comment on the EA/EAW?		
Christene		
Christene Sirois Kron Metropolitan Airports Commission Environment Department 6040 28th Ave S Minneapolis MN 55450 Phone: 612.725.6455 FAX: 612.725.6310		
Please consider reducing environmental impacts before printing this message.		
Original Message From: no-reply@macnoise.com [<u>mailto:no-reply@macnoise.com]</u> On Behalf Of Birdie Golden Sent: Friday, September 28, 2012 1:53 PM To: Sirois Kron, Christene Subject: Form submission from: Public Input Meeting Form		
Submitted on Fri, 09/28/2012 - 1:52pm Submitted by anonymous user: [192.9.209.98] Submitted values are:		
Full Name (First and Last): Birdie Golden Address: 3612 23rd Avenue South City: Minneapolis		
Email Address: birdie@imbirdie.com		
Message: 50, we just exhausted ourselves with over two years of battling the hostile takeover of our airspace and the		
airplane freeways built over our headsand already the airport is pushing to INCREASE the traffic again?! Does this ever quit or will we have to fight constantly with every single breath we have against this unrelenting invasion?		006-1. As discussed in the
NO, I DO NOT want my backyard to be crowded with giant, screaming jet engines every other minute that are so oud the sound of everything else in the environment is dwarfed and nearly eliminated by the roaring! For God's sake, this is a residential area with families and children. The very idea that this is even an option is	1	introduction to this appendix, th growth in aircraft operations
repulsive and inconsiderate to say the least.		would occur naturally with or
10/3/2012		without the Proposed Action. Also, see General Responses GR 05 and GR # 10.

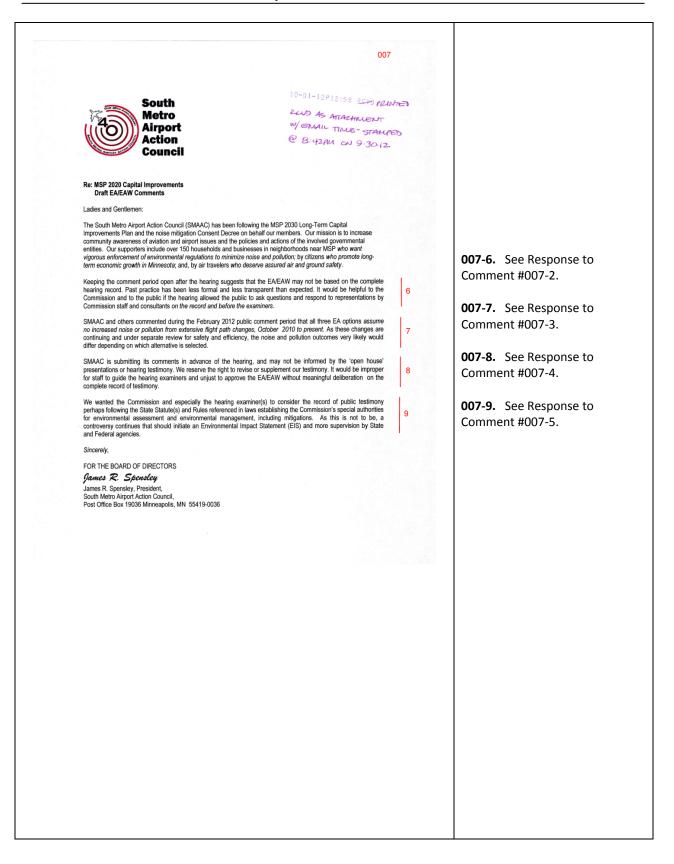
The results of this submission may be viewed at: http://www.macnoise.com/node/585/submission/253	Page 2 of 2 006	
10/3/2012		

Sirois Kron	Page 1 of 1 007	
Sent: To: Subject: Attachments:	mpds@visi.com Monday, October 01, 2012 6:24 AM msp2020drafteaw Corrected Cover Letter EACvrLtr1Oct12.pdf uch trouble, please replace the cover letter sent earlier (with SMAAC comments) with the cted letter. The word "of" was omitted in the second line, missed in or during a broad	007-1. Both letters have been entered into the record.
	"EA1Oct12Comments.pdf" sent earlier is the target of the cover letter and the two ether are our written comments.	
Thank you.	ener are our written comments.	
 Jim Spensley Minneapolis		
minitapons		
40/4/2012		
10/1/2012		



concerning the Draft EA/EAW in February 2012.
There are no new headings or modified runway use procedures proposed as part of the Preferred Alternative evaluated in the Draft EA/EAW. The future (2020 and 2025) noise contours incorporated all changes in effect since 2010 (e.g. Runway 30R northbound departure heading dispersion) and proposed (e.g. PBN procedures) through 2020.
As shown on Figures 5.14-5 and 5.14-6 the noise contours for the No Action Alternative and the Action Alternative show minimal differences between the proposed alternatives.
007-4. Refer to Response to Comment 007-2.
007-5. See General Response GR # 01.

Sirois Kron, Christene	007	Page 1 of 1
From: mpds@visi.com Sent: Sunday, September 30, 2012 8:42 PM To: msp2020drafteaw Subject: EA/EA/W Comments Importance: High Attachments: EA/CVrLtr1Oct12.pdf, EA1Oct12Comments.pdf Attached please find the cover letter and Comments of the South Metro Airpport Action Counc	cil	
A A A A A A A A A A A A A A A A A A A		
10/2/2012		



	007-10. Comment noted.
 	007-11. The Long Term Comprehensive Plan (LTCP) is the MAC and Metropolitan Council approved plan that systematically identifies airport needs through the year 2030. The Draft EA/EAW evaluates the environmental impacts of the identified projects from the LTCP that are necessary to meet the forecasted growth of passengers at MSP and to
40 years ago to address noise and pollution from air and ground operations at MSP (Minneapolic). St. Paul International Airport). The organization has alternately clashed and collaborated with the Metropolitan Airports Commission (MAC) over the years, accumulating unique knowledge and expertise, observing plans and management, and seeking safe, sufficient, affordable, and clean operations at MSP.	maintain and promote safe and efficient aircraft operations.
	 007-12. The projects evaluated for this EA are proposed to address current and forecasted increases in passenger enplanements. The forecast levels are projected to occur with or without the planned improvements. As identified in the Draft EA/EAW no environmental category impacts exceed the level of significance as defined by NEPA, CEQ Regulations, FAA Orders 1050.1, Environmental Impacts: Policies and Procedures, FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions, MEPA and the EQB rules implementing the MEPA. Also, see General Response GR # 01. 007-13. The commenter's
	runway use rates do not align with the results of airfield modeling completed for the Draft EA/EAW. The source of the commenter's data regarding operations per hour at peak hours is not provided and therefore related assumptions are unknown. The airfield was modeled and analyzed by using sophisticated computer simulation software (SIMMOD). Alternatives 1 and 2 do not extend peak hours by adding

gates. As discussed in Chapter 2 of the Draft EA/EAW, terminal (including gates) and landside facilities (parking, airport roadways, etc.)) are needed to maintain an adequate level of customer service at the airport. As air travel grows and economic conditions change the airlines adjust their operating model. In response to current conditions, airlines are using larger planes with higher load factors. Neither the MAC nor the FAA determine the type of aircraft that the airlines use. With larger planes and higher load factors there are fewer operations per thousand passengers than in the past and less pressure on the airfield. However, the larger nearly full aircraft require more gate frontage and bigger hold rooms. Also, because air travel is growing there is an increase in the number of passengers. As the number of passengers increase so does the need for expanded landside facilities such as bag claim, security checkpoints, parking and access roads. The proposed project does not increase airfield canacity and
increase airfield capacity and does not create additional safety risks.
The commenter's claim that Runway 17/35 increased hourly flight capacity by 80 percent is not supported by previous studies. Again, the source of the commenter's data is not provided and therefore related assumptions are unknown.
Airfield capacity can be defined as the maximum number of aircraft operations which can be accommodated on the airport or an airport component in a given time period. The airfield capacity is not an absolute number but

comparisons can be made by looking at similar levels of delay. The overall airfield capacity of the airport before and after the addition of Runway 17-35 was analyzed as part of the Dual Track EIS. Prior to Runway 17-35 the MSP airfield capacity was estimated to be approximately 523,000 annual operations with a weighted average delay of 10 minutes per operation. With Runway 17-35 the MSP airfield capacity was estimated to be approximately 630,000 annual operations with a weighted average delay of 10 minutes per operation. Thus, using this measure, the change in airfield capacity amounts to an increase of approximately 21 percent.
Flight schedules and the number of operations are determined by the Air Carriers and other airport users. Neither the FAA nor the MAC has any control over arrival/departure times or the number of operations, as long as all flights can be handled safely and efficiently.
007-14. The City of Bloomington noted that "MSP is a vital economic engine for the Twin Cities region. As much as continued growth at MSP positively impacts the local economy in a direct fashion, it also indirectly boosts the local economy by helping to attract businesses that rely on robust air service. With the economic development role of MSP in mind, Bloomington discourages MAC from pursuing any efforts to push air traffic away from MSP and toward outstate airports." in their comment letter (Comment Letter #015). Flight schedules and the number
of operations are determined by

the Air Carriers and other airport users. Neither the FAA nor the MAC has any control over arrival/departure times or the number of operations, as long as all flights can be handled safely and efficiently.

007-15. The MSP 2030 LTCP does not recommend runway improvements and does not recommend taxiway improvements until after 2025. Therefore, the statement "...as acknowledged in the MSP 2030 LTCP, very expensive groundside improvement are needed for safe movement of aircraft" appears unfounded.

007-16. The environmental impacts of the proposed project and associated construction activities have been fully evaluated by the MAC and FAA and do not significantly affect the quality of the human environment. The MAC is in compliance with all environmental permits, has a strong safety record and has implemented proactive procedures to help prevent environmental incidents.

MSP 2020 Capital Improvements Draft EA/EAW Comments P a g e 2	SMAAC, October 2012	
EXECUTIVE SUMMARY		
Three main points are made supporting SMAAC's recommendatio Environmental Impact Statement (EIS) or return the Draft Environment as incomplete. In the interim, related capital improvements should be s should be reduced due to the overflights controversy, uncertainlies i unscheduled completion of the mandated regional airline safety program	tal Assessment (EA) to the Sponsor suspended, and rates and schedules in use and demand forecasts, and	17
1. ENVIRONMENTAL IMPACTS NOT QUANTIFIED OR DISTINGUISH	HED	
The Draft EA/EAW fails to differentiate noise or other environmental im	pacts among the three Alternatives.	18
There is no discussion of reasonable alternatives that accomplish equal or less environmental impact as required by 40 CFR 1502.14		19
FAA Order 1050-1E, with respect to the preferred Alternative, require noise exposure is highly controversial (/501b4) and impacts including n		20
Also, children are harmed by overflights and schools are near the inadequate (FAA Order 1050-1E/400c), and revised departure proced noise sensitive areas (/400n).	70 DNL limit where mitigation is	21
Noise exposure increases resulting from changes in departure proced late 2010 are unresolved. Additional changes by the airlines in 2011 ar all three Alternatives, obscuring significant local noise increases comp changes. As of September 2012, no flight path or noise intensity da additional changes are being considered.	nd the FAA in 2012 were applied to pared to 2010 before the departure	22
The risks of fuel leaks, storm water management failures and deicing be quantified and funds identified for emergencies and containment. F in operation and during past expansion projects. The full cost of new repair is uncertain but proportional to the hub aircraft bank and extended	Problems occurred in these systems facilities and their maintenance and	23
2. SAFETY NEEDS AND IMPROVEMENT SCHEDULES NOT SYNCHI	RONIZED	
The Sponsor reports that "facilities are congested (and, the use o peak winter periods." This congestion exists because of fleet mix a routinely in any season. Airline plans <i>may</i> include up-sizing the hub bar since peak hour rates would be continued at minimum FAA separati complicated and ground congestion continued. Alternative 2 would exact	and runway overuse at peak hours nk passenger capacity per flight, but ions, runway use would be no less	24
¹ The possible future mitigation described includes treatment of residences, s DNL areas without identifying the authority or funding for the mitigation pro		

007-17. See General Response GR # 01. All capital projects under construction at MSP have undergone a complete environmental review in accordance with both Federal NEPA and state MEPA requirements.

ere are numerous factors volved in the perceived change flight paths since September 10. The fleet mix has evolved MSP and now there are more gional jets using the airport an ever before. The regional s have replaced turbo props. e increase in regional jets upled with the decrease in rbo props has created a more mpatible fleet mix that requires s of a need to fan out to sure safe operations. In dition, the Air Traffic Control wer returned to a more orous adherence to existing nway assignment procedures e to the near miss in ptember 2010. This has sulted in some northbound partures being moved back to area they were prior to the wnturn in traffic but did not eate new flight paths or ocedures. The net result is a gher percentage of jets that fly a narrower corridor (due to mpatibility of mix) at a lower itude (due to operating aracteristics of the aircraft).

Flight schedules and the number of operations are determined by the Air Carriers and other airport users. Neither the FAA nor the MAC has any control over arrival/departure times or the number of operations, as long as all flights can be handled safely and efficiently.

007-18. Environmental impacts by alternative are quantified and distinguished throughout the Draft EA/EAW. For example, see Tables 5.1.5, 5.1.6, 5.1.7, 5.1.8, 5.2.1, 5.2.2, 5.4.2, 5.4.3, 5.13.2, 5.13.3, 5.14.3, 5.14.4, 5.14.5, 5.14.6, 5.14.7, 5.14.8, 5.14.9, 5.18.1 etc.
007-19. Several alternatives are discussed in Chapter 3 of the Draft EA/EAW including other airports, other modes of transportation and a new terminal. In addition, the Draft EA/EAW demonstrates that impacts associated with the proposed alternatives would be minor.
According to FAA Order 1050.1E Paragraph 405d, "There is no requirement for a specific number of alternatives or a specific range of alternatives to be included in an EA. An EA must consider the proposed action and a discussion of the consequences of taking no action, and may limit the range of alternatives to action and no action when there are no unresolved conflicts concerning alternatives uses of available resources. Other reasonable alternatives are to be considered in preparing an EA to the degree commensurate with the nature of the proposed action and agency experience with the environmental issues involved. Generally, the greater the degree of impacts, the wider the range of alternatives that should be considered."
Unresolved conflict is explained in FAA Order 5050.B Paragraph 706d(5)(a), "Unresolved conflicts may exist between the project proponent and those wishing to use affected environmental

resources for non-airport

purposes. Typically, an unresolved conflict exists when an airport development project concerns [or] involves more special purpose law (see paragraph 9.t). An example of an unresolved conflict would be when an airport sponsor proposes locating a runway in a wetland, while a project opponent states the same wetland is valuable for flood retention." There are no unresolved conflicts related to the proposed alternatives.
Under MEPA, an EAW need not discuss alternatives. Minn. R. 4410.1200.
007-20. The threshold of significance for noise is triggered if the action alternative would cause an increase of 1.5 dB DNL or greater for a noise sensitive land use at or above the 65 DNL noise exposure when compared to the No Action Alternative. This threshold is not reached with the Preferred Alternative. The noise impacts are reduced slightly when comparing the forecast 2020 Preferred Alternative. Moreover, noise mitigation is proposed as part of the Draft EA/EAW. Also, see General Responses GR # 01 and GR # 10.
007-21. Noise sensitive sites have been mitigated. An extensive school noise mitigation program has been completed around Minneapolis-St. Paul International Airport providing noise mitigation to 17 schools. There are no schools located in the 70 DNL noise contours.
007-22. There are no unresolved issues related to departure procedures or runway use related to this project. There are no new

headings or modified runway use procedures proposed as part of the Preferred Alternative evaluated in the Draft EA/EAW. The future (2020 and 2025) noise contours incorporated all changes in effect since 2010 (e.g. Runway 30R northbound departure heading dispersion)..

As stated in response #007-20, there is no noise increase that meets the 1.5 dB DNL significance threshold. See General Responses GR # 05, GR # 06 and GR # 09.

007-23. The number of aircraft operations is the same among all alternatives. Therefore, there is no difference in fuel or deicing fluid usage between the No Action Alternative and the other alternatives. As noted in the Draft EA/EAW, the action alternatives have newer pavements and storm sewers which will reduce the potential for fuel and deicing fluid impacts. Additionally, to address the inherent risk associated with fueling operations, MSP Airport tenants have implemented an industryleading integrated spill response plan, installed oil/water separators at fuel-loading locations and modified the storm water ponds specifically to address fuel and oil. These facility improvements have been voluntarily implemented and have a demonstrated performance record over the past eight years. Additionally, the MPCA NPDES permit regulates the risk for both petroleum and deicing impacts to the environment through permit limits and best management practices. MSP has invested in centralized deicing pads at all runway departure ends and

operates a comprehensive glycolimpacted storm water collection system to capture deicing fluid.

007-24. The capacity of the MSP airfield has been evaluated numerous times using sophisticated airfield and airspace simulation software. As part of this Draft EA/EAW, the airfield was evaluated for the No-Action, Alternative 1 and Alternative 2 scenarios. For all of the alternatives, the airfield (which includes runways, taxiways, and terminal apron areas) delay was well below problematic levels and the airfield was shown to be well below capacity through 2025. Alternative 2 does not exacerbate the situation in any way. A summary of the airfield capacity analysis is included in Appendix D - MSP Airfield Simulation Analysis.

As stated in the introduction to this appendix, the Proposed Action is needed to address congestion and overcrowding at MSP terminal and landside (parking, airport roads, etc.) facilities under current and 2020 conditions as well as to address congestion on regional roadways through the 2030 planning timeframe. MSP has adequate airfield capacity beyond the 20year planning horizon. The Proposed Action is not needed to increase airfield capacity.

			007-25. Safety is the FAA's
	007		highest priority. There were no
1	007		changes in air traffic procedures.
	MSP 2020 Capital Improvements SMAAC, October 2012		The Air Traffic Control Tower
	Draft EA/EAW Comments Page 3		returned to a more rigorous
			adherence to existing procedures
	Noise-impacted neighborhoods were told that increased overflights were the result of an FAA procedural change made for safety. However, turning flights also increased because of runway and gate use		after the near miss in 2010. In
	realignments, raising questions about ground traffic congestion and ground safety needs. Congestion is	25	addition, the fleet mix at MSP has
	and departures. Congestion is due to the airspace management plan and "efficient" use of three runways,		evolved and become more
	two with interspersed arrivals and departures.		homogeneous (primarily a
		26	decrease in turbo prop aircraft
		1 27	and an increase in regional jet
	hour now. More annual operations may or may not increase peak hours per day but would neither	28	aircraft). As the fleet mix has
	increase or decrease peak-hour runway use or ground traffic congestion.		changed and become more
	3. THE HEALTH STUDIES: HARM FROM OVERFLIGHT EVENTS		homogenous, the location of
		1	tracks is more similar and less
	event-noise correlated with very serious public health risks. Many industrialized countries use event noise	29	diverse. Subsequent to these
	limits to plan or regulate airport and airline operations. <i>Perhaps</i> the MAC planning horizon for this potential change is, unfortunately for the neighborhoods, after 2020. But by 2030 it is reasonable to assume	20	changes, MAC requested the FAA
 change made for a stely. However, tuning light also increased because of numwy and gale use independent in a stellar difficult are of them tempore and annual to be attracted independent plan and efficient (are of them tempore) annual tempore and annual participations. Buildy operations, faily departures, such and increase part hours now. More annual operations may or may not increase park hours per day but would neither the call of the state participation of the state participations and an increases in turbh and an increases and the state of the call of the state participations and an increases and the state of the state participations per day but would neither the call of the state participations per day but would neither the call of the state participations per day but would neither the call of the state participations per day but would neither and an increases and the state of the state participations per day but would neither and the state of the state participations per day but would neither and the state of the state participations per day but would neither and the state of the state participations per day but would neither and the state of the state participations per day but would neither and the state of the state participations per day but would neither and the state of the state participation per day the state and the state of the state participation per day the state and the state of the state participation per day that the state and the state of the state participations per day but would neither and the state of the state participations and the state participation and the state participation per day that and the state participation per day that the state participation per day that the state and the state participation per day that per day that per day that the state participation per day that per day that per day that the state participation pe			
	epidemiological studies. The MSP Noise Oversight Committee is following the FICAN work and requested	30	
			experience ground congestion.
	Even the No Action alternative would increase overflights and unreasonably denies the ongoing	31	See General Response GR # 05.
		T.	007 26 See Decrements to
			-
			Comment 007-25.
			007 27 According to the MCD
			007-27. According to the MSP
			bridges are not needed until post
			2025.
			007 29 The traffic studios
			completed as part of the Draft
			EA/EAW are documented in
			Appendix C, MSP Area Roadway
			Improvements Project Memos.
			The results of the analyses show
			that there are no significant
			impacts associated with vehicular
			traffic.
			007-29. FICAN is not currently
			participating in research
			regarding the health risks of
			noise. For more information,
			refer to General Response # 08.
			007-30. See General Response
			GR # 07 and GR # 08.

007-31. The increase in passenger enplanements and operations under the No Action Alternative is based on the natural growth forecasted for MSP. The Proposed Project will not result in an increase in operations. There are numerous factors involved in the perceived change in flight paths since September 2010. The fleet mix has evolved at MSP and now there are more regional jets using the airport than ever before. The regional jets have replaced turbo props. The increase in regional jets coupled with the decrease in turbo props has created a more compatible fleet mix that requires less of a need to fan out to ensure safe operations. In addition, the Air Traffic Control Tower returned to a more rigorous adherence to existing runway assignment procedures due to the near miss in September 2010. This has resulted in some northbound departures being moved back to an area they were prior to the downturn in traffic but did not create new flight paths or procedures. The net result is a higher percentage of jets that fly in a narrower corridor (due to compatibility of mix) at a lower altitude (due to operating characteristics of the aircraft). Flight schedules and the number of operations are determined by the Air Carriers and other airport users. Neither the FAA nor the MAC has any control over arrival/departure times or the number of operations, as long as all flights can be handled safely and efficiently.

007-32. Comment to the C. See General Response GR # 05. 007-33. Safety is the FAA's highest priority. There were no changes in air traffic procedures. The Air Traffic Control Tower Traffic Control	<text><text><text><section-header><text><text><text><text><text><text><text></text></text></text></text></text></text></text></section-header></text></text></text>	
BMC: Online Transmission BMC: Online Transmission BIGL: BI	<text><text><section-header></section-header></text></text>	
 Increase in the state of the second se	<text><section-header><section-header><section-header></section-header></section-header></section-header></text>	General Response GR # 05.
 Increase in the state of the second se	<text><section-header><section-header><section-header></section-header></section-header></section-header></text>	
DISCUSSION: 1. NOBE ENCORMENT COLUMPTIED OR DISTINUUSHED 12 An end off on negholphondos charange monthaling thom neighborhoods newly subjected to weight and non neighborhoods charange in all traffic Control Tower returned to a more rigorous adherence to existing procedures after the near miss in 2010. In addition, the fighter think and the summary. 13 An end off off op paralle mony. 13 At the MOC and KOC, rotac compairs table to be to paralle do the summary. 13 SMAC commodifies and appearations and CBy of Menagois and capacitor to be to the summary. 13 SMAC componences and appearations and CBy of Menagois the summary. 13 SMAC componences and appearations and CBy of Menagois the summary. 13 SMAC componences and appearations and CBy of Menagois requests of the NOC and unmerident in the SC and the summary. 13 SMAC componences and appearations and CBy of Menagois requests of the NOC and unmerident in the SC and the summary. 13 SMAC componences and appearations and CBy of Menagois requests of the NOC and unmerident in the SC and the summary in the SC and the summary. 13 Note and NOC in the could imponentiation and of the SC and unmerident in the SC and the summary. 13 SMAC componences and appearations and CBy of Menagois requests of the NOC and the summary. 13 SMAC componences and appearations and CBy of Menagois requests of the NOC and the summary. 13	DISCUSSIONE ALIGNE EXPOSIDENE NOT CUANTIFIED OR DISTINUISHED align Dirign 2011, the MAC relevies the usafily immages at the time compliants in appenner hower align is malaneous one or how the parasite interview one overfights at the numer setup in the same interview of the EAEAN with the time increases in dark high fights or moview of the same interview of the same increases of the time increases in dark high fights or moview of the same increases of the same increase of the same increase of the same increases of the same increases of the same increases of the same increases of the same increase of the same increase of the same increase of the same increases of the same increase of the same increase of the same increases of the sam	-
1. NOSE EXPOSURE NOT QUANTIFIED OR DISTINUISHED Image: Control of Barding and Some adjust Some adjust and Some adjust and Some adjust and Some a	1.NISE EXPOSURE NOT GUANTIFIED OR DISTINGUISHED [1] During 2011, the MAC received missands of distutatives compliants from neight price recentifys a procedural change made to more safely imanage ait faffic control during simultaneous or news inclusions of the parallel munnys. [3] As a recult the MAC delegade buscance of the EAEAM unit IFAA and alport affing the for more inclusions. The ABA and alport affing the for more inclusions and the DACA and inputs the same way. [3] At the MAC and NOC, noise compliants related to the operational changes and questions related to head alport affing the same way. [3] At the MAC and NOC, noise compliants related to the operational changes and questions related to head alport affing the same way. [3] AMAC consequences and appearances and Cly of Minnegolis requests of the NOC are unmentioned uning MSA and alport affing the same way. [3] AMAC consequences the face MAC and respect and questions related to head and the MAC and respect and alport affing the same maximum face and alport affing the same maximum face and alport and advect and and alport affing the same maximum face and alport affing the same face and alport affing the same maximum face and alport affing the same maximum face and alport affing the same face and alport affing the same maximum face and alport affing the same face and alport affing t	• • •
During 2011, the MAC received thousands of distributions compliates from registrontonics may hadded to produce in the market increase of the partial ranges. The first increase increases in the partial ranges of the partial range of the partin range of the partial range of the partial range of	During 2011, the MAC received thousands of disturtance complaints from neighborhoods newly subjected to overfliptis and to nore subject manage at traffic control during simulaneous or marks infinitaneous or low of both of the parallel inninvys. 33 Are used, the MAC depole subsect of the EAEAW unit FAA and airport staff "investigated." The FAA subsequently revised fliptin paths sightly. Either an increase in day fliptis or moving airlines as in Africaneous or marks in the Aaea or overfliptis and noise the both three controls in the EAEAW. MAC staff resulted clibers a lating fliptic and subject the AAC consequence or origin in the EAEAW. MAC staff resulted clibers a lating fliptic and subject the AAC and NOC, noise compleints related to the operational charges and questions related to head in the EAEAW. Since the Dart EAEAW was released after the NOC asked FICAN to consider using MAC consequence and appearances and Clip of Minneapolis requests of the NOC are unmentioned in the EAEAW. Since the Dart EAEAW was released after the NOC asked FICAN to consider using MAC and NOC noise consume increases resulting from increased use of R30R by aircrift departing on a 300 degree heading during 2011 or or 300, 300, 400, 400 dodgee heading during 2011 or or 300, 300, 400 dow minor unmetable was allowed, with a strange or in needed of the hingpated Noise Model (NMM) for motion and Virter operational charges are subject. (both was assessed, frie constrained parallely and 300 degree heading during 2011 or or 300, 300, 400 dow minor unmetable. Noise exposure moves are subject, for an and and week minor unmetable was and the staff was and and week minor unmetable and back and advect mode. The information and future deparation and scale over flip in the constant of the staff was assessed, frie constant, and and week minor week matage and week more unmetable. Noise models in the staff washaw and anoue on R30, 800 dogree heading during 2011 or or 300, 30	. .
a pooling has a from negatorhoods observing more overfurg has a spacent lower stations. This followed a subserving non-overfurg has a spacent lower station of the parallel manys. An end be done of both of the parallel manys. An end be done of both of the parallel manys. An end be done overflight and the space of the approximation of the space overflight and the space of the	 a condition is and trans negligible constraints. This followed a simultaneous or heart is influences use of both of the parallel nurways. As a result, the MAC delayed issuance of the EA/EA/W util EAA and airort staff "investigated." The FAA and airort staff investigated. The FAA and Airort and the completion frequence of the EA/EA/W util EAA and airort staff investigated. The FAA and EAA And Contrespondence and appearances and CAy of Minneapols in questeds of the NOC and util more formed to beach and the NoC assist and the face and appearance and CAy of Minneapols in questeds of the NOC and util more formed to beach and the NoC assist and the face and appearance and CAy of Minneapols in questeds of the NOC and util more formed to beach and a special status start, is is strange that this controversy is not addressed in the DAC and NOC income the face and appearances and CAy of Minneapols in questeds of the NOC and util more formed to beach and the NoC assist of the Date Staff AuA and AuA an	
a procedure damps make to more safety imange at infite conind damp simulaneous or nearly after the near an insis in 2010. In addition, the field time parallel names, and an increase in all produced mays and querifiers in in addition, the field miss in 2010. In addition, the field miss are down and the spatial may make a field with more safe in the spatial may make a field with more safe in the spatial may make a field with more safe in the spatial may make a field with more safe in the spatial may make a field with more safe in the spatial may make a field with more safe in the spatial may make a field with more safe in the spatial may make a field with more safe in the spatial may make a field with more safe in the spatial may make a field with more safe in the spatial may make a field with more safe in the spatial may make a field with more safe in the spatial may make a field with more safe in the spatial may make a field with more safe in the spatial may make a field with more safe in the spatial may make and the more more homogenous, the location of the more safe in the spatial may make and the more more in the make and may may use data field with the spatial may make and the more may have more the weak (Miss have a spatial may may make the safe with the spatial may may make and with the spatial may make the spatial may make and the more make and the more may have may be make the spatial may make and may may make and the more may weak the more may weak the more may weak the more may make the spatial may may may may make the state may make the spatial may may may may make the spatial may	a procedural transper make to more stely imange air traffic control during simultaneous or nearly in the parallel innews. As a result, the MAC deleged issuance of the EA/EAN until FAA and airport staff investigated." The FAA subsequently writed fight paths sightly. Ether an increase in alay flight or moving airlines as in a flag. At the MAC and NOC, noise compliants related to the operational changes and quastions related to health to be applied innovements and EA/EA/MAC starf related for clarenal atoms to the flag. All movements and EA/EA/MAC starf related for clarenal atoms to the flag. The flag and the set of the NOC are unrentformed and the clarenal movements and EA/EA/MAC starf Flag to hocalise using MAD are expected for the flag. The flag and the set of the NOC are unrentformed flag and noise atoms in the CA/A in the set of the NOC are unrentformed flag. The FAA was and the flag to the clarenal movements and EA/EA/MAC set of the NOC are unrentformed through 2003. Noise exposure increases resulting from increased use of R20R by aircraft departing on a 300 degree teaching this part have no beauting the part of the A/A and the set of the NOC are unrentformed flag. The Noc are the flag to the clarenal movements and the EA/A increase the set of A/A was the set of the A/A and the avert of the tabe A/A. Conserve, and all all base years is needed for the Noc are the set of addressed in the Date of the outpart of the A/A and the set of the A/A and the set of the A/A and the and the and the A/A A/A and the A/A and the A/A A/A A/A A/A A/A A/A A/A A/A A/A A/	-
As a small, the MAC related issuance of the EACMI well KAA and abort dust "reading wells as in a Marriadius" would change overlight and noise patterns, but not necessarily in the same say. At the MAC change overlight and noise patterns, but not necessarily in the same say. At the MAC issue operation is a data of the Coordination is a same say. At the MAC correspondence and appearances and Coordination is a same say. SMAAC correspondence and appearances and Coordination is a same say. SMAAC correspondence and appearances and Coordination is a same say. SMAAC correspondence and appearances and Coordination is a same say. SMAAC correspondence and appearances and Coordination is planed the DACKI. Some appearances and Coordination and further operational expansion is planed the DACKI. Some appearances and Coordination and further operational expansion is planed the DACKI. Some appearances and Coordination and further operational expansion is planed the DACKI. The EAAA. Some appearances and DACKI. And appearances of the Integrater Moles Model (MMI to mode) a fully user in model for the Integrate Moles Model (MMI to mode) a fully user in model for the Integrate Moles Model (MMI to mode) a fully user is negated for the Integrate Moles Model (MMI to mode) a fully user in model for the Integrate Moles Model (MMI to mode) a fully user in model for the Integrate Moles Model (MMI to mode) a fully user in model for the Integrate Moles Model (MMI to mode) a fully user in model for the Integrate Moles Model (MMI to mode) a fully user in model for the Integrate Moles Moles (MMI to model) a fully user in model for the Integr	As a result, the MAC delayed issuance of the EAEAW util FAA and aiport staff "investigated." The FAA subsequently revised fight paths sightly. Efter an increase in dail rights or moving airfies as in Advised were separated or both the capital movements and EAEAW. MAC staff research were the capital sightly and the capital path sightly. Efter an increase in dail rights or moving airfies as in Advised were separated from the capital movements and EAEAW. MAC staff research of the increased or the increased or the increased and the the MAC acked FICAM to consider using MAP are pathetic bid and the stange that this contrevery is not addressed in the Dail and EAEAW was released after the MAC acked FICAM to consider using MAP are pathetic bid and the stange that this controvery is not addressed in the Dail and EAEAW was released after the MAC acked FICAM to consider using MAP are pathetic bid and a 300 degree heading this year have not been fully or finging 2000. 36 Noise exposure increases resulting from increased out set at the MAC acked FICAM to consider using MAP are addressed in the Dail and 300 degree heading this year have not been fully or finging 2000. 36 Noise exposure increases resulting from increased to make that notice exposure would be increased and the trans in CSM air disparatings (FO er advis). 37 Noise exposure increases resulting from increased to make than crists or all asses are assigned, advised and the contexposure would all the increased and the trans increase and subtranse (FO er advis). 37 Noise exposure increases resulting the adviser mater would all the increased and that may are increased and that move would all the increased and that may are increase areassing, advised and the data adv	
Attended Zwaid Anger paths apply. Effert an increase in day fights or moving arises as in a proceedings. Not on decayation would be headed to be departed on the capater increases and Apply and Carter stated Licker and and the capater processing and the capater	subsequently revised flight paths sightly. Effer an increase in daily flights or moving airlines as in [33] 34 At the MAC and NOC, noise compliants related to the operational changes and questions related to health studies were separated from the capital improvements and EXEAW. MAC staff resided citizent attempts to possible. 34 SMAC correspondence and appearances and Cky of Minneapolis requests of the NOC are unmentioned in the EXEAW. Since the Draft EAAEW was released after the NOC asked FICAM to consider using MSP as an epidemiological test study site, it is through the NOC asked FICAM to consider using MSP as an epidemiological study site, it is through the NOC asked FICAM to consider using MSP as an epidemiological study site, it is through the NOC asked FICAM to consider using MSP as an epidemiological advinz 2011 or no 300. 320, 320. 35 Noise exposure increases resulting from increased use of R30P ky atricent departing on a 340 deprete head of the integrated Noise Model (NM) to model accession on 300. 320, 320. and 300 deprete head and source noise. In the case above, department overtights were increase are assigned, adving 2011 or no 300. 320, 320. and 300 deprete head and source noise. In the case above, department overtights were increased results where increases are dailing of the noise from actual overfights, normalized attitude, and source noise. In the case above, department overtights were increased for the integrated Noise Model (NM). 37 Daily operations, daily department working has been end work of the holes from the case of the department of a 300 deprete head of the holes from the case of the department of the sole of the through the methode of the latter department of the departm	
Attendine 2 would charge overlight and noise patterns, but on ecessarily in the same way. At the MAC Consequences and CDP, how comparison induces a scheme way. Mack safe messare constrained and become more thomogenous (primarily a decrease in turbo prop aircraft and an increase in regional jet aircraft). As the fileet mix has the DEAEMX was noted because differences and appearances and CDy of Minased in EDA Care unmethods in the Data Minase and appearances and CDy of Minased in EDA Care unmethods in the Data Minase and appearances and CDy of Minased in EDA Care unmethods in the Data Minase and appearances and CDy of Minased in the Data Minase and appearances and CDy of Minased in the Data Minase and PEAMX was noted that in woods of EDAN constants in the marke 3200 hierarchican and there is a scheme data was interested for the Mozare interview in a static departing on a 300 degree heading thing year have to been fully or finally defermented and increase in the heading dispersion for the northbound departure of particles and Minase (FG per day). Arities plans may include more hub been fully on light, bit and gaves in our station of the appendix on a static departing on a 300 degree heading thing year have account on the static departing on a 300 degree heading during 2011 or 0.00, 300, and 300 degree heading thing year have account on the static departs on a static depart on	Attenative 2 would change overlight and noise patterns, but not necessarily in the same vay. At the MAC and NOC, noise compaints related to the operational changes and questions related to health studies, which strongly suggest that <i>event noise</i> is a better measure of noise parameters and CBV of Managobia regreteds of the NOC are unremotived in the Drath EAGNW strong related at the NOC asset FICHS Mark Cost and FICHS Mark	
dide were separated from the call improvements and EAEAW. MCC staff resisted citizens atterning and an increase in regional jet aircraft). As the fleet mix has and an increase in regional jet aircraft). As the fleet mix has a minor experimentation and further operational expension is planned from the call of CARAW is more than the form is 2020 implementation and further operational expension is planned from the call of CARAW is more adding the form the case of the third of CARAW is more adding the form the case of the theorem is adding the form the case of	Addies were supported from the capital improvements and EA/EAW. MAC staff resisted clizend attempts to closus the health studies, which strongly suggest that event noise is a better measure of noise exposure impacts. 34 dot SMAAC correspondence and appearances and City of Minneapolis requests of the NOC are unmentioned in the EA/EAW. Since the Data EA/EA/W was released after the NOC asket PLAN to consider using MAP as an epidemiological test study, site, it is strange that this controvery is not addressed in the Draft EA/EA/W, considering the time frame is 2020 implementation and further operational expansion is planned through 2030. 36 36 Noise exposure increases resulting from increased use of R30R by aircraft departing on a 380 degree head in the Dirat EA/EA/W. Molecule inform actual overflights, normalized altitude, air speed and source noise. In the case above, departmence daity operations. Otherwise, close Model (MM) to model "actual" noise resulting the mole ten study out of the noise Hodel (MM) to model "actual" noise resulting the molecule study overflights. Normalized altitude, air speed and source noise. In the case above, deparations, flappearations, flappearations in creased one staff of a data areas are signed. And a300 degree headings this year have not been fully or on 300, 320, 34, and 330 degree headings this year have not been fully or on suggest a tuly vaer is needed for the integrated Noise Model (NM). 37 Triming the base amount of the adding during 2011 or on 300, 320, 34, and 330 degree headings this year have not been fully or on 300, 320, 34, and 330 degree headings this year have not been fully or on 300, 320, 34, and 330 degree headings this year have not been fully or on 300, 320, 34, and 35, and 35, and 35, and 36, and 36, and aircraft gauge are much changed since and and and th	
b dodds the hearth studies, which strongly suggest mix work node is a constr measure of node and an increase in regional jet a increase. In the EAEW. Since the frame is 2020 implementation and three operational expension is planned through 2020. All the frame is 2020 implementation and three operational expension is planned through 2020. 30, and 30 dogree headings this year have not been fully of through 2010 or 300, 202, 300, and 300 dogree headings the year are engle dairy operations. Otherwise, local areas are assigned, for the too 2010, 126 (186 pt and the stress of the too 2010) or 300, 202, 300, and 300 dogree headings the year areange dairy operations. Otherwise, local areas are assigned, for the too 2010, 126 (186 pt and 2011) or 300, 202, 300, and 300 dogree heading the year areange dairy operations. Otherwise, local areas are assigned, for the too 2010, 126 (186 pt and 2011) or 300, 202, 300, and 300 dogree headings the year areange dairy operations. Otherwise, local areas are assigned, for the too 2010, 126 (186 pt and 2011) or 300, 2010, performs that or areagoner work of all the intervased and that nurway use system percentage pages. The too 2010, 201	 do dacust in pacts. SMAAC consequencing and an analysis of the Noc and the Noc as a celler measure of noise exposure increases and City of Minnapolis requests of the Noc asset of KAN consider using MSP as an epidemicolicial test study site. It is strange that this controvery is not addressed in the Death EAE-MK. Consider using the time frame is 2020 implementation and further operational expansion is planned through 2330. Noise exposure increases resulting from increased use of R3R by aircraft departing on a 380 degree headings this year have not been fully or inally deferring for a situ base year is needed for the integrated Noise Model (IMM) to model "actual" mole resulting from actual overlights, normalized altitude, air speed and source noise. In the case above, departing cone as 300 degree headings this year have not been fully or all departing on a 380 degree heading through 2010. Afrine plans may include more hub bank passenger capacity per flight, but sills he increased and that mmay use gains per R38 by alrcraft departing on a 300 degree heading during 2011 or on 300, 300. 300, 300, 301, 301 degree heading this were increased from less than <1% of all departing or a 300, 300, 301, 301, 301 degree heading during 2011 or on 300, 302, 304, and 300 degree headings this year in needed for the integrated Noise Model (NM). Daily operations, daily departure using R300HL, and aircraft gauge are much changed since 2010. Delta Airlines reduced regional jet flight set al added MD 90 flights. 	
SMAC conspondence and apparences and City of Minneapolis requests of the NOC are unmentioned in the EAEAN was released due the the OC asked rinking More and the the Case advert the Data EAEN was released due of the NOL are unmentioned to the Data EAEN was released due of ROR by aircraft plan increased use of ROR by aircraft operational expansion is planned by a standard due to the Data EAEN was released from the regulational expansion is planned by a standard due to the Data EAEN was used to the thinggined Noise Model (NM) models are advected for the integrated Noise Model (NM) models are advected for the integrated Noise Model (NM) models are advected for the integrated Noise Model (NM) models are advected for the integrated Noise Model (NM) models are advected for the integrated Noise Model (NM) models are not the Data Models are not advected for the integrated Noise Model (NM) models are not the Data Models are not advected for the integrated Noise Model (NM) models are not the Data Models are not advected for the integrated Noise Model (NM) models are not advected for the integrated Noise Model (NM) models are not advected for the integrated Noise Model (NM) models are not advected to the integrate Noise Model (NM) models are not advected to the integrate Noise Model (NM) in a source note. In the case advected to the integrate Noise Model (NM) in a source note. In the case advected NM and the interneed and that form interneed are not the bank passenger capacity per fight, but since peak hour rates would be incorrect if Data Advines and Tarity and and the Model (NM). The Noise Case Model (NM) is an advected NM and NM	 SMAAC correspondence and appearances and City of Minneapolis requests of the NOC are unmentioned in the EAEAW. Since the Draft EAEAW was released after the NOC asked FICAN to considering MSP as an epidemiological test study site, it is strange that this contriversy is not addressed in the Draft EAEAW. Considering the time frame is 2020 implementation and further operational expansion is planned through 2030. Noise exposure increases resulting from increased use of R30R by aircraft departing on a 360 degree heading during 2011 or on 300, 230, 340, and 380 degree heading site was not been fully of finally determined, Runway use data for a lub expansion is planned through 2011 or on 300, 230, 340, and 380 degree heading site was not been fully of timely determined. Runway use data for a lub expansion for the integrated Note Model (MM) to 100 to 100 your on 300, 340, and 380 degree heading during 0 at 380 degree heading during 0 at 380 to 2106, 5145 ger day). Affine plans may include more hub bank passenger capacity per flight, but since peak hour rates would be increased use of R30R by aircraft divide divide and guard and source notices and source increases of R30R by aircraft degree heading during 2011 or 300, 300, 340, and 380 degree heading during 2011 or 300, 300, 340, and 380 degree heading the divide more hub and the partner source increases are consult. The source of a R30R by aircraft divide are not been fully or finally determined, and runway use data for a hub year is needed for the Integrated Notes (NM). Daily operations, divide partners using R30RL, and aircraft gauge are much changed since 2010. Delta Airlines has announced aircraft purchase and flight realignment plans? not taken into account. 	
in the EAEAW. Since the Datif EAEW was released after the NOC sisted rights MSP as an opdemological test study slit. It is strange that this controlwers is not addressed in the Darif EAEW. Considering the time frame is 2020 implementation and further operational expansion is planned through 2030. 35 changed and become more homogenous, the location of tracks is more similar and less diverses of an 030 203, 204, 204 and 204 depenhance house thdy of fault individual expansion. In the case above, dopart of the noise year are valued for the integrated Noise Model (NMI model 2014) and 100 are able operations. In the case above, dopart expansion part of the noise than or 18% of all dopartures (< per day) to a 25% (>165 per day). 36 Artine plans may include more hub bank passenger capacity per flight, but since pask hour rates would be incorrest of the integrated Noise Model (NMI). 37 Artine plans may include more hub bank passenger capacity per flight, but since pask hour rates would be incorrest of the integrated Noise Model (NMI). 37 Artine plans may include an milimum FAA separations, day departures in 300 degree heydreming, and 2014 or on 300, 2020, 2030, 2040, 2	 in the EAEAV. Since the Draft EAEAV was released after the NCC asked FICAN to consider using MSP are an epidemiological test study site. It is strange that this controverse is not addressed in the Draft EAEAV, considering the time frame is 2020 implementation and further operational expansion is planned through 2030. Noise exposure increases resulting from increased use of R30R by aircraft departing on a 360 degree heading straing 2011 or on 300, 320, 340, and 360 degree headings this year have not been fully or finally to model "actual" noise resulting from hase-year average daily operations. Otherwise, local areas are assigned, for a total expansion is planned through 2010. Aritine plans may include more hub bank passenger capacity per flight, but since peak hour rates would be continued at minimum FAA separations, it appears that noise exposure would still be increased and that runway use system perchalting acids would be two more matelistic. Noise exposure increases resulting from increased tools Model (NN). Date of NOR by aircraft departure overflights were increased from less that noise exposure would still be increased and that runway use system perchalting acids would be two more matelistic. Noise exposure would a state for a full operation solid operate neuralistic. Noise resulting from increase due to fixed percenting actual noise and flight realignment plans² not taken into account. The case above, departure overflights were increase and flight realignment plans³ not taken into account. The increase and might realignment plans³ not taken into account. The case above due be above more share and might realignment plans³ not taken into account. The increase and reality operations adding departures share would be incorrect if Delta Airlines reduced regional jet flights and added MD-30 flights. 	
as an englemiological test study sile, it is strange that this controversy is not addressed in the Draft EAX, considering the time frame is 2020 implementation and further operational expansion is planned through 2030. Noise expoure increases resulting from increased use of R30R by aircraft departing on a 300 degree heading the year heading th	as an epidemiological test study sile, it is strange that this controversy is not addressed in the Drah EAEAV, considering the time frame is 2020 implementation and further operational expansion is planned through 2030. Noise exposure increases resulting from increased use of R30R by aircraft departing on a 360 degree heading during 2011 or on 300, 320, 300, and 360 degree headings this year have not ben fully or finally determined, Runway use data for a full base year is needed for the integrated Noise Model (INM) to model "actual" noise resulting from have yearage daily operations. Otherwise, local areas are assigned, for example, only part of the noise from actual overfliphts, normalized attitude, air speed and source noise. In the case above, departure overfliphts were increased from less than <1% of all departures (<6 per day) to >15% (>185 per day). Additional test strand strange that the continued at minimum FAA separations, if appears that increase exposure uncreased and that nurway use system percentage gashs would be even more unrealistic. Noise exposure uncreased and that nurway use system percentage gashs would be even more unrealistic. Noise exposure uncreased and that nurway use system percentage gashs would be even more unrealistic. Noise exposure increased and that nurway use system percentage gashs would be even more unrealistic. Noise exposure increased and that nurway use system percentage gashs would be even more unrealistic. Noise exposure increased and that nurway use system percentage gashs would be even more unrealistic. Noise exposure increases of the NB start Mosis Model (NM). Daily operations, daily departures using R30R-L, and aircraft gauge are much changed since 2010. Delta Aritines has announced aircraft space and fight realignment plans' not taken into account.	
through 200. Noise exposure increases resuling from increased use of R30R by aircrift departing on a 360 degree headings this year have not been fully of erresult of the integrated Noise Model (NM) to model actual noise result on the second with the overlaph were increased to the integrated Noise Model (NM) to model actual noise result on the second work of the integrated Noise Model (NM) to model the origin the sole actual overlights were increased to the integrated Noise Model (NM) to model the rest of the integrated Noise Model (NM) to model the origin the sole model or methods the state -1% of al departures (<	through 2030. Response increases resulting from increased use of R30R by aircraft departing on a 360 degree headings this year have not been fully or finally determined, Rurway use data for a full base year is needed for the Integrated Noise Model (NMI) to modal "actual" noise resulting from base-year average daily operations. Otherwise, local areas are assigned, for easa eabove, departure overfights, normalized altitude, air speed and source noise. In the case above, departure overfights were increased from less than <1% of all departures (<6 per day) to >15% (>185 per day). Aritine plans may include more hub bank passenger capacity per fight, but since peak hour rates would be increased use or R30R by aircraft departing on a 300 degree heading during 2011 on x00, 320, 340, and 350 degree headings this year have not been fully or finally determined, and rurway use data for a full year is needed for the Integrated Noise Model (INM). Do Modal and I year is needed for the Integrated Noise Model (INM). The article are reduced regional jet flights and added MD-90 flights. The alternatives 1 and 2 include gate by aircraft type improvements that would be incorrect if Delta Airlines reduced regional jet flights and added MD-90 flights.	•
Noise exposure increases resulting from increased use of R30R by aircraft departing on 380 degree banding during 211 or 300, 320, 340, and 390 degree headings this year have to been fully of inflay determined, Runway use data for a full base year in needed for the integrated Noise Model (NM) to model "actual" noise resulting from base-year any include areas are assigned and that now increased time form actual overfliphs, normalized altitude, air speed and source noise. In the case above, departure overfliphs, normalized altitude, air speed and source noise. In the case above, departure overfliphs were increased in a full areas are assigned areas are assigned and that now increased in the second departure would still be increased and that now increased in the noise exposite, would still be increased and that now increased in the thegating on a 300 degree heading during 2011 or on 200, 320, 340, and 390 degree heading during 2011 or on 200, 320, 340, and 390 degree headings this year in needed for the integrated Noise Model (NM). 361 Daily operations, daily departures using R30RL, and aircraft gauge are much changed since 2010. Delta Arlines reduced regional jet flights and added MD-90 flights. 383 • • • • • • • • • • • • • • • • • • •	Noise exposure increases resulting from increased use of R30R by aircraft departing on a 380 degree heading thing 2011 or an 30, 320, 340, an 380 degree heading this year have no these Model (IMM) to mainly determined, Runway use data for a full base year is needed for the Integrated Noise Model (IMM) to mainly and the case above, denarture overflights, normalized attitude, air speed and source noise. In the case above, denarture overflights, normalized attitude, air speed and source noise. In the case above, denarture overflights, mormalized attitude, air speed and source noise. In the case above, denarture overflights, but since peak hour rates would be continued at minimum FAA separatrat departing on a 380 degree heading during 2011 or or 300, 320, 340, and 380 degree headings this year have not been fully or finally determined, and runway use data for a full year is needed for the Integrated Moise Model (IMM). Daily operations, daily departures using R30PU, and aircraft gauge are much changed since 2010. Delta a full year is needed MD-90 flights. 36	-
 heading during 2011 or on 30, 320, 340, and 380 degree headings this year have not been fully or finally definited. The hieraget dolbs Model (MM) to model "actual" noise resulting from base year average daily operations. Otherwise, local areas are assigned, for example, only jard 14 horoise form actual coverlipts, normalized altitude, air speed and source noise and assource noises. Arine plans may include more hub bank passenger capacity per flight, but since peak hour rates would be confinued at minimum FAA separations, it appears that noise exposure increases are not an advised to be with noise uncastice. Noise exposure increases are neading the more than a not be explosure increases and reading during 2011 or on 300, 320, 340, and 380 degree heading fairing and nurway use data for a full year are not been fully or finally definition. The normalistic. Noise exposure increases are not seen fully of main definition of the increased and fully appearations. The Head Air I'raffic Control Tower implemented an increase in the heading during 2011 or on 300, 320, 340, and 380 degree heading fairing and nurway use data for a fully are not been fully or finally definition. The normalistic. Noise exposure increases and the Model with the new not been fully or finally definition. The new of the fully of nally definition and an a fully are not been fully or finally definition. ³⁴⁷ ³⁴⁷ ³⁴⁷ ³⁴⁸ ³⁴⁹ 	heading during 2011 or on 300, 320, 340, and 380 degree headings this year have not been fully or finally 36 "actual" noise resulting from base-year average daily operations. Otherwise, local areas are assigned, low part of the noise from calcula overlights, normalized atilutide, air speed and source noise. In the case above, departure overlights were increased from less than <1% of all departures (<6 per day) to >15% (>185 per day). 37 Actine plans may include more hub bank passenger capacity per flight, but since peak hour rates would be continued at minimum FAA separations, it appears that noise exposure would still be increased rate that provey use system have oble end would be either more unablast. Noise exposure increases resulting from increased use of R308 by alrcraft departing on a 360 degree heading during 2011 or on 300, 320, 340, and 380 degree heading the year have not been fully or finally determined, and runway use system have oble end thy or finally determined, and runway use system have oble end thy or finally determined, and runway use system have oble end thy or finally determined, and runway use system have oble end thy or finally determined, and runway use data for a full year is needed for the Integrated Noise Model (INM). 38 Daily operations, daily departures using R30P/L, and aircraft gauge are much changed since 2010. Delta Atrines has announced atricraft purchase and flight realignment plans ² not taken into account. 38 "** ** ** ** ** ** "** ** ** ** ** ** ** "** ** ** ** *	
 "actual" noise resulting from base-year average daily operations. OtherWise, local areas are assigned, for the case above, departure overflights were increased from less than <1% of all departures (<5 per day). >15% (>185 per day). Aritine plans may include more hub bank passenger capacity per flight, but since peak hour rates would be to continued at minimum FAA separations, it appears that noise exposure would still be increased and that nurway use system percentage poals would be two more increases in the separations, it appears that noise exposure increases resulting from increase of R3R by aircraft departing on a 380 degree heading during 2011 or on 300, 320, and 300 degree heading during 2011 or on 300, 320, and 300 degree heading during 2011 or on 300, 320, and 300 degree heading during 2011 or on 300, 320, and 300 degree heading during 2011 or on 300, 320, and 300 degree heading during 2011 or on 300, 320, and 300 degree heading during 2011 or on 300, 320, and 300 degree heading during 2011 or on 300, 320, and 300 degree heading during 2011 or on 300, 320, and 300 degree heading during 2011 or on 300, 320, and 300 degree heading during 2011 or on 300, 320, and 300 degree heading during 2011 or on 300, 320, and 300 degree heading during 3014 or and auxour. Tail year is needed for the infegrated Noise Model (NMA). Tail year is needed for the infegrated Noise Model (NMA). Tail year is needed for the infegrated Noise Model (NMA). Tail year is needed to the infegrated Alice Alignment plans? In taken into account. Tail year is needed to the infegrate and fight realignment plans? In taken into account. Tail year is needed to the infegrated Noise Model (NMA). Tail year is needed to the infegrate that would be incorrect if Deta Alrines reduced regional jet flights and adred MD-90 flights. OD7-34. The operational changes by the FAA in 2010 and 2012 were incorporated into t	 *actual noise resulting from base-year average daily operations. Otherwise, local areas are assigned, a sirsped and Source noise. In the case above, departure overflights were increased from less than <1% of all departures (<6 per day) to >15% (>185 per day). Arine plans may include more hub bank passenger capacity per flight, but since peak hour rates would be continued at minimum FAA separations, it appears that noise exposure would still be increased resulting from increased cus of R30R by alrcraft departing on a 360 degree heading thirty get have not been one unrealistic. Noise exposure increases resulting from increased cus of R30R by alrcraft departing on a 360 degree heading thirty get have not been one unrealistic. Noise exposure increases resulting the increase and the antipage are have not been one unrealistic. Noise exposure increases resulting from increased cus of R30R by alrcraft departing on a 360 degree heading thirty get and and to unway use system hear ob been fully or finally determined, and runway use of R30R by alrcraft purchase and flight realignment plans² not taken into account. 38 	
the case alone, departure overflights were increased from less than <1% of all departures (<6 per day) to >15% (>165 per day). Alline plans may include more hub bank passenger capacity per flight, but since peak hour rates would be incoreased and that runway use system sould be incoreased and that runway use data for a full year is needed for the Integrated Noise Model (NM). Daily operations, claip departures using R30RL, and aircraft gauge are much changed since 2010. Delta Allines has announced aircraft purchase and flight realignment plans ² not taken into account. ³³⁷ ³⁴ ³⁴⁷ ³⁴ ³⁴⁷ ³⁴⁸ ³⁴⁸ ³⁴⁸ ³⁴⁸ ³⁴⁸ ³⁴⁸ ³⁴⁸ ³⁴⁹	the case above, departure overflights were increased from less than <1% of all departures (<6 per day) to ×15% (×185 per day). Aritine plans may include more hub bank passenger capacity per flight, but since peak hour rates would be continued at minimum FAA separations, it appears that noise exposure would still be increased and that nurway use system percentage goals would be even more unrealistic. Noise exposure increases easiling from increased use of R30R by aircraft deparing on a 300 degree heading during 2011 or on 300, 320, 340, and 380 degree headings this year have not been fully or finally determined, and nurway use data for a full year is needed for the lingerated Noise Model (NN). Daily operations, daily departures using R30RU, and aircraft gauge are much changed since 2010. Delta Aritines has announced aircraft purchase and flight realignment plans ² not taken into account.	•
Airline plans may include more hub bank passenger capacity per flight, but since peak hour rates would be continued at minimum FAA separations, it appears that noise exposure would still be increased at militing of the percentage optical would be even more unrealistic. Noise exposure increases resulting from increased use of R30R by aircraft departing on a 360 degree heading during 2011 or on 300. 30, and 330 degree heading from just have not been thuly of fnally determined, and runway use data for a full year is needed for the Integrated Noise Model (NM). Daily operations, daily departures using R30RL, and aircraft gauge are much changed since 2010. Delta Airlines and autorating purchase and flight realignment plans? not taken into account. 	Airline plans may include more hub bank passenger capacity per flight, but since peak hour rates would be continued at minimum FAA separations, it appears that noise exposure would still be increased and that nurway use system berchatting objective as would be even more unrealistic. Noise exposure increases resulting (A), and 360 degree headings thus van have no been huly of finally determined, and nurway use system bank to be the number of the increased and that a full year is needed for the Integrated Noise Model (INM). Daily operations, daily departures using R30RU, and aircraft gauge are much changed since 2010. Delta Airlines has announced aircraft purchase and flight realignment plans ² not taken into account. ³³ Alternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Airlines reduced regional jet flights and added MD-90 flights. ³⁴ Alternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Airlines MU and MU a	
 confinue at minimum FAA separations, it appears that noise exposure would still be increased realining from increased use of R30R by aircraft departing on a 360 degree heading during 2011 or on 300, 320, 320, 300, and 350 degree heading first year have no been fully of finally determined, and runway use data for a full year is needed for the Integrated Noise Model (NM). Daily operations, daily departures using R30RL, and aircraft gauge are much changed since 2010. Delta Airlines has announced aircraft purchase and flight realignment plans? not taken into account. ³⁷ ³⁴ Alternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Airlines reduced regional jet flights and added MD-90 flights. O07-34. The operational changes by the FAA in 2010 and 2012 were incorporated into the noise evaluation for the Draft EA/EAW. Refer to page 5-55 of the Draft EA/EAW. Also, see General Responses GR # 07 and GR # 08. O07-35. See General Responses GR # 07 and GR # 08. NOC minutes and agendas associated with the development of the Draft EA/EAW are included in Appendix N, <i>Public and Agency Involvement</i>. Letters from the 	continued at minimum FAA separations, it appears that noise exposure would still be increased and that from increased use of R30R by aircraft departing on a 360 degree heading during 2011 or on 300, 320, 340, and 360 degree headings this year have not been fully or finally determined, and runway use data for a full year is meeded for the Integrated Noise Model (NM). Daily operations, daily departures using R30RL, and aircraft gauge are much changed since 2010. Delta Altines has announced aircraft purchase and flight realignment plans? not taken into account. T ³³ Alternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Airlines reduced regional jet flights and added MD-90 flights.	-
 rurway use system percentage goals would be even more unrealistic. Noise exposure increases requested by the City of Minneapolis, the MSP Noise oversight Committee and the Minneapolis, dily department, and rurway use data for a full year is needed for the Integrated Noise Model (INM). Daily operations, daily departure using R30RL, and alrcraft gauge are much changed since 2010. Delta Airlines has announced aircraft purchase and flight realignment plans² not taken into account. ³⁷ ¹ ³ Atternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Airlines reduced regional jet flights and added MD-90 flights. ³⁸ ³⁰ ³¹ ³⁷ ³¹ Atternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Airlines reduced regional jet flights and added MD-90 flights. ³⁹ ³⁰ ³¹ ³¹ ³¹ ³¹ ³¹ ³¹ ³² ³³ ³⁴ ³⁴ ³⁵ ³⁴ ³⁵ ³⁵ ³⁵ ³⁵ ³⁵ ³⁵ ³⁵ ³⁵	 runway use system percentage goals would be even more unrealistic. Noise exposure increases resulting from increased use of R30R ky aircraft departing on a 360 degree heading this year have no been fully or finally determined, and runway use data for a full year is needed for the integrated Noise Model (INM). Daily operations, daily departures using R30RL, and aircraft gauge are much changed since 2010. Delta Airlines has announced aircraft purchase and flight realignment plans² not taken into account. 	
 340, and 360 degree headings this year have not been fully or finally determined, and runway use data for a full year is needed for the Integrated Noise Model (INM). Daily operations, daily departures using R30RL, and aircraft gauge are much changed since 2010. Delta Airlines has announced aircraft purchase and flight realignment plans² not taken into account. ³⁴⁰ ³⁴¹Alternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Airlines reduced regional jet flights and added M0-90 flights. ³⁴⁰ ³⁴¹Alternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Airlines reduced regional jet flights and added M0-90 flights. ³⁴¹Alternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Airlines ³⁴²Alternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Airlines ³⁴⁴OD7-34. The operational changes by the FAA in 2010 and 2012 were incorporated into the noise evaluation for the Draft EA/EAW. Refer to page 5-55 of the Draft EA/EAW. Refer to page 5-55 of the Draft EA/EAW. Also, see General Responses GR # 07 and GR # 08. ³⁴⁵OD7-35. See General Responses GR # 07 and GR # 08. ³⁴⁶OD7-35. See General Responses GR # 07 and GR # 08. ³⁴⁷OF7-35. See General Responses GR # 07 and GR # 08. NOC minutes and agendas associated with the development of the Draft EA/EAW are included in Appendix N, <i>Public and Agency Involvement</i>. Letters from the 	 340, and 360 degree headings this year have not been fully or finally determined, and runway use data for a full year is needed for the Integrated Noise Model (INM). Daily operations, daily departures using R30RL, and aircraft gauge are much changed since 2010. Delta Airlines has announced aircraft purchase and flight realignment plans² not taken into account. 	
Daily operations, daily departures using R30RU, and aircraft gauge are much changed since 2010. Delta Airlines has announced aircraft purchase and flight realignment plans ² not taken into account. ²⁻² Alternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Airlines reduced regional jet flights and added MD-90 flights. MAC. The EA/EAW was not delayed during this investigation. 007-34. The operational changes by the FAA in 2010 and 2012 were incorporated into the noise evaluation for the Draft EA/EAW. Refer to page 5-55 of the Draft EA/EAW. Also, see General Responses GR # 07 and GR # 08. 007-35. See General Responses GR # 07 and GR # 08. NOC minutes and agendas associated with the development of the Draft EA/EAW are included in Appendix N, <i>Public and Agency</i> <i>Involvement</i> . Letters from the	Daily operations, daily departures using R30R/L, and aircraft gauge are much changed since 2010. Delta 38 M Atrines has announced aircraft purchase and flight realignment plans ² not taken into account. G *** Alternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Alriines reduced regional jet flights and added MD-90 flights. GC *** GC GC GC G	•
Alfines has announced aircraft purchase and flight realignment plans ² not taken into account. ^{1/2} Alternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Airlines reduced regional jet flights and added MD-90 flights. 007-34. The operational changes by the FAA in 2010 and 2012 were incorporated into the noise evaluation for the Draft EA/EAW. Refer to page 5-55 of the Draft EA/EAW. Also, see General Responses GR # 07 and GR # 08. 007-35. See General Responses GR # 07 and GR # 08. NOC minutes and agendas associated with the development of the Draft EA/EAW are included in Appendix N, <i>Public and Agency</i> <i>Involvement</i> . Letters from the	Airlines has announced aircraft purchase and flight realignment plans ² not taken into account. T ^{2-*} Alternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Airlines reduced regional jet flights and added MD-90 flights. Of RR RA RA RA RA RA RA RA RA RA	-
 ²⁻² Alternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Airlines reduced regional jet flights and added MD-90 flights. 007-34. The operational changes by the FAA in 2010 and 2012 were incorporated into the noise evaluation for the Draft EA/EAW. Refer to page 5-55 of the Draft EA/EAW. Also, see General Responses GR # 07 and GR # 08. 007-35. See General Responses GR # 07 and GR # 08. NOC minutes and agendas associated with the development of the Draft EA/EAW are included in Appendix N, <i>Public and Agency Involvement</i>. Letters from the 	^{2 - 3} Alternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Airlines reduced regional jet flights and added MD-90 flights. OU By W EX Rd OU G G M W W P Rd OU Rd OU G M W W W P Rd OU G G M W	-
reduced regional jet flights and added MD-90 flights. 007-34. The operational changes by the FAA in 2010 and 2012 were incorporated into the noise evaluation for the Draft EA/EAW. Refer to page 5-55 of the Draft EA/EAW. Also, see General Responses GR # 07 and GR # 08. 007-35. See General Responses GR # 07 and GR # 08. NOC minutes and agendas associated with the development of the Draft EA/EAW are included in Appendix N, Public and Agency Involvement. Letters from the Involvement. Letters from the	reduced regional jet flights and added MD-90 flights.	lelayed during this investigation.
by the FAA in 2010 and 2012 were incorporated into the noise evaluation for the Draft EA/EAW. Refer to page 5-55 of the Draft EA/EAW. Also, see General Responses GR # 07 and GR # 08. 007-35. See General Responses GR # 07 and GR # 08. NOC minutes and agendas associated with the development of the Draft EA/EAW are included in Appendix N, <i>Public and Agency</i> <i>Involvement</i> . Letters from the	by W ev R E E R C G G M W W D D A A I M M Tr E F (N Tr E	
were incorporated into the noise evaluation for the Draft EA/EAW. Refer to page 5-55 of the Draft EA/EAW. Also, see General Responses GR # 07 and GR # 08. 007-35. See General Responses GR # 07 and GR # 08. NOC minutes and agendas associated with the development of the Draft EA/EAW are included in Appendix N, <i>Public and Agency</i> <i>Involvement</i> . Letters from the	W ev R E E R R G G M W W D A A I M M T T E T (N T T E	
evaluation for the Draft EA/EAW. Refer to page 5-55 of the Draft EA/EAW. Also, see General Responses GR # 07 and GR # 08. 007-35. See General Responses GR # 07 and GR # 08. NOC minutes and agendas associated with the development of the Draft EA/EAW are included in Appendix N, <i>Public and Agency</i> <i>Involvement</i> . Letters from the	even Re E/ Re G G m W W D A A A A M Tr Er (N Tr	-
Refer to page 5-55 of the Draft EA/EAW. Also, see General Responses GR # 07 and GR # 08. 007-35. See General Responses GR # 07 and GR # 08. NOC minutes and agendas associated with the development of the Draft EA/EAW are included in Appendix N, Public and Agency Involvement. Letters from the	Ref E/ Ref G G M W D D A I M M Tr Er (M Tr Er	•
EA/EAW. Also, see General Responses GR # 07 and GR # 08. 007-35. See General Responses GR # 07 and GR # 08. NOC minutes and agendas associated with the development of the Draft EA/EAW are included in Appendix N, <i>Public and Agency</i> <i>Involvement</i> . Letters from the	E/ Rd G G M W W D D A I M M T T T T T T T T T	
Responses GR # 07 and GR # 08. 007-35. See General Responses GR # 07 and GR # 08. NOC minutes and agendas associated with the development of the Draft EA/EAW are included in Appendix N, <i>Public and Agency</i> <i>Involvement</i> . Letters from the	R 4 00 G m W D D A 1 M T T T F C T C T T T T	
007-35. See General Responses GR # 07 and GR # 08. NOC minutes and agendas associated with the development of the Draft EA/EAW are included in Appendix N, <i>Public and Agency</i> <i>Involvement</i> . Letters from the	00 G m w D A A I M Tr Er (N Tr	
GR # 07 and GR # 08. NOC minutes and agendas associated with the development of the Draft EA/EAW are included in Appendix N, <i>Public and Agency</i> <i>Involvement</i> . Letters from the	G m w D A A I M Tr Er (N Tr	esponses GK # U/ and GR # U8.
GR # 07 and GR # 08. NOC minutes and agendas associated with the development of the Draft EA/EAW are included in Appendix N, <i>Public and Agency</i> <i>Involvement</i> . Letters from the	G m w D A A I M Tr Er (N Tr	
minutes and agendas associated with the development of the Draft EA/EAW are included in Appendix N, Public and Agency Involvement. Letters from the	m w D Ap <i>In</i> Tr Er (N Tr	•
with the development of the Draft EA/EAW are included in Appendix N, <i>Public and Agency</i> <i>Involvement</i> . Letters from the	w D A I I M T T F E T (N T T E	
Draft EA/EAW are included in Appendix N, <i>Public and Agency</i> <i>Involvement</i> . Letters from the	D Aj In M Tr Er (N Te	-
Appendix N, <i>Public and Agency</i> <i>Involvement</i> . Letters from the	Aj In M Tr Er (N Te	-
Involvement. Letters from the	In M Tr Er (N Te	
	M Tr Er (N Te	
	Tr Er (N Tr	
MAC to the Partnership for Air	Er (N Te	•
Transportation Noise and	(N Te	-
Emissions Reduction	Te	
(Massachusetts Institute of		
Technology) and the Airport		
Cooperative Research Program		
	A)	ACRP) requesting to be included

in studies regarding health effects of aircraft noise are also included in Appendix N. This request does not imply that a study will be completed and is unrelated to the Proposed Project.

007-36. See General Response GR # 05. INM noise modeling development, track and runway use assignments and special requests by the NOC are described in Appendix G, Noise Metric, The Effects of Aviation Noise on People, Noise Guidelines and Noise Model Development and detailed in Appendix N, Public and Agency Involvement, (see the NOC public meeting agenda and minutes).

The future forecast flight tracks used in the Draft EA/EAW (2020 and 2025) included operational assumptions in effect since 2010 (implementation of increased heading dispersion for northbound departure operations off Runway 30R, the HESTN ONE and SLAYR ONE Area Navigation (RNAV) Standard Instrument Departures (SIDs) off Runway 17, as implemented on November 30, 2012 by FAA ATC, per the request of the NOC and MAC) and proposed changes through 2020 were modeled in the forecast flight tracks in the Draft EA/EAW. See page G-43 of Appendix G.

There is no requirement to collect a year's worth of data to model operations in INM.

The proposed mitigation in the Final EA/EAW is based on actual noise contours.

007-37. There is no requirement to collect a year's worth of data to model operations in INM. See Response to Comment #007-36.

007-38. Delta Air Lines was consulted with during the preparation of the aviation activity forecast. Delta advised that it would be reducing regional jet flights and adding MD-90s. These changes were incorporated in the fleet mix forecast used in the Draft EA/EAW. Delta's acquisition of Southwest's Boeing 717 was announced after the draft forecast was completed; however, the forecast has Boeing 717 aircraft in the future fleet mix.

007 MSP 2020 Capital Improvements Draft EA/EAW Comments SMAAC. October 2012 Page | 5 The EA/EAW noise "analysis" is way off: | 39 1. Comparing the same (new) flight patterns provided no difference among the alternatives. 2. The projected NEMs are not drawn at a scale that allows anyone to see where the "old" contours lay. 40 3. The aircraft source noise and altitude values were not based on actual noise. 41 4. The base year is unspecified, but no full year since 2009 is typical due to continuous flight-path changes since October 2010, increasing R30R/L departures, and seasonal changes in runway availability, wind, and 42 flight schedules. 5. The new headings and runway use make average tracks north of MSP both lower (louder) and further 43 east than modeled for the EA and compared to 2009. There is no doubt, really, that there is new and more noise exposure in Minneapolis. 6. The 1.5 DNL at a 65 DNL contour "significance" standard is: a] one of several standards (1.5 DNL is 44 2.5% at 60 DNL; 2.3% at 65; 2.1% at 70). Any increase in 70 DNL areas would be incompatible land use. 7. The best case error margin in MSP NEMs is no less than 0.5 DNL³. The graphics program smoothes the 45 curve as it connects the weighted grid points The assertion that these flight pattern changes did not, have not, or will not exceed an increase of 1.5 DNL at the 65 DNL contour (Chapter 5, Aircraft Noise, page 5.2) is misleading and incomplete: 46 The standard also applies to DNL levels greater than 65 DNL Noise compatibility studies and mitigation programs treated areas over 70 DNL and between 63 and 60 DNL differently. In short, there have been and will be more actual noise exposure and public health risks: ignoring the 47 health studies now is just plain wrong. This point is important and deserves separate consideration, see paragraph 3. The staff analysis did not prove that overall DNL noise exposure is no greater for any given number of daily 48 operations. The sponsor did not detail noise events or model DNL contours on a local scale. Previous noise exposure maps placed DNL contour lines parallel to runways based on on-the-ground source noise with a physical separation of less than 500 feet per DNL. Currently, air crossings of the old DNL contour lines are frequent at angles near 90 degrees Alternative 2, the staff recommended and most extensive and expensive alternative, includes possible additional mitigation (2 levels of sound insulation). The assumption that past sound insulation programs (SIP or ESIP) based on 2002 and earlier flight numbers and patterns are suited for a fixed 49 number of annual operations is invalid. The models and day-night level (DNL contours) cited in staff reports to NOC were not based on current-year use, flight tracks or fleet mix projected for 2015 or 2020. The noise studies conducted by the Sponsor and FAA do not jibe with citizens' observations of locally intense noise exposure. These observations are credible evidence that noise exposure has increased 50 a lot in certain neighborhoods. The MAC received thousands of complaints, conducted several meetings ³ The issue is that the contours cannot show a change of 1.5 DNL locally, as for a block here or two blocks there even if the data supports an increase or decrease in average annual intensity at a grid point.

007-39. The alternatives evaluated do not result in a change in flight patterns in the future. As such, the aircraft flight patterns at the airport do not change in the various forecasted scenarios.

007-40. The forecast scenario noise contours are very similar and as such it is very difficult to differentiate the various contours on the same map in many locations. On the PDF version of the document available online or on CD it is possible to zoom in on the maps to inspect more closely. The location of historically mitigated contours may be seen on Figure 5.14-7, which shows the projected contour within the mitigated blocks.

007-41. The Draft EA/EAW used the Integrated Noise Model (INM) and the Day-Night Average Sound Level (DNL) as required by the FAA. See General Response GR # 07.

007-42. The base year in the Draft EA/EAW is 2010. The EA has incorporated recent changes in Runway 30R departure tracks for the forecast years' (2020 and 20205) contour development.

007-43. There are no new headings or modified runway use procedures proposed as part of the Preferred Alternative evaluated in the Draft EA/EAW. There are numerous factors involved in the perceived change in flight paths since September 2010. The fleet mix has evolved at MSP and now there are more regional jets using the airport than ever before. The regional jets have replaced turbo props. The increase in regional jets coupled with the decrease in turbo props has created a more compatible fleet mix that requires

less of a need to fan out to ensure safe operations. In addition, the Air Traffic Control Tower returned to a more rigorous adherence to existing runway assignment procedures due to the near miss in September 2010. This has resulted in some northbound departures being moved back to an area they were prior to the downturn in traffic but did not create new flight paths or procedures. The net result is a higher percentage of jets that fly in a narrower corridor (due to compatibility of mix) at a lower altitude (due to operating characteristics of the aircraft). The INM modeling included all changes since the based year (e.g. Runway 30R northbound departure heading dispersion) and proposed changes (e.g. PBN) for 2020 and 2025. 007-44. Comment noted. Sensitive land uses within the

Sensitive land uses within the 2020 60+ DNL are reduced with the Preferred Alterative compared to the No Action Alternative. There is no change in the acreage within the 70 DNL noise contour when comparing the various alternatives in 2020.

007-45. It is not accurate to assign a DNL margin of error to the noise exposure contours based on smoothing. In the case of the contours in this EA, refinements and tolerances were tightened such that additional smoothing functions were not required.

The INM calculates noise exposure at user-defined grid points, using a recursively subdivided irregular grid that results in varying distances between grid points. The user controls the density of the grid

points based on the levels of grid subdivision and accuracy; the contours were computed with a high level of refinement and a low tolerance value, which notably increases the number of grid points used to calculate noise exposure. Essentially, areas with higher levels of aircraft activity (i.e. location and density of flight tracks and operations) result in an increased number of grid points at which noise exposure is calculated, while areas considerably further from the airport are calculated with fewer grid points. Contours are developed using a methodology consistent with all FAA noise analysis, as well as with models used by the United States Air Force and Federal Highway Administration noise models. The model parameters used for the development of the contours result in noise exposure variability between points of considerably less than mentioned. **007-46.** There are no flight

pattern changes proposed as part of the Preferred Alternative evaluated in the Draft EA/EAW.

The threshold of significance for noise is triggered if the action alternative would cause an increase of 1.5 dB DNL or greater for a noise sensitive land use at or above the 65 DNL noise exposure when compared to the No Action Alternative. There are no areas of sensitive land uses that would experience a 1.5 dB, or greater increase in the 65+ DNL noise contour when comparing the 2020 and 2025 Action Alternative to the 2020 and 2025 No Action Alternative.

While there would be no significant impacts, there would be differences in the number of noise sensitive uses within the 60 to 64 DNL contours, 65 to 69 DNL contours, and the 70-74 DNL contours. Tables 5.4.2 and 5.4.3 in the Draft EA/EAW (pages 5-25 and 5-26) provide the number of noise sensitive uses within these contours for each of the alternatives. All residential uses with the 65+ DNL noise contours have been provided noise mitigation. **007-47.** As discussed in the introduction to this appendix, the growth in aircraft operations would occur naturally with or without the Proposed Action. The Air Quality Assessment was conducted in accordance with USEPA and FAA regulations and

guidance. The Air Quality Assessment included aircraft operations, ground support equipment, motor vehicles, and stationary sources associated with the airport. On pages 5-13 through 5-16, the Draft EA/EAW demonstrates compliance with the National Ambient Air Quality Standards (NAAQS), which are determined based on health and welfare criteria, and General Conformity requirements for carbon monoxide. In addition, the difference in estimated emissions for all pollutants between the future year No Action Alternative and the Action Alternatives is not significant. For many conditions estimated emissions associated with the Action Alternatives are less than emissions associated with the No Action Alternative, as a result of reduced aircraft taxi times. Moreover, emissions from construction activities associated with the Proposed Action, such as

fugitive dust, will be minimized by implementing best management practices. Thus, the Action Alternatives would not be expected to adversely affect ambient air quality or human health.

The Air Quality Assessment also addressed hazardous air pollutants (HAPs). HAPs are pollutants that do not have established NAAQS but present potential human health risks from short (acute) or long-term (chronic) exposures. The FAA and MAC prepared a HAPs emission inventory that complies with FAA and EPA guidance and that is based on what is known currently about airport-related emissions. See Final EA/EAW, Appendix E Air Quality Technical Report, Section 6.

As explained in General Response GR # 02, there are no existing federal regulatory guidelines specific to hazardous air pollution (HAP) emissions from aircraft engines. Although there are FAA and EPA/FAA guidance documents recommending best practices for quantifying speciated organic gas emissions from aircraft engines, the methods for measuring air emissions associated with aircraft engines is an evolving process that is still under development. The guidance specifically warns against preparing any type of HAPs assessment for aircraft emissions under NEPA-other than the type of emission inventory provided in the Draft EA/EAW—because such assessments "require a complete understanding of both the reaction of OGs/HAPS in the atmosphere and downstream plume evolution," and the science of such atmospheric

reactions is "currently limited" and "still evolving." Id. See also 40 C.F.R. § 1502.22.

See also General Responses GR # 02, GR # 03, GR # 04, GR # 05, GR # 07 and GR # 08.

007-48. The threshold of significance for noise is triggered if the action alternative would cause an increase of 1.5 dB DNL or greater for a noise sensitive land use at or above the 65 DNL noise exposure when compared to the No Action Alternative. This threshold is not reached with the Preferred Alternative. The noise impacts are reduced slightly when comparing the forecast 2020 Preferred Alternative to the No Action Alternative. Moreover, noise mitigation is proposed as part of the Draft EA/EAW. Also, see General Responses GR # 01 and GR # 10.

007-49. See General Response GR # 10. Past noise mitigation was based on the noise impacts associated with forecasted operation activity. The proposed mitigation in the Final EA/EAW is based on actual noise contours. The proposed noise mitigation program was revised after the publication of the Draft EA/EAW. The proposed mitigation in the Draft EA/EAW was modified to base mitigation eligibility and timing on annually-developed actual noise contours instead of the 2020 Preferred Alternative noise contours.

007-50. There is noise associated with the airport and in response the MAC has implemented a very robust noise mitigation program. Also, see General Responses GR # 07 and GR # 10.

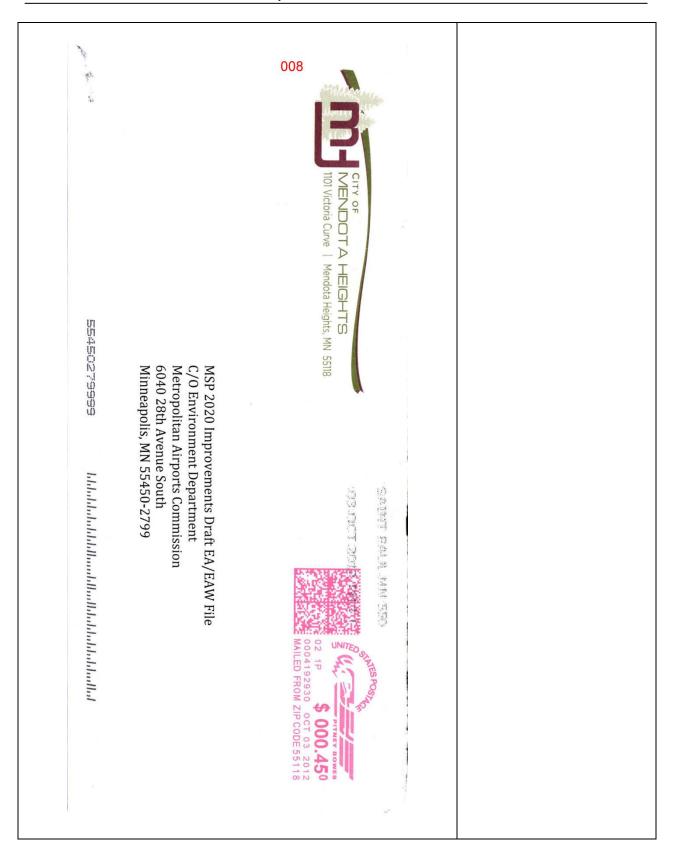
		007-51. FAA Order 1050-1E,
007	•	paragraph 501 and 40 C.F.R.
		§ 1508.18 define "significance" in
MSP 2020 Capital improvements SMAAC, October 2012 Draft EA/EAW Comments Page 6		terms of context and intensity. Controversy alone does not
and published numerous reports. At least three related recommendations were made to the MAC by the NOC. This controversy itself meets criteria in FAA Order 1050-1E, paragraph 501b (4).	51	warrant an EIS; if the "effects" on
Alternative interpretations using the ground track (map position versus time) and climb rates (attained altitude versus time) data show observations of high intensity overflight events are accurate.		the quality of the environment are likely to be "highly
These presentations made at quarterly noise input and NOC meetings should be part of the examined public record and a determination made based on the record as to the likely pollution and noise impacts.	52	controversial," that is one factor that FAA should consider in
		evaluating the intensity of an
2. Safety needs and Improvement schedules not synchronized.		impact. FAA Order 1050-1E,
The EA presentation reports an "Unacceptable Level of Service facilities are congested (and, the use of) gates exceeds capacity during peak winter periods." This lack of capacity and congestion exists because of fleet mix and runway use at peak hours. Increased operations by regional carriers and FAA procedural changes made for safety exacerbate congestion. However, turning flights also increased because of runway and gate use, raising questions about ground traffic congestion and ground safety issues in Alternative 1 or 2.	53	Appendix A, paragraph 14.3, provides that for NEPA purposes, a significant noise impact occurs if a proposed action alternative
The results of modeling (SIMMOD) ground traffic may or may not apply. The models extend some input traffic pattern and add movements randomly. There has been no independent review of the base patterns or model parameters by a disinterested party.	54	would cause an increase of 1.5 dB DNL or greater for a noise
The departure headings and runway-use changes increase the need for capital improvements as recognized in long-term MSP plans. Basing the need for safer and more direct access between the terminal gates and the runways based on <i>annual use</i> regardless of <i>peak-hour</i> use lacks credence. The taxiway bridges are needed for 150+ safe operations per hour now and if more annual operations are scheduled and peak-hour rates are maintained at 150+ per hour.	55	sensitive land use at or above the 65 DNL noise exposure when compared to the No Action
Movements during off-peak hours are not a safety or demand issue. We suggest therefore that the safer plan is to reduce peak-hour use or bite the \$1 billion bullet now.	56	Alternative. The Preferred Alternative does not reach this significance threshold. Rather,
3. The health studies.		under the Preferred Alternative,
The Federal Inter-Agency Committee on Airport Noise IFICAN) is exploring, <i>how</i> airport operations produce serious public health risks correlated with event noise impacts. Many industrialized countries use event noise limits to plan or regulate airport and airline operations. Perhaps the MAC planning horizon for this potential change is, unfortunately for the neighborhoods, after 2020 – but 2030?	57	noise impacts are reduced slightly when comparing the forecast 2020 Preferred Alternative noise
The EA/EAW is closely related to the MSP 2030 LTCP, and the health studies are a fact that should be included in this EA. The MAC and the FAA need not provide or schedule more capacity than needed on a daily or annual basis if costs are higher per operation, health and safety are affected, and alternative management plans are viable. Considering a reasonable alternative that accomplishes the same goals at less cost and equal or less environmental impact is required by 40 CFR 1502.14(a).	58	analysis to the forecast 2020 No Action Alternative noise analysis. Moreover, noise mitigation is
		proposed as part of the Preferred Alternative in the Draft EA/EAW.
		In addition, the
		recommendations made to MAC by NOC are not related to the
		Proposed Action. See also General Response GR # 01.
		007-52 Information related to the Quarterly Noise Public Input and NOC meetings is available online at www.macnoise.com. Presentations and materials
		related specifically to the Draft EA/EAW process are provided in Draft EA/EAW Appendix N, "Public and Agency".

 007-53. The Proposed Action is needed to address terminal and landside congestion and not airfield congestion. Congestion does not result from the fleet mix or RUS. The changing fleet is generally causing a reduction in the growth of airfield delays as passenger traffic grows. The RUS is a preferential system used most during periods of reduced activity. During peak periods aircraft are assigned their runway based upon wind and destination for departures and best airspace/airfield utilization for arrivals. 007-54. There is no requirement
to conduct an independent review of the SIMMOD modeling. 007-55. See Response to Comment #007-27.
007-56. Unclear as to the reference to \$1 billion. See General Responses GR # 05, GR # 07, GR # 09, and GR #10.
007-57. Comment noted. 007-58. See Response to Comment 007-19 and General Response GR # 05.

		007-59. Rate reductions will not
 00	7	decrease individual noise intensity or even change the
MSP 2020 Capital Improvements SMAAC, October 2012 Draft EA/EAW Comments P a g e 7		noise exposure map, unless the total number of operations also
Both event noise intensity and noise exposure map areas would be decreased by rate reductions. More precision navigation courses over less sensitive areas, more gradual ascents and descents, and other noise abating operations would be feasible.	59	changes. Flight schedules and the number of operations are determined by the Air Carriers
The 1998 FEIS/ROD that authorized the new runway, 17-35, limited noise over 70 DNL and over 65 DNL for 620,000 operations per year, anticipating fleet mix changes that would lessen noise exposure as operations increased over the period 2004 to 2020. The MAC has completed expensive additional programs for 64-60 DNL areas as modeled for 2020 forecast operations.	60	and other airport users. The primary purpose of the Air Traffic Control Tower is to provide a safe
It is poor public policy to elevate efficiency – unneeded and more expensive operations in this case – if safety is not equally assured and the highly expected adverse consequences for the population unattended or increased.	61	and efficient flow of air traffic, in accordance with FAA Orders, rules and regulations. Neither the FAA nor the MAC has any control over arrival/departure times or the number of operations, as long as all flights can be handled safely and efficiently. See General Response GR # 06. 007-60. The comment is incorrect. The 1998 FEIS/ROD did not limit noise over 70 DNL or limit operations per year. Comment noted.
		007-61. Safety is the FAA's highest priority and the agency will ensure that the design of any approved alternative properly protects the public safety. The FAA ensures the safety of all airport improvement projects by applying numerous technical standards it has developed over the years to each aspect of every project. The FAA is conducting a thorough and careful review of the proposed Airport Layout Plan. This review is designed to ensure that the proposal complies with applicable FAA airport design standards and safety regulations. This review involves multiple FAA lines of businesses, including Air Traffic, Airports, Airways Facilities, Flight Standards, Flight Procedures, etc.

October 3, 2012 MSP 2020 Improvements Draft EA/EAW File C/O Environment Department Metropolitan Airports Commission 6040 28 th Avenue South Minneapolis, MN 55450-2799 Dear Mr. Fuhrmann: Thank you for the opportunity to review and comment on the Minn	008 101 Victoria Curve Mendota Heights, MN 55118 651.452.1850 phone 651.452.0940 fax www.mendota-heights.com	
 Airport 2020 Improvement Plan Draft Environmental Assessment/A Worksheet. The City of Mendota Heights recognizes MSP as a sig Minneapolis/SI. Paul metropolitan area and the State of Minnesota the airport, we support these planning efforts as a means for us to b development within our own borders. In reviewing the draft EA/EAW, the City of Mendota Heights wish Airports Commission (MAC) of the conditions that were placed on Comprehensive Plan (LTCP) for MSP International Airport by the 23, 2010. Specifically, the following conditions should be adhered The MAC will update the plan every five years and that the 2015. MAC should initiate a capacity study two years in advance have 540,000 annual operations and incorporate the results following LTCP update. MAC should initiate an FAA Part 150 study update (which noise analysis and mitigation program), in consultation with Committee, when the forecast level of operations five years levels mitigated in the Consent Decree (582,366 annual operators) will should be incorporated into the first subsequent LTCP. The LTCP needs to acknowledge that storm water from MS to the reaches of the Minnesota and Mississipi Rivers that impaired for a number of pollutants and stressors. 	nificant economic asset to the . As a community adjacent to better oversee land use and the 2030 Long Term Metropolitan Council on June to: first update is prepared by of when MSP is expected to of this study into the includes a comprehensive a the MSP Noise Oversight into the future exceeds the rrations). The results of this P update. SP detention ponds discharges	008-1. The MAC is adhering to the 2030 Long Term Comprehensive Plan for MSP. The Metropolitan Council confirmed that the Draft EA/EAW is consistent with the Long Term Comprehensive Plan adopted by the MAC. Refer to letter # 042 from the Metropolitan Council.

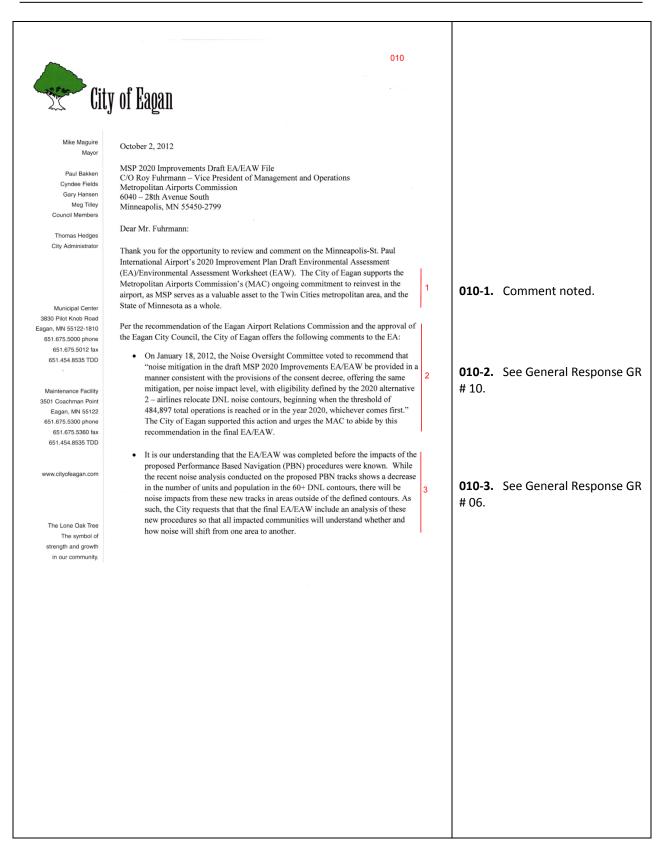
008			
In addition to these previously agreed to conditions, the City of Mendota Heights would like to			
address several other concerns:			
1) We understand that the draft EA/EAW was completed before the impacts of the proposed		000 0	Can Canadal David
Performance Based Navigation (PBN) procedures were known. These new procedures	2	008-2.	See General Response GR
could have a significant impact on areas within our city, and we are hopeful that the final	2	# 06.	
EA/EAW includes an analysis of these new procedures.			
2) At their January 18, 2012 meeting, the Noise Oversight Committee voted to recommend			
that "noise mitigation in the draft MSP 2020 Improvements EA/EAW be provided in a	0.000		
manner consistent with the provisions of the consent decree, offering the same mitigation,	3	008-3.	See General Response GR
per noise impact level, with eligibility defined by the 2020 alternative 2 – airlines relocate DNL noise contours, beginning when the threshold of 484,897 total operations is			· · · · · · · · · · · · · · · · · · ·
reached or in the year 2020, whichever comes first." The City of Mendota Heights urges		# 10.	
the MAC to abide by this recommendation in the final EA/EAW.			
Thank you again for the opportunity to comment on this important planning document. We look			
forward to continue working with the Metropolitan Airports Commission on making the MSP			
International Airport an even more important economic asset to the metropolitan area, state, and			
region, while recognizing the impacts it has on the surrounding communities. If you need further			
information, please contact city administrator Justin Miller at (651) 255-1153 or			
justinm@mendota-heights.com.			
Sincerely,			
Sandra Krubsback			
Saudra Krebe back			
Sandra Krebsbach			
Mayor			
cc: Mendota Height City Council Mandata Height Airport Balations Commission			
Mendota Heights Airport Relations Commission			



009 sun country airlines October 4, 2012 MSP 2020 Improvements Draft EA/EAW File C/O Roy Fuhrmann-Vice President Management and Operations Metropolitan Airports Commission 6040 28th Avenue South Minneapolis, MN 55450-2799 Dear Mr. Fuhrmann: MN Airlines, LLC dba Sun Country Airlines appreciates the opportunity to provide comments on the potential environmental impact of the MSP 2020 Improvement Plan. At the present time, Sun Country Airlines operates fourteen 737 new generation aircraft out of our MSP hub. We plan to grow the airline at a rate of at least two or three aircraft per year for the foreseeable future, with the potential to increase that growth rate after 2013. Gate and operating space at Terminal Two is absolutely essential to our planned growth. Without the planned expansion of gates at T2, Sun Country's planned growth, at least at MSP, would be severely constrained. Sun Country needs the growth at T2 to continue to provide the greater Minnesota public with competitive air fares and enhanced direct air 009-1. Comment noted. 1 service. We very much support the MSP 2020 planned improvements. Sincerely, John S. Fredericksen Vice President and General Counsel 1300 Mendota Heights Road, Mendota Heights, MN 55120 Corporate Headquarters 651.681.3900 Reservations 800.359.6786 Fax 651.681.3901

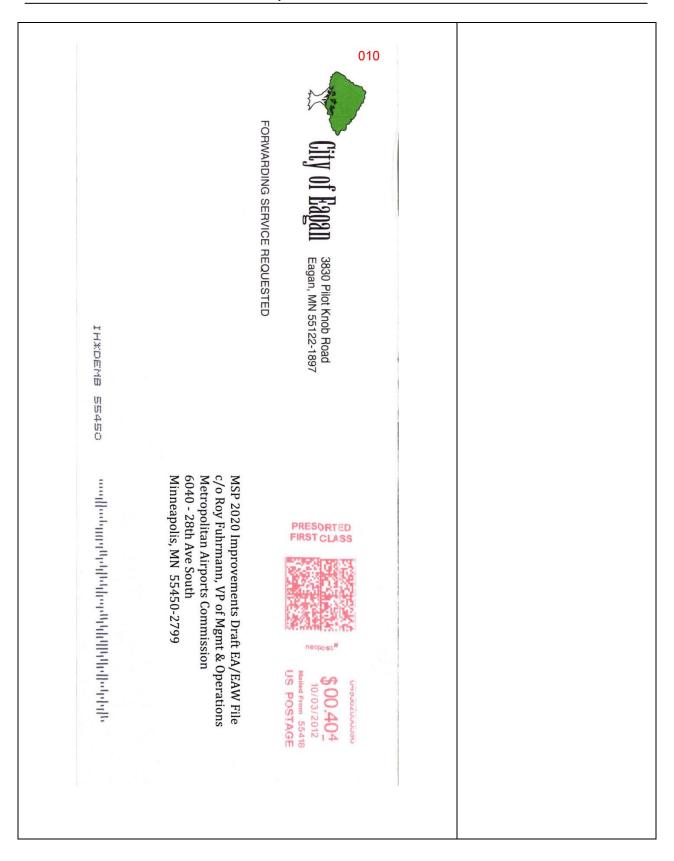
Minneapolis-St. Paul International Airport 2020 Improvements Draft EA/EAW





010 As operations are forecasted and runway use is determined, the City maintains its 010-4. See General Response GR long-standing request that the Runway Use System be adhered to by concentrating operations in the Eagan/Mendota Heights Corridor in order to limit # 09. operations on Runway 17/35, which impacts densely populated residential areas. In reviewing the draft EA/EAW, the City of Eagan reiterates the importance of the conditions that were placed on the 2030 Long Term Comprehensive Plan (LTCP) for MSP International Airport by the Metropolitan Council on June 23, 2010. Specifically, the following conditions should be adhered to: 1) The MAC will update the plan every five years and that the first update is prepared by 2015. 2) MAC should initiate a capacity study two years in advance of when MSP is expected to have 540,000 annual operations and incorporate the results of this 010-5. The MAC is adhering to 5 study into the following LTCP update. the 2030 Long Term 3) MAC should initiate an FAA Part 150 study update (which includes a Comprehensive Plan for MSP. comprehensive noise analysis and mitigation program), in consultation with The Metropolitan Council the MSP Noise Oversight Committee, when the forecast level of operations five years into the future exceeds the levels mitigated in the Consent Decree confirmed that the Draft EA/EAW (582,366 annual operations). The results of this study should be incorporated is consistent with the Long Term into the first subsequent LTCP update. Comprehensive Plan adopted by 4) The LTCP needs to acknowledge that storm water from MSP detention ponds the MAC. Refer to letter # 042 discharges to the reaches of the Minnesota and Mississippi Rivers that are from the Metropolitan Council. identified as water-quality impaired for a number of pollutants and stressors. Thank you again for the opportunity to comment on the 2020 Improvement Plan EA/EAW, and thank you for your ongoing planning efforts to ensure the present and future strength of MSP Airport. If you have any questions regarding the City of Eagan's comments, please contact Dianne Miller, Assistant City Administrator, at (651) 675-5014 or dmiller@cityofeagan.com. Sincerely, Mike Maguire Mayor Eagan Airport Relations Commission cc:

Minneapolis-St. Paul International Airport 2020 Improvements Draft EA/EAW



011

1

2

Sirois Kron, Christene

From: Sent: To: Subject: MARY G [1234polla@msn.com] Friday, October 05, 2012 11:56 AM msp2020drafteaw Airport changes.

I have lived southside MpIs all my life. I bought my home because it was on a busline and No airport noise. I have fibromyalgia and suffer chronic insomnia/fatigue which increases my pain when i get no rest. Since the last runways were built and airplane noise was diverted over our homes, my health has deteriorated tremendously. I had new windows and insulated siding put on out of my own pocket but these changes apparently were not highend enough and i could not afford more. I feel the State of Minnesota should start earning their money and gain back public respect for government by standing up for our rights. MAC has broken promises consistently after obtaining special funding.etc., i.e. airport in Duluth area which was to create more jobs; quieter planes and no nighttime flying over residential areas. I am now spending thousands on deteriorating health due partially to lack of sleep. Citizens need to take control back on decisions that affect them. Sincerely, M. Gorman

1

011-1. See General Responses GR # 05 and GR # 10.

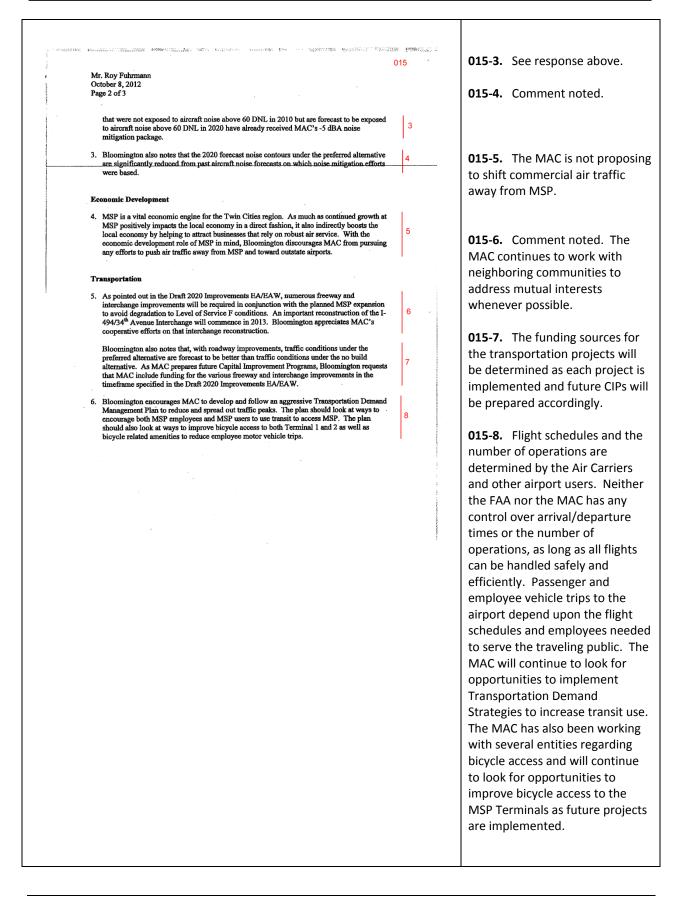
011-2. The MAC has not received special funding. The MAC does not operate or control the Duluth airport. The MAC did provide a loan to Northwest Airlines to help the airline through difficult financial times. The loan has been fully repaid. The MAC has not broken promises concerning quieter planes or nighttime flight restrictions. Neither the MAC nor the FAA determines the schedules or equipment used by the airlines to serve Minneapolis (as long as they meet FAA FAR Part 36 Stage 3 noise requirements). However, the MAC has worked very aggressively and in cooperation with the FAA, Airlines and the surrounding communities through the Noise Oversight Committee to enact voluntary measures to reduce noise impacts.

Sirois Kron, Christene	Page 1 of 1 <mark>012</mark>	
From: John [jwhite15@comcast.net] Sent: Thursday, October 04, 2012 6:45 AM To: msp2020drafteaw Subject: airport noise issue Greeting Roy Fuhrmann, Interval of the second sec		
I am writing this email to complain about the airplane noise level in my south Minneapolis neighborhood. Simple conversation inside and outside my house is interrupted now with the airplane noise level. Steep interruptions are also my concern. If the schedule and routes change to allow more airplanes to fly over my home I see the need for sound abatement. At the very least why can't the airplanes stay on the Cedar Ave flight path. Sincerely. John White 4254 33 rd Ave so. Minneapolis, MN. 55406	1	012-1. As explained in the introduction to this appendix, the growth in operations would occurnaturally with or without the Proposed Action. In other words the forecasted number of aircraft operations is the same for all alternatives, including the No Action alternative. That said, mitigation is proposed in the Fina EA/EAW to address the increase in noise due to the natural growth in operations. See General Responses GR # 05, GR # 10 and GR # 12.
10/5/2012		

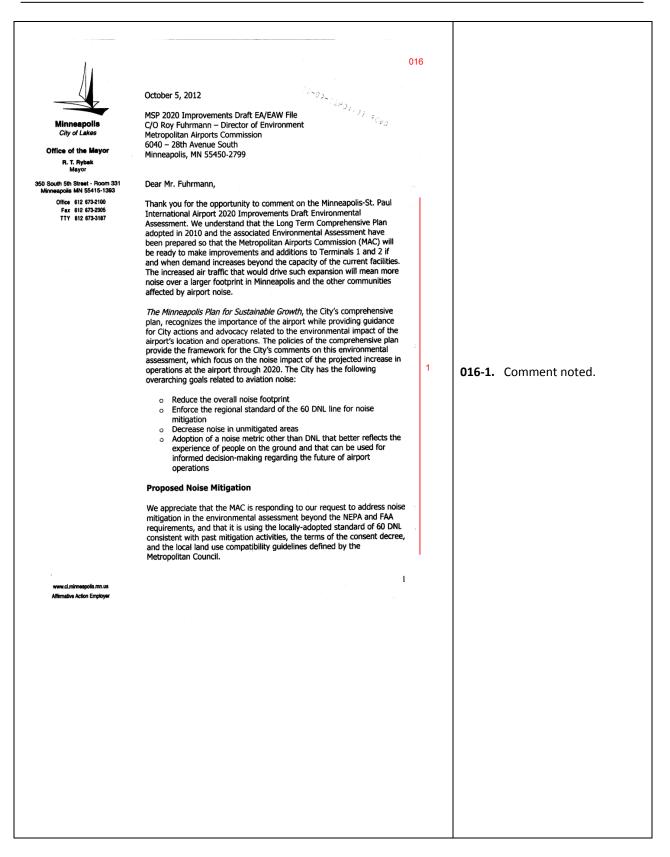
	Deer 1 of 1	
Sirois Kron, Christene	013	
<section-header>Sive Kron, Christene Tree: ridey. Colore 02, 022 127 234 Tree: ridey. Colore 02, 022 127 234 Subject Apport Companies Subject Apport Companies Subject Apport Companies Subject Apport Companies The interport of the one opport of the opport of the opport of the opport apport Companies Apport Companies Subject Apport Apport Apport Apport Companies Subject Apport Apport Apport Apport Apport Apport Subject Apport Apport Apport Apport Apport Apport Subject Apport Apport Apport Apport Apport Subject Apport Subject Apport Subject Apport Subject Appo</section-header>		013-1. Information regarding the proposed RNAV procedures has been added to the Final EA/EAW. See General Responses GR # 05, GR # 06 and GR # 10. The forecast flight tracks used in the Draft EA/EAW (2020 and 2025) included operational assumptions based on recent FAA ATC implementation of increased heading dispersion for northbound departure operations off Runway 30R as requested by the City of Minneapolis, the MSP Noise Oversight Committee (NOC) and the MAC. Additionally, the HESTN ONE and SLAYR ONE Area Navigation (RNAV) Standard Instrument Departures (SIDs) off Runway 17, as implemented on November 30, 2012 by FAA ATC, per the request of the NOC and MAC, were modeled in the forecast flight tracks in the Draft EA/EAW. See page G-43 of Appendix G. As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action. That said, mitigation is proposed in the Final EA/EAW to address the increase in noise due to the natural growth in operations.

	Page 1 of 1	
Sirois Kron, Christene	014	
From: Elizabeth Jarrett Andrew [elizabeth@spiritualmemoir.com]		
Sent: Monday, October 08, 2012 4:30 PM To: msp2020drafteaw		
Subject: Expansion of the airport: MSP 2020 Improvements draft EA/EAW File		
Dear Mr. Fuhrmann,		
I am writing to urge you to make an in-depth environmental assessment before continuing with the airport expansion. Both the city of Minneapolis and many residents are concerned		
about an increase in noise and fumes from the expansion. Please do not authorize any	1	014-1. As explained in the
changes until the lives of those under the flight paths is taken into consideration.	I	introduction to this appendix, the
Sincerely,		growth in operations would occu
Elizabeth Jarrett Andrew Minneapolis resident		naturally with or without the
· · · · · · · · · · · · · · · · · · ·		Proposed Action. See General
Elizabeth Jarrett Andrew		Responses GR # 01, GR # 02, GR
<u>www.spiritualmemoir.com</u> www.elizabethjarrettandrew.com		03, GR # 04, GR # 05 and GR # 10
For I know that the energy of the creative impulse comes from love and all its manifestations—admiration, compassion, glowing respect, gratitude, praise, tenderness, adoration, enthusiasm. Brenda Ueland		
10/9/2012		

ener hiller and a second and the second s	
015	
CITY OF BLOOMINGTON	
BLOOMINGTON MINNESOTA	
October 8, 2012	
Roy Fuhrmann Vice President, Management and Operations MSP 2020 Improvements Draft EA/EAW File Metropolitan Airports Commission 6040 28 th Avenue South Minneapolis, MN 55450	
Re: Draft Environmental Assessment/Environmental Assessment Worksheet (Draft 2020 Improvements EA/EAW) – 2020 MSP Improvements	
Dear Mr. Fuhrmann:	
The City of Bloomington appreciates the Metropolitan Airports Commission's (MAC) continued efforts to plan for the expansion and improvement of Minneapolis-St. Paul International Airport (MSP). A large, high quality international airport is vital to our region's long term economic success. Bloomington strongly supports expansion at MSP that does not create excessive or disproportionate environmental impacts on surrounding communities. We appreciate the MAC's efforts to proactively assess and mitigate impacts related to the expansion. On October 8, 2012, the Bloomington City Council approved the following comments on the Draft 2020 Improvements EA/EAW.	015-1. Comment noted.
Aircraft Noise	
 While aircraft noise levels in Bloomington are forecast at levels lower than previously anticipated, aircraft noise remains a negative impact that should be aggressively mitigated. Bloomington strongly encourages MAC to take whatever steps it can to further reduce aircraft noise levels over noise sensitive uses. These steps include but are not limited to: a. Establishing runway use systems that channel air traffic over noise compatible land uses; b. Using technology to improve navigation procedures and allow aircraft noise; c. Encouraging airlines using MSP to utilize a fleet mix of lower noise aircraft, and d. Closely monitoring actual aircraft noise levels and using the data to adjust noise models as necessary. 	015-2. See General Responses GR # 05, GR # 06, GR # 09, and GR # 10.
 Comparing the 2010 actual noise contours over Bloomington (Figure 5.14-1) with the 2020 forecast noise contours under the preferred alternative (Figure 5.14-7), Bloomington notes that there is very little expansion in aircraft noise levels. Those Bloomington dwelling units 	015-3. Comment noted.
MAYOR AND CITY MANAGEE AN AFFIEMATIVE ACTION/EQUAL	
1800 W. OLD SHAKOPEE ROAD, BLOOMINGTON MN 55431-3027 AN AFFIRMATIVE ACTION/EQUAL PH 952-563-8780 FAX 952-563-8754 TTY 952-563-8740 OPPORTUNITIES FAMPLOYER	



Reserved Man Man (Man (Man) (Man) (Man) (Man) (Man) 015 Mr. Roy Fuhrmann October 8, 2012 Page 3 of 3 Thank you in advance for consideration of Bloomington's comments. Should you have any questions regarding this letter, please contact Larry Lee, Community Development Director, at (952) 563-8947. Sincerely, All hunder Gene Winstead Mayor Copy: Lisa Pielen, Metropolitan Airports Commission Member



016

2

3

4

5

6

2

In Minneapolis, most of the increase in the 2020 forecast 60 DNL footprint for the MAC's preferred alternative takes place within already-mitigated areas. The exception is the area southeast of Lake Harriet, where a projected increase in arrivals to Runway 12R results in 1,229 homes being eligible for new or upgraded noise mitigation under the language proposed in the environmental assessment.

Section 5.14.6 of the environmental assessment states that "noise mitigation will begin when the level of total annual operations at MSP reaches 484,879 or in the year 2020, whichever comes first." A threshold based on the number of operations does not make sense because the underlying assumptions and inputs that led to the forecast noise contours, as well as the accuracy of the model itself, will undoubtedly change. Most notably, fleet mix and flight tracks will continue to evolve. In the coming years, the updated contour maps reflecting 484,879 operations will not look the same as the map shown in the EA prescribing the blocks that would become eligible for noise mitigation. The fact that 35 homes within the 2010 60 DNL are not receiving mitigation based on the 2007 60 DNL illustrates this disconnect. Even as the totai number of flights declined, the geographic distribution of the noise shifted in a manner that was not anticipated by earlier forecasts.

The City of Minneapolis requests that the provision of any new noise mitigation be based on an assessment of measured conditions by geography rather than the total number of operations at the airport. The MAC should continue to update noise exposure maps annually and tie this measurement to a clearly-defined mitigation strategy that is approved by the surrounding communities. Basing mitigation on measured conditions will reflect changes in fleet mix and flight patterns including the possible implementation of RNAV or future performance-based nuvigation moded.

The Integrated Noise Model and DNL

We understand that under National Environmental Policy Act (NEPA) and Federal Aviation Administration (FAA) rules the MAC's preferred alternative does not generate "significant impacts" related to noise, defined as "an increase of 1.5 dB DNL or greater for a noise sensitive land use at or above the 65 DNL noise exposure when compared to the No Action Alternative." However, we are concerned that Minneapolis residents are subjected to noise in a manner that is not captured by the Integrated Noise Model (INM) with DNL as the primary metric. DNL is intended to measure average noise exposure, and is derived from a model with inputs provided by the aviation industry rather than a measure of actual noise events. The projected impacts using INM modeling are similarly flawed. Because the human ear does not hear in averages, DNL does not effectively convey the noise impact experienced by residents. The recent experience of increased noise along Cedar Avenue illustrates this point.

In 2004, an independent consultant collected baseline noise data using its own equipment in areas of south Minneapolis affected by aviation noise. A continuation of this work, including a follow-up data collection effort and the preparation of a report using the consultant's own nethodology for measuring and documenting noise, would help all parties better evaluate aviation noise and would aid in developing a more effective metric for making policy decisions about the future of the airport. As the operator of the airport, the Metropolitan Airports Commission is best positioned to fund this work and to lead the effort to develop more effective noise metrics to be used in decision-making. The City of Minneapolis requests that the MAC **016-2.** Comment noted. The 2020 forecasted 60 DNL contour for Alternative 2 - Airlines Relocate minimizes the affected population within the 60 DNL contour when compared to the No Action or Alternative 1-Airlines Remain Alternative. This preferred alternative is consistent with the cities stated goal in The Minneapolis Plan for Sustainable Growth to "reduce the overall noise footprint".

016-3 and 4. Comment noted. The Final EA/EAW recognizes the stated concerns and as such is proposing a modification to the mitigation to address actual impacts. See General Response GR # 10.

016-5. See General Response GR # 07.

016-6. The MAC will continue to report, and consider the use of, alternative noise metrics. However, DNL is FAA's accepted noise metric, and the MAC has used FAA's INM-generated DNL noise contours as the mechanism for implementing a \$500 million noise mitigation program at MSP since the early 1990s. The noise mitigation program, relying on DNL and INM, has substantial community support. See General Response GR # 07.

016

6

7

8

9

10

fund this independent noise study, working in cooperation with affected communities. The City further requests that the MAC take on a leadership role with the communities and the FAA on identifying and implementing a new methodology and metric for measuring aviation noise.

Noise Impact

A primary goal of the City of Minneapolis is to reduce the overall noise footprint from the airport. This should be an achievable goal given the retirement of the noisiest aircraft, the flexibility in runway use provided by the addition of Runway 17/35, and the proximity of other airports that could relieve some of the demand at MSP. In fact, the overall noise footprint has been reduced in recent years as a result of quieter planes and a reduction in the number of operations. The noise analysis conducted for the environmental assessment, however, anticipates a reversal of this trend. It shows the 60 DNL noise footprint surrounding MSP growing by 1,736 acres between 2010 and 2020, an area larger than all of the Minneapolis lakes combined or nearly 350 city blocks. This larger noise footprint is the result of a projected increase in the number of annual flights from 435,583 in 2010 to 484,879 in 2020, illustrating the substantial impact that the number and frequency of flights has on noise as well as the limits of improvements in aircraft technology to minimize noise.

The City of Minneapolis is burdened by airport noise pollution over densely populated residential neighborhoods. The Environmental Impact Statement for the construction of runway 17/35, based the environmental mitigation on a runway use percentage that has not been realized. The explanation has been that in spite of a Runway Use System (RUS) adopted by the Noise Oversight Committee and the MAC, the sheer number of departures currently at MSP makes it impossible to use certain runways to the extent planned. The City is concerned that the increase in capacity will exacerbate this problem and make it less likely that the preferred runways under the RUS can be used.

Additionally, there may already be sufficient capacity at other airports throughout the state of Minnesota which would make this project unnecessary. The City has long advocated for a statewide aviation strategy that results in more commercial airline service at airports with unused capacity. We would welcome the MAC joining us in advocating for this planning at the state level.

Performance-Based Navigation

The FAA is working with the airlines and the MAC on developing new Performance-Based Navigation (PBN) procedures, including Area Navigation (RNAV) and Optimized Profile Descent (OPD). RNAV procedures allow aircraft to fly more closely to a defined flight path. Those flight paths were recently released and are currently under review.

The draft EA states that "The noise analysis did not include the proposed PBN procedures currently being developed by the FAA. An evaluation of the impacts of these procedures as they relate to the proposed project may be incorporated in the Final EA. If information is not available, an evaluation will be completed once the information is available, if applicable." This is not a strong enough commitment to assessing the impact of PBN procedures, which holds some promise for improving the overall noise situation by keeping flights on a defined track but could also disproportionately impact some residents. The residents of Minneapolis and the other

3

016-6. See comment response above.

016-7. Comment noted.

016-8. As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action.

The increase in aircraft capacity at the terminals will not make the use of the RUS more difficult. Aircraft operations are not projected to reach the 2004 historical peak operations level of 542,000 annual operations until after 2025. The use of Runway 17-35 is made slightly easier with the Preferred Alternative when wind conditions allow since more aircraft will be using Terminal 2, and will not have to cross another runway to use Runway 17-35. See General Response GR # 09.

016-9. The MAC supports the MnDOT Statewide Aviation Plan review process. As part of the EA/EAW process, the MAC considered the positive impacts that full use of regional/statewide airports would have at MSP.

The alternative to divert passengers to another airport was studied as part of the Draft EA/EAW. See Section 3.1.1 of the Draft EA/EAW. It was concluded that (1) neither the development of a competing hub nor a supplemental airport appears likely given current airline behavior and trends and, (2) even if the studied airports were able to capture 100 percent of their respective markets, the need for MSP terminal and landside

improvements would be delayed only temporarily. Therefore, the Other Airports Alternative was dismissed from further consideration.
016-10. As explained in the introduction to this appendix, the PBN project is separate from the airport development project and the alternatives analyzed in the Draft EA/EAW. The proposed PBN procedures are the subject of a separate NEPA process being completed by FAA Air Traffic Organization.
While the EA/EAW does not provide environmental review or approval of the proposed PBN procedures, the proposed PBN procedures have been incorporated into the forecasted future scenarios noise contours in the Final EA/EAW. Also, see General Response GR # 06.

communities affected by the airport need to be assured that the timeline for implementation of PBN procedures allows enough time to understand the impacts and tradeoffs before a final decision is made whether to adopt PBN at MSP. Any environmental review of the long term comprehensive plan that does not take the currently proposed PBN procedures cannot claim to accurately represent future conditions and therefore is inadequate.

These impacts and tradeoffs extend well beyond the 60 DNL line. While changing flight patterns may or may not necessitate new noise mitigation under the mitigation language offered in the environmental assessment, shifting noise patterns do have an effect on individuals outside the 60 DNL. Any analysis of PBN procedures or other changes to flight patterns should be conducted for a geographic area large enough to fully understand whether and how noise will shift from one area to another, regardless of possible plans for noise mitigation in some areas.

Environmental Impact Statement

Future decisions regarding the terminal reconfigurations in the Long Term Comprehensive Plan may also affect or be affected by the implementation of PBN, requiring a more in-depth and comprehensive analysis than an Environmental Assessment can offer. In a letter to the MAC dated January 6, 2011 and a letter to the Noise Oversight Committee dated January 18, 2012, the City of Minneapolis requested that the cumulative effects of future airport actions including a full build-out of the Long-Term Comprehensive Plan and the implementation of PBN procedures such as RNAV and OPD be assessed comprehensively in the form of an Environmental Impact Statement. We reaffirm that request with this letter, agreeing with past Metropolitan Council comments on the previous 2015 Terminal Expansion EA that an EIS is warranted.

Fine Particulate pollution

Air quality and the negative impacts on public health of poor air quality are of particular concern for the City. High levels of particulate matter, specifically PM 2.5, are correlated with an increase in cardiovascular disease, heart attacks, strokes and asthma. Recent studies suggest increased fine particulates may negatively impact birth weight and IQ levels in children. Data from MPCA ambient monitoring stations near the airport show PM 2.5 levels have increased and are close to exceeding National Ambient Air Quality standards. In addition to its impact on public health, nonattainment for PM 2.5 would result in significant economic impacts for the region and should be avoided at all cost.

The City requests that additional air pollution modeling be conducted for the current number and pattern of flights and the expected increase and temporal concentration in takeoffs, landings, idle time, expected turnover of fleets; and traffic from cars, buses and other associated facility operations that will increase as a result of this proposed expansion. Given the population density of areas in direct proximity to the airport, and the broader area likely to be impacted by expanded airport operations, these modeling data should be used to conduct a cumulative health risk impact study. above.

016

10

11

12

4

016-11. As explained in the introduction to this appendix, the PBN project is separate from the airport development project and the alternatives analyzed in the Draft EA/EAW. The proposed PBN procedures are the subject of a separate NEPA process being completed by the FAA Air Traffic Organization.

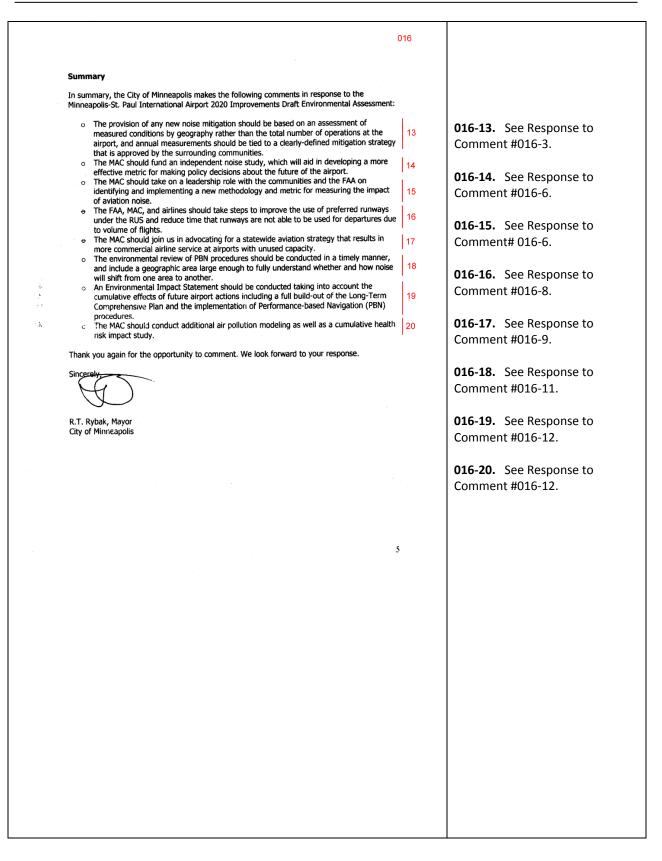
016-10. See comment response

Projects proposed in the LTCP for post 2020 are not considered "reasonable foreseeable actions" because of the uncertainty and changeability in the aviation industry. Therefore, the post 2020 LTCP projects are not included in the Draft EA/EAW. Based on the evaluation in the Draft EA/EAW, an EIS is not required. See General Response GR # 01.

016-12. The Air Quality Assessment was conducted in accordance with USEPA and FAA guidance. Also, note that the USEPA commended the MAC on the thorough air quality analysis in the Draft EA/EAW in its October 10, 2012, comment letter. Refer to Comment Letter #027 from the USEPA. Based on the Air Quality Assessment in the Draft EA/EAW, the Action Alternatives are not expected to adversely affect ambient air quality. The PM_{2.5} concentrations at the two air monitoring stations closest to MSP are well within the National Ambient Air Quality Standards (NAAQS) and the trend over the past three years is decreasing concentrations. In May 2006, the MPCA published a study of ambient monitoring conditions near MSP. The monitoring study included measurements of air

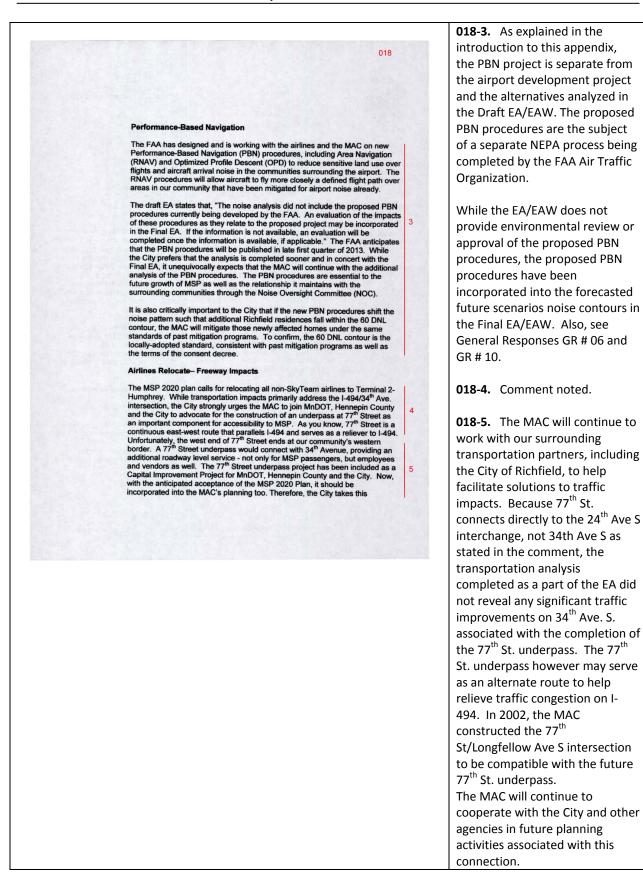
toxics and PM_{2.5} at two locations on MSP Airport and at Wenonah School and Richfield Intermediate School. Overall, median and average concentrations of pollutants monitored near MSP were similar to concentrations monitored at other locations in the Twin Cities Metropolitan Area. There is no difference between the PM_{2.5} emissions from Alternatives 1 and 2 versus the No Action Alternative during 2020 and 2025. The PM_{2.5} emissions during 2020 are 36 tons and during 2025 are 39 tons for all alternatives (i.e., No Action and Action Alternatives). Thus, the Action Alternatives are not expected to affect PM_{2.5} concentrations adversely. As explained in GR # 02, there are no existing federal regulatory guidelines specific to hazardous air pollution (HAP) emissions from aircraft engines. Although there are FAA and EPA/FAA guidance documents recommending best practices for quantifying speciated organic gas emissions from aircraft engines, the methods for measuring air emissions associated with aircraft engines is an evolving process that is still under development. See FAA, Guidance for Quantifying Speciated Organic Gas Emissions from Airport Sources, September 2, 2009, and FAA/EPA Recommended Best Practices for Quantifying Speciated Gas Phase Organic Gas Emissions from Aircraft Equipped with Turbofan, Turbojet and Turboprop Engines, May 27, 2009. The guidance specifically warns against preparing any type of HAPs assessment for aircraft emissions under NEPA—other than the type of emission inventory provided in the Draft

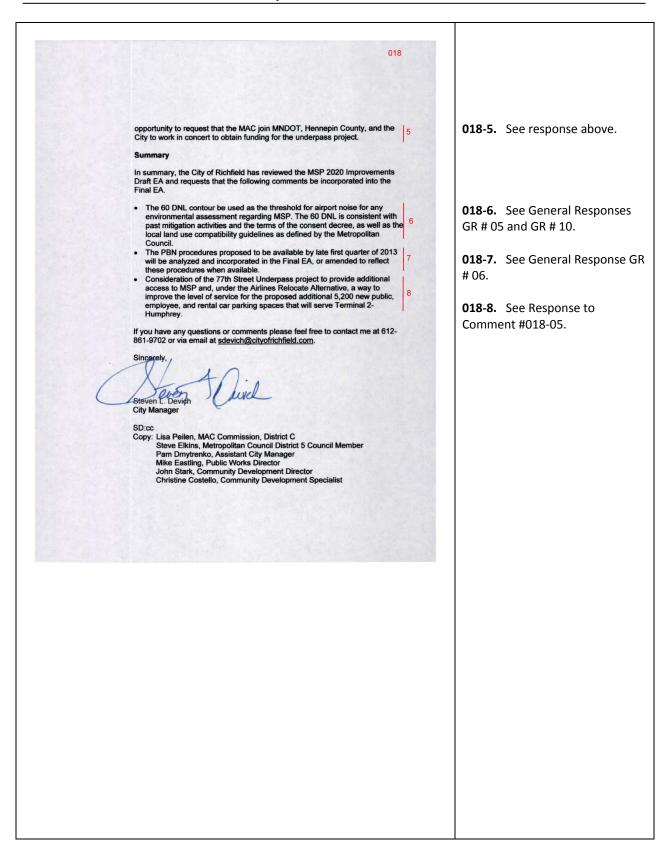
EA/EAW—because such assessments "require a complete understanding of both the reaction of OGs/HAPS in the atmosphere and downstream plume evolution," and the science of such atmospheric reactions is "currently limited" and "still evolving." <i>Id. See also</i> 40 C.F.R. § 1502.22 (providing that in an EIS, an agency may identify information that is unavailable).
unavailable). The FAA and MAC prepared a HAPs emission inventory that complies with FAA and FAA/EPA guidance and that is based on what is known currently about airport-related emissions. See Final EA/EAW, Appendix E <i>Air</i> <i>Quality Technical Report,</i> Section 6. See also General Responses GR # 02, GR # 04 and GR # 03.



017 MSP 2020 Improvements Draft Environmental Assessment / Environmental Assessment Worksheet (EA/EAW) Public Open House – MAC General Offices Building Monday, 1 October 2012 10-10-12#039/03-36% 10-10-12A09:05 RCVD COMMENTS 2012 Date: oct 1 N F. DONNE Name: 4305-27# Ave Address: Minneapolis Minn City: 55406 ZIP Code: PLEASE WRITE YOUR COMMENTS BELOW Ive been blessed Top be able to live in Lake Hinwathafor 12 years sofor, a the o stope Tai llago spearefu I bought here be Thore no these Thatla mMAD The meeting these will be is worth le my home cl Lil ra di **017-1.** See General Responses 1 ago which 12 GR # 05, GR # 08 and GR # 11. our loads t ouse that las Lan botto ne I want to keep we mo e left but I h lala shlochooda loved ne I still u anpor Theiping people en keep my only 2a 21m Tup 77 there g of my blo 20 saof Written comments may also be submitted via USPS mail or e-mail to the address John F.O. Comments will be accepted until 5:00 pm on October 11, 2012. MSP 2020 Improvements Draft EA/EAW File C/O Environment Department Metropolitan Airports Commission 6040 – 28th Avenue South Minneapolis, MN 55450-2799 Phone: 612-726-8100 Email: msp2020draftEAW@mspmac.org

	018		
	10-10-12411:52 RCVD		
RICHFIELD	City Manager's Office		
	October 9, 2012		
	MSP 2020 Improvements Draft EA/EAW File c/o Environment Department 6040 28th Avenue South		
MAYOR	Minneapolis, MN. 55450-2799		
DEBBIE GOETTEL	Subject: City of Richfield Comments on 2020 Improvements Draft		
PAT ELLIOTT TOM FITZHENRY	Environmental Assessment/Worksheet for MSP		
SUZANNE M. SANDAHL FRED L. WROGE, JR.	Dear Mr. Fuhrmann:		
CITY MANAGER STEVEN L. DEVICH	The City of Richfield would like to thank you for the opportunity to comment on the Minneapolis-St. Paul International Airport (MSP) 2020 Improvements Draft Environmental Assessment (EA)/Environmental Assessment Worksheet (EAW). The City of Richfield recognizes that the Metropolitan Airport Commission (MAC) is proposing development at Terminals 1-Lindbergh and 2-Humphrey at MSP and environmental review of the proposed development is required to comply with the National Environmental Policy Act (NEPA) and the Minnesota Environmental Policy Act (MEPA). The proposed development raises concern for Richfield due to the potential for additional airport noise over our community	1	018-1. See General Responses
	as well as other communities surrounding MSP. The Richfield Comprehensive Plan acknowledges the benefits the City receives from the airport such as convenient access to airport services. The challenge for Richfield is to maximize the benefits of its convenient location while minimizing the aircraft noise effects. Through the comprehensive plan the City		GR # 05 and GR # 10.
	has established some goals and policies to ensure the collaboration between all the entities involved. They include:	197	
	Advocate airport-operating procedures that will minimize adverse impacts in		018-2. Comment noted.
	Richfield; • Continue the City's cooperative efforts with MAC to share resources and	2	
	infrastructure;		
	 Continue to cooperative with the MAC, the Pollution Control Agency and other governmental agencies to reduce adverse noise impacts generated by 		
	 air traffic; and Continue its cooperative effort with the MAC and the Federal Aviation Administration (FAA) to address the issues of low frequency noise impacts to the City. 		
	The Urban Hometown 6700 PORTLAND AVENUE, RICHFIELD, MINNESOTA 55423 612.861.9760 FAX: 612.861.8974		
	WWW.rdyakubed.og AN EQUAL OPPORTUNTY Bencores		





	019	
Sirois Kron, C	hristene	-
From: Sent: To:	Georgia Wegner [gwegner3905@mac.com] Tuesday, October 09, 2012 4:27 PM msp2020drafteaw	
Cc: Subject:	Sandra K Colvin Roy Airport notes	
l was unable to a	ttend your meeting on October 1, though I wanted to meet you all very much.	τ.
Ave). Then North didn't do a thing our homes is the	house in 1983. Airport noise wasn't an issue, even living as close to it as I do (39th St and 20th hwest stopped its noise mitigation procedures. It turns out they were voluntary and MAC about it. In fact, MAC has been all airline all the time. Forgive me if I don't think sealing us in best solution to airport noise. A few things have been done to spread the misery but I'm now g tv shows that have dialogue I really want to hear. (Luckily there aren't many).	1
	r September 11th. I also remember September 12th. I stood outside my house and was	0
	ick by the quiet. I was e sky. That glorious blue is imprinted in my brain.	
	some sort of altered state. It was years later I realized it was the lack of airplane exhaust.	
	ere are so relatively few airplanes compared to cars.	2
	cy change that much that fast! It means these wing THAT MUCH EXHAUST. Sometimes I can see it.	2
	mobile equivalent of what one airplane does to us?	
wasn't aware of with allergies on warming? MN is they know that t	In procession of the set of the s	3
	s fought like crazy to be recognized as people. Well,	
	Il be good citizens. They have a history of being stomers, their employees (excepting vice-presidents)	
	inity. Delta has moved their noisiest planes here.	4
They are grossly	b so they can charge us more and foul our air more. inefficient. I don't want to hear about fuel costs when one has to stop in Newark to fly from ladelphia. They can work smarter. Have you looked at their flight maps lately?	4
major overhaul o been so wildly su	antiquated FAA systems and I can't even start on how I feel about adding flights without a of that. I don't imagine it could be done without tax increases and since the tax rants have accessful I don't see that happening soon. So perhaps you (MAC) can think about the nce and if you won't make things better, at least you can refrain from making them worse.	5
	7: some years ago - many in fact - two of my friends were visiting from Philadelphia. We different lake every day and our conversation was constantly interrupted by airplane noise.	6
	1	

019-1. The MAC remains mitted to evaluating and lementing noise abatement edures and programs when sible. Through the work of the C, airlines are involved in the e discussion and as a result, ny noise initiatives have been lemented. Over the years, e of the initiatives have taken form of voluntary programs, as the voluntary nighttime rs. The airlines continue to try omply with such program. vever, their respective rational requirements do not w for 100% compliance. This s not represent a ontinuation of noise tement efforts by the airlines. General Response GR # 05 response to comment #005-

-2. The Air Quality essment was conducted in ordance with USEPA and FAA lance. Also, note that the PA commended the MAC on thorough air quality analysis ne Draft EA/EAW in its ober 10, 2012, comment er. Refer to Comment Letter 7 from the USEPA. ed on the Air Quality essment in the Draft EA/EAW, Action Alternatives are not ected to adversely affect pient air quality. The PM_{2.5} centrations at the two air nitoring stations closest to P are well within the National bient Air Quality Standards AQS) and the trend over the three years is decreasing centrations. In May 2006, the CA published a study of pient monitoring conditions r MSP. The monitoring study uded measurements of air

toxics and PM_{2.5} at two locations on MSP Airport and at Wenonah School and Richfield Intermediate School. Overall, median and average concentrations of pollutants monitored near MSP were similar to concentrations monitored at other locations in the Twin Cities Metropolitan Area. There is no difference between the PM_{2.5} emissions from Alternatives 1 and 2 versus the No Action Alternative during 2020 and 2025. The PM_{2.5} emissions during 2020 are 36 tons and during 2025 are 39 tons for all alternatives (i.e., No Action and Action Alternatives). Thus, the Action Alternatives are not expected to affect PM_{2.5} concentrations adversely. As explained in GR # 02, there are no existing federal regulatory guidelines specific to hazardous air pollution (HAP) emissions from aircraft engines. Although there are FAA and EPA/FAA guidance documents recommending best practices for quantifying speciated organic gas emissions from aircraft engines, the methods for measuring air emissions associated with aircraft engines is an evolving process that is still under development. See FAA, Guidance for Quantifying Speciated Organic Gas Emissions from Airport Sources, September 2, 2009, and FAA/EPA Recommended Best

Practices for Quantifying Speciated Gas Phase Organic Gas Emissions from Aircraft Equipped with Turbofan, Turbojet and Turboprop Engines, May 27,

2009. The guidance specifically
warns against preparing any type
of HAPs assessment for aircraft
emissions under NEPA—other
than the type of emission
inventory provided in the Draft
EA/EAW—because such
assessments "require a complete
understanding of both the
reaction of OGs/HAPS in the
atmosphere and downstream
plume evolution," and the
science of such atmospheric
reactions is "currently limited"
and "still evolving." Id. See also
40 C.F.R. § 1502.22 (providing
that in an EIS, an agency may
identify information that is
unavailable).
The FAA and MAC have prepared
a HAPs emission inventory that
complies with FAA and FAA/EPA
guidance and that is based on
what is known currently about
airport-related emissions. See
Final EA/EAW, Appendix E Air
Quality Technical Report, Section
6.
Notably, compared to other
sources such as automobiles,
aviation emissions are a relatively
small contributor to air quality
concerns both with regard to
regional air quality and global
greenhouse gas emissions. Generally, aviation contributes
less than 0.5 percent of the
national emissions inventory
(while transportation activities
contribute about 55 percent); and
an individual airport contributes
about 1 to 3 percent of the
regional emissions. Emission
contributions are far greater from
other transportation sectors such
as on-road vehicles as well as
industrial stationary sources.
Notably, only 10 percent of

aircraft emissions of all types,
except VOC and CO, are produced
during airport ground level
operations and during landing
and takeoff. The bulk of aircraft
emissions (90 percent) occur at
higher altitudes (i.e., removed by
time and space from local air
quality impacts). For VOC and CO,
the split is closer to 30 percent
ground level emissions and 70
percent at higher altitudes. Thus,
on a regional basis, aviation-
related emissions are a smaller
percentage of the overall total
and a majority of the aircraft
emissions occur above the
ground and at higher altitudes,
which put the emissions further
away from population receptors.
See General Responses GR # 02,
GR # 03 and GR # 04.
019-3. In terms of U.S.
contributions to CO_2 , the General
Accounting Office reports that
"domestic aviation contributes
about 3 percent of total CO ₂
emissions, according to USEPA
data," compared with other
industrial sources including the
remainder of the transportation
sector (20 percent) and power
generation (41 percent). The
International Civil Aviation
Organization estimates that GHG
emissions from aircraft account
for roughly 3 percent of all
anthropogenic GHG emissions
globally. Based on the Air Quality
Assessment within the Draft
EA/EAW, the Action Alternatives
are not expected to affect climate
change adversely.
<u> </u>
Also, see Response to Comment
019-2 and General Response GR #
02.
019-4. Comment noted.

 019-5. Safety is the FAA's highest priority. The agency will provide that the design of any approved alternative properly protects the public safety. FAA air traffic control procedures and requirements, including aircraft separation provisions, ensure the safe operation of aircraft using MSP. 019-6. See General Responses GR # 05 and GR # 10.

019 On about day four, after an "airplane break" one of them turned to me asking very angrily "WHY DO YOU ALLOW THIS?" I didn't have an answer. I've never been given an answer and I still want one. Georgia Wegner	019-6. See comment response above.
2	

Page 1 of 2 Sirois Kron, Christene 020	020-1. As explained in the introduction to this appendix, the growth in operations would occur	
From: Lisa M. Schmid [Ischmid@nilanjohnson.com] Sent: Tuesday, October 09, 2012 6:29 PM To: msp2020drafteaw Delicity IN 0.000 home must be the ENE NM Elity	naturally with or without the Proposed Action.	
The migrocontrained with the set of the set	 Proposed Action. As explained in the introduction to this appendix, the RNAV project is separate from the airport development project and the alternatives analyzed in the Draft EA/EAW. The proposed RNAV procedures are the subject of a separate NEPA process being completed by the FAA Air Traffic Organization. While the EA/EAW does not provide environmental review or approval of the proposed RNAV procedures, the proposed RNAV procedures have been incorporated into the forecasted future scenarios noise contours in the Final EA/EAW. Also, see General Response GR # 06. 020-2. The forecast flight tracks used in the Draft EA/EAW (2020 and 2025) included operational assumptions based on recent FAA ATC implementation of increased heading dispersion for northbound departure operationss off Runway 30R as requested by the City of Minneapolis, the MSP Noise Oversight Committee (NOC) and the MAC. Additionally, the HESTN ONE and SLAYR ONE Area Navigation (RNAV) Standard Instrument Departures (SIDs) off Runway 17, as implemented on November 30, 2012 by FAA ATC, per the request of the NOC and MAC, were modeled in the forecast flight tracks in the Draft EA/EAW. See page G-43 of Appendix G. Also, see General Response GR # 05. 	

eparture operations R as requested by nneapolis, the MSP

020-3. See General Response GR # 10. Past noise mitigation was based on the noise impacts associated with forecasted operation activity. The proposed mitigation in the Final EA/EAW is based on actual noise contours. The proposed noise mitigation program was revised after the publication of the Draft EA/EAW. The proposed mitigation in the Draft EA/EAW was modified to base mitigation eligibility and timing on annually-developed actual noise contours instead of the 2020 Preferred Alternative noise contours. There are numerous factors involved in the perceived change in flight paths since September 2010. The fleet mix has evolved at MSP and now there are more regional jets using the airport than ever before. The regional jets have replaced turbo props. The increase in regional jets coupled with the decrease in turbo props has created a more compatible fleet mix that requires less of a need to fan out to ensure safe operations. In addition, the Air Traffic Control Tower returned to a more rigorous adherence to existing runway assignment procedures due to the near miss in September 2010. This has resulted in some northbound departures being moved back to an area they were prior to the downturn in traffic but did not create new flight paths or procedures. The net result is a higher percentage of jets that fly in a narrower corridor (due to compatibility of mix) at a lower altitude (due to operating characteristics of the aircraft). 020-4. The Air Quality

Assessment was conducted in accordance with USEPA and FAA

1	
	guidance. Also, note that the USEPA commended the MAC on the thorough air quality analysis in the Draft EA/EAW in its October 10, 2012, comment letter. Refer to Comment Letter #027 from the USEPA.
	As explained in the introduction to this appendix,, the RNAV project is separate from the airport development project and the alternatives analyzed in the Draft EA/EAW. The proposed RNAV procedures are the subject of a separate NEPA process being completed by the FAA Air Traffic Organization.
	While the EA/EAW does not provide environmental review or approval of the proposed RNAV procedures, the proposed RNAV procedures have been incorporated into the forecasted scenarios noise contours in the Final EA/EAW.
	See General Responses GR # 01 and GR # 06.
	020-5 . As explained in the introduction to this appendix, the RNAV project is separate from the airport development project and the alternatives analyzed in the Draft EA/EAW. The proposed RNAV procedures are the subject of a separate NEPA process being completed by the FAA Air Traffic Organization.
	Comment will be forwarded to FAA Air Traffic Organization.
	See General Responses GR # 06 and GR # 10.

Page 2 of 2	
020	
PRIVILEGE AND CONFIDENTIALITY NOTICE - This message and any attachments may contain information that is privileged, confidential and exempt from disclosure under applicable law. If you are not the intended recipient or authorized to receive for the recipient, you are notified that dissemination, distribution or copying of this message and any attachments is strictly prohibited. If you have received this message in error, please immediately advise the sender by reply e-mail and delete the message and any attachments.	
CIRCULAR 230 NOTICE - Any advice contained in this communication and any related attachment(s) is not intended to be used, and it cannot be used for the purpose of avoiding tax related penalties or to support the promotion or marketing of any matter. (The foregoing legend has been affixed pursuant to U.S. Treasury Regulations.)	
10/10/2012	

021

1

2

3

Minnesota Pollution Control Agency

520 Lafuyutte Road North | St. Paul, Minneseta 53155-4194 | 661-295-6300 800-657-3864 | 651-282-5332 TTY | www.pca.state.mn.us | Equal Opportunity Employ

October 10, 2012

Mr. Roy Fuhrmann MSP 2020 Improve 10-10-12P01:24 RCVD

C/O Environmental Department Metropolitan Airports Commission 6040 – 28th Avenue South Minneapolis, MN 55450-2799

ents Draft EA/EAW File

Re: Minneapolis – St. Paul International Airport 2020 Improvements Draft Environmental Assessment/ Environmental Assessment Worksheet

Dear Mr. Fuhrmann:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (EA)/ Environmental Assessment Worksheet (EAW) for the Minneapolis – St. Paul International Airport 2020 Improvements project (Project) located in Hennepin and Ramsey Counties, Minnesota. The Project consists of a wide variety of improvements to the airport. Regarding matters for which the Minnesota Pollution Control Agency (MPCA) has regulatory responsibility and other Interests, MPCA staff has the following comments for your consideration.

Appendix M – Change in Surface Water Impacts from Aircraft Deicing and Fueling

Deicing Pad(s) at Terminal 2-Humphray: The Draft EA/EAW discusses the paving of several of the impervious areas in and around both the Humphrey Remote Apron plug-and-pump (PnP) and the Humphrey Apron PnP. It appears that the primary reason for the paving of many of these areas is to provide additional "remain overnight" aircraft storage and additional taxiway. This action will create a situation in which the existing grassy drainage areas will become paved.

It is important to point out one of the primary conditions of the evaluation of the three alternatives with respect to deicing activities was that the total number of departures does not change, but only the location from where those operations originate (page M-3). By using this approach, the anticipated growth of the airport activities is not considered. Because of this assumption, and the anticipated future deicing needs, the MPCA recommends that additional deicing controls be considered in the evaluation. The primary considerations should be the potential addition of deicing pad(s) and remote runoff storage containment to address both existing and future deicing practices.

Evaluation of the installation of a higher level of deicing collection device. The collection of aircraft deicing fluids is most efficient with the use of deicing pads and then secondly with PnPs. Generally expected glycol collection rates are 60 percent for new deicing pads and 40 percent for new PnPs. The current evaluation only considered the installation of PnPs around the Terminal 2-Humphrey area. Given that it is being proposed to pave much of the area around the terminal, it would be most appropriate to investigate the potential to install the more efficient deicing pad technology at this time. Reasons for this suggestion are presented below. Additionally, the design of the new PnPs, and possibly the existing PnPs located at the terminals proposed to undergo significant changes, should consider in their design in their design.

The airport is compliant with its NPDES permit and will continue to comply with the permit conditions in the future.

021-1. Additional controls concerning deicing activities were considered as part of the Draft EA/EAW. Upon review, dedicated deicing pads are already located at all five departure runway thresholds. Four of these were designed and constructed specifically to collect and contain spent aircraft deicing fluids (ADF). Under either Action Alternative, the fifth deicing pad will be reconstructed in a similar manner.

021-2. As noted in the Response to Comment #021-1, dedicated deicing pads are located at each of the departure runway thresholds. Although the current evaluation indicated that the area would be served by plug and pump technology, the plug and pump technology would be constructed to conform to the same technology used at dedicated deicing pad locations. Typically, dedicated deicing pads, with the same infrastructural technology, perform better because dedicated deicing pads have more frequent use of deicing whereby there is more fluid to capture since there is more fluid sprayed in one location. The plug and pump locations may have only 4 to 8 aircraft deicing operations per day while the deicing pad may deice 4 to 8 aircraft per position per hour. The MAC will use the same construction technology at the plug and pump locations as typically used at the dedicated deicing pads. Collected fluids will be pumped directly or trucked to

remote storage for recycling or

metered to treatment facilities. **021-3.** The ability to manage the collected glycol impacted storm water will be considered and is preferred when constructing new facilities.

	004	
	021	
Mr. Roy Fuhrmann Page 3	•	
October 10, 2012		
We appreciate the opportunity to review this project. Please provide your specific responses to our comments and notice of decision on the need for an Environmental Impact Statement. Please be aware	5	021-5. Comment responses are
that this letter does not constitute approval by the MPCA of any or all elements of the Project for the	1	provided. The MAC will issue a
purpose of pending or future permit action(s) by the MPCA. Ultimately, it is the responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions. If	6	notice of decision on the need fo
you have any questions concerning our review of this Draft EA/EAW, please contact me at 651-757-2508.	• •	an EIS after the completion of th
		EA/EAW process. The final
Sincerely,		determination will also be
Varien Woman		published in the EQB monitor.
Karen Kromar Planner Principal		Also, see General Response GR #
Environmental Review Unit		01.
Resource Management and Assistance Division		021 C Necessary normits will b
KK:mbo		021-6. Necessary permits will b obtained prior to construction.
cc: Ken Westlake, U.S. Environmental Protection Agency Craig Affeldt, MPCA, St. Paul		
Doug Wetzstein, MPCA, St. Paul		
Robert Kostinec, MPCA, Rochester		
		1

Sirois Kron, Christene 02	22	Page 1 of 1	
From: Batdorf, Karen M. [K9BATDORF@stthomas.edu] Sent: Wednesday, October 10, 2012 8:41 AM To: msp2020drafteaw Cc: 'Colvin Roy, Sandra K.' Subject: RNAV and our neighborhood and am deeply opposed to the proposed Environmental Assessment plan for airport expansion and navigation changes. The assessment we are being asked to comment on is inadequate and premature. Nothing should be done until the new issue of RNAV has been adequately addressed. We are already experiencing increased noise and air traffic issues, and using an environmental assessment plan that does not include or follow after an intense study of proposed RNAV changes is both inadequate and dreliberately misleading to area residents, who have already suffered the impact of the relentless airport expansion. In addition, compensating plans should be in place according to noise projections, not retrofitted after a problem has been established. The current proposal smells of an attempt to deceive and overrun the good of the neighborhoods. Karen Batdorf 4922 30 th Avenue South		1	022-1. As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action. As explained in the introduction to this appendix, the RNAV project is separate from the airport development project and the alternatives analyzed in the Draft EA/EAW. The proposed RNAV procedures are the subject of a separate NEPA process being completed by the FAA Air Traffic Organization
			Organization. While the EA/EAW does not provide environmental review or approval of the proposed RNAV procedures, the proposed RNAV procedures have been incorporated into the forecasted scenarios noise contours in the Final EA/EAW.
10/10/2012			The proposed noise mitigation program was revised after the publication of the Draft EA/EAW. The proposed mitigation was modified to base mitigation eligibility and timing on annually- developed actual noise contours instead of the 2020 Preferred Alternative noise contours. See General Responses GR # 05, GR # 06 and GR # 10.

Sirois k	Kron, Christene	023	Page 1 of 1	
From: Sent:	Pat Engstrand [pengstrand@mmrf.org] Wednesday, October 10, 2012 8:55 AM			
Го:	msp2020drafteaw			
•	feedback on your plan			
ave its o	py our process until RNAV gets sorted out and assure the airport community that RNAV wi wn independent analysis and a public comment. Putting the cart before the horse has never n a smooth ride.	11	1	023-1. As explained in the introduction to this appendix, th
Thank yo Pat Engst	u for considering my comments.			RNAV project is separate from the airport development project
	of the Longfellow Neighborhood			and the alternatives analyzed in the Draft EA/EAW. The proposed RNAV procedures are the subject of a separate NEPA process bein completed by the FAA Air Traffic Organization.
				While the EA/EAW does not provide environmental review of approval of the proposed RNAV procedures, the proposed RNAV procedures have been incorporated into the forecasted scenarios noise contours in the Final EA/EAW.
				See General Responses GR # 05, GR # 06 and GR # 10.
10/10/2	012			

Olinia Kana Okalatana O	Page 1 of 1 24	
Sirois Kron, Christene From: Ronald Goldser [Ronald.Goldser@zimmreed.com] Sent: Wednesday, October 10, 2012 8:59 AM To: msp2020drafteaw		
Cc: Dianne Miller; 'helenleslie@comcast.net' Subject: Comments on EA/EAW and RNAV proposal		
I reside at 774 Elrene Court, Eagan. The proposed RNAV tracks from Runway 12R have three tracks	1	
diverging shortly after takeoff. The two southwest most of these three diverging tracks go directly over my neighborhood. This divergence is purportedly to allow increased capacity on departure. However, this makes no sense, since planes all follow the main track immediately following departure, until the time of divergence. We object to the RNAV proposal from Runway 12R insofar as this divergence is permitted so close to the airport, and particularly over my neighborhood.	1	024-1. As explained in the introduction to this appendix, th RNAV project is separate from the airport development project
RONALD S. GOLDSER OF COUNSEL		and the alternatives analyzed in the Draft EA/EAW. The proposed
JIMMERMAN REED, PLLP 1300 IDS Center, 80 South 8th Street		RNAV procedures are the subject
Minneapolis, MN 55402 T 612.341.0400		of a separate NEPA process bein
bio website vCard map		completed by the FAA Air Traffic
Voice of the People [Class Action Attorneys Wwarded Best Law Firms by U.S. News & World Report		Organization.
This e-mail may contain information that is privileged, confidential or otherwise protected from disclosure under applicable law and is intended ONL Y for particular clients, parties, or entities involved in illigation or dealings with the Zimmerman Reed, PLLP law firm. If you are not the intended recipient or have received this email in error, please notify us immediately by e-mail, discard any paper copies and delete all electronic files of the message. Any unauthorized review, use, disclosure or distribution of the e-mail or its attachment(s) is prohibited by av.		While the EA/EAW does not provide environmental review of approval of the proposed RNAV procedures, the proposed RNAV procedures have been incorporated into the forecasted scenarios noise contours in the
		Final EA/EAW. Your comment was forwarded t FAA Air Traffic Division for their
		consideration.
		See General Responses GR # 05 and GR # 06.
10/10/2012		

025

Sirois Kron, Christene

From: Sent: To: Subject: Mary Vrabel [mvrabel@lakecountryschool.org] Wednesday, October 10, 2012 9:18 AM msp2020drafteaw Comment on Airport Expansion/Mitigation

To: MSP 2020 Improvements Draft EA/EAW File C/O Roy Fuhrmann – Director of Environment Metropolitan Airports Commission

I am writing in opposition to the expansion of the airport and increase in flights over the neighborhood without a full Environmental Impact Statement and a mitigation plan in place for both noise AND pollution. Some mornings when I leave my home, the air stinks from the idling planes It's like living at the end of a tail pipe already; added flights will only worsen these conditions. I request a full environmental review that includes the impact of RNAV and a mitigation plan for both noise and air pollution. An airport this big shouldn't be in a heavily residential area. It's time for the airport to consider moving to the other side of the wetlands. Mary Vrabel

4229 38th Ave. S. Minneapolis, MN 55417 612-724-8225 **025-1.** As identified in the Draft EA/EAW no environmental category impacts exceed the level of significance as defined by NEPA, CEQ Regulations, FAA Orders 1050.1, Environmental Impacts: Policies and Procedures, FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions, MEPA and the EQB rules implementing the MEPA. Therefore, an EIS is not required. See General Response #GR-01 for more information.

Mitigation for noise is included in the EA/EAW. See General Response #GR-10 for more information on the mitigation.

As explained in the introduction to this appendix, the RNAV project is separate from the airport development project and the alternatives analyzed in the Draft EA/EAW. The proposed RNAV procedures are the subject of a separate NEPA process being completed by the FAA Air Traffic Organization. While the EA/EAW does not provide environmental review or approval of the proposed RNAV procedures, the proposed RNAV procedures have been incorporated into the forecasted scenarios noise contours in the Final EA/EAW.

Moving the airport is not a feasible alternative because the Minnesota Legislature prohibited the MAC from constructing, equipping, or acquiring land for a major new airport to replace the existing Minneapolis-St. Paul International Airport. (Minnesota Statues 1996, 473.608).

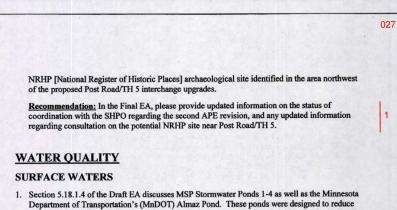
As explained in the introduction to this appendix, the growth in

operations would occur naturally with or without the Proposed Action. See Response to Comment #002-4 and General Responses GR # 01, GR # 02, GR # 03, GR # 04, GR # 05, GR # 06, and GR # 10.

	Page 1 of 1	
Sirois Kron, Christene 026	Page 1 of 1	
From: Kenneth Wenzel [kjwenzel1@earthlink.net] Sent: Wednesday, October 10, 2012 3:22 PM		
To: msp2020drafteaw Subject: Airport expansion		
Dear Mr. Fuhrmann,		026-1. As explained in the
We am writing to comment on the proposed airport expansion. As a residents of South Minneapolis we are deeply concerned about the impact on the quality of our and our family's life as a result of this potential expansion. We support the cities positions that this needs an extensive environmental review that focused attention on the health, noise and pollution impact of this plan. We also support the need to provide noise mitigation for additional homes in the vicinity of the airport should this plan proceed.	1	introduction to this appendix, the growth in operations would occu naturally with or without the Proposed Action.
Thank you for your time and attention to these matters.		Proposed Action.
Kenneth and Janet Wenzel		The Air Quality Assessment was conducted in accordance with USEPA and FAA guidance. Also, note that the USEPA commended the MAC on the thorough air quality analysis in the Draft EA/EAW in its October 10, 2012, comment letter. Refer to Comment Letter #027 from the USEPA.
		See Response to Comment #003- 1 and General Responses GR # 01 GR # 02, GR # 03, GR #04 and GR # 05.
10/10/2012		026-2. Noise mitigation was included in the Draft EA/EAW. The proposed noise mitigation program was revised after the publication of the Draft EA/EAW. The proposed mitigation in the Draft EA/EAW was modified to base mitigation eligibility and timing on annually-developed actual noise contours instead of the 2020 Preferred Alternative noise contours. Thus, the proposed mitigation in the Final EA/EAW is based on actual noise contours. See General Response GR # 10.
		•

	027
WIED STATE	
UNITED STATES ENVIRONMENTAL PROTECTION AG	ENCY
REGION 5 77 WEST JACKSON BOULEVARD	
CHICAGO, IL 60604-3590	
10-10-12P03:16 PAINTED OCT 1 0 2012 (CANAL COM) REPLY TO THE A E-	
10-10-12P03:10 (EMAIL COPY) REPLY TO THE AT	
E-	9J
MSP 2020 Improvements Draft EA/EAW File	
C/O Environment Department	
Metropolitan Airports Commission 6040 28 th Avenue South	
Minneapolis, Minnesota 55450	
RE: Draft Environmental Assessment: Minneapolis-St. Paul Internation	al Airport – Proposed
2020 Improvements; Minneapolis, Hennepin County, Minnesota	
To Whom It May Concern:	
The U.S. Environmental Protection Agency (EPA) has reviewed a Draft Env	ronmental Assessment
(Draft EA) prepared by the Metropolitan Airports Commission (MAC) for th	e Federal Aviation
Administration (FAA) for proposed improvements to the Minneapolis-St. Pa (MSP) in Minneapolis, Minnesota. This letter provides our comments on the	Draft EA, pursuant to
our authorities under the National Environmental Policy Act (NEPA), the Co	uncil on Environmental
Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section Act.	n 309 of the Clean Air
	d within Hannanin
MSP is the primary air transportation hub of Minnesota. The airport is locate County, approximately seven miles south of downtown Minneapolis, and is of	perated by the
Metropolitan Airports Commission. MSP is the only major airport in the cou	ntry to have two
terminals located on entirely separate roadway systems. The need for the pro- based on the existing and projected unacceptable levels of service at MSP far	
Specifically, MSP is experiencing unacceptable levels of service within Term both landside ¹ and terminal facilities; the arrivals curb, parking, and internati	unal 1 - Lindberg at
currently congested. Additionally, the demand for gates at Terminal 2 - Hun	phrey exceeds capacity
during winter months. As passenger activity grows, the levels of service for including access roads, are expected to deteriorate further. Similarly, the levels	landside facilities,
terminals at gates, ticket counters, passenger check-in areas, security screeni	ng checkpoints, and
baggage claim areas are projected to deteriorate to unacceptable levels (base	I on standard airport
planning practices).	
¹ Landside facilities include terminal curb roadways, ground transportation centers, park facilities, and access roads.	ing facilities, rental car
Recycled/Recyclable • Printed with Vegetable Oil Based Inks on 100% Recycled Paper (50%	Postconsumer)

027 The MAC is proposing to address these needs through 2020 by implementing the Proposed Action. The overall purpose of the project is to accommodate the expected demand such that the airside and landside level of service at MSP is acceptable through the 2020 planning timeframe and that the regional roadway level of service is acceptable through the 2030 planning timeframe. Several alternatives were initially considered, with three alternatives being carried forward for detailed study in the Draft EA. Two build alternatives as well as a No Action alternative were studied. Build Alternative 1 – Airlines Remain includes the terminal and landside improvements needed by the year 2020. With this alternative, the terminal and landside facilities improvements consist of those necessary to accommodate forecasted airline growth within their current terminal Build Alternative 2 - Airlines Relocate includes terminal and landside improvements needed by the year 2020, and improvements are based on relocating all non-Sky Team airlines² to Terminal 2 – Humphrey. The No Action Alternative includes Airport-limited incremental improvements that will be implemented prior to 2020. These improvements are independent and will or have already received environmental approval or are categorically excluded from further environmental analyses. Alternative 2 was ultimately selected as the Preferred Alternative/Proposed Action. This alternative was selected as the Proposed Action when it was determined that MSP's 2-terminal system could be used more efficiently and in a manner that would relieve certain existing constraints at Terminal 1 – Lindberg. The Proposed Action, Airlines Relocate, involves relocation of non-Sky Team airlines (currently located in Terminal 1 - Lindberg) to Terminal 2 - Humphrey, in addition to many terminal, landside/roadway, and airside projects at both Terminals. Additionally, regional roadway improvements (out to 2030, as per Federal Highway Administration [FHWA] planning guidance) have been identified and studied, based on the existing 2030 Long Term Comprehensive Plan [LTCP] and background traffic growth. Proposed on-airport improvements as well as off-airport regional roadway improvements were summarized in Table ES 3.3 on page ES-5 of the Draft EA. In a scoping letter sent by EPA on January 7, 2011, to Mr. Roy Fuhrmann of MAC, EPA provided and you will be any contract of the proposed project. EPA appreciates the detailed information and analysis provided in Appendices to the Draft EA, particularly as they relate to studies undertaken for air quality and noise. EPA's comments on the Draft EA primarily relate to historical properties, water quality, cumulative impacts, and energy use/conservation. Comments are categorized by topic and are as follows. HISTORIC PROPERTIES/REVISIONS TO AREA OF POTENTIAL EFFECT (APE) 1. The Draft EA discusses SHPO concurrence on the original APE (concurrence date of 2/8/2011) and on a revised APE (concurrence date of 11/16/2011). Additionally, the APE was revised again and on a reviser the contract of the second coordinating with the SHPO to obtain concurrence with the updated APE ... " Narrative information provided in Section ES 4.3 of the Draft EA stated that there is a potentially eligible ² All airlines except for Delta Airlines and its alliance partners.



Department of Transportation's (MnDOT) Almaz Pond. These ponds were designed to reduce total suspended solids (TSS) discharges to the Minnesota River (the receiving waterbody for all stormwater ponds) by 80%. Review of aerial photography and U.S. Geological Survey (USGS) topographic maps shows that Ponds 1 and 2, as well as the MnDOT pond located between Ponds 1 and 2, appear to have been constructed in first order unnamed tributaries to the Minnesota River. While the streams do not appear as blue line streams on USGS topographic maps, they do show as "v-notch contours." These "crenulations" are assumed to represent the incision into the landscape that has been affected by the stream channel, and can generally be used to infer the extent of a stream channel, particularly a first-order (headwater) stream.

Recommendation: EPA is unclear on why these areas were selected for construction of MSP's stormwater ponds. EPA recommends that the Final EA provide additional information on the timeframes when these ponds were constructed, and whether or not they were constructed in regulated Waters of the United States. If Ponds 1 and 2 were in fact constructed as in-stream ponds, please explain why a Water of the U.S. was used to receive (and treat) stormwater before discharging to the Minnesota River (a waterbody listed as impaired under Section 303(d) of the Clean Water Act). EPA requests additional information be provided on this issue. Why were stormwater ponds not constructed in upland areas?

WETLANDS

1. As noted above, Section 5.18.1.4 of the Draft EA discusses MSP Stormwater Ponds 1-4 as well as the Minnesota Department of Transportation's (MnDOT) Almaz Pond. Review of aerial photography and USGS topographic maps shows that Ponds 3 and 4, as well as the "South Retention Basin No. 3 (494 pond)" appear to have been constructed in wetlands directly abutting the Minnesota River. Pond 3 appears to have been constructed in a wetlands abutting Snelling Lake, a large open water body to which it discharges, adjacent to the Minnesota River. Pond 4 appears to have been constructed in wetlands directly abutting the Minnesota River. Fond 4 appears to have been constructed in wetlands directly abutting the Minnesota River, to which Pond 4 discharges. The 494 pond also appears to have been constructed in wetlands abutting the Minnesota River.

Recommendation: EPA is unclear on why these areas were selected for construction of MSP's stormwater ponds. EPA recommends that the Final EA provide additional information on the timeframes when these ponds were constructed, and whether or not they were constructed in

³ This pond also appears to have required a U.S. Army Corps of Engineers Section 404 permit (MVP-2006-07216).

027-1. The FAA submitted their finding of No Historic Properties Affected for Phase I of the Preferred Alternative to the SHPO and the Tribes with the Draft EA. After reviewing the documentation provided by the FAA, the SHPO concurred with the FAA's finding for Phase I. The finding and related correspondence are included in Appendix F. Updated information regarding the consultation is provided in Section 5.11.5 of the Final EA/EAW.

027-2. Design plans for MSP Ponds 1 and 2 are dated April 2001. Pond 1 began operating in December 2001. Pond 2 began operating in September 2003.

2

3

4

5

027-3 and 027-4. The MSP stormwater ponds were not constructed in Waters of the United States. MSP ponds 1 and 2 were constructed in locations formerly containing concrete stormwater drainage channels for highway and airport stormwater runoff. The channels were constructed in the late 1950's. Refer to State of Minnesota **Department of Highways** Construction Plan for Grading & Surfacing Trunk Highway No. 5 (State Project No. 2732-34) dated April 2, 1958. Federal environmental review was completed for all the stormwater ponds. The Dual Track Airport Planning Process, Twin Cities Metropolitan Area Final Environmental Impact Statement (FEIS) Section 4(f) Evaluation, US Department of Transportation Federal Aviation Administration and Metropolitan Airports Commission, May 1998 discusses Ponds 1 and 2. The Final Environmental Assessment -Drainage Improvement Project on Department of Veterans Affairs

Property, Metropolitan Airports
Commission and URS/BRW, Inc.,
March 2001 addresses Pond 1
and the Almaz pond.
It is also noted that neither the
No Action Alternative nor either
of the Action Alternatives will
have any effect on the location of
the MSP ponds.
the Mar pollus.
027-5. Original design plans for
MSP Ponds 3 and 4 are dated
February 1980. Ponds 3 and 4
were constructed in 1980 and re-
constructed in 2012. See
Responses to Comments 027-6
and 027-7 on the next page for
additional information.

027

6

7

8

10

regulated Waters of the United States. If Ponds 3, 4, and the MnDOT pond were in fact constructed in wetlands, please explain why a Water of the U.S. was used to receive (and treat) stormwater before discharging to the Minnesota River (a waterbody listed as impaired under Section 303(d) of the Clean Water Act), and EPA requests additional information be provided on this issue. Why were stormwater ponds not constructed in upland areas?

2. EPA's cursory review of aerial photography indicates that wetlands appear to be present at several locations in the vicinity of proposed improvements; these potential wetland areas are not shown on the National Wetland Inventory (NWI) maps. EPA's concerns are primarily located in the vicinity of proposed upgrades to Trunk Highway 5 at Glumack Drive; this area was noted as having "wetland characteristics" in Section 5.19 of the Draft EA.

Recommendations: EPA's recommendations are as follows:

- To know definitively where wetlands (and streams and other regulated Waters of the United States) are located, a wetland delineation will need to be completed. The delineation should be submitted to the U.S. Army Corps of Engineers (USACE) for verification of wetland boundaries. EPA recommends that the delineation be completed and verified by the USACE before the Final EA is released.
- EPA is aware that MAC believes that wetland characteristics at this location are maninduced, and that MAC has contacted USACE (correspondence dated July 3, 2012) requesting that "the USCOE verify in writing that the USCOE does not have jurisdiction over the Potential Wetland." EPA requests that the Final EA include additional information on the status of any wetland delineations, investigations, or results of consultation with the USACE
 gearding the status of, or jurisdiction of, any identified wetland areas.
- If USACE determines that any areas within the footprint of proposed projects are wetland, EPA requests that the Final EA include information (and a map) of those wetland areas, along with the USACE's jurisdictional determination, narrative information on which agency(ies) have jurisdiction over which wetlands, and a summary of potential total wetland impact acreage, proposed mitigation, mitigation ratios, etc.

GROUNDWATER

Section 5.18.2.5 of the Draft EA states that aircraft deicing may have the potential to impact
groundwater, but that "...the two Action Alternatives would be expected to reduce the overall
potential for groundwater impacts because each alternative includes the construction of new
pavements with storm sewer systems that will likely include design criteria to improve collection
of glycol-impacted stormwater."

Recommendation: EPA recommends that, in the Final EA, MAC/FAA commit to design criteria 11 to improve collection of glycol-polluted stormwater.

CUMULATIVE IMPACTS

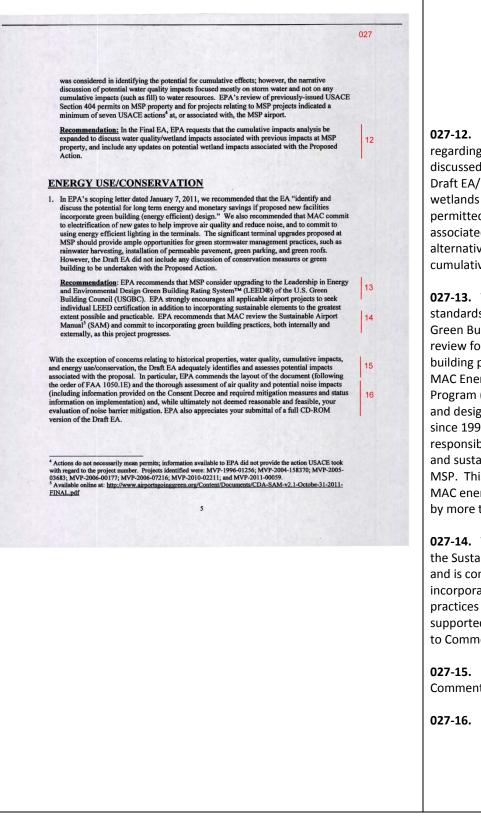
 Section 5.21.2 discusses impact categories not considered in identified the potential for cumulative effects; wetlands were not included in the list of considered categories. Water quality

4

027-6 and 027-7. The MSP stormwater ponds were not constructed in Waters of the United States. Ponds 3 and 4 were constructed in locations that were non-jurisdictional wetlands. Federal environmental review was completed for all the stormwater ponds. The Environmental Information Document (EID) -Snelling Lake Stormwater Retention Basin No. 2 - Wold Chamberlain Field, Metropolitan Airports Commission and E.A. Hickok and Associates, 1979 was completed for what is now known as Ponds 3 and 4. The Environmental Assessment -North Side Storm Sewer Improvements and Runway 30R Approach Lighting System -Minneapolis-St. Paul International Airport, Metropolitan Airports Commission, May 2011 addresses improvements to Ponds 3 and 4. It is also noted that neither the No Action Alternative nor either of the Action Alternatives will have any effect on the location of the MSP ponds.

027-8. The entire study area was reviewed to determine if any locations exhibited wetland characteristics. Only one location, the area near TH 5 and Glumack Drive, exhibited wetland characteristics. A wetland delineation was completed at this location. The USACE has determined that the location identified with wetland characteristics is not a part of the "waters of the United States" as defined in 40 CFR 328.8(a)(3). In addition, the wetland characteristics were man-induced and therefore exempt from the WCA. Therefore, no wetlands per state / federal regulations are located within the study area.

027-9. The USACE has determined the area near TH 5 and Glumack Drive that exhibited wetland characteristics is not part of the "waters of the United States" as defined in 40 CFR 328.8(a)(3). The Final EA/EAW includes correspondence documenting the USACE's determination.
027-10. See Response to Comment #027-9.
027-11. The Action Alternatives include a reconfigured runway 30L dedicated deicing pad with new storm sewers. New deicing pad technology in use by the MAC currently includes the most advanced best management practices available for collection of spent deicing fluid. However, there may be new construction developments that emerge prior to the construction of the deicing pad. Therefore, the MAC will evaluate emerging industry design criteria that may improve the collection of glycol-impacted stormwater prior to construction of the new deicing pad



027-12. Cumulative effects regarding water quality were discussed in Section 5.21.4 of the Draft EA/EAW. There are no wetlands or Section 404 permitted action impacts associated with any of the alternatives, so there are no cumulative impacts.

027-13. The MAC's design standards specifically require a Green Building and sustainability review for all terminal and building project designs. The MAC Energy Conservation Program (MECP) has had policies and design standards in place since 1999 to focus on fiscally responsible energy conservation and sustainability measures at MSP. This program has reduced MAC energy consumption at MSP by more than 20% since 1999.

027-14. The MAC is familiar with the Sustainable Airport Manual and is committed to incorporating Green Building practices wherever they can be supported fiscally. See Response to Comment #027-13.

027-15. See Responses to Comments #027-1 through 14.

027-16. Comments noted.

027 Thank you for the opportunity to review and comment on this Final EA and Draft FONSI. We are available to discuss our comments with you in further detail if requested. Please send us a copy of the final, signed FONSI once it becomes available. If you have any questions about this letter, please contact Ms. Liz Pelloso, PWS, of my staff at 312-886-7425 or via email at pelloso.elizabeth@epa.gov. Sincerely, JA. Wall Kenneth A. Westlake, Chief NEPA Implementation Section Office of Enforcement and Compliance Assurance Kandice Krull, FAA cc: Phil Forst, FHWA Melissa Jenny, USACE-St. Paul District (2011-00061-MMJ) Rich Davis, USFWS Mary Ann Heidemann, Minnesota Historical Society (SHPO) Lisa Joyal, MnDNR Melissa Doperalski, MnDNR Linda Peterson, Mn BWSR Roy Fuhrmann, MAC 6

 Sirois Kron, Christene Sirois Kron, Christene From: charlene shaeffer [cmshaeffer@yahoo.com] Sent: Thursday, October 11, 2012 6:23 AM To: msp2020drafteaw Subject: airport noise This plan needs a more extensive environmental review – an Environmental Impact Statement – instead of a mere assessment. This plan has inadequate noise modeling and does not adequately consider the health impacts of airport noise and pollution. A big problem is that it doesn't even consider RNAV- which could be coming soon and could change things quite a bit. The review should include RNAV. This plan, which anticipates a large increase in flights by 2030 basically offers no mitigation. There is no plan for mitigation until the number of flights dramatically increases. This is not even consistent with what MAC had done in the past, which is to produce annual maps and mitigate when those maps show that homes are exposed to more noise. Mitigation should at least be based on changes in noise, not some arbitrary number of flights. Years ago, all types of studies were made and the data tweaked to prove that there was no need to move the airport. Less than a year after the expansion the numbers projected of increased flights (and increased noise) proved to be woefully low. Our neighborhoods suffer daily from noise and pollution from - sometimes - non stop overflying planes. Our lake district has become a place where you can sit and enjoy the view - but don't try to hold a conversation - because you won't be able to. Sitting outside and visiting with neighbors, watching our children play, or just reading a book. All of these are impacted by constant noise of planes. Not for a minute or two - but for 20 or 30 minutes at a time. If a restaurant, pub, or another neighbor was making that kind of noise - it would be AGAINST the law. Shouldn't the airport show the same respect for the state that has nutured it for years! Charlene 	1 2 3 4	028-1. The Air Quality Assessment was conducted in accordance with USEPA and FAA guidance. Also, note that the USEPA commended the MAC on the thorough air quality analysis in the Draft EA/EAW in its October 10, 2012, comment letter. Refer to Comment Letter #027 from the USEPA. Also, see General Response GR #
 This plan needs a more extensive environmental review – an Environmental Impact Statement – instead of a mere assessment. This plan has inadequate noise modeling and does not adequately consider the health impacts of airport noise and pollution. A big problem is that it doesn't even consider RNAV- which could be coming soon and could change things quite a bit. The review should include RNAV. This plan, which anticipates a large increase in flights by 2030 basically offers no mitigation. There is no plan for mitigation until the number of flights dramatically increases. This is not even consistent with what MAC had done in the past, which is to produce annual maps and mitigate when those maps show that homes are exposed to more noise. Mitigation should at least be based on changes in noise, not some arbitrary number of flights. Years ago, all types of studies were made and the data tweaked to prove that there was no need to move the airport. Less than a year after the expansion the numbers projected of increased flights (and increased noise) proved to be woefully low. Our neighborhoods suffer daily from noise and pollution from - sometimes - non stop overflying planes. Our lake district has become a place where you can sit and enjoy the view - but don't try to hold a conversation - because you won't be able to. Sitting outside and visiting with neighbors, watching our children play, or just reading a book. All of these are impacted by constant noise of planes. Not for a minute or two - but for 20 or 30 minutes at a time. If a restaurant, pub, or another neighbor was making that kind of noise - it would be AGAINST the law. Shouldn't the airport show the same respect for the state that has nutured it for years! 	2	Assessment was conducted in accordance with USEPA and FAA guidance. Also, note that the USEPA commended the MAC on the thorough air quality analysis in the Draft EA/EAW in its October 10, 2012, comment letter. Refer to Comment Letter #027 from the USEPA.
 Statement – instead of a mere assessment. This plan has inadequate noise modeling and does not adequately consider the health impacts of airport noise and pollution. A big problem is that it doesn't even consider RNAV- which could be coming soon and could change things quite a bit. The review should include RNAV. This plan, which anticipates a large increase in flights by 2030 basically offers no mitigation. There is no plan for mitigation until the number of flights dramatically increases. This is not even consistent with what MAC had done in the past, which is to produce annual maps and mitigate when those maps show that homes are exposed to more noise. Mitigation should at least be based on changes in noise, not some arbitrary number of flights. Years ago, all types of studies were made and the data tweaked to prove that there was no need to move the airport. Less than a year after the expansion the numbers projected of increased flights (and increased noise) proved to be woefully low. Our neighborhoods suffer daily from noise and pollution from - sometimes - non stop overflying planes. Our lake district has become a place where you can sit and enjoy the view - but don't try to hold a conversation - because you won't be able to. Sitting outside and visiting with neighbors, watching our children play, or just reading a book. All of these are impacted by constant noise of planes. Not for a minute or two - but for 20 or 30 minutes at a time. If a restaurant, pub, or another neighbor was making that kind of noise - it would be AGAINST the law. Shouldn't the airport show the same respect for the state that has nutured it for years! 	2	Assessment was conducted in accordance with USEPA and FAA guidance. Also, note that the USEPA commended the MAC on the thorough air quality analysis in the Draft EA/EAW in its October 10, 2012, comment letter. Refer to Comment Letter #027 from the USEPA.
 This plan, which anticipates a large increase in flights by 2030 basically offers no mitigation. There is no plan for mitigation until the number of flights dramatically increases. This is not even consistent with what MAC had done in the past, which is to produce annual maps and mitigate when those maps show that homes are exposed to more noise. Mitigation should at least be based on changes in noise, not some arbitrary number of flights. Years ago, all types of studies were made and the data tweaked to prove that there was no need to move the airport. Less than a year after the expansion the numbers projected of increased flights (and increased noise) proved to be woefully low. Our neighborhoods suffer daily from noise and pollution from - sometimes - non stop overflying planes. Our lake district has become a place where you can sit and enjoy the view - but don't try to hold a conversation - because you won't be able to. Sitting outside and visiting with neighbors, watching our children play, or just reading a book. All of these are impacted by constant noise of planes. Not for a minute or two - but for 20 or 30 minutes at a time. If a restaurant, pub, or another neighbor was making that kind of noise - it would be AGAINST the law. Shouldn't the airport show the same respect for the state that has nutured it for years! 		USEPA commended the MAC on the thorough air quality analysis in the Draft EA/EAW in its October 10, 2012, comment letter. Refer to Comment Letter #027 from the USEPA.
to move the airport. Less than a year after the expansion the numbers projected of increased flights (and increased noise) proved to be woefully low. Our neighborhoods suffer daily from noise and pollution from - sometimes - non stop overflying planes. Our lake district has become a place where you can sit and enjoy the view - but don't try to hold a conversation - because you won't be able to. Sitting outside and visiting with neighbors, watching our children play, or just reading a book. All of these are impacted by constant noise of planes. Not for a minute or two - but for 20 or 30 minutes at a time. If a restaurant, pub, or another neighbor was making that kind of noise - it would be AGAINST the law. Shouldn't the airport show the same respect for the state that has nutured it for years!	4	#027 from the USEPA.
planes. Our lake district has become a place where you can sit and enjoy the view - but don't try to hold a conversation - because you won't be able to. Sitting outside and visiting with neighbors, watching our children play, or just reading a book. All of these are impacted by constant noise of planes. Not for a minute or two - but for 20 or 30 minutes at a time. If a restaurant, pub, or another neighbor was making that kind of noise - it would be AGAINST the law. Shouldn't the airport show the same respect for the state that has nutured it for years!	4	
All of these are impacted by constant noise of planes. Not for a minute or two - but for 20 or 30 minutes at a time. If a restaurant, pub, or another neighbor was making that kind of noise - it would be AGAINST the law. Shouldn't the airport show the same respect for the state that has nutured it for years!	1	01.
Charlene	5	028-2. As explained in the introduction to this appendix, the RNAV project is separate from the
		airport development project and the alternatives analyzed in the Draft EA/EAW. The proposed RNAV procedures are the subject of a separate NEPA process being completed by FAA Air Traffic Organization.
10/11/2012		While the EA/EAW does not provide environmental review or approval of the proposed RNAV procedures, the proposed RNAV procedures have been incorporated into the forecasted scenarios noise contours in the Final EA/EAW.
		Also, see the response to Comment #003-1 and General Responses GR # 02, GR # 03, GR # 04, GR # 05, GR # 06, GR # 07, and GR # 08.
		028-3. As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action.

That said, mitigation was proposed in the Draft EA/EAW to address the increase in noise due to the natural growth in operations. The mitigation addresses the change in noise due to the natural growth in aircraft operations that would occur with or without the Preferred Alternative.
The proposed noise mitigation program was revised after the publication of the Draft EA/EAW. The proposed mitigation in the Draft EA/EAW was modified to base mitigation eligibility and timing on annually-developed actual noise contours instead of the 2020 Preferred Alternative noise contours. Thus, the proposed mitigation in the Final EA/EAW is based on actual noise contours.
See General Response GR # 10.
028-4. Comment noted. See General Responses GR # 02 and GR # 05.
028-5. See General Responses GR # 05 and GR # 07.

029
029-1. Comment noted.
ort expansion plans. I have past few years, and I have not 029-2. As explained in the
introduction to this appendix, the growth in operations would occur naturally with or without the
Proposed Action. As identified in the Draft EA/EAW no
environmental category impacts exceed the level of significance as
defined by NEPA, CEQ Regulations, FAA Orders 1050.1, Environmental Impacts: Policies and Procedures, FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions, MEPA and the EQB rules implementing the MEPA. Therefore, an EIS is not required. See General Responses GR # 01, GR # 02 and GR # 08.
029-3. See General Responses GR # 05, GR # 08 and GR # 10.
029-4. As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action.
That said, mitigation was proposed in the Draft EA/EAW to address the increase in noise due to the natural growth in operations. The mitigation addresses the change in noise due to the natural growth in aircraft operations that would occur with or without the Preferred Alternative. See General Responses GR # 05, GR # 06, GR # 09, and GR # 10.
See Ge

		030-1. The economic projections
Siraia Kron Christona 030	Page 1 of 1	used in the forecast were
		provided by the Metropolitan
From: Michael-K [michael3442@yahoo.com] Sent: Thursday, October 11, 2012 11:28 AM		Council, Woods & Poole
To: Dan Boivin		Economics, the U.S. Department
Cc: msp2020drafteaw		of Energy, and the FAA, all of
Subject: EA/EAW statement 10-11-2012 Commissioners:		which are independent of the
I would like to take this opportunity to add several comments to the debate over the MSP EA/EAW. My		MAC and its consultants. In
concerns are whether the assumptions for MSP's future economic growth are realistic and whether the addition of RNAV doesn't warrant broadening the parameters of the current EA/EAW.		addition, the FAA reviewed and
As to the former, my opinion of the likelihood of moderate economic growth being the prevailing condition		approved the aviation activity
over the next dozen years, is based on my work as a Technical Stock Analyst; as such, I am daily looking at domestic and worldwide economic conditions in an attempt to identify economic and political trends that may impact tradeable capital markets. Unfortunately, I do not see a economic pathway going forward that is built on a foundation of genuine growth in organic rather than manufactured economic conditions. In recent years we have suffered the bursting of the technology bubble, the real estate bubble, and the		forecasts used in the Draft EA/EAW.
worldwide banking collapse. The current attempt by the Federal Reserve Bank to inflate our economy out of the resulting stagnation, after more than thirty years of relentless credit expansion, will do nothing more		As explained in the introduction
than increase the scale and certainty of the coming collapse.	1	to this appendix, the growth in
With this viewpoint, I have to question the growth forecast that MSP has made part of their analysis forming the foundation upon which a decision to move forward with the EA/EAW is based. Were I charged		operations would occur naturally
with adding my name to a major airport upgrade and expansion process costing tens of millions of dollars, I would want to be certain the economic analysis upon which the plan is based is as clear and unbiased as is possible. I will therefore suggest that an independent review of the economic projections put forward in this EA/EAW be conducted prior to the making of a final decision. If such an independent analysis were to show that traffic at MSP were more likely to be flat - or even decline over the next decade, then such a projection may warrant a reworking of the various pieces of the EA/EAW along with a several year delay		with or without the Proposed Action.
to see if the economy is able to find bedrock upon which to grow.		The projects included in the
And, as concerns RNAV, I believe most MAC commissioners see that the FAA's implementation of the RNAV program is likely to be one of the most significant new operations that will impact the daily lives of most thereads of the proceeding the fact and the second provide the seco	2	Proposed Action will be
many thousands of metro area residents. For some it will have the beneficial effect of condensing overflights to a narrow track and therefore reducing noise directly over the heads of those living under the former much broader track. For others, this narrowing of overflight tracks will have the opposite effect and concentrate the noise, further increasing their experience of direct event noise possibly many times over what they are now subjected to. In a conversation with NOC's Roy Fuhrmann, Environmental Director, I made the comment that the current methodology for determining the effect of noise on residents near to		implemented when demand dictates.
airports does not seem to accurately reflect their experience on the ground. Mr. Fuhrmann's reply was that this is a condition that those who study and work with airport noise issues have known about for more than twenty years.		030-2. As explained in the
This being the case, then I question whether it isn't time for the leadership of a major metropolitan airport	1	introduction to this appendix, the
to take a closer look at this phenomenon to see whether the true experience of the affected residents can't be respected and pulled into the decision making process for the EA/EAW. Perhaps Mr. Fuhrman and his team at NOC can design and conduct an analysis using the latest methodologies for determining residents' actual experience of overflight noise issues.	3	RNAV project is separate from the airport development project and
At some point going forward, there will be a major metropolitan airport that leads the way at addressing this issue in a way that is both respectful to the reported experience of the residents, as well as fair to the	1	the alternatives analyzed in the
airlines that need to use the public's airspace to conduct their business. Considering my earlier comments on the possibility of economic growth being less than what is currently planned for, and the suggestion that this may warrant a revisiting of those projections, perhaps now would also be an opportune time to revisit the overflight noise issue through an Environmental Impact Statement (EIS). It could be that the current slowdown in the worldwide economy affords an unexpected window for MAC to take the lead in addressing the overflight noise issue by applying it's respected NOC staff and it's recent expenditure on	4	Draft EA/EAW. The proposed RNAV procedures are the subject of a separate NEPA process being
state of the art noise measuring equipment to this difficult problem.		completed by the FAA Air Traffic
Respectfully Submitted, Michael Kehoe		Organization.
		While the EA/EAW does not
10/11/2012		provide environmental review or approval of the proposed RNAV procedures, the proposed RNAV procedures have been incorporated into the forecasted scenarios noise contours in the Final EA/EAW. See General Response GR # 06.
		030-3. See General Response GR # 07.
		030-4. See General Response GR # 01.

Sirois Kron, Christene 031 From: M Morzenti [mmorzenti@yahoo.com] Sent: Thursday, October 11, 2012 11:32 AM To: msp2020drafteaw	Page 1 of 1	031-1. As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action.
 Subject: Proposed new airport plan. Hi, I would like to comment on the proposed new plan for the airport. I have serious concerns about expansion especially in light of the changes that have occurred over the last year which have significantly and negatively impacted the Standish Ericson and surrounding neighborhoods in South Minneapolis. It is clear that the nonstop flights and lower planes have made it feel like we are now living in a war zone with the unrelenting noise and vibrations causes by these flights. Without any clear plan to address neighboring communities concerns about existing flight changes. I cannot see how an expansion will do anything except increase the problems that the lack of concern the airport commission has shown for the people who actually live in the cities and are more concerned about the comfort of those who use their facilities. Before any plan for expansion the airport needs to address and fix the problems that addresses the health effects of the dramatic increase in flight noise on our neighborhoods. 	1 2 3	That said, mitigation was proposed in the Draft EA/EAW to address the increase in noise due to the natural growth in operations. The mitigation addresses the change in noise due to the natural growth in aircraft operations that would occur with or without the Preferred Alternative.
<text></text>		The forecast flight tracks used in the Draft EA/EAW (2020 and 2025) included operational assumptions based on recent FAA ATC implementation of increased heading dispersion for northbound departure operations off Runway 30R as requested by the City of Minneapolis, the MSP Noise Oversight Committee (NOC) and the MAC. Additionally, the HESTN ONE and SLAYR ONE Area Navigation (RNAV) Standard Instrument Departures (SIDs) off Runway 17, as implemented on November 30, 2012 by FAA ATC, per the request of the NOC and MAC, were modeled in the forecast flight tracks in the Draft EA/EAW. See page G-43 of Appendix G.
		See General Responses GR # 05 and GR # 10. 031-2. There are numerous factors involved in the perceived change in flight paths since September 2010. The fleet mix has evolved at MSP and now there are more regional jets using the airport than ever before. The regional jets have replaced turbo props. The increase in regional jets coupled with the decrease in turbo props has created a more compatible fleet mix that requires

less of a need to fan out to ensure safe operations. In addition, the Air Traffic Control Tower returned to a more rigorous adherence to existing runway assignment procedures due to the near miss in September 2010. This has resulted in some northbound departures being moved back to an area they were prior to the downturn in traffic but did not create new flight paths or procedures. The net result is a higher percentage of jets that fly in a narrower corridor (due to compatibility of mix) at a lower altitude (due to operating characteristics of the aircraft). See General Response GR # 05 and GR # 10. **031-3.** As identified in the Draft EA/EAW no environmental category impacts exceed the level of significance as defined by NEPA, CEQ Regulations, FAA Orders 1050.1, Environmental Impacts: Policies and Procedures, FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions, MEPA and the EQB rules implementing the MEPA. Therefore, an EIS is not required. See General Responses GR # 01 and GR # 08.

guess, is very noisy. As a our neighborhood just a we are already dealing v hope you consider the i other areas but with us	ne Fire Weiss [ericdweiss@gmail.com] Thursday, October 11, 2012 11:32 AM msp2020drafteaw Airport Noise I and Ave S in South Minneapolis. I am right next to the freeway which, as you can a major road with a fire station, 38th St is also very noisy. Any airplane that flies over adds to the noise and greatly reduces the livability of our area. For us along the freeway with noise and have received little attention paid to it in comparison to the airport. I mpact to our corridor with a heightened sense of awarness. Yes, the plane noise affects it's a breaking point and honestly an environmental justice issue. Airports are ays, but don't burden us with both.	032-1. As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action. That said, mitigation was proposed in the Draft EA/EAW to address the increase in noise due to the natural growth in operations. The mitigation addresses the change in noise due to the natural growth in aircraft operations that would occur with or without the Preferred Alternative.
Fric Weiss 3753 2nd Ave S, Mpls 5		The aircraft noise analysis in the Draft EA/EAW was done in a manner compliant with the environmental review requirements for proposed airport actions. The area of evaluation includes many locations that border other forms of transportation including major roadways. Aircraft noise calculations do not include road noise. However, in the areas around the airport where aircraft noise is likely to have an impact on the overall noise levels, residential sound mitigation has been provided, or is being proposed as part of the noise mitigation outlined in the Draft EA/EAW. Environmental Justice was addressed in Section 5.17.3 of the Draft EA/EAW. Since none of the alternatives would result in impacts exceeding the thresholds of significance for any of the impact categories, it was concluded there would not be high and adverse human health or environmental impacts. Therefore, none of the alternatives would disproportionately affect minority and/ or low –income populations. Also, see General Response GR # 10.

From: vanessa coldwater [waterbirthresources@yahoo.com] Sent: Thursday, October 11, 2012 11:36 AM To: msp2020drafteaw Subject: Need EIS! Dear Mr. Fuhrmann, I have lived in the Powderhorn Park neighborhood for 13 years. For a year and a half there has been an increase in flights overhead as well as the frequency, the early and late flights, and incredible amount of noise because the fleet mix has changed and they are flying lower. I am ready to move. The airport noise has managed to do what violence, prostitution and drug dealing have not threaten to drive me from my home and community. My entire family sleeps poorly and spends less time outside because the noise in the park and yard is intolerable. I would be willing to be three are health effects from emissions as well as noise. It is essential that a full Environmental Impact Statement be conducted before any expansion of the airport or increase in flights over our neighborhood is considered. Please take into account the livability of our city and health of its citizens. Sincerely, Vanessa Stephens Coldwater 612.747.9096 Sincerely, Vanessa Stephens Coldwater 612.747.9096 Sincerely, Since	Sirois	Kron, Christene 033	Page 1 of 1	033-1. As explained in the introduction to this appendix, the
10/11/2012	From: Sent: To: Subject: Dear Mr have lin been an ncredib ready to dealing l boorly a boorly a would b that a fu or increa of our ci Sincerel ^s	vanesa coldwater [waterbirthresources@yahoo.com] Thursday, October 11, 2012 11:36 AM msp2020drafteaw E: Need EIS! r. Fuhrmann, ved in the Powderhorn Park neighborhood for 13 years. For a year and a half there has increase in flights overhead as well as the frequency, the early and late flights, and be amount of noise because the fleet mix has changed and they are flying lower. I am o move. The airport noise has managed to do what violence, prostitution and drug have not threaten to drive me from my home and community. My entire family sleeps and spends less time outside because the noise in the park and yard is intolerable. I be willing to bet there are health effects from emissions as well as noise. It is essential all Environmental Impact Statement be conducted before any expansion of the airport ase in flights over our neighborhood is considered. Please take into account the livability ity and health of its citizens. IV, a Stephens Coldwater	1	Proposed Action. The forecast flight tracks used in the Draft EA/EAW (2020 and 2025) included operational assumptions based on recent FAA ATC implementation of increased heading dispersion for northbound departure operations off Runway 30R as requested by the City of Minneapolis, the MSP Noise Oversight Committee (NOC) and the MAC. Additionally, the HESTN ONE and SLAYR ONE Area Navigation (RNAV) Standard Instrument Departures (SIDs) off Runway 17, as implemented on November 30, 2012 by FAA ATC, per the request of the NOC and MAC, were modeled in the forecast flight tracks in the Draft EA/EAW. See page G-43 of Appendix G. Also, see General Responses GR # 01,
	10/11/2	2012		

Sirois Kron,	, Christene	034	Page 1 of 1
Sent: To: Subject: Attachments:	sallyguill@aol.com Wednesday, October 10, 2012 11:57 PM msp2020drafteaw opposition to plan Airport noise.doc ached letter in opposition to adding capability to send more airplanes over Lake	Harriet	
Sarah Guillet			
10/11/2012			

Sarah Guillet 4823 East Lake Harriet Parkway Minneapolis, MN 55 419 October 10, 2012 612-922-8269 MSP 2020 Improvements Draft EA/EAW File C/O Roy Fuhmann Metropolitan Airports Commission 6040 28 th Ave. S Minneapolis, MN 55450-8100	 034-1. There will be an average of 18 additional places over Lake Harriet. However, this will occur with or without the Proposed Action. As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action. Also, see General Responses GR # 05 and GR # 10. 034-2. As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the here introduction to this appendix, the growth in operations would occur naturally with or without the here introduction to this appendix, the growth in operations would occur naturally with or without the here introduction to this appendix, the growth in operations would occur naturally with or without the
<text><text><text><text><text><text></text></text></text></text></text></text>	Proposed Action. Also, see General Responses GR # 02 and GR # 11. 034-3. The Purpose and Need in Chapter 2 of the EA/EAW demonstrated the need and justification for the proposed project. The public was given the opportunity to review the Draft EA and provide comments on the proposed improvements. Both the MAC and the FAA reviewed the comments and seriously considered them before responding to them. Responses to comments are included in the Final EA. We have noted your comment against the proposed development.

Sincia Kana Christiana 035	Page 1 of 1	
From: Lynnea Forness [lforness@gmail.com]		
Sent: Thursday, October 11, 2012 12:13 PM To: msp2020drafteaw		
Subject: Airport Noise I'd like to request an Environmental Impact Statement, particularly about the health effects of	1 035-1.	See General Response GR
noise on neighborhoods.		nd GR # 08.
I have lived north of the airport since 1999 and the increasing noise has made it difficult for my family to enjoy being outside. It has also interrupted sleep and increased stress level.	2	See General Responses
Thank you,		5 and GR # 10.
Lynnea Forness Minneapolis		
10/11/2012		

	Page 1 of 1	
Sirois Kron, Christene 036	-	
 From: Susan Taylor [sootaylor1@gmail.com] Sent: Thursday, October 11, 2012 12:09 PM To: msp2020drafteaw Subject: Airplane Noise over Powderhorn Park The disruption of life and work by frequent low flights is at times intolerable. My husband is an attorney and I am a college English instructor: both of us do significant amounts of our work at home and find that we cannot complete telephone calls or concentrate when flights fly low overhead, plane after plane after plane. Our daughter's ability to focus on her homework or reading has been impacted. We all three have been awakened late at night and early in the morning by a low-flying airplane screaming over our house. We are at the point of leaving our neighborhood, but the frequent, low, extremely noisy airplanes over our home will make it even more difficult to sell our house. What Delta has done is confiscate our peace of mind, our enjoyment of our home, our health, and our property's value with no opposition from regulatory or elected officials. If you can do something about this, I beg you to. Thank you for considering our input. Susan Taylor 	1	036-1. See General Responses GR # 02, GR # 05, GR # 08, GR # 10, GR # 11 and GR # 12.
10/11/2012		

Sirois Kron, Christene 037 From: Joanne Jongsma [joanne@quotidian.org] Sent: Thursday, October 11, 2012 1:48 PM To: msp2020drafteaw	Page 1 of 1	037-1. As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action.
 Subject: Plane noise To whom it may concern: I was told that this was an email address where I could send comments about the airplane noise over my house. (3504 15th Ave. S, Minneapolis) I am not exactly sure what the new proposed airport plan entails, but I'd like to put in my 2 cents that the last 2 or 3 years, the airplane noise in our neighborhood has become rather outrageous. Some days it seems like there is just roar after roar of planes flying very low overhead. They are flying low and often. I have to pause conversations, movies, telephone calls often to wait until the plane is past, and then 2-5 minutes later, there's another one. In the summer when the windows are open, the noise is worst, but in the winter too, I often wake up to the noise of a low flying plane. This was not how it was when we first moved into the neighborhood. I have heard of a variety of reasons as to why this has been happening, but whatever it is, it has to stop. I worry about my children's hearing and our quality of life. Like most urban families, we live with the constant roar of traffic and other noises. Currently, this airplane noise trumps all other sounds, and it is never ending. Please keep this in consideration when planning new runways and regulations for take off and landing. 	1	That said, mitigation was proposed in the Draft EA/EAW to address the increase in noise due to the natural growth in operations. The mitigation addresses the change in noise due to the natural growth in aircraft operations that would occur with or without the Preferred Alternative.
July		The forecast flight tracks used in the Draft EA/EAW (2020 and 2025) included operational assumptions based on recent FAA ATC implementation of increased heading dispersion for northbound departure operations off Runway 30R as requested by the City of Minneapolis, the MSP Noise Oversight Committee (NOC) and the MAC. Additionally, the HESTN ONE and SLAYR ONE Area Navigation (RNAV) Standard Instrument Departures (SIDs) off Runway 17, as implemented on November 30, 2012 by FAA ATC, per the request of the NOC and MAC, were modeled in the forecast flight tracks in the Draft EA/EAW. See page G-43 of Appendix G. The Proposed Action does not include new runways or changes to air traffic procedures. See General Responses GR # 05, GR # 10, GR # 11 and GR # 08.

Sirois Kron Christene 038	Page 1 of 2	process began in November 2010
Sirois Kron, Christene 038 From: Emily Resseger [resseger@gmail.com] Sent: Thursday, October 11, 2012 1.48 PM To: msp2020drafteaw Subject: MSP 2020 EA/EAW comments Dear Mr. Fuhrmann- I I am writing to provide comments on the MSP 2020 Improvements Draft EA/EAW. As a civil engineer and environmental scientist, I am concerned with the haste this EA is being pushed through and do not believe all relevant impacts are being adequately addressed. In particular I have the following issues with the draft report: -The FAA's preferred method of measuring noise impacts, DNL contours, does not reflect on the ground changes in noise pollution and is a flawed method of analyzing impacts. As a south Minneapolis resident (Standish neighborhood) I have noticed a significant increase in airplane noise the past two years due to more overflights, in quicker succession, and at lower altitudes. However the DNL contour maps do not adequately reflect these changes because they are created with data provided by the aviation industry, not on the ground numbers, and are based on 24 hour averages. In my neighborhood it's not the totality of airplane noise over 24 hours that is impacting my quality of life, but the very low, very loud airplanes that tend to come once every couple of minutes for relatively short bursts of time. This small number of very disruptive flights will never significantly affect A 24 hour average, but does significantly affect ME and my pets and neighbors: our ability to watch TV or talk on the phone without waiting for a plane to go by, our ability to enjoy our yards, and our ability to sleep without being awoken by an airplane bu	-	 038-1. The Draft EA/EAW process began in November 2010 with community briefings. Public meetings were conducted in July 2011, January 2012 and September 2012, in addition to the Public Hearing held on October 1, 2012. In-depth analysis of environmental impacts including air quality and noise took place throughout 2011 and the first half of 2012. The Draft EA/EAW was published on August 30, 2012. Comments on the Draft EA/EAW were accepted until October 11, 2012. Submitted comments are addressed in this response to comments and in the Final EA/EAW. See General Response GR # 01. 038-2. See General Responses GR # 05 and GR # 07.
 and of the first proceeder of proceeder of proceeder of the current monitor of proceeder of a set of the transmission proceeder of the current of the current of the current of the current high volume of departures. I'm concerned with the planned increase in capacity it will be even more difficult to follow the RUS, and this should be addressed in the EA. -Any additional mitigation will only be provided if the number of flights dramatically increases, not if there are quantifiable changes in noise. While I believe the DNL contour method has serious drawbacks (see above), even if the DNL contour maps show additional noise impacts where historically mitigation would have been required (within the 60 DNL footprint), it will not be provided unless the the number of flights tracks, it is impossible to predict how many additional flights would cause DNL contours to shift significantly. Do to the large number of outstanding issues and omissions, I believe the more comprehensive EIS should be completed for this project. Thank you for opportunity to provide comments on the MSP 2020 Improvements Draft 10/11/2012 	4 5 6	GR # 05 and GR # 07. 038-3. As explained in the introduction to this appendix, the RNAV project is separate from the airport development project and the alternatives analyzed in the Draft EA/EAW. The proposed RNAV procedures are the subject of a separate NEPA process being completed by the FAA Air Traffic Organization. While the EA/EAW does not provide environmental review or approval of the proposed RNAV procedures, the proposed RNAV procedures have been incorporated into the forecasted scenarios noise contours in the Final EA/EAW.
		 See General Responses GR # 06 and GR # 10. 038-4. See General Response GR # 09. 038-5. The proposed noise mitigation program was revised after the publication of the Draft EA/EAW. The proposed mitigation in the Draft EA/EAW

was modified to base mitigation eligibility and timing on annually- developed actual noise contours instead of the 2020 Preferred Alternative noise contours. Thus, the proposed mitigation in the Final EA/EAW is based on actual noise contours. See General Response GR # 10.
038-6. See General Response GR # 01.

EA/EAW.	038	Page 2 of 2	
Emily Resseger, PE 3640 27th Avenue South Minneapolis, 55406 612-822-0637			
10/11/2012			

039-1. As explained in the Page 1 of 1 introduction to this appendix, the 039 Sirois Kron, Christene growth in operations would occur From: Kathleen Regan [KRegan@seaburygroup.com] naturally with or without the Sent: Thursday, October 11, 2012 2:37 PM Proposed Action. To: msp2020drafteav Cc: kathee.regan@yahoo.com; Kathleen Regan Subject: Airport Noise and airport expansion - Nokomis That said, mitigation was Dear Roy Fuhrmann – Director of Environment MAC. proposed in the Draft EA/EAW to I writing to voice my comments regarding airport noise over Nokomis and possible impacts regarding address the increase in noise due the new airport expansion plans. We live at 4442 32nd Ave S and have been here since 2003. We absolutely love our neighborhood being close to the creek, Fort Snelling, Minnehaha Falls and the lakes to the natural growth in and trails. We have invested in completely gutting and redoing our house top to bottom to stay in this operations. The mitigation While my husband and I both travel for work and enjoy the convenience of being close to the airport, addresses the change in noise the noise level has consistently gotten worse since we've lived here. ESPECIALLY in the past few weeks. We have noticed a CONSIDERABLE difference in noise from planes, flying lower over our house (even due to the natural growth in with the cooler weather and closed windows). Our new 2009 Andersen windows never rattled where as aircraft operations that would now they are rattling several times a day and the noise is significant even with all windows closed and being in our basement - sometimes we have to turn up the TV and often talk louder, stop phone occur with or without the conversations momentarily while a plane passes. I am a consultant (and work in the airline industry) and work from home often - this has severely impacted my ability to do business at home. I must Preferred Alternative. retreat to the basement to conduct professional calls for fear of an airplane passing by and even then I just cross my fingers one won't come by !!! The forecast flight tracks used in We also have a new baby and are now thinking long term of where we want to be. Even with all our new investments in our house - with the news of this expansion, we don't know we can stay in this the Draft EA/EAW (2020 and neighborhood - which we love and adore. We have long planned to look for a bigger house in the area to stay here, but now are thinking seriously of leaving with these new plans and the impacts. I would 2025) included operational 2 expect we would experience a significant loss in our investments in our house due to the expansion and noise, let alone impediments to our personal and professional daily routine in our own home!!! I assumptions based on recent FAA haven't even mentioned the impacts in summer time and trying to be in our backyard. ATC implementation of increased It seems outrageous to me the airport needs to grow even bigger - MSP is a huge airport already and heading dispersion for 3 passenger traffic considerably less in these past years. We travel often and this airport seems already comparable in size if not bigger than many other major cities. And with bigger planes on the docket northbound departure operations there will be a huge impact on the surrounding neighborhoods in noise pollution - especially the lakes area for which the twin cities is so famous for; which draws talent and families, which encourages off Runway 30R as requested by businesses to invest, etc. My neighborhood especially is in a major regentrifying process. People are working hard on their houses and I would suspect (and as I've seen on neighborhood forums) having to the City of Minneapolis, the MSP think seriously about staying. Noise Oversight Committee (NOC) PLEASE PLEASE, I implore you to do a closer review of the environmental impacts (noise, pollution, and the MAC. Additionally, the 4 economic, social and community health). This is critical to so many that will be affected. **HESTN ONE and SLAYR ONE Area** Thank you for your consideration, Navigation (RNAV) Standard Kathleen Regan Instrument Departures (SIDs) off 651-247-4099 Kathee.regan@yahoo.com Runway 17, as implemented on November 30, 2012 by FAA ATC, per the request of the NOC and 10/11/2012 MAC, were modeled in the forecast flight tracks in the Draft EA/EAW. See page G-43 of Appendix G. See General Responses GR # 05 and GR # 10. **039-2.** See General Responses GR # 05, GR # 10 and GR # 11. **039-3.** As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action. The Purpose and Need in Chapter 2 of the EA/EAW demonstrated the need

and justification for the proposed project. The Proposed Action is needed to improve level of service at MSP. See Appendix O of the Draft EA/EAW. 039-4. The Draft EA/EAW was prepared in accordance with NEPA and the CEQ Regulations as well as FAA Orders 1050.1, Environmental Impacts: Policies and Procedures and 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions. It was also prepared in accordance with MEPA and the EQB rules implementing the statute. Also,
implementing the statute. Also, note that the USEPA commended the MAC on the noise and air quality analysis in the Draft EA/EAW. Refer to letter #027 from the USEPA. Also, see General Responses GR # 01, GR # 02, GR # 03, GR # 04 and GR # 08.

Sirois Kron, Christene 040	Page 1 of 1 Page 1 of 1 Page 1 of 1 RNAV project is separate from the
From: Miller, Nicole [NMiller@Briggs.com] Sent: Thursday, October 11, 2012 2:45 PM To: msp2020drafteaw Subject: MSP 2020 Improvements Draft EA/EAW File Mr. Fuhrmann and others: I am writing to you as a Southeast Minneapolis resident, regarding the proposed expansion of the Minneapolis-St. Paul International Airport and the proposed implementation of Area Navigation (RNAV). As part of this planning and potential development process, I believe an Environmental Impact Statement must be developed, and I demand such as a multi-year, property-owning tax-paying resident in close proximity to the airport. I am especially concerned	airport development project is separate from the airport development project and the alternatives analyzed in the Draft EA/EAW. The proposed RNAV procedures are the subject of a separate NEPA process being completed by the FAA Air Traffic Organization.
about the noise levels, which have already dramatically increased in the years I have lived here. Moreover, I believe <u>a mitigation plan needs to be put into place</u> . There absolutely needs to be a plan to reduce the aircraft noise impact on the communities near the airport – which includes all of Southeast Minneapolis. Regards, Nicole Nicole Miller Senior Marketing Manager Briggs and Morgan, P.A. Direct 612,977.8724 Fax 612,977.8650 miller@brings.com	² While the EA/EAW does not provide environmental review or approval of the proposed RNAV procedures, the proposed RNAV procedures have been incorporated into the forecasted scenarios noise contours in the Final EA/EAW.
2200 IDS Center 80 South 8th Street Minneapolis, MN 55402 CONFIDENTIALITY NOTICE: The information contained in this e-mail communication and any attached documentation may be privileged, confidential or otherwise protected from disclosure and is intended only for the use of the designated recipient(s). It is not intended for transmission to, or receipt by, any unauthorized person. The use, distribution, transmittal or re-transmittal by an unintended recipient of this communication is strictly prohibited without our express approval in writing or by e-mail. If you are not the intended recipient of this e-mail, please delete it from your system without copying it and notify the above sender so that our e-mail address may be corrected. Receipt by anyone other than the intended recipient is not a waiver of any attorney-client or work-product privilege. This email has been scanned for all viruses by the MessageLabs SkyScan service. (http://www.messagelabs.com)	The Draft EA/EAW was prepared in accordance with NEPA and the CEQ Regulations as well as FAA Orders 1050.1, Environmental Impacts: Policies and Procedures and 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions. It was also prepared in accordance with MEPA and the EQB rules implementing the statute. Also,
10/11/2012	note that the USEPA commended the MAC on the noise and air quality analysis in the Draft EA/EAW. Refer to letter #027 from the USEPA. Also, see General Response GR # 01.
	040-2. As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action.
	That said, mitigation was proposed in the Draft EA/EAW to address the increase in noise due to the natural growth in operations. The mitigation addresses the change in noise due to the natural growth in

aircraft operations that would occur with or without the Preferred Alternative.

The forecast flight tracks used in the Draft EA/EAW (2020 and 2025) included operational assumptions based on recent FAA ATC implementation of increased heading dispersion for northbound departure operations off Runway 30R as requested by the City of Minneapolis, the MSP Noise Oversight Committee (NOC) and the MAC. Additionally, the HESTN ONE and SLAYR ONE Area Navigation (RNAV) Standard Instrument Departures (SIDs) off Runway 17, as implemented on November 30, 2012 by FAA ATC, per the request of the NOC and MAC, were modeled in the forecast flight tracks in the Draft EA/EAW. See page G-43 of Appendix G.

See General Responses GR # 05 and GR # 10.

	Page 1 of 1	
Sirois Kron, Christene	041	
From: Steve Erickson [steveae33@yahoo.com]		
Sent: Thursday, October 11, 2012 3:01 PM		
To: msp2020drafteaw		
Subject: Airport Noise Impact		
To whom it may concern,		
Minneapolis Airport noise negatively affects my home life in several ways:		
My address is 4529 29th Ave South, Mpls 55406	1	
1) Reduction of property values		
Inability to have windows open in the summertime	4	
Unpredictable air noise prevents planning of outdoor backyard activities	1	041-1. As explained in the
		introduction to this appendix, the
Thank you for considering lowering the traffic in my neighborhood and compensation for home		
improvements necessary to reduce noise levels.	1	growth in operations would occu
-Steve Erickson		naturally with or without the
-SLEVE ERCKSON		
		Proposed Action. See General
		Responses GR # 05, GR # 10 and
		GR # 11.
		GR # 11.
10/12/2012		

<text><text><text><text><text></text></text></text></text></text>	<text><text><text><text><text><text></text></text></text></text></text></text>	Sirois Kron, Christene		042	Page 1 of 1
<text></text>	<text></text>	Sent: Thursday, Or To: msp2020drai Subject: MSP EA Cor Attachments: Met Council Good Afternoon Roy, Attached is the Council'	tober 11, 2012 3:03 PM teaw ments Draft EA Comments 10_11_12.pdf s comments regarding the draft EA. Paper copies	have been	
<text></text>	<text><text><text></text></text></text>	Regards,			
		EMAILLOGO.png	Senior Aviation Planner MTS Russell Owne@metc state mn us P. 651.602.1724 F. 651.602.1739 390 North Robert Street St. Paul, MN 55101 metrocouncil.org		
	10/12/2012	you are not the intended recipient, any reading this enail or examining any a email and any attachments.	dissemination of this email or any attachments is strictly prohibited, and you sh tachments. If you received this email in error, please notify the sender immediat	ould refrain from ely and delete this	
	10/12/2012				
10/12/2012		10/12/2012			

Metropolitan Cou	incil	
		-
October 11, 2012		
Roy Fuhrmann Vice President Management/Op Metropolitan Airports Commiss Minneapolis-Saint Paul Internat 6040- 28 th Avenue South Minneapolis, MN 55450-2799	sion	
and the provide the	The second se	
RE: MSP 2020 Improvemen (EAW) Metropolitan Council D Review File No. 21028		
Dear Mr. Fuhrmann:		
Assessment Worksheet for MS	as reviewed the Draft Environmental Assessment (EA) and Environmental SP 2020 improvements to determine its adequacy and accuracy in addressing impacts that warrant further investigation.	
accommodate the expected den facilities through 2020 and acc EA/EAW involve Terminal 1, 0	projects and improvements to the Airport that will allow the airport to nand at an acceptable level of service throughout MSP's terminal and landside cess to the regional roadway system through 2030. The major projects in this Concourse G remodel and expansion, Terminal 2 expansion, construction of new access inprovements involving interchanges with I-494 and Trunk Highway 5.	
regarding sewers. The Council	n EIS is not necessary for regional purposes, but the EA/EAW is incomplete staff has reviewed the document and has the following comments which should final EAW, and in proceeding with project development. We have also noted uired.	1, 2
Regional Parks (Jan Youngqu	uist, 651-602-1029)	
The EA is complete and accurat	te and an EIS does not appear to be necessary.	3
Advisory Comment:		
International Airport, Minnehaha Parkway, I Minnesota Valley Nation The improvements to M facilities; however, the	ional parks and trails in the general vicinity of the Minneapolis-St. Paul including Nokomis-Hiawatha and Minnehaha Regional Parks as well as Nine Mile Creck and Intercity Regional Trails. Fort Snelling State Park and the onal Wildlife Refuge are considered complements to the regional parks system. MSP outlined in the EA may result in an increase of noise at these park and trail the EA indicates that the noise impacts will not exceed the threshold of e, it was determined that there was not an impact to Section 4(f) resources outside	4
	the Trunk Highway 5 and Post Road intersection will be redeveloped and a new ost Road serves as the park entrance access road to Fort Snelling State Park.	5
	www.metrocouncil.org	
390 Robert Street North • St.	Paul, MN 55101-1805 • (651) 602-1000 • Fax (651) 602-1550 • TTY (651) 291-0904	
	An Equal Opportunity Employer	

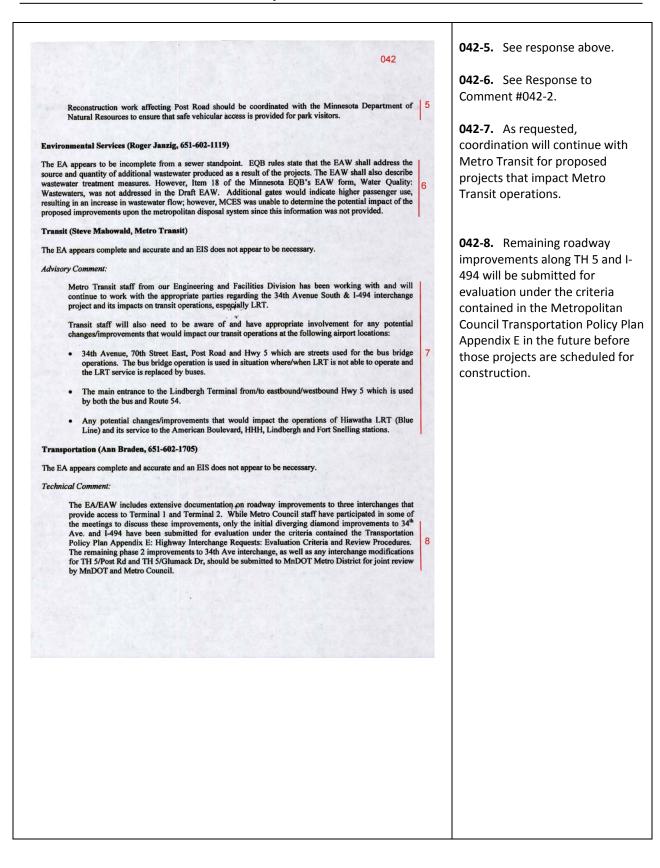
042-1. Comment noted.

042-2. The following text was added to the Final EA/EAW under Section 5.18.4. All wastewater generated on the MSP campus is treated by the Metropolitan Council Environmental Services (MCES) at its Metro Wastewater Treatment plant. The operating capacity of the Metro plant is 251 million gallons per day (MGD). The amount of wastewater generated is related to the number of enplanements. Since the number of enplanements is the same for the No Action Alternative and the Action Alternatives, the wastewater generation would be expected to be the same. However, the amount of wastewater would be reduced by incorporating lowflow restroom facilities in expanded or remodeled locations as part of the Action Alternatives. Therefore, the Action Alternatives would generate less wastewater than the No Action Alternative.

Enplanements are expected to grow by 28 percent from approximately 16.3 million in 2010 to approximately 20.9 million in 2020 regardless of the Alternative, including the No Action. A straight projection increases wastewater discharges from an average of 0.5 MGD to 0.6 MGD in 2020. The future change in wastewater generation at MSP is small relative to the capacity of the Metro plant.

Additional coordination with the Metropolitan Council was conducted after the publication of the Draft EA/EAW to address wastewater treatment capacity at MCES. Correspondence dated November 30, 2012 from the Metropolitan Council confirmed that the above text addresses

their wastewater comments.
Correspondence is included in
Appendix N of the Final EA/EAW.
042-3. Comment noted.
042-4. Comment noted.
U+z-4. Comment noted.
042-5. Comment noted. Text
was added to the Final EA/EAW to
note that Post Road serves as the
park entrance access road to Fort
Snelling State Park and that
coordination with the Minnesota
Department of Natural Resources
is required to ensure safe
vehicular access for park visitors
during TH 5/Post Road
construction.



042	42
<text><text><text><section-header><text><text><text><text></text></text></text></text></section-header></text></text></text>	if to index 9 Bits for the final in a proval will be obtained prior to constructing controlled access highway projects at Trunk Highway 5 or Interstate I-494 in accordance with MN Statute 473.166. This requirement is acknowledged in the Final EA/EAW (Section 5.17.2.6

Sirois	Kron, Christene	Page 1 of 1 043	043-1. See General Responses GR # 05 and GR # 10.
From: Sent: To: Subject I live in signific inform begins There i values over th anyway Dream	Brendan Downes [bdownes01@gmail.com] Thursday, October 11, 2012 3.41 PM msp2020drafteaw t: MSP Airport Expansion South Minneapolis near lake Hiawatha and Nokomis, and have noticed a ant increase in the airplane traffic noise. It seems we are in a constant battle to the MAC about increases in noise pollution, and once it subsides for awhile it	1 2 3	043-2. As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action. The Purpose and Need in Chapter 2 of the EA/EAW demonstrated the need and justification for the proposed project.
our ama were th years in same. Thanks, Brendar 4442 32	n Downes 2nd Ave S, polis, MN 55406	4	The Action Alternatives include primarily terminal (including gates) and landside improvements. The proposed airside improvements are limited to those needed to accommodate the terminal improvements such as extended service roads, relocated fuel lines and expanded aprons. The proposed airside improvements do not include changes to the runways. Data supporting the need to implement the Proposed Action are included in Appendix O of the Draft EA/EAW. Also, see General Responses GR # 05, GR # 10 and GR # 11.
10/12/	2012		043-3. The use of newer aircraft with quieter engine technology continues to increase at MSP. Regardless, the forecasted growth in aircraft operations at Minneapolis-St. Paul International Airport is anticipated to occur with, or without, the contemplated airport improvements. The variable factor is the level of service that will be provided to the traveling public, the improvements are intended to ensure an acceptable level of service in the future.
			043-4. Impacts to Section 4(f) properties including parks were considered in the Draft EA/EAW.

See Section 5.6, <i>Department of</i> <i>Transportation Act: Section 4(f)</i> of the Draft EA/EAW.
The MAC is continuing to plan aviation facilities to meet the need of the region. The proposed improvements are consistent with the Metropolitan Council's approval of the MAC LTCP in 2010.

				Page 1 of 1
Sirois Kron	, Christene		044	
From:		T) [Michael.J.Corbett@state.mn.us]		
Sent:	Thursday, October 11, 2			
То:	msp2020drafteaw; Sorer (DOT); Parzyck, Rebecc	enson, Deb (DOT); Irish, Bruce (DOT); ca (DOT); Lackey, Clare (DOT); Coddi riffith, John (DOT); Rauchle, Ron (DO	Fossand, Bryce (DOT); Craig ington, Ryan (DOT); Pedersen	, Scott (DOT);
	Fischer, Jose (DOT); Gri ann.braden@metc.state	riffith, John (DOT); Rauchle, Ron (DO e.mn.us; connie.kozlak@metc.state.mr n (DOT)	T); Jacobson, Nancy (DOT); n.us; Isaacson, Brian (DOT); C	zech, Paul
Cc:	Sherman, Tod (DOT); M			
Subject:	RE: EAW12-007 MSP A : EAW12-007-MSP_2020			
Hello,	. EAW 12-007-WSF_2020	-rollowopcetter.pdf		
	copy of MnDOT's follow up cerning this letter, please	up letter for the MSP Airport 2020 EA/ e let me know.	EAW. If you have any	
Michael Corbe	ett, PE			
	Division – Planning			
1500 W Count Roseville, MN				
651-234-7793				
Michael.J.Cort	ett@state.mn.us			
10/12/2012				
10/12/2012				
10/12/2012				
10/12/2012				
10/12/2012				
10/12/2012				
10/12/2012				
10/12/2012				
10/12/2012				
10/12/2012				
10/12/2012				
10/12/2012				
10/12/2012				
10/12/2012				
10/12/2012				
10/12/2012				
10/12/2012				
10/12/2012				
10/12/2012				

	1.21.1.2		
	044		
Minnesota Department of Transportation Metropolitan District Waters Edge Building			
1500 County Road B2 West Roseville, MN 55113			
October 11, 2012			
Mr. Roy Fuhrmann Metropolitan Airports Commission Vice President, Management & Operations 6040 28 th Avenue South Minneapolis, MN 55450			
SUBJECT: MSP 2020 Improvements Draft EA/EAW MnDOT Review # EAW12-007 West Side of TH 5, north of I-494 Fort Snelling, Hennepin County			
Dear Mr. Fuhrmann:			
MnDOT has additional comments related to this EA/EAW for further consideration and inclusion in the record of comments:			
To date, MnDOT has been working with MAC and it's consultant on the development of the I-494/34 th Avenue Diverging Diamond Interchange (DDI) which is to be let and constructed in 2013. As part of that effort, other future roadway improvement needs have been identified and discussed. The improvement include those on I-494, the Post Road interchange reconstruction and improvement to the Glumack interchange as identified and shown in the EA document. The only roadway improvement currently included and funded in MnDOT's program is the Diverging Diamond Interchange at 34 th Avenue. None of the other roadway improvements identified in the EA are either funded or included in MnDOT's program.	1	044-1.	Comment noted.
Much coordination and review of traffic modeling and their associated reports has taken place regarding the improvements, especially the 34^{th} Avenue DDI which is why there have been no formal comments from Traffic as they have been given during the development of the 34^{th} Avenue DDI.	2	044-2.	Comment noted.
Additionally:			
 The traffic forecast modeling was reviewed and approved by Jim Henricksen. The Traffic Modeling for both the VISSIM and CORSIM was reviewed and approved by Kevin Sommers. 	3 4	044-3.	Comment noted.
 The consultant Kimley-Horn and Associates submitted a draft interstate access request to MnDOT for review. MnDOT reviewed this document and sent back comments. This document was revised and submitted to FHWA for approval. 	5	044-4.	Comment noted.
comments. This occurrent has for see and sounded to the tree approval		044-5.	Comment noted.
		1	

044 4) MnDOT Traffic has been and will continue to be actively involved in the development of the diverging diamond interchange at 34th Ave. Many of the 6 **044-6.** Comment noted. documents in the EA were submitted to MnDOT Traffic prior for review and comment. All of these comments have been incorporated into these documents.5) Interchange concepts for TH 5/Post Road and TH 5/Glumack were also included in the EA. MnDOT Traffic looks forward to developing these concepts further 044-7. Coordination with 7 MnDOT Traffic will continue for when funding is identified for these projects. roadway projects, including If you have any questions concerning this review, please feel free to contact me at improvements on I-494 and TH 5. (651) 234-7793. Sincerely, Michael J. Corbett Michael J. Corbett, PE Senior Planner Copy sent via E-Mail: Bruce Irish, Water Resources Bryce Fossand, Water Resources Scott Pedersen, Area Manager Ron Rauchle, Area Engineer John Griffith, Area Manager Brian Isaacson, Program Management Paul Czech, Planning Karen Scheffing, Planning Tony Fischer, Freeways Nancy Jacobson, Design Buck Craig, Permits Becky Parzyck, Right-of-Way Ryan Coddington, Traffic Engineering Clare Lackey, Traffic Engineering Deb Sorenson, Aeronautics Ann Braden, Metropolitan Council Connie Kozlak, Metropolitan Council

Sirois Kron, Christene	Page 1 of 2 045	
Strost Kon, Christene From: Mancy Larson (n2208@yahoo.com) Stern Turday, October 11, 2012 408 PM Tern msp20200rafteaw Core Strong Colvingory@inneagopiism.gov MSP 2020 Improvements Draft EA/EAW File COR OR y Fuhrman - Director of Environment Metropolitan Airports Commission Email: msp2020draftEAV@mspmac.org Cotober 11, 2012 Dear MAC Board: In the many years we have lived on the corner of Woodlawn and E. 49 th Street, we have never been innudated with plane noise to the evtent that it has been impossible to concentrate inside our house or eat outdoors at all until the FAA intervened in the meaning that you cannot take precautions to escape from it. The small commuter aiplane routs earlier this year. The noise is absolutely relenteess at certain times of the day and night and on specific days of the week. The din is not particularly predictable, meaning that you cannot take precautions to escape from it. The small commuter aiplane files over our house, earling on the there is no noise relieff within the periods of intensive take offs. For years planes have been flying over the lake or lagong the river, affording those of us who live in this area some relieff from the intensity and consistency of the noise. Noise is a significant contributor to elevated stress levels for populations close to noise a sumounity center, bike paths, saling, windsuffing, golf, tennis courts, walking paths and an active neighborhood association. Sounds very high end, docent if? The quality of lie and amenities are what makes this area so attractive for homeowners, (largely two-parent working and young families). It is the character of this neighborhood that creates as influx of children and new homeowners. On many mornings, when I stand on my steps as I leave for work, I am salied by jet (left lumes, triang from the endes stream of children and new homeowners. On many mornings, when I stand on my steps as a leave for work, I am salied by jet (left lumes, triang from the endess stream of children and new hom	1	045-1. See General Responses GR # 05, GR # 09, and GR # 10. 045-2. The Air Quality Assessment was conducted in accordance with USEPA and FAA guidance. The Air Quality Assessment included aircraft operations, ground support equipment, motor vehicles, and stationary sources associated with the airport. The USEPA Region 5 completed a review of the Air Quality Assessment and concluded in its October 10, 2012, comment letter that the "EPA commends the thorough assessment of air quality" For additional information, see the response to Comment #003-1. The MPCA is the agency within the state of Minnesota with regulatory authority for air quality. Also, refer to General Responses GR # 02, GR # 03, GR # 04 and GR # 08. 045-3. See General Responses GR # 05, GR # 09, and GR # 10.

045 Page 2 of 2

4

certain traffic to other airports in the area; regulate trajectories and directions for take offs and landings. MSP has no regulations of which I am aware and no noise restrictions. So, to those of us down on the ground, it seems that the noise issue simply does not reach the ears of the MAC Board. The citizens need relief from being at the mercy of airport noise. The affected area continues to grow; the noise mitigation packages are predicated on remaining in one's house and never using one's yard. All of these solutions do not begin to be sufficient.

Nothing should be done to enlarge any piece of MSP until MAC has dealt with the unremitting noise. Citizens should not be blamed for living in their neighborhoods as I overheard in one MAC meeting. The comment was something to the effect that people living in the area who don't like airport noise should not have bought a house in the area or should move. Really? How callous is the Board to the needs of the citizens?

MAC is seeking permission to add infrastructure, including new gates to the terminals in anticipation that the number of passengers and flights predicated on estimates of substantial growth in the future rather than on any expressed need by the community. In order to be authorized to make these changes at the airport, MAC is seeking approval to do an Environmental Assessment (EA). Even if approved, the EA would be inadequate because of FAA-driven new navigation techniques (RNAV). The FAA has not taken into consideration the very urban nature of MSP and the critical noise and pollution issues. Projecting future actions MUST include changes in flight and navigation procedures impacting the area surrounding the airport. I believe that either MAC nor the federal government intentionally wish to increase airport noise and stress on the population in this area; however, that being said, it is obvious that they need to then make these issues a priority in planning and evaluation. The MAC plans need a much more comprehensive environmental review.

I would ask MAC to reconsider its current plans. There is no rush to expand the airport nor is there any rush to evaluation. The actions that MAC takes impact disproportionately, those in the heart of the city of Minneapolis. It is key for any public Board to use information provided by its stakeholders and ensure they do not simply provide platitudes to the community.

Sincerely,

Nancy W. Larson

Nancy W. Larson, Ph.D. Concerned Citizen

10/12/2012

045-3. See response above**045-4.** As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action. See Response to Comment #043-3 and General Responses GR # 05 and GR # 10.

045-5. As explained in the introduction to this appendix, the RNAV project is separate from the airport development project and the alternatives analyzed in the Draft EA/EAW. The proposed RNAV procedures are the subject of a separate NEPA process being completed by the FAA Air Traffic Organization. See General Responses GR # 01, GR # 06, and GR # 10.

045-6. The Draft EA/EAW process began in late 2010 with community and agency briefings. Public meetings were conducted in July 2011, January 2012 and September 2012, in addition to the Public Hearing held on October 1, 2012. Comments received as a result of the briefings were considered in the development of the Draft EA/EAW. The Draft EA/EAW was published on August 30, 2012. Comments on the Draft EA/EAW were accepted until October 11, 2012. Submitted comments are addressed in this response to comments and in the Final EA/EAW. The projects included in the Proposed Action will be implemented when demand dictates.

	Page 1 of 1 046	
Sirois Kron, Christene From: Cate Long [catherinelong70@yahoo.com] Sent: Thursday, October 11, 2012 4:48 PM To: msp2020drafteaw Subject: MSP 2020 Improvements Draft EA/EAW File Dear Mr. Fuhrmann: I am writing to specifically request that the environmental impact study include a close look at how regular exposure to extremely loud airplane noise affects the developing ears and auditory systems of babies and young children. I have a 20 month-old daughter, and there are times when the noise from low-flying planes is so loud that MY ears are ringing - I can't help but worry how		
It is how the first of the second data for the	1	046-1. See General Responses GR # 01, GR # 05, GR # 08, GR # 09 and GR # 10.
Please help.		
Sincerely,		
Cate Long 3631 14th Avenue South Minneapolis, MN 55407		
10/12/2012		

Sirois Kron, Ch	nristene	Page 1 of 1 047
From: Fut Sent: Fric To: Sirc	irmann, Roy lay, October 12, 2012 7:58 AM bis Kron, Christene	
Subject: FW Attachments: EA	Environmental Assessment Comments Comments1.pdf	
From: Tijuana Har Sent: Thursday, C	wkins [mailto:Tijuana.Hawkins@house.mn] ctober 11, 2012 4:53 PM	
To: Fuhrmann, Ro Subject: Fwd: En	y vironmental Assessment Comments	
Mr. Furhmann,		
I'm not sure if the f Rep. Davnie. Thank you,	irst email came to you, but please read the email below and the attached letter from	
Tijuana Hawkins Legislative Assista	nt	
	ins 10/11/2012 4:46 PM >>>	
Attached please R Assessment. If yo	ep. Jim Davnie's comments re: the MSP 2020 Improvements Draft Environmental u have any questions, please feel free to contact Rep. Davnie's office.	
Thank you,		
Tijuana Hawkins Legislative Assista 651 296 5355	nt	
10/12/2012		

	· .		047	
Jim Davnie State Representative		Minnesota		
District 62A		House of		
South Minneapolis	C 200	Representati	ves	
COMMITTEES: C	CHAIR, LABOR AND CONSUMER PROTE	ECTION DIVISION		
October 11, 2012	E-12 EDUCATION COMMERCE AND LABOR K-12 FINANCE DIVISION TAXES			
MSP 2020 Improvements Draft EA/ C/O Roy Fuhrmann – Director of E	nvironment			
Metropolitan Airports Commission 6040 – 28th Avenue South				
Minneapolis, MN 55450-2799				
Dear Mr. Fuhrmann,		D1 I		
Thank you for the opportunity to con 2020 Improvements Draft Environm	nental Assessment. As the State	e Representative for the		
Standish-Ericcson, Corcoran, Longf have been hearing a significant amo	ount of concern from constituer	nts about airport noise over the		
past two years. This controversy in 10 years previous that I have held th		s a significant change from the		
I understand that the Long Term Co				
Environmental Assessment have bee (MAC) will be ready to make impro	ovements and additions to Term	ninals 1 and 2 if and when		
demand increases beyond the capaci would drive such expansion will me	ean more noise over a larger fo			
other communities affected by airpo				
I recognize and value the importance does not diminish concerns around t	the environmental impact of the	e airport's location and		
operations particularly as related to t changes in the Fall of 2010. My cor	nstituents and I are now particu	larly concerned about the	1	
noise impact in unmitigated areas of 2020.	f the projected increase in oper-	ations at the airport through		047-1. See General Responses GR # 05 and GR # 10.
Beyond the experience of increased				
I also urge the MAC to work to not o metric other than DNL that better re-	eflects the experience of people	on the ground and that can be	e Haran ar	
used for informed decision-making n in the newly effected areas that the c	current methodology is not resp		2	047-2. The MAC will continue t
current conditions and recent operation	ional changes.			report, and consider the use of,
State Office Building, 100 Rev Dr Martin Luther King Jr.	Rhd St Paul Minnesota 55155-1298	(651) (96-0173	alternative noise metrics. However, DNL is FAA's accepted
FAX: (651)) 297-2668 Email: rep.jim.davnie@hou		***	noise metric, and the MAC has
				used FAA's INM-generated DNL
				noise contours as the mechanis
				for implementing a \$500 million
				noise mitigation program at MS
				since the early 1990s. The noise mitigation program, relying on
				DNL and INM, has substantial
				community support. See Genera
				Response GR # 07.

Proposed Noise Mitigation

I appreciate that the MAC is responding to Minneapolis' request to address noise mitigation in the environmental assessment beyond the NEPA and FAA requirements, and that it is using the locally-adopted standard of 60 DNL consistent with past mitigation activities, the terms of the consent decree, and the local land use compatibility guidelines defined by the Metropolitan Council.2

In Minneapolis, most of the increase in the 2020 forecast 60 DNL footprint for the MAC's preferred alternative takes place within already-mitigated areas. The exception is the area southeast of Lake Harriet, where a projected increase in arrivals to Runway 12R results in 1,229 homes being eligible for new or upgraded noise mitigation under the language proposed in the environmental assessment.

The environmental assessment states that "noise mitigation will begin when the level of total annual operations at MSP reaches 484,879 or in the year 2020, whichever comes first." Unfortunately residents in these areas are already experiencing significant increased noise daily. As you know even as the total number of flights declined, the geographic distribution of the noise shifted in a manner that was not anticipated by earlier forecasts. A threshold then based on the number of operations does not make sense because the underlying assumptions and inputs that led to the forecast noise contours, as the accuracy of the model itself, will undoubtedly change. Most notably, fleet mix and flight tracks will continue to evolve and current unmitigated areas may experience yet greater overflight disturbance and noise. We can be confident that in the coming years, the updated contour maps reflecting 484,879 operations will not look the same as the map shown in the EA prescribing the blocks that would become eligible for noise mitigation.

I would respectfully request than that the provision of any new noise mitigation be based on an assessment of measured conditions by geography rather than the total number of operations at the airport. The MAC should continue to update noise exposure maps annually and tie this measurement to a clearly-defined mitigation strategy that is approved by the surrounding communities. Basing mitigation on measured conditions will reflect changes in fleet mix and flight patterns, including the possible implementation of RNAV or future performance-based navigation procedures.

The Integrated Noise Model and DNL

I understand that under National Environmental Policy Act (NEPA) and Federal Aviation Administration (FAA) rules the MAC's preferred alternative does not generate "significant impacts" related to noise, defined as "an increase of 1.5 dB DNL or greater for a noise sensitive land use at or above the 65 DNL noise exposure when compared to the No Action Alternative." I am concerned that Minneapolis residents are subjected to noise in a manner that is not captured by the current Integrated Noise Model (INM) with DNL as the primary metric. While residents complain of high noise levels often beginning early in the morining and repeating in short time increments throughout the day DNL is intended to measure average noise exposure. Further DNL is derived from modeling and is not a measure of actual noise events. The projected 047

3

4

5

6

047-3. Comment noted. The 2020 forecasted 60 DNL contour for Alternative 2 - Airlines Relocate minimizes the affected population within the 60 DNL contour when compared to the No Action or Alternative 1-Airlines Remain Alternative. This preferred alternative is consistent with the cities stated goal in The Minneapolis Plan for Sustainable Growth to "reduce the overall noise footprint".

047-4. Comment noted. The Final EA/EAW recognizes the stated concerns and as such is proposing a modification to the mitigation to address actual impacts. See General Response GR # 10.

047-5. See General Response GR # 07 and GR # 10.

047-6. See General Response GR # 07.

7

8

9

10

11

impacts using INM modeling are similarly flawed. Because the human ear does not hear in averages, DNL does not effectively convey the noise impact experienced by residents.

It seems clear that accurate actual measures of sound volume and frequency need to be the basis of decision making. I join with the City of Minneapolis in requesting that the MAC fund an independent noise study, working in cooperation with affected communities. I also concur with the City in their request that the MAC take on a leadership role with the communities and the FAA on identifying and implementing a new methodology and metric for measuring aviation noise.

Noise Impact

As the mix of airplanes using MSP changed and older, noisier aircraft were retired there was hope that would lead to a reduction in noise. While there is some evidence that has occurred overall the shift to an increased number of smaller, regional jets coupled with FAA operational changes has also shifted the noise footprint of the airport. The noise analysis conducted for the environmental assessment, however, anticipates a reversal of this trend. It shows the 60 DNL noise footprint surrounding MSP growing by 1,736 acres between 2010 and 2020. This larger noise footprint is the result of a projected increase in the number of annual flights from 435,583 in 2010 to 484,879 in 2020, illustrating the substantial impact that the number and frequency of flights has on noise.

It is past time that stakeholders come together to develop a comprehensive statewide aviation strategy that results in more commercial airline service at airports with unused capacity. I would welcome an opportunity to join with the MAC for this planning with Governor Dayton's Administration and the legislature.

Performance-Based Navigation

I understand that the FAA is working with the airlines and the MAC on developing new Performance-Based Navigation (PBN) procedures, including Area Navigation (RNAV) and Optimized Profile Descent (OPD). Those potential flight paths were recently released and are currently under review. I understand that FAA was very delayed in releasing the proposed tracks and is limiting the time for public review and comment. Given the potential significant impact of these changes on the experience of residents under any new takeoff and landing routes the review and comment period should not be rushed artificially and the MAC should not act without adequate regard to the public.

The draft EA states that "The noise analysis did not include the proposed PBN procedures currently being developed by the FAA. An evaluation of the impacts of these procedures as they relate to the proposed project may be incorporated in the Final EA. If information is not available, an evaluation will be completed once the information is available, if applicable." I agree with the city that this is not a strong enough commitment to assessing the impact of PBN procedures, which holds some promise for improving the overall noise situation by keeping flights on a defined track but could also disproportionately impact some residents. The residents of Minneapolis and the other 4 communities affected by the airport need to be assured that the timeline for implementation of PBN procedures allows enough time to understand the impacts and tradeoffs before a final decision is made whether to adopt PBN at MSP. Any environmental

047-7. The MAC will continue to report, and consider the use of, alternative noise metrics. However, DNL is FAA's accepted noise metric, and the MAC has used FAA's INM-generated DNL noise contours as the mechanism for implementing a \$500 million noise mitigation program at MSP since the early 1990s. The noise mitigation program, relying on DNL and INM, has substantial community support. See General Response GR # 07.

047-8. Comment noted.

047-9. The MAC supports the MnDOT Statewide Aviation Plan review process. As part of the EA/EAW process, the MAC considered the positive impacts that full use of regional/statewide airports would have at MSP.

The alternative to divert passengers to another airport was studied as part of the Draft EA/EAW. See Section 3.1.1 of the Draft EA/EAW. It was concluded that (1) neither the development of a competing hub nor a supplemental airport appears likely given current airline behavior and trends and, (2) even if the studied airports were able to capture 100 percent of their respective markets, the need for MSP terminal and landside improvements would be delayed only temporarily. Therefore, the Other Airports Alternative was dismissed from further consideration.

047-10 and 11. As explained in the introduction to this appendix, the PBN project is separate from the airport development project and the alternatives analyzed in the Draft EA/EAW. The proposed PBN procedures are the subject of

a separate NEPA process being completed by the FAA Air Traffic Organization. While the EA/EAW does not provide environmental review or approval of the proposed PBN procedures, the proposed PBN procedures have been incorporated into the forecasted future scenarios noise contours in the Final EA/EAW. Also, see General Response GR # 06.

11

12

13

14

15

16

review of the long term comprehensive plan that does not take the currently proposed PBN procedures cannot claim to accurately represent future conditions and therefore is inadequate.

These impacts and tradeoffs extend well beyond the 60 DNL line. Shifting noise patterns do have an effect on individuals outside the 60 DNL. Any analysis of PBN procedures or other changes to flight patterns should be conducted for a geographic area large enough to fully understand whether and how noise will shift from one area to another, regardless of possible plans for noise mitigation in some areas.

Environmental Impact Statement

Future decisions regarding the terminal reconfigurations in the Long Term Comprehensive Plan may also affect or be affected by the implementation of PBN, requiring a more in-depth and comprehensive analysis than an Environmental Assessment can offer. In a letter to the MAC dated January 6, 2011 and a letter to the Noise Oversight Committee dated January 18, 2012, the City of Minneapolis requested that the cumulative effects of future airport actions including a full build-out of the Long-Term Comprehensive Plan and the implementation of PBN procedures such as RNAV and OPD be assessed comprehensively in the form of an Environmental Impact Statement. I agree with past Metropolitan Council comments on the previous 2015 Terminal Expansion EA that an EIS is warranted.

Fine Particulate pollution

Residents are increasingly concerned about the impact of expanded airport operations on the health of residents, and particularly children, beneath those aircraft operations. Air quality and the negative impacts on public health of poor air quality are of particular concern. As you know high levels of particulare matter, specifically PM 2.5, are correlated with an increase in cardiovascular disease, heart attacks, strokes and astman. Recent studies suggest increased fine particulates may negatively impact birth weight and IQ levels in children. My understanding is that data from MPCA ambient monitoring stations near the airport show PM 2.5 levels have increased and are close to exceeding National Ambient Air Quality standards. In addition to its impact on public health, nonattainment for PM 2.5 would result in significant economic impacts for the resion and should be avoided at all cost.

Additional air pollution modeling needs to be conducted for the current number and pattern of flights and the expected increase and temporal concentration of all associated facility operations including takeoffs, landings, idle time, expected turnover of flets; and traffic from cars, buses that will increase as a result of any proposed expansion. Given the population density of areas in direct proximity to the airport, and the broader area likely to be impacted by expanded airport operations, these modeling data should be used to conduct a cumulative health risk impact study.

In short I urge the MAC to engage in a full Environmental Impact Statement on the cumulative impact of airport operations and proposed expansion previous to adopting any proposed expansion of MSP. Additionally I urge the MAC to fund a study of the changing experience of airport noise on the surrounding residents using a different metric based on actual noise data rather than computer modeling. That study should be focused not only on the currently identified noise mitigation area but also on the areas around the airport affected by recent operational changes as well as possible future changes. I urge the MAC to be a leader in working with the

047-11. See response above

047-12. Cumulative impacts are included in the Draft EA/EAW. As NEPA, FAA Order 5050.4B, and MEPA require, reasonably foreseeable actions are to be included in the cumulative impact analysis. Projects proposed in the LTCP for post 2020 are not considered "reasonably foreseeable actions" because of the uncertainty and changeability in the aviation industry. An EIS is not required. See General Response GR # 01 and GR # 06.

047-13. The Air Quality Assessment was conducted in accordance with USEPA and FAA guidance. The Air Quality Assessment included aircraft operations, ground support equipment, motor vehicles, and stationary sources associated with the airport. The USEPA Region 5 completed a review of the Air Quality Assessment and concluded in its October 10, 2012, comment letter that the "... EPA commends the thorough assessment of air quality..." No other comments were received from the USEPA on the Air Quality Assessment.

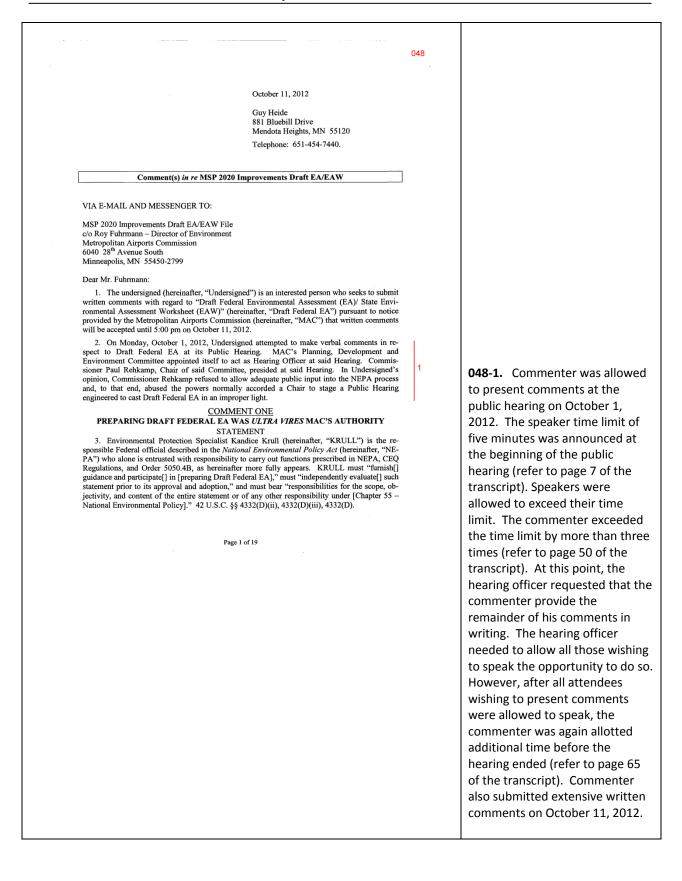
Based on the Air Quality Assessment in the Draft EA/EAW, the Action Alternatives are not expected to adversely affect ambient air quality. The PM_{2.5} concentrations at the two air monitoring stations closest to MSP are well within the National Ambient Air Quality Standards (NAAQS) and the trend over the past three years is decreasing concentrations. In May 2006, the MPCA published a study of ambient monitoring conditions near MSP. The monitoring study included measurements of air

toxics and PM_{2.5} at two locations on MSP Airport and at Wenonah School and Richfield Intermediate School. Overall, median and average concentrations of pollutants monitored near MSP were similar to concentrations monitored at other locations in the Twin Cities Metropolitan Area. There is no difference between the PM_{2.5} emissions from Alternatives 1 and 2 versus the No Action Alternative during 2020 and 2025. The PM_{2.5} emissions during 2020 are 36 tons and during 2025 are 39 tons for all alternatives (i.e., No Action and Action Alternatives). Thus, the Action Alternatives are not expected to affect PM_{2.5} concentrations adversely. As explained in GR # 02, there are no existing federal regulatory guidelines specific to hazardous air pollution (HAP) emissions from aircraft engines. Although there are FAA and EPA/FAA guidance documents recommending best practices for quantifying speciated organic gas emissions from aircraft engines, the methods for measuring air emissions associated with aircraft engines is an evolving process that is still under development. See FAA, Guidance for Quantifying Speciated Organic Gas Emissions from Airport Sources, September 2, 2009, and FAA/EPA Recommended Best Practices for Quantifying Speciated Gas Phase Organic Gas **Emissions from Aircraft Equipped** with Turbofan, Turbojet and Turboprop Engines, May 27, 2009. The guidance specifically warns against preparing any type of HAPs assessment for aircraft emissions under NEPA-other than the type of emission inventory provided in the Draft

EA/EAW—because such
assessments "require a complete
understanding of both the
reaction of OGs/HAPS in the
atmosphere and downstream
plume evolution," and the science
of such atmospheric reactions is
"currently limited" and "still
evolving." Id. See also 40 C.F.R. §
1502.22 (providing that in an EIS,
an agency may identify
information that is unavailable).
The FAA and MAC have prepared
a HAPs emission inventory that
complies with FAA and FAA/EPA
guidance and that is based on
what is known currently about
airport-related emissions. See
Final EA/EAW, Appendix E, Air
Quality Technical Report, Section
6. See also General Responses GR
02, GR # 03 and GR # 04.
047-14. The Air Quality
Assessment was conducted in
accordance with USEPA and FAA
guidance. The USEPA Region 5
completed a review of the Air
Quality Assessment and
concluded in its October 10, 2012,
comment letter that the "EPA
commends the thorough
assessment of air quality" No
other comments were received
from the USEPA on the Air Quality
Assessment. See previous
response (047-13) and General
Responses GR # 02, GR # 03 and
GR # 04.
017 15 See Conoral Personse
047-15. See General Response GR # 01.
047-16. The USEPA commended
the MAC on the thorough noise
analysis in the Draft EA/EAW.
Refer to letter #027 from the
USEPA. The MAC will continue to
report, and consider the use of,
alternative noise metrics.
However, DNL is FAA's accepted

noise metric, and the MAC has used FAA's INM-generated DNL noise contours as the mechanism for implementing a \$500 million noise mitigation program at MSP since the early 1990s. The noise mitigation program, relying on DNL and INM, has substantial community support. See General Response GR # 07.

047 047-17. See Response to 17 Administration and legislature to develop a new, comprehensive statewide aviation plan. Comment #016-9. Adequate time should be given to the community to review and comment on any new PBN 18 procedures and an environmental review of them conducted before any adoption of new flight tracking procedures. Additionally the MAC should conduct sufficient air pollution modeling to adequately identify and assess the public health impacts of airport activity on area residents. 047-18. As explained in the 19 introduction to this appendix, the Thank you again for the opportunity to comment. I look forward to your response. PBN project is separate from the Sincerely, airport development project and annie the alternatives analyzed in the esentative Jim Davnie Draft EA/EAW. The proposed RNAV procedures are the subject of a separate NEPA process being completed by the FAA Air Traffic Organization. See General Response to GR # 06. 047-19. See Response to Comments #047-13.



048 4. KRULL must implement the NEPA process prescribed in Council on Environmental Quality regulations in part 1500-1508 of title 40, Code of Federal Regulations. CEQ Regulations "tell [FAA] what they must do to comply with the procedures and achieve the goals of [NEPA]." 40 C.F.R. § 1500.1(a). CEQ Regulations mandate the following, *inter alia*: NEPA procedures must insure that environmental information is available to ... citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. 40 C.F.R. § 1500.1(b). [FAA] shall to the fullest extent possible: (a) Interpret and administer the policies, regulations, and public laws of the United States in accordance with the policies set forth in the Act and in these regulations. (b) Implement procedures to make the NEPA process more useful to ... the public; (d) Encourage and facilitate public involvement in decisions which affect the quality of the human environment. (e) Use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment. Id. § 1500.2. Parts 1500 through 1508 of this title provide regulations applicable to and binding on [FAA] for implementing the procedural provisions of the National Environmental Policy Act of 1969 These regulations, unlike the predecessor guidelines, are not confined to [NEPA] sec. 102(2)(C) (environmental impact statements). The regulations apply to the whole of [NEPA] section 102(2). Id. § 1500.3. ... The phrase "to the fullest extent possible" in [NEPA] section 102 means that [FAA] shall comply with that section unless existing law applicable to the agency's operations expressly prohibits or makes compliance impossible. Id. § 1500.6. 5. In a normative¹ decision concerning sufficiency of notice and an opportunity for public comment in informal agency rulemaking, the court in United States v. Nova Scotia Food Prod-ucts Corp., 568 F.2d 240 (C.A.2 1977) held: To suppress meaningful comment by failure to disclose the basic data [constituting the fac-tual material that was] relied upon [by agency] is akin to rejecting comment altogether. For Cf. Air Transport Ass'n of America v. F.A.A., 169 F.3d 1 (C.A.D.C. 1999) where informal rulemaking was required to expose "<u>critical factual material</u>" to "refutation" in the proceeding." *Id.* at 252. And, see *Independent* U.S. Tanker Owners Committee v. Levis, 690 F.24 098 (C.A.D.C. 1982) where it was held that where agency's task "begins" with forecasts in an informal relamaking proceeding, such forecasts must be disclosed "so that interested parties can comment upon the conclusions property to be drawn from them." *Id.* at 926, italic in original. Page 2 of 19

unless there is common ground, the comments are unlikely to be of a quality that might impress a careful agency. The inadequacy of comment in turn leads in the direction of arbitrary decision-making.

Id. at 252. The Nova Scotia court concluded "that the failure to disclose to interested persons the scientific data" was "procedurally erroneous." *Ibid.*

6. Draft Federal EA provided for public comment is a NEPA statement prepared by MAC, a State public agency with jurisdiction over Minneapolis-St. Paul International Airport ("MSP") in ssession of additional property rights in associated reliever airports located in the Minneapolis-St. Paul metropolitan area, but without jurisdiction over other major airports in the State of Minnesota, e.g. substantial airports located in Rochester, Duluth, and St. Cloud, Minnesota.

7. Said Draft Federal EA proposed a major Federal action.

8. Under NEPA, U. S. Department of Transportation Federal Aviation Administration (hereinafter, "FAA") may permit a State of Minnesota agency or official to prepare a NEPA statement for any major Federal action funded under a program of grants to States <u>only</u> if "the State agency or official has <u>statewide jurisdiction</u>." 42 U.S.C. § 4332(D)(i), underline added. By said words, Congress clearly intended said Draft Federal EA must be prepared by an agency with legal responsibility to serve and protect the public interest of the entire State of Minnesota and not the narrow, parochial interest of the Minneapolis-St. Paul metropolitan area alone

COMMENT ONE

9. Undersigned objects to said Draft Federal EA, commenting preparing said Draft Federal EA is ultra vires MAC's authority for MAC does <u>not</u> enjoy "statewide jurisdiction" as required by NEPA, supra, and to permit MAC's action to stand would make NEPA largely superfluous or inoperative

10. Undersigned further comments, for aforesaid reason, he objects to said Draft Federal EA and respectfully requests that KRULL vacate this proceeding set in motion by an illegal Draft Federal EA and provide a legal draft Federal environmental assessment for public con ment, in a new proceeding to come into compliance with CEQ Regulations that required KRULL to comply with NEPA "to the fullest extent possible," meaning to comply "unless existing law applicable to [FAA operations] expressly prohibits or makes compliance impossible." 40 C.F.R. \$ 1500.6.

11. Undersigned finally comments, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement on said action, as requested in comments four and five, infra, that such agency action, in Undersigned's opinion, would effectively moot this comment as aforesaid alleged NEPA violation can be remedied in that new proceeding.

COMMENT TWO

"NO ACTION" SCENARIOS ARE SERIOUSLY INACCURATE, FATALLY FLAWED STATEMENT

12. Undersigned restates and incorporates by reference par. 3-5, supra, as though fully set forth herein.

Page 3 of 19

of NEPA Section 102(D), 42 U.S.C.

048

2

§ 4332(D) is inaccurate. NEPA allows for preparation of EA's by entities with less than statewide jurisdiction. See also 42 U.S.C. § 4332(D)(iiii) which states in part "...this subparagraph does not affect the legal sufficiency of statements prepared by State agencies with less than statewide jurisdiction."

048-2. The Commenter's reading

In addition, NEPA and FAA regulations implementing the statute allow the MAC, as an airport sponsor and applicant for FAA approval, to prepare the EA. 40 C.F.R. § 1506.5(b); FAA Order 5050.4B, NEPA Implementation Instructions for Airport Actions, Chapter 7 (April 2006). An airport sponsor or its consultant normally prepares an EA under NEPA. FAA Order 5050.B, ¶ 707(a). FAA then independently evaluates the EA to: (1) determine the EA's accuracy; (2) take full responsibility for the scope and content that addresses FAA actions; (3) determine if the EA meets the requirements of NEPA, applicable special purpose laws, and FAA Order 5050.4B, including responses to public comments; (4) help ensure the necessary agency review and consultation has occurred and that the EA addresses agency comments; (5) ensure the EA identifies EA preparers; and (6) ensure the EA is suitable for a public hearing, if one will occur. FAA Order 5050.B, ¶ 707(b). See also 40 C.F.R. § 1506.5 (if applicant prepares EA, federal agency "must make its own evaluation of the environmental issues and take responsibility for the scope and content of the environmental assessment."); FAA Order 5050.B, ¶ 707(f) (same). The responsible FAA official takes responsibility

for an EA's scope and content by signing the statement on the bottom of the EA cover The statement provides that the EA becomes a federal document "when evaluated, signed, and dated by the Responsible FAA official." FAA Order 5050.B, ¶ 707(f).
The Draft EA/EAW also satisfies the requirements of MEPA. Similar to NEPA, MEPA provides for environmental review of certain "governmental actions"— that is, "projects wholly or partially conducted, permitted, assisted, financed, regulated, or approved by governmental units." Minn. R. 4410.0200, subp. 33. "Governmental units" are any Minnesota state agency or general or special purpose unit of government in the state of Minnesota. Minn. R. 4410.0200, subp. 34. There are three levels of environmental review for governmental actions under MEPA: exempt projects; environmental assessment worksheet (EAW); and environmental impact statement (EIS). A project proposer submits the completed data portions of an EAW to the responsible governmental unit (RGU) or its agents. The RGU determines whether the information is complete and, if it is, may approve the draft for distribution. Minn. R. 4410.1400. It is the RGU that is responsible for the completeness and accuracy of the information in an EAW. In addition, a federal EA under NEPA may be circulated in place of an EAW if the EA addressed each of the environmental effects in the EAW form. Minn. R. 4410.1300.
The MAC has participated in preparation of the EA/EAW

preparation of the EA/EAW because the MAC is the project

proposer, and under MEPA, the MAC is the RGU for the proposed development at MSP. Under MEPA, the proposed development is not exempt from environmental review and may have the potential for significant environmental effects. Minn. R. 4410.1000. The MAC, therefore, prepared an EAW for the proposed development. In addition, an EAW is required because the proposed development is a scheduled project in the MAC's capital improvement program for MSP and the cost of the proposed development exceeds \$5 million. Minn. Stat. § 473.614, sub. 2.
See also General Response GR # 01.
 048-3. In publishing the Draft EA/EAW, the FAA has complied with NEPA and the CEQ regulations implementing the statute, as well as FAA Orders 1050.1, <i>Environmental Impacts: Policies and Procedures</i> and 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions. In addition, MAC has complied with MEPA and the EQB rules implementing the statute. 048-4. Comment noted.

13. Draft Federal EA provided for public comment materially represented, if "no action" is taken, it followed MSP will <u>not</u> have capacity to accommodate airport operations forecast in 2020 and 2025, in the following words:

The purpose of the proposed development is to accommodate the expected demand such that the level of service is acceptable throughout MSP's terminal and landside facilities through 2020 and the regional roadway system through 2030. MSP's terminal and landside facilities <u>do not and/or will not</u> meet current and forecasted demand.

Draft Federal EA section ES-2.

14. Said Draft Federal EA materially represented in preparing its 2020 and 2025 "No Action" depictions (hereinafter, "Scenario(s)") of the human environment at MSP it used the following airport operation counts:

2020 (forecast)	484,879 airport operations
2025 (forecast)	526,040 airport operations

Draft Federal EA at p. 2-4.

 Said Draft Federal EA materially represented its 2020 "no action" Scenario was based on an airport operation count of "484,879" operations, in the following words:

Based on the 484,879 total forecast operations in 2020, approximately 4,388 acres are in the 65+ DNL noise contour and approximately 11,240 acres are in the 60+ DNL noise of the <u>No Action</u> Alternative. Table 5.14.3 contains the count of single-family and multi-family dwelling units and population in the 2020 and 2025 <u>No Action</u> Alternative DNL noise contours.

Draft Federal EA sub-section 5.14.5.1 ("No Action Alternative Noise").

16. From aforesaid admission that its 2020 "no action" Scenario was based on its forecast airport operation count of "484,879" operations, it can reasonably be inferred that its 2025 "no action" Scenario was also based on its forecast airport operation count of "526,040" operations.

COMMENT TWO

17. Undersigned objects to said Draft Federal EA's depictions of the human environment at MSP in 2020 and 2025 for said "no action" depictions are repugnant to its fundamental premise that in 2020 and 2025 MSP will not have capacity to accommodate airport operations forecast in said years. From said premise it reasonably followed MSP would handle substantially less than the "484,879" operations forecast for 2020 and substantially less than the "526,040" operations forecast in 2025. Said Draft Federal EA's 2020 and 2025 "no action" depictions are clearly fictitous and dishonest in presenting the public with false choices for public comment. Wherefore Undersigned further comments and respectfully requests that KRULL vacate this proceeding set in motion by a seriously inaccurate draft Federal environmental assessment and provide an adequate draft Federal environmental assessment for public comment with accurate depictions of the human environment at MSP in 2020 and 2025 in a new proceeding, to come into compliance with CEQ Regulations that required FAA to provide information 'of high quality" which included only "falccurate scientific analysis, expert agency comments" so as to expose such information to "public scrutiny." 40 C.F.R. § 1500.1(b).

18. Undersigned further comments, in his opinion, said Draft Federal EA, in preparing 2020 and 2025 "no action" depictions based on inaccurate assumptions of MSP's capacity, effec-

Page 4 of 19

048-5. As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action.

The commenter asserts that the 2020 and 2025 forecast aircraft operations are inaccurate. However, the commenter does not explain the basis for this conclusion. The commenter also suggests incorrectly that the purpose of the proposed project is to increase airport capacity to accommodate forecast 2020 and 2025 aircraft operations. As stated in Chapter 2 of the Draft EA/EAW the purpose of the proposed project is to accommodate expected demand at MSP such that the airside and landside level of service is acceptable through the 2020 planning timeframe, and that the regional roadway level of service is acceptable through the 2030 planning timeframe. Additional airfield capacity is not needed and airfield capacity improvements such as new runways are not proposed. In other words, the purpose is to relieve congestion and overcrowding at MSP terminal and landside facilities under current conditions, as well as under conditions in 2020. By relieving congestion, MSP will maintain an acceptable airside and landside level of service through the 2020 planning timeframe, and an acceptable regional roadway level of service through the 2030 planning timeframe.

As recently as 2005, with the current terminal building facilities, MSP handled 532,240 annual operations, more than the 484,879 forecast for 2020 or the 526,040 forecast for 2025. Therefore, it is inaccurate to state

that a No Action scenario would result in a substantial reduction in aircraft operations from the forecast levels. As noted in Section 10 of Draft EA/EAW Appendix A, a No Action scenario would require airlines to make changes in their scheduled flight times to accommodate projected demand with existing facilities, but the airlines would have to reduce their level of service to accommodate the increased daily and annual demand at MSP. 048-6. See Response to Comment #048-5 and General Response GR # 01.

					048		
y	vely camouflaged significant impacts directly att ears, and that accurate "no action" Scenarios will mpact statement.				6	048-6.	See response above.
	19. Undersigned finally comments, if KRULI	L dispenses w	with preparing	an environmental	1	040 7	Common the stand
	ssessment on proposed Federal action and directly	proceeds to p	orepare an envi	ronmental impact	7	048-7.	Comment noted.
	tatement on said action, as requested in comments a Undersigned's opinion, would effectively moot				1		
	lation can be remedied in that new proceeding.	uns commen	, as aloredate		1		
	COMMENT	THREE					
Α	ALTERNATIVE SCENARIOS ARE SERIOUS		RATE, FATA	LLY FLAWED			
	STATEM 20. Undersigned restates and incorporates by		3-5 supra a	s though fully set			
fo	orth herein.	reference pur	. <i>5 5</i> , <i>54p</i> , 4, 6	o though rung bet			
A	21. Draft Federal EA provided for public oc rrea Forecast (hereinafter, "TAF") "was not used cction," "Alternative 1" and "Alternative 2" depict norinoment at MSP. It materially represented that tons were used in preparing said Scenarios:	in preparing ions (hereinaf	g its 2010, 20 ter, "Scenario	20 and 2025 "No s)") of the human			
	Table	e 2.2.2					
	Summary of Pertinent Fo						
		2010	2020	2025			
	Domestic Scheduled Air Carrier ("AC") International Scheduled Air Carrier ("AC")	367,851 26,556	410,410 29,530	448,074 32,886			
	Charter	103	96	106			
	All-Cargo Carrier General Aviation and Air Taxi	12,499 27,921	12,764 29,934	12,826 30,003			
	Military	2,145	2,145	2,145			
	Total	437,075	484,879	526,040			
"	Draft Federal EA at pp. 2-3, 2-4. It materially rep [t]here are almost no differences in the number of 0, 2-5.						
lo	22. Government's 2011 official TAF forecas	-					
	Summary of Pertinent 2011 TA	AF Forecast A 2010	2020	2025			
	Air Taxi (hereinafter, "AT")	135,477	153,474	167,794			
	General Aviation (hereinafter, "GA")	13,448	13,932	14,070			
0	Total (AT + GA) Jndersigned respectfully requests that Exhibit No. if aforesaid Government TAF forecast, be entere epresentations.						
I.							
	Page 5 of	10					
	Page 5 of	19					

9

23. Comparing said Draft Federal EA's airport operations count, *supra*, for both Air Taxi ("AT") and General Aviation ("GA") to TAF's corresponding counts, *supra*, disclosed the following:

Year	Draft EA Total (AT + GA)	TAF Total (AT + GA)
2010	27,921	148,925
2020	29.934	167,406
2025	30,003	181,864

24. FAA has defined an "Air Taxi" as an aircraft designed to have a $\underline{maximum\ seating\ capacity\ of\ 60\ seats\ or\ less.}$

25. FAA has defined "General Aviation" as civil aircraft.

26. FAA has defined "Air Carrier" as an aircraft with seating capacity of more than 60 seats.

COMMENT THREE

27. Undersigned objects to all of said Draft Federal EA Scenarios of the human environment at MSP in 2010, 2020 and 2025 for said Scenarios are clearly based on a fleet mix that <u>understated</u> air taxi ("AT") and general aviation ("GA") aircraft operations, and, for that reason, inexorably <u>overstated</u> air carrier ("AC") aircraft operations in said years. Stated another way, said Draft Federal EA's fleet mix assumed AT and GA represented 6.4% of total aircraft operations in 2010, 6.2% in 2020, and 5.7% in 2025, while TAF stated AT and GA represented 34.1%, 34.5%, and 34.6% respectively. From said comparison, said Draft Federal EA representation, *supra*, that its forecast was substantially similar to TAF ("ft]here are almost no differences in the number of operations") is seriously inaccurate. Since AT and GA aircraft by definition, *supra*, that its forecast was substantially similar to TAF ("ft]here are almost no differences in the number of operations") is seriously inaccurate. Since AT and GA aircraft by definition, *supra*, frederal EA 2010, 2020 and 2025 "No Action," "Alternative 1" and "Alternative 2" Scenarios are likewise seriously inaccurate. Wherefore Undersigned further comments and respectfully requests that KRULL vacate this proceeding set in motion by a seriously inaccurate draft Federal environmental assessment for public comment with accurate depictions of the human environment at MSP in 2010, 2020 and 2025 in a new proceeding, to come into compliance with CEQ Regulations that required FAA to provide information "of high quality" which included only "[alccurate scientific analysis, expert agency comments" so as to expose such information to "public scrutiny." 40 C.F.R. § 1500.1(b).

28. Undersigned finally comments, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement on said action, as requested in comments four and five, *infra*, that such agency action, in Undersigned's opinion, would effectively moot this comment as aforesaid alleged NEPA violation can be remedied in that new proceeding.

COMMENT FOUR ALTERNATIVE SCENARIOS DISCLOSED "SIGNIFICANT" IMPACT STATEMENT

29. Undersigned restates and incorporates by reference par. 3-5, *supra*, as though fully set forth herein.

Page 6 of 19

048-8. The differences between the TAF and the Draft EA/EAW forecast criteria for aircraft categories explain the difference in operations forecasted. Regardless, the total operations (427,558 for the 2010 TAF and 437,075 for 2010 forecast in EA) are similar (less than 2.5% difference).

The FAA TAF considers Commuter/Air Taxi operations as one category. The Commuter operations include takeoffs or landings by aircraft with 60 or fewer seats that transport regional passengers on scheduled commercial flights and Air Taxi operations as takeoffs or landings by aircraft with 60 or fewer seats conducted on non-scheduled or for-hire flights. The 2011 TAF lists 135,477 (2010), 153,474 (2020) and 167,794 (2025) Commuter/Air Taxi operations. These operations were included in the scheduled air carrier category In the Draft EA/EAW forecast. These "smaller and lighter" regional carrier operations are depicted in the air carrier fleet mix forecast in Table 5.9 (Appendix A, Attachment 5). Additionally, the 2010 fleet mix is based on actual aircraft operations that occurred in 2010.

The Draft EA/EAW forecast also includes a separate general aviation category consistent with the MAC general aviation statistics in their Monthly Operations Reports and the fleet mix associated with that forecast consists of "smaller and lighter" general aviation aircraft.

General Aviation operations include all itinerant general aviation and local civil aviation aircraft takeoffs or landings not

classified as commercial in the TAF. The 2011 TAF lists 13,448 (2010), 13,932 (2020) and 14,070 (2025) General Aviation operations.
The FAA TAF considers Air Carrier operations to include all takeoffs or landings of commercial aircraft with seating capacity of more than 60 seats. The 2011 TAF lists 275,772 (2010), 314,795 (2020) and 340,798 (2025) Air Carrier operations at MSP. The TAF also lists 2,861 (2010), 2,864 (2020) and 2,864 (2025) Military operations (takeoffs or landings by military aircraft).
FAA guidance for the review and approval of aviation forecasts states that forecasts for total enplanements and total operation are considered consistent with the TAF if they meet the following criterion: Forecasts differ by less than 10 percent in the 5-year forecast period, and 15 percent in the 10- year forecast period." (See FAA's Review and Approval of Aviation Forecasts, June 2008 p. 1). The EA forecast meets this criterion for both enplanements and operations.
Total operations in the 2011 TAF for 2010 are 427,558. The Draft EA/EAW listed 437,075 operations for 2010. This equates to a difference of 2.2 % which is within what is considered consistent.
Total operations in the 2011 TAF for 2020 are 485,065. The Draft EA/EAW forecast listed 489,879 operations for 2020. This equates to a 1% difference which is within what is considered consistent.

Total operations in the 2011 TAF for 2025 are 525,526. The Draft EA/EAW forecast listed 526,040 operations for 2025. This equates to less than a 1% difference, which is within what is considered consistent. Thus, the Draft EA/EAW forecast is considered consistent with the TAF. Finally, the FAA reviewed and approved the EA/EAW forecast in July 2012.
048-9. Comment noted.

					048
30. In Order 1050.1E, Appendix A <i>inter alia</i> , in determining whether a char cant:					
A change in the operation of an that change results in an increase greater in either a land area whic patible under Appendix A (Tabl to be noncompatible under that increased.	in the yearly day-nigh h was formerly compa e 1), or in a land area	t average tible but i which wa	sound lev s thereby s previou	vel of 1.5 dB or made noncom- isly determined	
14 C.F.R. § 150.21(d)(1).					
31. Order 1050.1E set following st nificant:	andard for determining	g whether	a change	in noise is sig-	
A significant noise impact woul cause noise sensitive areas to ex or above DNL 65 dB noise expr same timeframe. For example, ar cant impact. Special considerati of noise impacts on noise sensiti and historic sites, including trad threshold does not adequately ad tional park or national wildlife ro a generally recognized purpose a	perience an increase ir sure when compared to increase from 63.5 dl on needs to be given to ve areas within nation tional cultural propert tress the effects of noi fuge where other nois	n noise of to the no a B to 65 dB the evalu- al parks, ites. For et ise on visit	DNL 1.5 action alto 3 is consi- uation of t national v xample, t tors to are	dB or more at ernative for the dered a signifi- the significance wildlife refuges he DNL 65 dB eas within a na-	
Order 1050.1E, Appendix A par. 14.3.					
32. "MSP 2020 Improvements Dr with Draft Federal EA provided for pub rially represented proposed Federal acti of sensitive land uses would experie noise contour") under any Scenario and tour <i>i.e.</i> sensitive land areas, under its 20	lic comment. Said Pro on would not have a s nce a 1.5 dB or greate showed the following 20 Scenarios:	esentation ignificant er increase acres with	on page noise im within t hin MSP'	18 of 36 mate- pact ("no areas he 65 dB DNL s 65 DNL con-	
Scenario 2020 No Action	DNL Contour: 4,388 acres:	<u>65-69</u> 2,795	70-74 928	<u>75+</u> 665	
2020 Alternative 1	4,386 acres:	2,793	928	665	
2020 Alternative 2 And, the following pertinent counts of re-	4,387 acres:	2,793 areas wit	928 hin MSP	666. 's 65 DNL con-	
tour:	Sidential units on land	areas wit	IIII IVISI	3 05 DIVE COM-	
Scenario	DNL Contour:	65-69	70-74	75+	
2020 No Action 2020 Alternative 1	2,162 units: 2,172 units:	2,115 2,124	47 48	0	
2020 Alternative 2	2,166 units:	2,133	33	.0.	
And, the following pertinent population MSP's 65 DNL contour:	n counts of individua	als residin	ig on lan	d areas within	
Scenario	DNL Contour:	65-69	70-74	75+	
	Page 7 of 19				

10

11

12

2020 No Action	5,037 individuals:	4,918	119	0	
2020 Alternative 1	5,062 individuals:	4,941	121	0	
2020 Alternative 2	5,048 individuals:	4,965	83	0.	

2

When compared to the "no action" alternative, Alternative 1 and Alternative 2 are shown, *supra*, to <u>reduce</u> the acres within MSP's 65 DNL contour and, at the same time, <u>increase</u> the number of residential units and individuals residing therein. Undersigned respectfully requests that Exhibit No. 2, enclosed herewith, which exhibit is a copy of aforesaid "MSP 2020 Improvements Draft EA/EAW Open House Presentation" page 18 of 36, be entered in proceeding's record to verify foregoing representations.

COMMENT FOUR

33. Undersigned objects to said Draft Federal EA's determination, *supra*, that, under both alternatives, the proposed Federal action can <u>reduce</u> the acres within MSP's 65 DNL contour under its "no action" scenario and, at the same time, <u>increase</u> the number of residential units <u>and</u> individuals residing therein for appearing, as a matter of first impression, unscientific and manufactured, and further comments and requests, under the ruling in *Nova Scotia, supra*, that KRULL instruct MAC to disclose the basic scientific data, or factual material, believed to support this determination so that Undersigned can comment effectively, intelligently and meaning-fully on the conclusions properly to be drawn concerning it in a new proceeding, to come into compliance with CEQ Regulations that required KRULL to comply with NEPA "to the fullest extent possible," meaning to comply "unless existing law applicable to [FAA operations] expressly prohibits or makes compliance impossible." 40 C.F.R. § 1500.6.

34. Undersigned further comments, if it is the case that proposed Federal action, under both alternatives, can simultaneously reduce the acres within MSP's 65 DNL contour under its "no action" scenario and, at the same time, increase the number of residential units and individuals therein, that the residential units and individuals foreseen to be added within MSP's 65 DNL contour under Alternative 1 and/or Alternative 2 must reside on land areas outside MSP's "no action" 65 DNL contour and, for that reason, the noise impact of said alternatives is <u>significant</u> for foreseeably creating <u>new</u> land areas, *i.e.* formerly compatible land outside, but now inside MSP's 65 DNL contour, land areas "which [were] formerly compatible but [are] thereby made noncompatible under Appendix A (Table 1)," § 150.21(d)(1), *supra*, by the proposed Federal action, noting said Table 1 classified land areas inside an airport's 65 DNL contour as noncompatible use.

35. For that reason, Undersigned finally comments and respectfully requests that KRULL directly proceed to prepare an environmental impact statement on said action to come into compliance with NEPA, CEQ Regulations and Order 1050.1E that mandated FAA must prepare an environmental impact statement for actions significantly affecting the human environment and, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement, that such agency action, in Undersigned's opinion, would effectively moot this comment's request to disclose factual material relied on to decision, as such can be remedied in that new proceeding.

COMMENT FIVE ALTERNATIVE SCENARIOS DISCLOSED "SIGNIFICANT" IMPACT STATEMENT

Page 8 of 19

048-10. Residential units may be exposed to additional noise and, as a result, be included in the 65 DNL contour without having experienced a 1.5 dB DNL increase. For example, the noise exposure at a residential unit may increase from 64.9 DNL to 65.1 DNL, a difference of 0.2 DNL. While the residential unit would be within the 65 DNL contour, the increase in noise exposure is less than the significance threshold of 1.5 dB DNL.

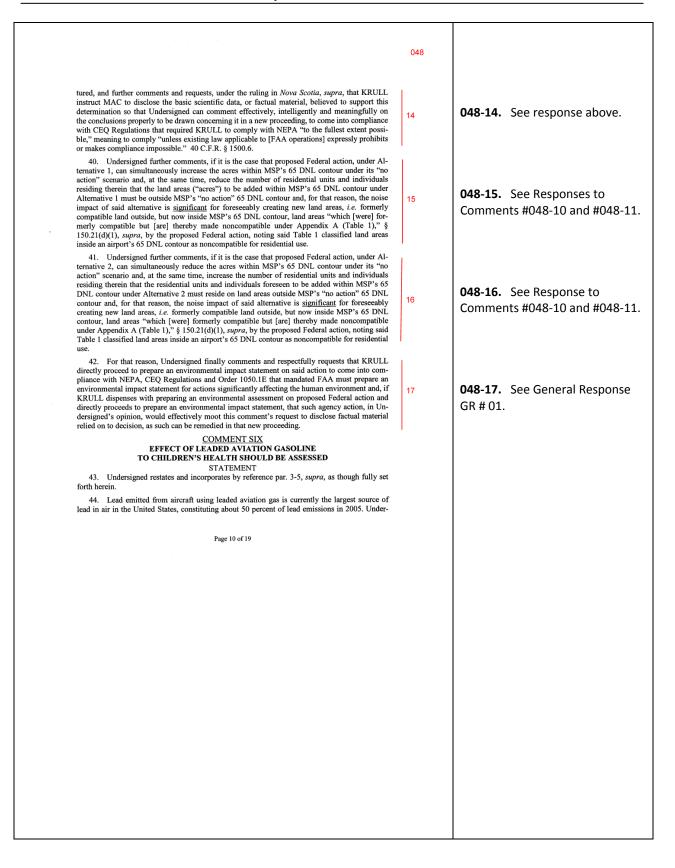
The noise contours expand and contract slightly relative to one another to varying degrees and at different locations around the airport. This variability may result in the scenario with a slight reduction in acreage even though there is a slight increase in units within the contours, depending on the density of residential land use within each contour. The counts are correct.

MetroGIS parcel data current as of August 2011 was used to assess residential noise impacts. Multi-family and single-family dwelling unit population multipliers were provided by MetroGIS on a city-by-city basis. Parcel unit count data were developed through a combination of field work done by MAC staff and data from the cities and counties neighboring MSP as a part of previous and current residential noise mitigation program efforts around the airport.

048-11. The number of nonresidential noise sensitive uses within the 65 DNL contour varies only slightly between the various alternatives. In 2020 the lowest number of residential units in the 65+ DNL noise contours is

provided by the No Action Alternative. There are 10 more residential units in the Airlines Remain Alternative and 4 more residential units in the Airlines Relocate Alternative within the 65+ DNL noise contours. In 2025 the lowest number of residential units in the 65+ DNL noise contour is provided by the Airlines Remain Alternative. There are 81 more residential units in the No Action Alternative and 171 more residential units in the Airlines Relocate Alternative. However, in both 2020 and 2025 for all alternatives, all residential units within the 65+ DNL noise contours of the development alternatives being considered have received noise mitigation and, as such, are considered a mitigated incompatible land use. Also, see the Response to Comment #007-20. 048-12. See General Response GR # 01.

•					048	
36. Undersigned restates and incorp fully set forth herein.	porates by reference pa	ar. 3-5, 3	30-31, <i>su</i>	pra, as though		
37. "MSP 2020 Improvements Dra with Draft Federal EA provided for public the following acres within MSP's 65 DN narios:	c comment. Said Prese	ntation o	n page 1	8 of 36 showed		
Scenario 2025 No Action 2025 Alternative 1 2025 Alternative 2	DNL Contour: 5,006 acres: 5,018 acres: 5,002 acres:	65-69 3,188 3,205 3,181	70-74 1,078 1,074 1,081	75+ 740 739 740.		
And, the following pertinent counts of restour:						
Scenario 2025 No Action 2025 Alternative 1	DNL Contour: 2,742 units: 2,661 units:	65-69 2,657 2,583	70-74 85 78	75+ 0 0		
2025 Alternative 2 And, the following pertinent populatior MSP's 65 DNL contour:	2,832 units: a counts of individuals	2,747 residing	85 g on lan	0. d areas within		
Scenario 2025 No Action 2025 Alternative 1 2025 Alternative 2	DNL Contour: 6,501 individuals: 6,294 individuals: 6,727 individuals:	65-69 6,286 6,096 6,512	70-74 215 198 215	75+ 0 0 0.		
2023 Alternative 2 When compared to the "no action" alter acres within MSP's 65 DNL contour an units and individuals residing therein. S number of acres and, at the same time, <u>i</u> residing therein.	native, Alternative 1 i d, at the same time, <u>r</u> Similarly, Alternative 2	s shown educe the is show	, <i>supra</i> , e numbe n, <i>supra</i>	to <u>increase</u> the r of residential , to <u>reduce</u> the		
28. Undersigned objects to said Dra native 1, the proposed Federal action can its "no action" scenario and, at the same t uals residing therein for appearing unsc requests, under the ruling in Nova Scotia, scientific data, or factual material, believe comment effectively, intelligently and n concerning it in a new proceeding, to cor KRULL to comply with NEPA "to the fu ing law applicable to [FAA operations] 40 C.F.R. § 1500.6.	increase the acres with ime, reduce the numbe ientific and manufactu <i>supra</i> , that KRULL in ed to support this detern neaningfully on the co ne into compliance with llest extent possible," r	in MSP's r of resid red, and struct M. nination nclusion h CEQ R neaning	s 65 DNL lential un l further AC to dis so that U s proper to comply	contour under its <u>and</u> individ- comments and sclose the basic ndersigned can y to be drawn ns that required y "unless exist-	13	048-13. See Responses to Comments #048-10 and #048-11.
39. Undersigned objects to said Dra native 2, the proposed Federal action can its "no action" scenario and, at the same viduals residing therein for appearing, as	reduce the acres within time, increase the num	n MSP's ber of re	65 DNL sidential	contour under units and indi-	14	048-14. See Responses to Comments #048-10 and #048-11.
	Page 9 of 19				•	



signed respectfully requests that Exhibit No. 3, enclosed herewith, which exhibit is a copy of "A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels," be entered in proceeding's record to verify foregoing representation found in said Analysis at p. 4.

45. The Center for Disease Control has stated "that there is no 'safe' level for blood lead in children" and a large body of research has demonstrated evidence of "learning disabilities and behavioral disorders, associated with lead exposure levels well below the CDC's action level," and of "<u>early</u> childhood blood lead levels as low as 2 μ g/dL" associated with "significant impacts on academic performance as measured by end-of-grade test scores." Exhibit No. 3 at p. 5 of 22, underline added.

46. The Environmental Protection Agency (hereinafter, "EPA") has taken notice of the special status, or vulnerability, of "[y]oung" children when it comes to lead exposure, in the following words:

Young children are especially vulnerable to the toxic effects of lead because their nervous systems are still developing and they absorb more of the lead to which they are exposed. Many of the health effects associated with lead are thought to be irreversible. Moreover, the effects at lower levels of exposure are often asymptomatic.

Federal Register, vol. 66, no. 4, at p. 1207. The term "asymptomatic" means children residing near MSP can be harmed by lead and not exhibit symptoms. For that reason, children may be harmed without their parents recognizing it. Undersigned respectfully requests that Exhibit No. 4, enclosed herewith, which exhibit is a copy of pertinent *Federal Register* page, be entered in proceeding's record to verify foregoing EPA representation.

47. Draft Federal EA provided for public comment in Chapter 5 ("Environmental Consequences") in section 5.17, sub-section 5.17.1, addressed "Children's Health and Safety Risks" in the following words:

Socioeconomic impacts may result from relocation of residences and businesses, alteration of surface transportation, division of established communities, disruption of orderly planned development, or changes in employment.

Draft Federal EA, sub-section 5.17.1. Said sub-section identified "the relocation of one business, the SuperAmerica (gas station)" as the only effect meriting attention in respect to children's health and safety. In other words, there was no attention given to the effects of aviation gasoline on childhood blood levels in said Draft Federal EA.

COMMENT SIX

48. Undersigned objects to said Draft Federal EA's oversight in failing to address the effects of leaded aviation gasoline on childhood blood lead levels and comments and respectfully requests that KRULL vacate this proceeding set in motion by an inadequate Draft Federal EA and provide an adequate Federal environmental assessment that addresses children's health and safety risks from leaded aviation gasoline so that Undersigned can comment effectively, intelligently and meaningfully on the conclusions properly to be drawn concerning it in a new proceeding, to come into compliance with CEQ Regulations that required KRULL to comply with NE-PA "to the fullest extent possible," meaning to comply "unless existing law applicable to [FAA operations] expressly prohibits or makes compliance impossible," 40 C.F.R. § 1500.6, and "[u]se the NEPA process to identify and assess the reasonable alternatives to proposed actions that will

Page 11 of 19

048

18

048-18. As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action.

Air monitoring data for lead in the MSP area are well below the National Ambient Air Quality Standards. Lead emissions are not typically considered in emission inventories for commercial service airports because lead emissions result primarily from piston engine aircraft and the use of aviation gasoline (avgas or 100LL). The share of aircraft operations at MSP that are conducted by piston aircraft totals less than two percent; which resulted in the annual use of approximately 20,000 gallons of avgas during 2010 and 2011. Avgas usage has decreased from approximately 67,000 gallons in 2005 to less than 20,000 gallons during each of the past three years, as piston aircraft operations have decreased at MSP. Notably, the estimated lead emissions at MSP total less than 0.04 tons per year, or only four percent of the applicable one-ton threshold. Also, note that the USEPA commended the MAC on the thorough air quality analysis in the Draft EA/EAW. Refer to the letter #027 from the USEPA.

Also, see General Response GR # 03.

r			
		048	
		040	
	avoid as minimize advance officies of these setting and the setting of the terminant in		
	avoid or minimize adverse effects of these actions upon the quality of the human environment." 40 C.F.R. § 1500.2.		
	49. Undersigned finally comments, if KRULL dispenses with preparing an environmental		
	assessment on proposed Federal action and directly proceeds to prepare an environmental impact		048-19. Comment noted.
	statement on said action, as requested in comments four and five, <i>supra</i> , that such agency action,	19	
	in Undersigned's opinion, would effectively moot this comment as aforesaid alleged NEPA omission can be remedied in that new proceeding.		
	COMMENT SEVEN		
	DRAFT EA MISREPRESENTED "MITIGATION" UNDER NEPA		
	STATEMENT		
	50. Undersigned restates and incorporates by reference par. 3-5, <i>supra</i> , as though fully set forth herein.		
	51. CEQ Regulations defined "mitigation" in the following words:		
	(a) Avoiding the impact altogether by not taking a certain action or parts of an action.		
	(b) Minimizing impacts by limiting the degree or magnitude of the action and its im-		
	plementation.		
	(c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.		
	(d) Reducing or eliminating the impact over time by preservation and maintenance op-		
	erations during the life of the action. (e) Compensating for the impact by replacing or providing substitute resources or envi-		
	ronments.		
	40 C.F.R. § 1508.20.		
	52. Order 1050.1E in par. 404(g) set following standard for determining what type of "mi-		
	tigation" permitted issuing a finding of no significant impact (hereinafter, "FONSI") where an impact exceeded applicable significance levels, underline added:		
	If the responsible FAA official determines that these impacts do not exceed applicable		
	significance levels, or mitigation discussed in the EA and made an integral part of the		
	project clearly will reduce identified impacts <u>below</u> significance levels, the responsible		
	FAA official will prepare a FONSI.		
	And, said Order restated same, with some amplification, in par. 405(g), underline added:		
	The EA may include reasonable mitigation measures. If mitigation is discussed, it shall be in sufficient detail to describe the benefits of the mitigation. Each impact category in		
	Appendix A identifies conditions that normally indicate a threshold beyond which the		
	impact is considered significant and an EIS is required for the action[.] If the EA con- tains mitigation measures necessary to reduce potentially significant impacts below ap-		
	plicable significance thresholds, an EIS is not needed and the approving official may is-		
	sue a FONSI provided that:		
-	(1) The agency took a "hard look" at the problem.		
	(2) The agency identified the relevant areas of environmental concern.		
	Page 12 of 19		

(3) The EA supports the agency's determination that the potential impacts will be insignificant.

(4) The agency has identified mitigation measures that will be sufficient to reduce potential impacts <u>below</u> applicable significance thresholds and has assured commitments to implement these measures.

53. "MSP 2020 Improvements Draft EA/EAW Open House Presentation" was provided with Draft Federal EA provided for public comment. Said Presentation on page 20 stated that its noise exposure map's noise contours materially represented, in pertinent part, "MAC Existing Noise Mitigation Program." Undersigned respectfully requests that Exhibit No. 5, enclosed herewith, which exhibit is a copy of aforesaid "MSP 2020 Improvements Draft EA/EAW Open House Presentation" page 20 of 36, be entered in proceeding's record to verify foregoing representation.

54. Draft Federal EA provided for public comment, admitting Federal action exceeded the noise threshold beyond which its impact is considered significant, materially represented an environmental impact statement would not be required as affected land areas had been 'mitigated':

[1]n both 2020 and 2025 all residential units within the 65+ DNL noise contours of the development alternatives being considered have been provided noise <u>mitigation</u> and, as such, are considered a <u>mitigated</u> incompatible land use. However, in consideration of the circumstances unique to MSP by virtue of past mitigation activities, the terms of the Consent Decree, and the local land use compatibility guidelines defined by the Metropolitan Council, this EA/EAW proposes mitigation in the 2020 Sponsor's Preferred Alternative 60+ DNL noise contours in a way that is consistent with the provisions of the Consent Decree. The noise mitigation will begin when the level of total annual operations at MSP reaches 484,879 or in the year 2020, whichever comes first.

Draft Federal EA sub-section ES.4.4.1.

COMMENT SEVEN

55. Undersigned comments that at said Draft Federal EA's October 1, 2012, Public Hearing, a City of Minneapolis resident appeared to comment for the record that he had recently been provided an opportunity to have his residence insulated and, for that recent event, he was of the opinion proposed Federal action significantly impacted his residential property, which comment, if accurately recollected by Undersigned and true, suggested said Draft Federal EA did not tell the truth when materially representing, *supra*, "all residential units within the 65+ DNL noise contours of the development alternatives being considered <u>have been</u> provided noise mitigation."

56. Undersigned further comments said Draft Federal EA's material representation that "all residential units within the 65+ DNL noise contours of the development alternatives being considered have been provided noise mitigation," *supra*, appeared in the record to be supported only by aforesaid noise exposure map that represented its noise contours accurately represented "MAC Existing Noise Mitigation Program." The noise contours in said map are <u>not</u> the FAA-approved "2007" Part 150 noise contour map which is the legal map for purposes of assessing MSP's "existing noise mitigation program." In Undersigned's opinion, said noise contours may represent contours developed in a judicial settlement between MAC and certain parties in a judicial proceeding in which neither FAA nor Undersigned was plaintiff or defendant. Such a noise exposure map would have no force and effect upon any parties not subject to that judicial pro-

Page 13 of 19

048

20

21

048-20. As discussed in the Draft EA/EAW, neither of the Action Alternatives would result in a significant impact.

The individual living in Minneapolis is being offered noise mitigation as part of the existing Consent Decree and is located outside the 65 DNL noise contour. All properties located in the 2020 Preferred Alternative 65+ DNL contours have been mitigated. In most areas around the airport, the forecast 2020 Preferred Alternative 60+ DNL noise contours are located within the existing Consent Decree mitigation area, and the property in those contours have already / or are receiving noise mitigation.

048-21. The label on the exhibit accurately describes what is pictured on the map:

"MAC Existing Noise Mitigation Program and 2020 Alternative 2 – Airlines Relocated DNL Noise Contours."

This noise exposure map does not represent MAC's Part 150 mitigation. The FAA did not approve the 2007 forecast noise contours for purposes of Part 150. The map is used to determine eligibility for the Consent Decree noise mitigation program. Consideration of this mitigation program in the context of this Draft EA/EAW is appropriate.

21

22

23

ceeding, and such map is clearly not a legal Part 150 noise contour map. Wherefore Undersigned further comments and respectfully requests, under the ruling in *Nova Scotia*, supra, that KRULL instruct MAC to disclose the factual material believed to support the representation that the noise exposure map in Exhibit No. 5, *infra*, represents MAC's Part 150 existing mitigation program so that Undersigned can comment effectively, intelligently and meaningfully on the conclusions properly to be drawn concerning it in a new proceeding, to come into compliance with CEQ Regulations that required KRULL to comply with NEPA "to the fullest extent possible," meaning to comply "unless existing law applicable to [FAA operations] expressly prohibits or makes compliance impossible." 40 C.F.R. § 1500.6.

57. Undersigned further comments that the applicable standard to dispense with preparing an environmental impact statement is <u>only</u> where "identified mitigation measures [will] reduce potentially significant impacts below applicable significance thresholds," Order 1050. IE, par. 405(g), supra. Said Draft Federal EA appeared to be identifying MAC's residential noise insulation program where it represented, supra, that "all residential units... have been provided noise <u>mitigation</u> and, as such, are considered a <u>mitigated</u> incompatible land," underline added. Undersigned further comments MAC's residential noise insulation program is not "mitigation" under NEPA. Said residential noise insulation program agreements, by their terms, generally grant MAC an air easement over a residential land area and shield MAC from legal process for taking property for a public purpose without compensation, but residential is insulation does not "reduce," par. 405(g), supra, that specific land area from exposure to noise levels of 65 DNL, or above, to a level less than 65 DNL, *i.e.* to a level "below applicable significance thresholds." Order 1050. IE, par. 405(g), underline added. For that reason, Undersigned objects to said Draft Federal EA's representation, supra, that MAC's residential home insulation program is "mitigation" under NEPA and further comments and respectfully requests that KRULL vacate this provide an adequate draft Federal environmental assessment and provide an adequate draft Federal environmental assessment in a new proceeding, to come into compliance with CEQ Regulations that required FAA to provide information "of high quality" which included only "falccurate scientific analysis, expert agency comments" so as to expose such information to "public scrutiny." 40 C.F.R. § 1500.1(b).

58. Undersigned finally comments, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement on said action, as requested in comments four and five, *supra*, that such agency action, in Undersigned's opinion, would effectively moot this comment as aforesaid alleged NEPA violation can be remedied in that proceeding.

COMMENT EIGHT DRAFT EA MISREPRESENTED EXTENT OF "PUBLIC" PARTICIPATION STATEMENT

59. Undersigned restates and incorporates by reference par. 3-5, *supra*, as though fully set forth herein.

60. Draft Federal EA represented that, in its preparation, there had been adequate coordination with the public, in the following words:

The MAC coordinated with ... the public throughout the preparation of the EA. Coordination began early in the NEPA process with Agency and Community Briefings in late 2010. These briefings were followed by presentations and briefings at various Noise

Page 14 of 19

048-21. See response above.

048-22. See the Responses to Comments #007-20 and #007-51. Under NEPA and FAA's implementing regulations, there are no significant noise impacts that result from the Preferred Alternative.

The noise mitigation provided by the MAC beginning in the 1990s constitutes "mitigation" under NEPA and MEPA. NEPA defines mitigation as "minimizing impacts by limiting the degree or magnitude of the action and its implementation." 40 C.F.R. § 1508.20. MEPA defines mitigation as "minimizing impacts by limiting the degree of magnitude of a project." The noise mitigation program that the MAC has implemented reduces interior noise levels and, in so doing, constitutes mitigation under NEPA and MEPA. And, as discussed in General Response GR # 01 and in Response to Comment #007-20 and #007-51, the Preferred Alternative does not result in an increase of 1.5 db DNL or greater for a noise sensitive land use at or above the 65 DNL noise exposure level when compared with the No Action alternative. The 1.5 db DNL or greater increase is FAA's threshold of significance under NEPA.

048-23. Comment noted.

Oversight Committee (NOC) meetings. Also, the MAC conducted three open houses; two in July Committee (NOC) meetings.

Draft Federal EA section ES.5.1.

COMMENT EIGHT

61. Undersigned comments that he attended MAC's July 14, 2011 "Public Information Meeting" at Washburn High School and MAC's January 31, 2012 "Open House" and that he objects to the characterization of same as having provided any meaningful opportunity to participate in "the preparation of the EA," *supra*, as no such opportunity was provided. Aforesaid occasions consisted of viewing information boards prepared by MAC concerning which, when asked, the individuals hosting said occasions were unable, or unwilling, to provide meaningful answers nor would they accept any comment or any request for information to better understand proposed Federal action. Said occasions appeared to be *pro forma* ("for the sake of form") and were devoid of any effective opportunity to participate in the preparation of said Draft Federal EA's representation that "coordinat[ion]" took place that offered any effective, meaningful opportunity for public participation in the preparation of said Draft Federal EA's negressement that appears calculated to be misunderstood and provide an adequate draft Federal environmental assessment for public comment in a new proceeding, to come into compliance with CEQ Regulations that required FAA to provide information "of high quality" which included only "[a]ccurate scientific analysis, expert agency comments" so as to expose such information to "public scrutiny." 40 C.F.R. § 1500.1(b).

62. Undersigned finally comments, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement on said action, as requested in comments four and five, *supra*, that such agency action, in Undersigned's opinion, would effectively moot this comment as aforesaid alleged NEPA misrepresentation can be remedied in that proceeding.

<u>COMMENT NINE</u> DRAFT EA MISREPRESENTED NUMBER OF PASSENGERS IN 2010 STATEMENT

63. Undersigned restates and incorporates by reference par. 3-5, *supra*, as though fully set forth herein.

64. Introduction to Draft Federal EA provided for public comment materially represented the following in discussing need for proposed Federal action: "[i]n 2010, MSP served nearly 33 million passengers ... ranking it 15th in North America" Draft Federal EA section 1-1.

65. Draft Federal EA cited two authorities, in footnotes, as support for aforesaid representation ("[i]n 2010, MSP served nearly 33 million passengers ... ranking it 15th in North America"). The first footnote referred to MAC's own statistics and the second referred to an analysis by ACI North America, an advocacy group promoting airport development. Draft Federal EA does not appear to have provided either of these cited authorities for public comment.

66. Government's 2010 official report stated MSP had "15,512,487" passenger enplanements in Calendar Year 2010. Undersigned respectfully requests that Exhibit No. 6, enclosed herewith, which exhibit is a copy of aforesaid Government enplanement report, be entered in proceeding's record to verify foregoing representation.

Page 15 of 19

048

24

25

048-24. As stated in the Draft EA/EAW, the MAC coordinated with interested agencies and the public throughout the preparation of the Draft EA/EAW. The Draft EA/EAW process began in November 2010 with agency and community briefings. Several agencies and cities submitted comments to the MAC after these briefings. Copies of these comments are provided in Appendix N. These comments were considered in the preparation of the Draft EA/EAW.

In-depth analysis of

environmental impacts, including air quality and noise, took place throughout 2011 and the first half of 2012. Public open houses were conducted while this analysis was being completed. Public open houses were held in July 2011 and January 2012. At these open houses, the public had the opportunity to talk about their concerns one on one with knowledgeable project representatives.

The public also had the ability to provide input during the preparation of the Draft EA/EAW through their elected officials and the Noise Oversight Committee (NOC). During this time period, the MAC met with community and city leaders and shared information with the NOC.

The Draft EA/EAW was published on August 30,' 2012. Written comments were accepted from August 30th until October 11, 2012. Public open houses were conducted on September 17th and 18^{th,} and October 1st to answer questions regarding the Draft EA/EAW. The MAC also conducted a public hearing

following the October 1 st open house. The purpose of the public hearing was to allow the public to submit oral and written comments. Submitted comments are addressed in this response to comments and in the Final EA/EAW. The commenter participated in open houses, the October 1, 2012, public hearing, and submitted extensive public comments on October 11, 2012. The commenter's oral and written comments are addressed in this response to comments.
048-25. Comment noted.

COMMENT NINE

67. Undersigned comments an official Government report of MSP's passenger enplanements in 2010, *supra*, disclosed MSP enplanements were not "33 million" in 2010, and further showed said enplanements actually <u>declined</u> that year, from 15,551,206 in 2009 to 15,512,487 in 2010, and finally showed MSP was not ranked "15" that year. See Exhibit No. 6, *infra*. Undersigned objects to said Draft Federal EA's material representation "[i]n 2010, MSP served nearly 33 million passengers ... ranking it 15th in North America," for appearing, as a matter of first impression, calculated to be misunderstood, and further comments and respectfully requests, under the ruling in *Nova Scotia*, *supra*, that KRULL instruct MAC to disclose the factual material believed to support the representation that "[i]n 2010, MSP served nearly 33 million gers ... ranking it 15th in North America ..., "*supra*, so that Undersigned can comment effectively, intelligently and meaningfully on the conclusions properly to be drawn concerning it in a new proceeding, to come into compliance with CEQ Regulations that required KRULL to comply with NEPA "to the fullest extent possible," meaning to comply "unless existing law applicable to [FAA operations] expressly prohibits or makes compliance impossible." 40 C.F.R. § 1500.6.

68. Undersigned further comments that the 2010 Government report, *supra*, reporting MSP had "15,512,487" passenger enplanements in Calendar Year 2010 is best evidence and that it does not appear possible, under any set of facts, to conclude, as said Draft Federal EA has, that MSP served "33 million passengers," *supra*, in 2010, unless one adopts a twisted definition of "passenger," and, for that reason Undersigned objects to said Draft Federal EA and respectfully requests that KRULL vacate this proceeding set in motion by a draft Federal environmental assessment calculated to be misunderstood and provide an adequate draft Federal environmental assessment for public comment in a new proceeding, to come into compliance with CEQ Regulations that required KRULL to provide information "of high quality" which included only "[a]ccurate scientific analysis, expert agency comments" so as to expose such information to "public scrutiny." 40 C.F.R. § 1500.1(b).

69. Undersigned finally comments, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement on said action, as requested in comments four and five, *supra*, that such agency action, in Undersigned's opinion, would effectively moot this comment as aforesaid alleged NEPA misrepresentation can be remedied in that proceeding.

<u>COMMENT TEN</u> AGENCY INTERFERENCE WITH NEPA PROCESS (GROSS ERROR) STATEMENT

70. Undersigned restates and incorporates by reference par. 3-5, *supra*, as though fully set forth herein.

 CEQ Regulations mandate "NEPA procedures must insure that environmental information is available to ... citizens <u>before</u> decisions are made and <u>before</u> actions are taken" and that "public scrutiny [is] essential to implementing NEPA." 40 C.F.R. § 1500.1(b), underline added.

72. Draft Federal EA provided for public comment materially represented "FAA reviewed and approved the EA forecast in July 2012" and, on that point, supplied a letter from Stephen Obenauer (FAA) (hereinafter, "OBENAUER") to Roy Fuhrmann (MAC) dated July 2, 2012 in its Appendix A. Draft Federal EA at p. 2-5, Appendix A at p. 3 (unfolioed).

Page 16 of 19

048

26

27

28

048-26. The 33 million passengers refers to total passengers, which includes revenue passenger enplanements (passengers leaving MSP), revenue deplanements (passengers arriving at MSP), and non-revenue enplanements and deplanements (passengers flying for free, e.g. airline employees). The FAA statistics only include revenue passenger enplanements.

According to the ACI North American Airports Ranking for 2010, cited as the source in the Draft EA/EAW, MSP did in fact rank 15th in 2010 for total passengers.

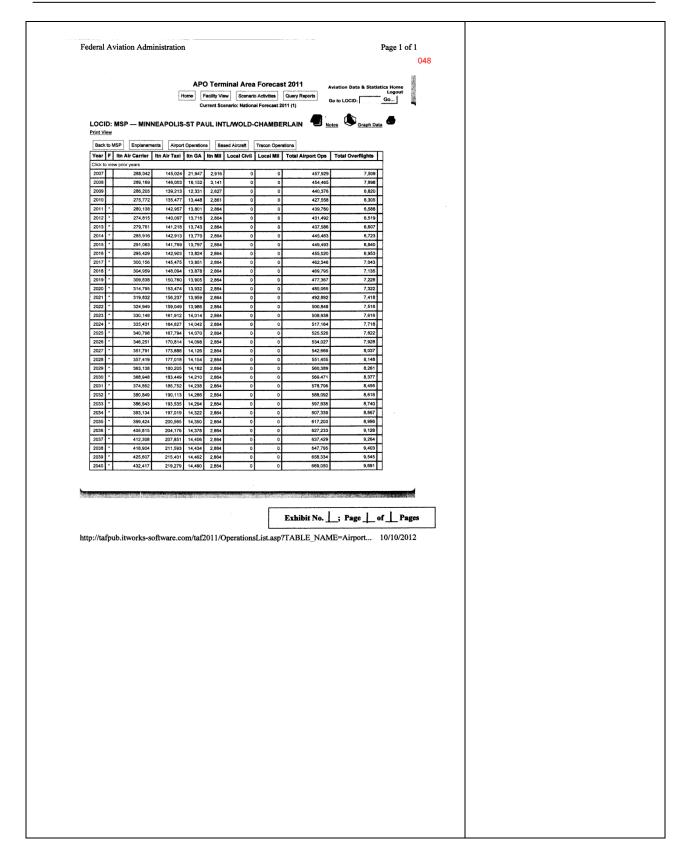
048-27. See response to Comment #048-26.

048-28. Comment noted.

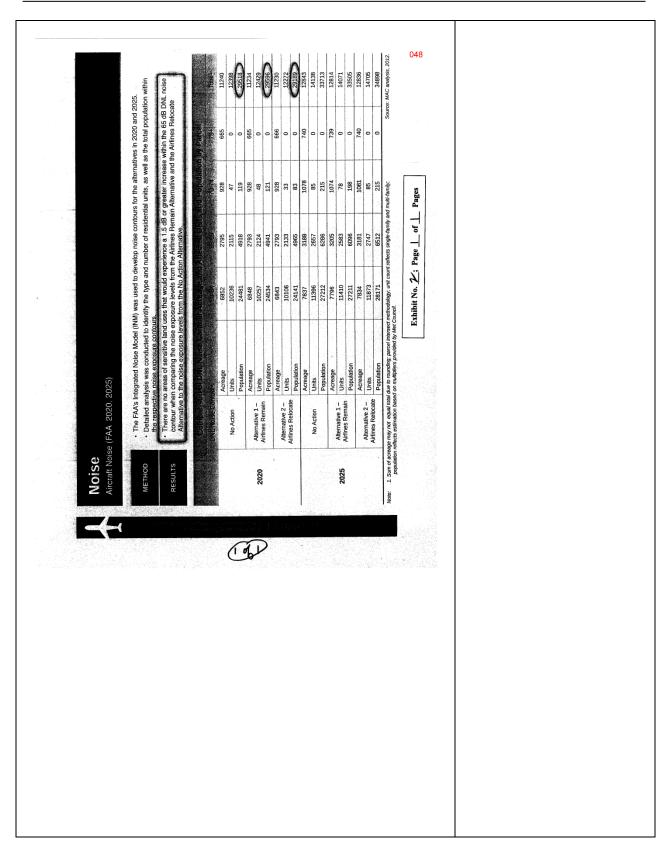
				048
73. Said Draft Federal EA stated Governm "was not used" in preparing its 2010, 2020 and 20 tive 2" Scenarios of the human environment at M the following fleet mix assumptions were used in p	25 "No Action SP. It materia	n," "Alternative	e 1" and "Alterna-	
Tab Summary of Pertinent F	ole 2.2.2	off Operations		
Summary of Pertinent P	2010	2020	2025	
Domestic Scheduled Air Carrier ("AC")	367,851	410,410	448,074	
International Scheduled Air Carrier ("AC")) 26,556	29,530	32,886	
Charter All-Cargo Carrier	103 12,499	96 12,764	106 12,826	
General Aviation and Air Taxi	27,921	29,934	30,003	
Military Total	2,145 437,075	2,145 484,879	2,145 526,040	
Draft Federal EA at pp. 2-3, 2-4. It materially re "[t]here are almost no differences in the number o p. 2-5.				
74. Said Draft Federal EA noted that under F than 10 percent in the 5-year forecast period, and be considered consistent with TAF and materially for aircraft operations," and offered the following	15 percent in y represented	the 10-year for its forecast "m	ecast period" may neets this criterion	
Comparison of MSP A		ty Forecasts		
	2010	2020	2025	
Operations EA Forecast	437,075	484,879	526,040	
2011 TAF	427,558	485,065	525,526	
% difference		0.0	0.1	
Draft Federal EA at p. 2-5. 75. Government's 2011 official TAF foreca lowing:	ast, in pertiner	nt part, actually	y forecast the fol-	
Summary of Pertinent 2011	TAF Forecast	Aircraft Operat	ions	
	2010	2020	2025	
Air Taxi ("AT") General Aviation ("GA") Total (AT + GA)	135,477 13,448 148,925	153,474 13,932 167,406	167,794 14,070 181,864	
Exhibit No. 1, infra.				
76. Comparing said Draft Federal EA's airp ("AT") and General Aviation ("GA") to TAF's c lowing:				
Page 17	of 19			

048-29. The forecast for the 048 combined operation categories is consistent with the FAA's Draft EA's Terminal Area Forecast (TAF). Draft EA Total (AT + GA) TAF Total (AT + GA) Deviatio Year FAA guidance for the review and 27,921 148,925 (-81%) 2010 2020 29.934 167,406 (-82%) approval of aviation forecasts 30,003 181,864 (-84%) 2025 states that forecasts for total COMMENT TEN 77. Undersigned objects to OBENAUER's approval of said Draft Federal EA's 2010 (acenplanements and total tual), 2020 (forecast) and 2025 (forecast) airport operation counts, for said counts, when disag-gregated, show that each seriously failed to meet FAA guidelines, viz., "[f]orecasts [that] differ operation are considered by less than 10 percent in the 5-year forceast period, and 15 percent in the 10-year forceast period" may be considered consistent with TAF. Supra. Undersigned comments OBENAUER consistent with the TAF if they erred when he approved said Draft Federal EA's 2010 (actual) and proposed 2020 and 2025 meet the following criterion: forecast aircraft operations <u>before</u> the factual material supporting said forecasts was exposed to public scrutiny so that the public could comment on the conclusions properly to be drawn from Forecasts differ by less than 10 it, and that to permit Obenauer's approval of critical, even decisive, information to stand before 29 that information was exposed to "public scrutiny" would effectively make NEPA largely superpercent in the 5-year forecast fluous or inoperative in this proceeding. Undersigned objects to a Draft Federal EA prepared with reliance on a premature and, likely, prejudicial exercise of FAA discretion and respectfully period, and 15 percent in the 10requests that KRULL vacate this proceeding set in motion by a tainted draft Federal environmental assessment and provide an adequate draft Federal environmental assessment for public com-ment in a new public hearing, to come into compliance with CEQ Regulations that required year forecast period." (See FAA's Review and Approval of Aviation KRULL to provide an effective, meaningful opportunity to expose Draft Federal EA's 2010 (actual), 2020 (forecast) and 2025 (forecast) airport operation counts, *supra*, to "public scruting "before [agency] decisions are made and before [agency] actions are taken." 40 C.F.R. Forecasts, June 2008 p. 1). The 40 C.F.R. § 1500.1(b) EA forecast meets this criterion 78. Undersigned finally comments, if KRULL dispenses with preparing an environmental for both enplanements and assessment on proposed Federal action and directly proceeds to prepare an environmental impact 30 statement on said action, as requested in comments four and five, supra, that such agency action, operations. Additionally, the FAA in Undersigned's opinion, would effectively moot this comment as aforesaid alleged gross error can be remedied in that proceeding. reviewed and approved the EA CONCLUSION forecast in July, 2012. 79. On October 11, 2012, Undersigned will deliver, prior to 5:00 p.m., the original of these comments in an envelope addressed to: MSP 2020 Improvements Draft EA/EAW File FAA environmental orders c/o Roy Fuhrmann - Director of Environment Metropolitan Airports Commission 1050.1E and 5050.4B require the 6040 28th Avenu . e South Minneapolis, MN 55450-2799, use of the latest available to MAC at 6040 28th Avenue South, Minneapolis, MN 555450, and also provide MAC a copy of planning information at the time these comments by e-mail² on October 11, 2012, prior to 5:00 p.m. (without exhibits) the NEPA process starts. The public is given an opportunity to ² To "msp2020draft EAW@mspmac.org." comment on the forecast during Page 18 of 19 the NEPA process. 048-30. Comment noted.

048 Sincerely, Om Berde Guy Heide in his individual capacity and or official capacity as Airport Noise Reduction Committee Secretary Enclosure(s): Exhibit No. 1 - APO Terminal Area Forecast 2011 (FAA; reproduced from FAA's internet website) Exhibit No. 2 – MSP 2020 Improvements Draft EA/EAW Open House Presentation, p. 18 of 36 (excerpt) Exhibit No. 3 – A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels, Marie Lynn Miranda, Rebecca Anthopolos, and Douglas Hastings, Children's Environmental Health Initiative, Nicholas School of the Environment, Duke University, Durham, North Carolina Exhibit No. 4 – Federal Register, vol. 66, no. 4, p. 1206-1207 Exhibit No. 5 – MSP 2020 Improvements Draft EA/EAW Open House Presentation, p. 20 of 36 (excerpt) Exhibit No. 6 – Enplanements at Primary Airports (Rank Order) CY 10 (FAA; reproduced from FAA's internet website) Page 19 of 19



Minneapolis-St. Paul International Airport 2020 Improvements Draft EA/EAW



048	
ΕΝΙΛΙΡΟΝΙΛΓΝΙΤΑΙ	
ehponline.org	
ehponline.org	
A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels	
Marie Lynn Miranda, Rebecca Anthopolos, Douglas Hastings	
http://dx.doi.org/10.1289/ehp.1003231	
Online 13 July 2011	
NIEHS National Institute of Environmental Health Sciences	
National Institutes of Health U.S. Department of Health and Human Services	
Exhibit No. 3; Page 1 of 22 Pages	

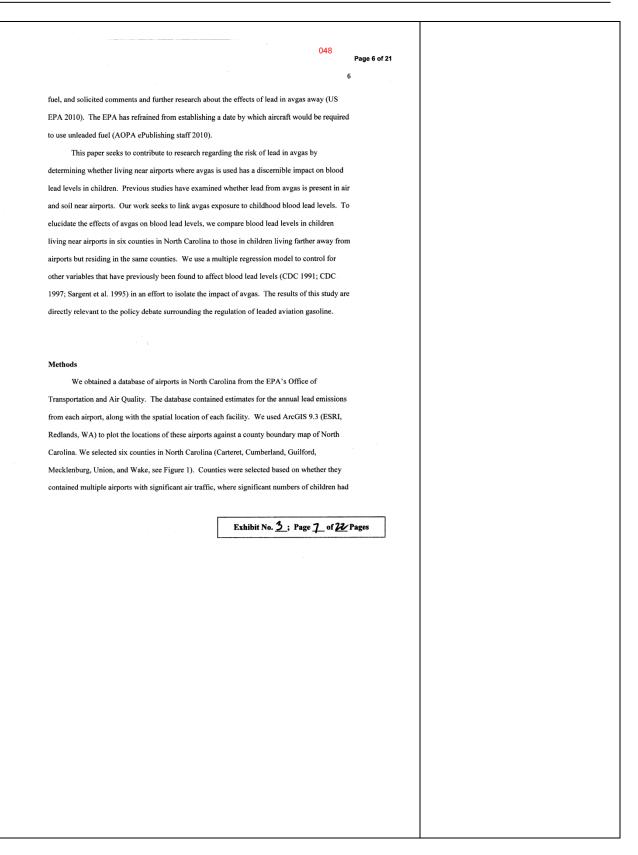
	048	
Page 1 of 21		
	1	
· .		
	A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels	
	Marie Lynn Miranda', Rebecca Anthopolos, and Douglas Hastings	
	Children's Environmental Health Initiative, Nicholas School of the Environment, Duke	
	University, Durham, NC 27708	
	*Corresponding author: Marie Lynn Miranda, Ph.D. Nicholas School of the Environment Duke University Box 90328 Levine Science Research Center Room A134 Durham, NC 27708-0328 919-613-8023 (o) 919-684-3227 (fax) mmiranda@duke.edu	
	Exhibit No. 3 ; Page 2 of 22Pages	

	048 Page 2 of 21	
	2	
	4	
Runn	ning Title: Aviation Gasoline and Childhood Blood Lead Levels	
Keyw	words: Aviation gasoline; Avgas; Blood lead; Childhood; Geospatial; Lead poisoning	
	nowledgments:	
	-	
Offic Norm also a Envir 8332	authors gratefully acknowledge aviation gas data provided by Marion Hoyer from the EPA's e of Transportation and Air Quality and childhood lead exposure data provided by Ed nan and Tena Ward from the NC Department of Environment and Natural Resources. We acknowledge the geocoding work undertaken by the GIS staff of the Children's ronmental Health Initiative. This work was funded in part by a grant from the USEPA (RD- 9301) and the North Carolina Department of Environment and Natural Resources (1 H64 20151).	
	peting Financial Interest Declaration:	
The a	authors have no competing financial interests with regard to this manuscript.	
Abbr	reviations (as defined in the text):	
Avga	as Aviation gasoline	
CDC	Centers for Disease Control and Prevention	
CI	Confidence interval	
EPA		
GIS	Geographic Information Systems	
LL	Low-lead	
NHA	NES National Health and Nutrition Examination Survey	
	Exhibit No. 3; Page 3 of 22 Pages	

Page 3 of 21	048
rage 5 01 21	3
	Abstract
	Background: Aviation gasoline, commonly referred to as avgas, is a leaded fuel used in small
	aircraft. Recent concern about the effects of lead emissions from planes has motivated the EPA
	to consider regulating leaded avgas.
	Objective: This study investigates the relationship between lead from avgas and blood lead levels
	in children living in six counties in North Carolina.
	Methods: We used Geographic Information Systems (GIS) to approximate areas surrounding
	airports in which lead from avgas may be present in elevated concentrations in air and may also
	be deposited to soil. We then used regression analysis to examine the relationship between
	residential proximity to airports and NC blood lead surveillance data in children aged 9 months
	to 7 years while controlling for factors including age of housing, socioeconomic characteristics,
	and seasonality.
	Results: Our results suggest that children living within 500 m of an airport at which planes use
	leaded avgas have higher blood lead levels than other children. This apparent effect of avgas on
	blood lead levels was evident among children living within 1000 m of airports. The estimated
	effect on blood lead levels exhibited a monotonically decreasing dose-response pattern, with the
	largest impact on children living within 500 m.
	Conclusions: We estimated a significant association between potential exposure to lead
	emissions from aviation gasoline and blood lead levels in children. While the estimated increase
	was not especially large, the results of this study are nonetheless directly relevant to the policy
	debate surrounding the regulation of leaded avgas.
	Exhibit No. 3 ; Page 4 of 22 Pages

Page 4 of 21 4	Arotaction Lada poisoning in children living in the United States has declined dramatically over the ast several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in lumbing. Nevertheless, children in the United States continue to be exposed to lead. The 007–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood add levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action evel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, ssociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; thiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. uggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 1. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that tere is no "safe" level for blood lead in children (CDC 2005). More source of lead exposure that is often overlooked is aviation fuel. Lead emitted from fireraft using leaded avgas is currently the largest source of lead in air in the United States; onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States i plays, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve the high octance required for the engines of piston-driven airplanes. The most commonly used al for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 µg L of leud (Reyal Dutch Shell 2010). Another	trouteries the several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in umbing. Nevertheless, children in the United States has declined dramatically over the as several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in umbing. Nevertheless, children in the United States continue to be exposed to lead. The 007-2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action vel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiddo et al. 2004; Lanphear et al. 2009; Schnaas et al. 2006). A study by Miranda et al. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, instituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States (1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Duch Shell 2010). Another	trouteries the several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in umbing. Nevertheless, children in the United States has declined dramatically over the st several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in umbing. Nevertheless, children in the United States continue to be exposed to lead. The 007-2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action vel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiddo et al. 2004; Lanphear et al. 2009; Schnaas et al. 2006). A study by Miranda et al. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, instituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States (1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Duch Shell 2010). Another		
Lead poisoning in children living in the United States has declined dramatically over the et several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in umbing. Nevertheless, children in the United States continue to be exposed to lead. The 07–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action wel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center r Health Statistics 2010). Even more worrisome is a large body of recent research that monstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on ademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from craft using leaded avgas is currently the largest source of lead in air in the United States, nestituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States '1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve ehigh octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 10LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	Lead poisoning in children living in the United States has declined dramatically over the et several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in umbing. Nevertheless, children in the United States continue to be exposed to lead. The 07–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action wel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center r Health Statistics 2010). Even more worrisome is a large body of recent research that monstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on ademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from craft using leaded avgas is currently the largest source of lead in air in the United States, nestituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States '1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve ehigh octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 10LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	Lead poisoning in children living in the United States has declined dramatically over the et several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in umbing. Nevertheless, children in the United States continue to be exposed to lead. The 07–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action wel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center r Health Statistics 2010). Even more worrisome is a large body of recent research that monstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on ademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from craft using leaded avgas is currently the largest source of lead in air in the United States, nestituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States '1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve ehigh octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 10LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	Lead poisoning in children living in the United States has declined dramatically over the et several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in umbing. Nevertheless, children in the United States continue to be exposed to lead. The 07–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action wel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center r Health Statistics 2010). Even more worrisome is a large body of recent research that monstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on ademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from craft using leaded avgas is currently the largest source of lead in air in the United States, nestituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States '1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve ehigh octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 10LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
Lead poisoning in children living in the United States has declined dramatically over the t several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in mbing. Nevertheless, children in the United States continue to be exposed to lead. The 07-2008 National Health and Nutrition Examination Survey (NHANES) survey found blood d levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action rel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center Health Statistics 2010). Even more worrisome is a large body of recent research that monstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; iodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on ademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that tre is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from craft using leaded avgas is currently the largest source of lead in air in the United States, instituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US A 2010). While leaded gasoline for automobiles was phased out of use in the United States 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve shigh octane required for the engines of piston-driven airplanes. The most commonly used if for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for v-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	Lead poisoning in children living in the United States has declined dramatically over the t several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in mbing. Nevertheless, children in the United States continue to be exposed to lead. The 07-2008 National Health and Nutrition Examination Survey (NHANES) survey found blood d levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action rel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center Health Statistics 2010). Even more worrisome is a large body of recent research that monstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; iodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on ademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that tre is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from craft using leaded avgas is currently the largest source of lead in air in the United States, instituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US A 2010). While leaded gasoline for automobiles was phased out of use in the United States 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve shigh octane required for the engines of piston-driven airplanes. The most commonly used if for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for v-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	Lead poisoning in children living in the United States has declined dramatically over the t several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in mbing. Nevertheless, children in the United States continue to be exposed to lead. The 07-2008 National Health and Nutrition Examination Survey (NHANES) survey found blood d levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action rel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center Health Statistics 2010). Even more worrisome is a large body of recent research that monstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; iodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on ademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that tre is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from craft using leaded avgas is currently the largest source of lead in air in the United States, instituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US A 2010). While leaded gasoline for automobiles was phased out of use in the United States 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve shigh octane required for the engines of piston-driven airplanes. The most commonly used if for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for v-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	Lead poisoning in children living in the United States has declined dramatically over the t several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in mbing. Nevertheless, children in the United States continue to be exposed to lead. The 07-2008 National Health and Nutrition Examination Survey (NHANES) survey found blood d levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action rel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center Health Statistics 2010). Even more worrisome is a large body of recent research that monstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; iodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on ademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that tre is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from craft using leaded avgas is currently the largest source of lead in air in the United States, instituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US A 2010). While leaded gasoline for automobiles was phased out of use in the United States 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve shigh octane required for the engines of piston-driven airplanes. The most commonly used if for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for v-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
Lead poisoning in children living in the United States has declined dramatically over the st several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in umbing. Nevertheless, children in the United States continue to be exposed to lead. The 07–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action wel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center r Health Statistics 2010). Even more worrisome is a large body of recent research that monstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on ademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from creat using leaded avgas is currently the largest source of lead in air in the United States, nestituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States (1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 10ULL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	Lead poisoning in children living in the United States has declined dramatically over the st several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in umbing. Nevertheless, children in the United States continue to be exposed to lead. The 07–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action wel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center r Health Statistics 2010). Even more worrisome is a large body of recent research that monstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on ademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from creat using leaded avgas is currently the largest source of lead in air in the United States, nestituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States (1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 10ULL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	Lead poisoning in children living in the United States has declined dramatically over the st several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in umbing. Nevertheless, children in the United States continue to be exposed to lead. The 07–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action wel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center r Health Statistics 2010). Even more worrisome is a large body of recent research that monstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on ademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from creat using leaded avgas is currently the largest source of lead in air in the United States, nestituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States (1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 10ULL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	Lead poisoning in children living in the United States has declined dramatically over the st several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in umbing. Nevertheless, children in the United States continue to be exposed to lead. The 07–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action wel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center r Health Statistics 2010). Even more worrisome is a large body of recent research that monstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on ademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from creat using leaded avgas is currently the largest source of lead in air in the United States, nestituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States (1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 10ULL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	traduction	
st several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in umbing. Nevertheless, children in the United States continue to be exposed to lead. The 107–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action vel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center r Health Statistics 2010). Even more worrisome is a large body of recent research that monstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on ademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et .2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, instituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States (1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	st several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in umbing. Nevertheless, children in the United States continue to be exposed to lead. The 107–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action vel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center r Health Statistics 2010). Even more worrisome is a large body of recent research that monstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on ademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et .2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, instituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States (1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	st several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in umbing. Nevertheless, children in the United States continue to be exposed to lead. The 107–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action vel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center r Health Statistics 2010). Even more worrisome is a large body of recent research that monstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on ademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et .2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, instituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States (1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	st several decades as a result of banning leaded gasoline, lead-based paint, and lead solder in umbing. Nevertheless, children in the United States continue to be exposed to lead. The 107–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action vel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center r Health Statistics 2010). Even more worrisome is a large body of recent research that monstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on ademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et .2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, instituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States (1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		v over the
humbing. Nevertheless, children in the United States continue to be exposed to lead. The 007–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action wel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, ssociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on scademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et al. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that tere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve te high octane required for the engines of piston-driven airplanes. The most commonly used ael for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ww-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	humbing. Nevertheless, children in the United States continue to be exposed to lead. The 007–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action wel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, ssociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on scademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et al. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that tere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve te high octane required for the engines of piston-driven airplanes. The most commonly used ael for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ww-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	umbing. Nevertheless, children in the United States continue to be exposed to lead. The 207–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action vel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on addemic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used lel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	umbing. Nevertheless, children in the United States continue to be exposed to lead. The 207–2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action vel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. ggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on addemic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used lel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
2007-2008 National Health and Nutrition Examination Survey (NHANES) survey found blood aal levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action wel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et a. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from recraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used hel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ww-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	2007-2008 National Health and Nutrition Examination Survey (NHANES) survey found blood aal levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action wel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et a. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from recraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used hel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ww-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	207-2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action vel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	207-2008 National Health and Nutrition Examination Survey (NHANES) survey found blood ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action vel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
ead levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action evel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, ssociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; chiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. uggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 1. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that here is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from irreraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US iPA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used uel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for pow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	ead levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action evel of 10 μg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, ssociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; thiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. uggests that early childhood blood lead levels as low as 2 μg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 1. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that there is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from irreraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US IPA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used al for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for pow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action vel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	ad levels at or above the Centers for Disease Control and Prevention's (CDC) blood lead action vel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used el for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
 vel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, sosciated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that tere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve high octane required for the engines of piston-driven airplanes. The most commonly used le for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ww-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another 	 vel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, sosciated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that tere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve high octane required for the engines of piston-driven airplanes. The most commonly used le for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ww-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another 	vel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, isociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. iggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on eademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, omstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used lel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	vel of 10 µg/dL in about 1.1% of 1- to 5-year-olds, or about 270,000 children (National Center or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, isociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. iggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on eademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, omstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used lel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
or Health Statistics 2010). Even more worrisome is a large body of recent research that lemonstrates negative health effects, including learning disabilities and behavioral disorders, ssociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; Chiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. uggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et al. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that here is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from incraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US EPA 2010). While leaded gasoline for automobiles was phased out of use in the United States by 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used well for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	or Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, ssociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; Chiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. uggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 1. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that here is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, oonstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used ale for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	er Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, issociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on eademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from recraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used lel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	er Health Statistics 2010). Even more worrisome is a large body of recent research that emonstrates negative health effects, including learning disabilities and behavioral disorders, issociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on eademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from recraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used lel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
emonstrates negative health effects, including learning disabilities and behavioral disorders, ssociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; Chiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. uggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 1. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that here is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US iPA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used uel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for pow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	emonstrates negative health effects, including learning disabilities and behavioral disorders, ssociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; chiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. uggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et l. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that here is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, constituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US IPA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used atel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for pow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	emonstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used all for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	emonstrates negative health effects, including learning disabilities and behavioral disorders, sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used all for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
ssociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; thiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. uggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et l. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that there is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve the high octane required for the engines of piston-driven airplanes. The most commonly used all for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for tow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	ssociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; thiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. uggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et l. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that there is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve the high octane required for the engines of piston-driven airplanes. The most commonly used all for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for tow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 μg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, postituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used atel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	sociated with lead exposure levels well below the CDC's action level (Canfield et al. 2003; hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 μg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, postituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used atel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
Chiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. uggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et l. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that here is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US EPA 2010). While leaded gasoline for automobiles was phased out of use in the United States hey 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used tuel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	 chiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. uggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et l. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that tere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US iPA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve a high octane required for the engines of piston-driven airplanes. The most commonly used a lei for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for a we-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another 	hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve the high octane required for the engines of piston-driven airplanes. The most commonly used the for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	hiodo et al. 2004; Lanphear et al. 2000; Schnaas et al. 2006). A study by Miranda et al. aggests that early childhood blood lead levels as low as 2 µg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve the high octane required for the engines of piston-driven airplanes. The most commonly used the for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
uggests that early childhood blood lead levels as low as 2 μg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et l. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that here is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, constituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US EPA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used usel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for pow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	uggests that early childhood blood lead levels as low as 2 μg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et al. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that here is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, constituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US IPA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve the high octane required for the engines of piston-driven airplanes. The most commonly used atel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for tow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	aggests that early childhood blood lead levels as low as 2 μg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, ponstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	aggests that early childhood blood lead levels as low as 2 μg/dL can have significant impacts on cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et . 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, ponstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et al. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that here is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US EPA 2010). While leaded gasoline for automobiles was phased out of use in the United States by 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used tuel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et l. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that there is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US IPA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve the high octane required for the engines of piston-driven airplanes. The most commonly used all for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for tow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	 cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from rcraft using leaded avgas is currently the largest source of lead in air in the United States, ponstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve high octane required for the engines of piston-driven airplanes. The most commonly used tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another 	 cademic performance as measured by end-of-grade test scores (Miranda et al. 2006; Miranda et 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from rcraft using leaded avgas is currently the largest source of lead in air in the United States, ponstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve high octane required for the engines of piston-driven airplanes. The most commonly used tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another 		
 1. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that here is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from irraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US EPA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used usel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for sow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another 	 I. 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that here is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from incraft using leaded avgas is currently the largest source of lead in air in the United States, constituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used are for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for how-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another 	 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used the for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for we-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another 	 2009; Miranda et al. 2010). In response to this body of research, the CDC has stated that ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used the for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for we-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another 		
here is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US EPA 2010). While leaded gasoline for automobiles was phased out of use in the United States by 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve the high octane required for the engines of piston-driven airplanes. The most commonly used uel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	there is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from incraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US IPA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used all for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for how-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used welead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	ere is no "safe" level for blood lead in children (CDC 2005). One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used welead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from incraft using leaded avgas is currently the largest source of lead in air in the United States, constituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US EPA 2010). While leaded gasoline for automobiles was phased out of use in the United States by 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used uel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from ircraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US IPA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve an high octane required for the engines of piston-driven airplanes. The most commonly used all for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for pow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	One source of lead exposure that is often overlooked is aviation fuel. Lead emitted from reraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
ircraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US EPA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used uel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	ircraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US IPA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve ne high octane required for the engines of piston-driven airplanes. The most commonly used uel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	rcraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	rcraft using leaded avgas is currently the largest source of lead in air in the United States, onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		itted from
onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US IPA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used uel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for pw-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US IPA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used uel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for pw-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	onstituting about 50 percent of lead emissions in the 2005 National Emissions Inventory (US PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used uel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for how-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used uel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for how-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	PA 2010). While leaded gasoline for automobiles was phased out of use in the United States y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		·
y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve he high octane required for the engines of piston-driven airplanes. The most commonly used uel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve ne high octane required for the engines of piston-driven airplanes. The most commonly used uel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	y 1995, lead is still permitted in aviation gasoline. Lead is added to avgas in order to achieve e high octane required for the engines of piston-driven airplanes. The most commonly used tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
he high octane required for the engines of piston-driven airplanes. The most commonly used uel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	he high octane required for the engines of piston-driven airplanes. The most commonly used uel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	e high octane required for the engines of piston-driven airplanes. The most commonly used tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	e high octane required for the engines of piston-driven airplanes. The most commonly used tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
uel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	uel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for ow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	tel for piston-driven aircraft in the U.S. is known as Avgas 100LL. While the "LL" stands for w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
ow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	ow-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another	w-lead, 100LL gasoline contains up to 0.56 g/L of lead (Royal Dutch Shell 2010). Another		
Exhibit No. 3; Page 5 of 22 Pages	Exhibit No. 3; Page 5 of 22 Pages	Exhibit No. <u>3</u> ; Page <u>5</u> of <u>22</u> Pages	Exhibit No. 3; Page 5 of 22 Pages		
				Exhibit No. 2; Page 3	<u>0 of <i>LL</i></u> rages

Page 5 of 21	048
1 490 5 61 21	5
	grade of avgas, Avgas 100, contains higher amounts of lead and is still in widespread use.
	Newer varieties of avgas without lead, including 82 UL and 94 UL, have recently been
	ntroduced. These unleaded fuels are not used as commonly as the two leaded grades, however,
	because their octane ratings are too low for many small aircraft engines.
	Previous research indicates that lead levels in air near airports where planes use avgas are
	significantly higher than background levels. A study at the Santa Monica airport in California
	found that the highest lead levels occur close to airport runways and decrease exponentially with
	listance from an airport, dropping down to background levels at about 1 km (US EPA 2010).
	Another study at Toronto-Buttonville airport found that the average air lead level near the airport
	was 4.2 times higher than the background air lead level in Toronto over a 24-hour period
	Environment Canada 2000), and a study at Chicago O'Hare airport found that air lead levels
	were significantly higher downwind from the airport than upwind (Illinois EPA 2002).
	Thus the combustion of leaded avgas by small airplane engines may pose a health risk to
	children who live or attend school near airports. The lead in air surrounding airports can be
	nhaled directly, or the lead may be ingested by children after it settles into soil or dust (US EPA
	2010). The EPA estimates that people living within 1 km of airports are at risk of being exposed
	to lead from avgas (Hitchings 2010). The EPA further notes that about 16 million people live
	within 1 km of an airport with planes using avgas, and 3 million children attend school within 1
	xm of these airports (US EPA 2010).
	Due to the risk of lead poisoning from avgas, environmental groups have pressured the
	EPA to take action to reduce lead emissions from aviation fuel. One environmental group,
	Friends of the Earth, has petitioned the EPA to find endangerment from and regulate lead in
	avgas. The EPA has responded with an Advanced Notice for Proposed Rulemaking on aviation
	Exhibit No. 3 ; Page 6 of 22 Pages



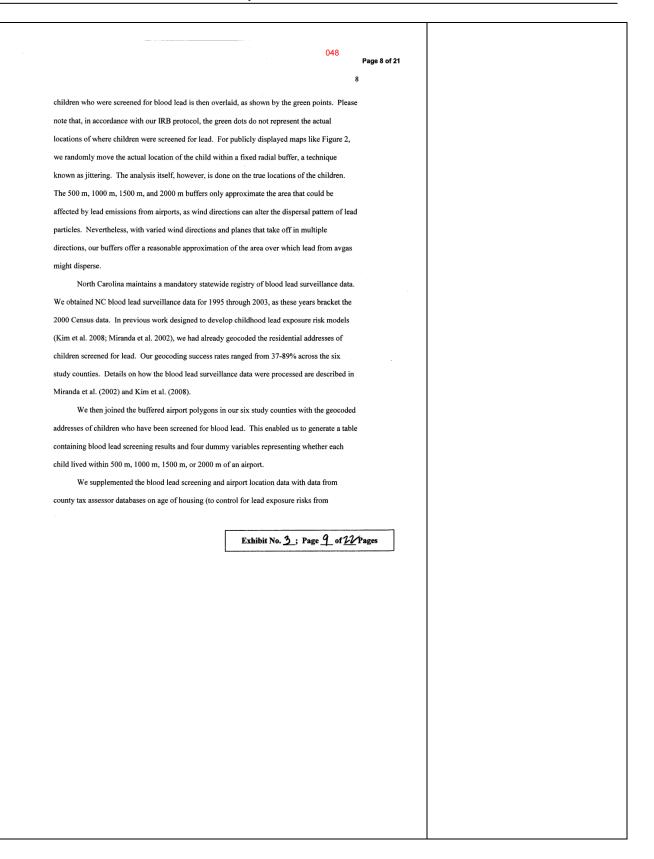
7

Page 7 of 21

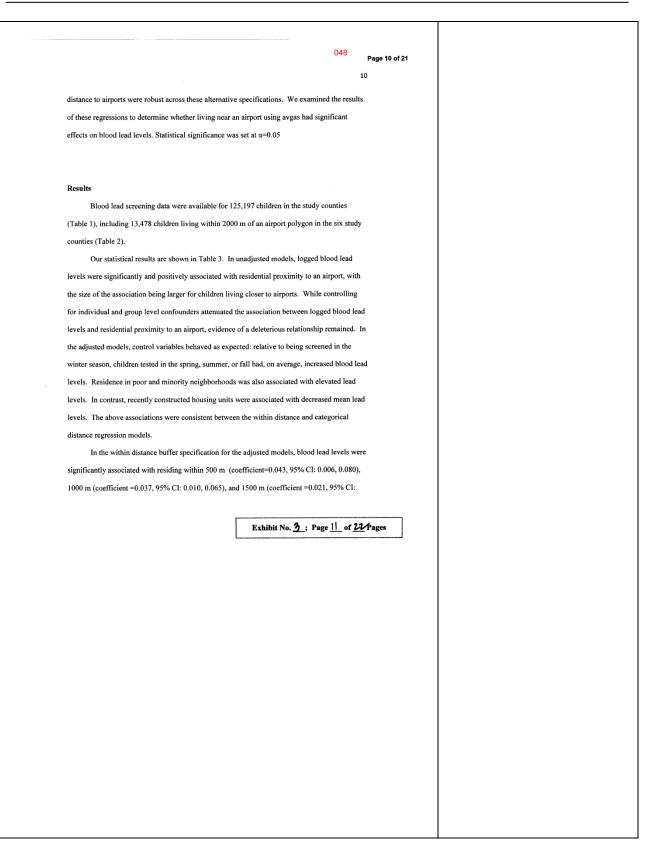
been screened for lead exposure, and where the county tax assessor data would allow us to control for age of housing as an important confounder when assessing avgas as a source of lead exposure (Table 1). Because we wanted to control for risk from deteriorating lead-based paint, we selected counties where the county tax assessor data contained a well-populated field for age of housing. We obtained NC blood lead surveillance data for all children in the study counties between the ages of 9 months and 7 years who had been tested for lead between 1995 and 2003 from the Children's Environmental Health Branch, within the North Carolina Department of Environment and Natural Resources. Because we were unable to ascertain where the children attended school, we were not able to control for the location of their school relative to the airports. We note that most of the children screened for lead are not yet old enough to be attending school. All aspects of this study were conducted in accordance with a human subjects research protocol approved by Duke University's Institutional Review Board.

After selecting our six study counties, we used Geographic Information Systems (GIS) to delineate fixed distance areas around each airport where aircraft use avgas. We also used GIS to connect the point locations of the airports given by address to tax parcel layers for each county via shared geography. The tax parcel layers contain a polygon shape representing the property boundary of each airport. We then created buffers around each of the airport polygons to represent the area in which airplane emissions could affect air lead levels. Because previous research has indicated that lead concentrations increase exponentially with proximity to airports (Piazza 1999), we created buffers that extended 500 m, 1000 m, 1500 m, and 2000 m from the polygon edges of the airport tax parcels. Figure 2 depicts this approach using the example of Wake County. Airports are indicated by the darkest shade of pink with the different distance buffers represented by increasingly lighter shades of pink. The residential addresses of the

Exhibit No. 3; Page & of 22 Pages



Page 9 of 21	048
i ugo o oi zi	9
	deteriorating lead-based paint), resolved at the individual tax parcel level. In addition, we used
	U.S. Census 2000 data on household median income (measured in tens of thousands) and
	proportion receiving public assistance, which were obtained at the Census block group level, as
	well as proportion non-Hispanic black and proportion Hispanic, which were obtained at the
	Census block level. Since previous work has shown the season of blood lead screening to be a
	significant predictor of blood lead levels (i.e., warm months are correlated with higher lead
	exposure from lead based paint) (Johnson et al. 1996; Kim et al. 2008; Miranda et al. 2007; Yiin
	et al. 2000), we created individual level dummy variables representing the season in which each
	child was screened for lead. Because the blood lead screening data are right-skewed, we used
	the natural logarithm of blood lead level in our analyses. We used the spatial data architecture
	described above to regress logged blood lead levels on the proximity to airport variable,
	controlling for age of housing, season in which the child was screened, and the Census
	demographic variables. We used multivariable regression analysis clustered at the Census block
	group level with inverse population weights at the tax parcel level to ensure that parcels with
	multiple blood lead screens did not overly influence the analysis. We implemented crude and
	adjusted regression models for each of the four proximity to airport variables. We used a
	categorical distance to airport variable with 0 to 500 m, 501 to 1000 m, 1001 to 1500 m, and
	1501 to 2000 m, with a reference group of greater than 2000 m. In addition, we performed a
	sensitivity analysis on our findings. First, we investigated whether the use of inverse population
	weights accounted for possible correlation among observations from the same tax parcel by
	running multilevel random intercept models designating the parcel as the grouping variable.
	Second, we considered the possibility of temporal confounding by including the lead screen year
	as a factor in each model with the reference year as 1995. Results regarding the importance of
	Exhibit No. 3; Page 10 of 22 Pages



Page 11 of 2	048
	11
	0.0008, 0.041) of an airport. Blood lead levels were not associated with living at greater
	distances. Importantly, the magnitude of the coefficient on the distance to airport variables was
	largest for those children living within 500 m and decreased in a dose-response fashion out to
	1500 m. Based on the distance to airport coefficients, children living within 500 m, 1000 m, or
	1500 m of an airport had average blood lead levels that were 4.4%, 3.8%, or 2.1% higher,
	respectively, than other children.
	In the categorical distance specification, compared to the reference category (>2,000 m
	from an airport), children living within 500 m from an airport had blood lead levels that were, on
	average, 4.4 % higher (coefficient=0.043, 95% CI: 0.006, 0.080) (Table 3). In addition, the
	coefficient for the 501 to 1000 m category was marginally significant (coefficient=0.034, 95%
	CI: -0.003, 0.072). Neither the 1001 to 1500 m, nor the 1501 to 2000 m category was significant
	at the 5 percent level, with coefficient estimates near the null value. These results taken
	collectively suggest that children living within 500 meters and within 1000 meters are driving the
	results in the models that entered the within distance threshold variables separately.
	Discussion
	Based on the geospatial and statistical analysis presented above, lead from aviation
	gasoline may have a small (2.1% - 4.4%) but significant impact on blood lead levels in children
	who live in close proximity to airports where avgas is used. Importantly, the magnitude of the
	estimated effect of living near airports was largest for those children living within 500 m and
	decreased in a monotonic fashion out to 1500 m. Because our model only takes into account
	whether a child is living anywhere in a fixed distance (500 m, 1000 m, or 1500 m) radius of an
	Exhibit No. 3; Page 12 of 22 Pages

	048 Page 12 of 21
	12
airport, children who live very close to or downwind	rom a runway could be affected more
significantly than the average value that we estimate t	
Our finding that living beyond 1000 m of an a	
significant relationship with blood lead levels is reaso	
suggesting that lead drops to background levels beyon	
Our study has several important limitations. I	
that could increase the extent of the area containing le	
directions and decrease it in others. Furthermore, our	
anywhere within a particular distance from an airport	and does not consider the fact that some
points within this area could have higher air lead cond	entrations than others. Our modeling of
the relationship between avgas and blood lead could b	e improved by incorporating wind
direction information, by obtaining information about	where piston-engine aircraft typically take
off or land at each airport, and by controlling for air t	affic volume. In addition, the variability in
our geocoding success rates may introduce spatial bia	s. To partially address this, we reran the
analysis without Union County, which had the lowest	geocoding rate (37% compared with 58%
for the remaining counties combined). The distance f	rom airport results were robust to this
change in the dataset. We also note that if one includ	es a rural county like Union County,
geocoding rates are inevitably poor. We felt it import	ant to include a rural county, so report
results with Union County data. Nonetheless, the ana	lysis presented here would be strengthened
with better geocoding rates. Finally, extending the stu	dy to additional counties throughout the
United States could increase sample size and determin	e whether the trends that we observed in
North Carolina are replicated elsewhere in the country	. The methods we describe here for
	Exhibit No. 3; Page 13 of 22 Pages

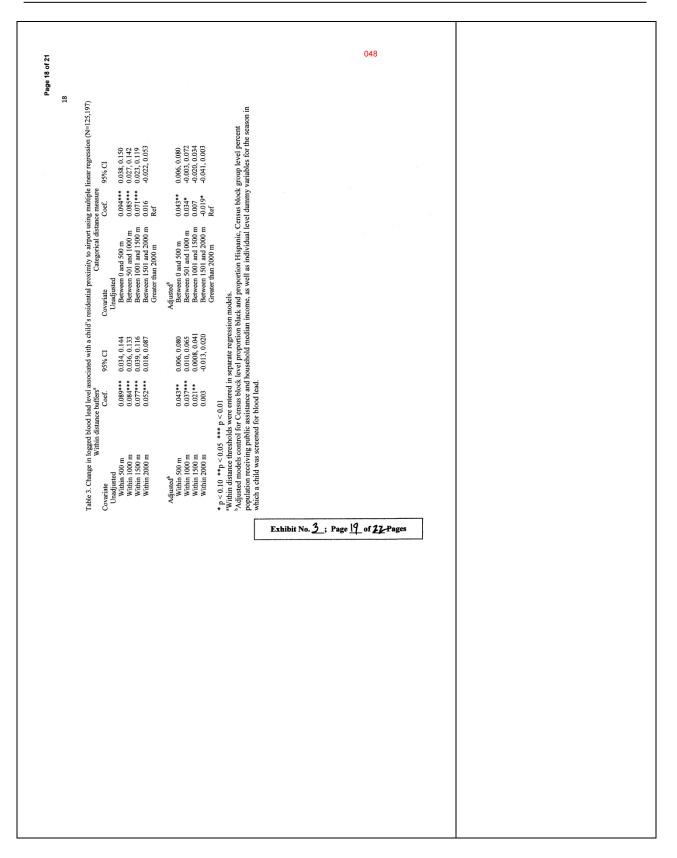
age 13 of 21	048	
	13	
	constructing buffer zones around airports could easily be replicated in other areas nationally (or	
	constructing buffer zones around airports could easily be replicated in other areas nationally (or internationally).	
	internationality).	
	Conclusions	
	Our analysis indicates that living within 1000 m of an airport where aviation gasoline is	
	used may have a significant effect on blood lead levels in children. Our results further suggest	
	that the impacts of aviation gasoline are highest among those children living closest to the	
	airport. This study adds to the literature examining whether leaded avgas poses risks to	
	children's health and speaks directly to the ongoing policy debate regarding the regulation of	
	leaded aviation gasoline.	
	Exhibit No. 3; Page 4 of 22 Pages	

048 Page 14 of 21
14
References
AOPA ePublishing staff. 2010. EPA confirms: No lead ban deadline looms on avgas. Available: <u>http://www.aopa.org/advocacy/articles/2010/100728avgas_epa.html</u> [accessed 15 February 2011].
Canfield RL, Henderson CR, Cory-Slechta DA, Cox C, Jusko TA, Lanphear BP. 2003. Intellectual impairment in children with blood lead concentrations below 10 µg per deciliter. N Engl J Med 348:1517-1526.
Centers for Disease Control and Prevention. 1991. Preventing Lead Poisoning in Young Children: A Statement by the Centers for Disease Control. Atlanta, GA.
1997. Screening young children for lead poisoning: guidance for state and local public health officials. Atlanta:U.S. Department of Health and Human Services/Public Health Service.
2005. Preventing Lead Poisoning in Young Children. Atlanta:CDC.
Chiodo LM, Jacobson SW, Jacobson JL. 2004. Neurodevelopmental effects of postnatal lead exposure at very low levels. Neurotoxicol Teratol 26:359-371.
Environment Canada. 2000. Airborne Paniculate Matter, Lead and Manganese at Buttonville Airport. CEP Project 041 6710. Toronto, Ontario:Conor Pacific Environmental Technologies for Environmental Protection Service, Ontario Region.
Hitchings M. 2010. U.S. EPA aims to slash aviation gasoline emissions. Global Refining & Fuels Today 2:31-35.
Illinois Environmental Progtection Agency BoA. 2002. Final Report: Chicago O'Hare Airport Air Toxic Monitoring Program June-December, 2000.
Johnson DL, McDade K, Griffith DA. 1996. Seasonal variation in paediatric blood lead levels in Syracuse, NY, USA. Environmental Geochemistry 18:81-88.
Kim D, Galeano MA, Hull A, Miranda ML. 2008. A framework for widespread replication of a highly spatially resolved childhood lead exposure risk model. Environ Health Perspect 116:1735-1739.
Lanphear BP, Dietrich K, Auinger P, Cox C. 2000. Cognitive deficits associated with blood lead concentrations < 10 μg/dL in US children and adolescents. Public Health Rep 115:521- 529.
Miranda ML, Dolinoy DC, Overstreet MA. 2002. Mapping for prevention: GIS models for directing childhood lead poisoning prevention programs. Environ Health Perspect 110:947-953.
Exhibit No. 3.; Page 15 of 22/Pages

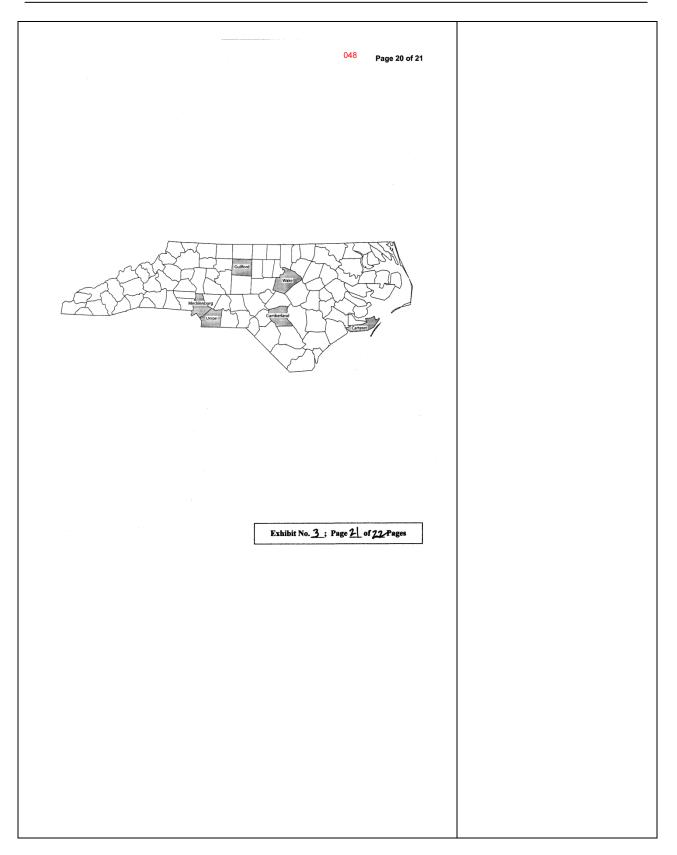
ge 15 of 21	048	
	Miranda ML, Kim D, Overstreet Galeano MA, Paul C, Hull A, Morgan SP. 2006. Evaluating the CDC Blood Lead Threshold: The Relationship between Early Childhood Blood Lead Levels and Performance on End of Grade Tests. In: Neurotoxicology in Development & Aging, 23rd International Neurotoxicology Conference Little Rock, AK.	
	2007. The relationship between early childhood blood lead levels and performance on End of Grade Tests. Environ Health Perspect 115:1242-1247.	
	Miranda ML, Kim D, Reiter J, Overstreet Galeano MA, Maxson P. 2009. Environmental Contributors to the Achievement Gap. NeuroToxicology 30:1019-1024.	
	Miranda ML, Maxson P, Kim D. 2010. Early childhood lead exposure and exceptionality designations for students. International Journal of Child Health and Human Development 3. In Press.	
	National Center for Health Statistics. 2010. National Health and Nutrition Examination Survey Data. In: Hyattsville, MD:U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.	
	Piazza B. 1999. Santa Monica Municipal Airport: A Report on the Generation and Downwind Extent of Emissions Generated from Aircraft and Ground Support Operations.	
	Royal Dutch Shell. 2010. Avgas grades and specifications. Available: <u>http://www.shell.com/</u> <u>home/content/aviation/products/fuels/types/avgas/</u> [accessed 15 February 2011].	
	Sargent JD, Brown MJ, Freeman JL, Bailey A, Goodman D, Freeman DH, Jr. 1995. Childhood lead poisoning in Massachusetts communities: its association with sociodemographic and housing characteristics. Am J Public Health 85:528-534.	
	Schnaas L, Rothenberg SJ, Flores MF, Martinez S, Hernandez C, Osorio E, et al. 2006. Reduced intellectual development in children with prenatal lead exposure. Environ Health Perspect 114:791-797.	
	United States Environmental Protection Agency. 2010. Advance Notice of Proposed Rulemaking on Lead Emissions from Piston-Engine Aircraft Using Leaded Aviation Gasoline. Fed Regist 75:22440-22468.	
	Yiin LM, Rhoads GG, Lioy PJ. 2000. Seasonal influences on childhood lead exposure. Environ Health Perspect 108:177-182.	
	Exhibit No. 3 ; Page 16 of 22 Pages	

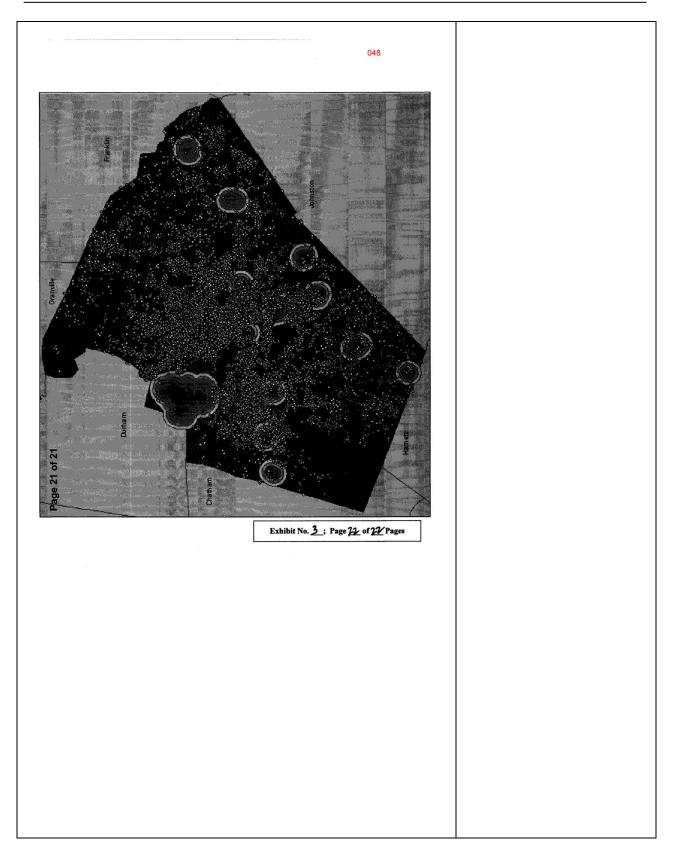
<page-header><caption><page-header><table-cell></table-cell></page-header></caption></page-header>					048	Page 16 of 21
screens among children age 9 months to 7 years in study counties, North Carolina (1995-2003) Estimated Lead Number of Tensisions Blood Lead County Airports (Tons/Year) Screens Carteret 8 0.224 3.333 Cumberland 11 0.238 14.854 Guilford 10 0.369 27,043 Mecklenburg 10 0.894 47,510 Union 14 0.285 3.387 Wake 13 0.624 29,070						
screens among children age 9 months to 7 years in study counties, North Carolina (1995-2003) Estimated Lead Number of Tensisions Blood Lead County Airports (Tons/Year) Screens Carteret 8 0.224 3.333 Cumberland 11 0.238 14.854 Guilford 10 0.369 27,043 Mecklenburg 10 0.894 47,510 Union 14 0.285 3.387 Wake 13 0.624 29,070						
Number of Emissions Blood Lead County Airports (TonsYear) Screens Carteret 8 0.224 3,333 Cumberland 11 0.238 14,854 Guilford 10 0.369 27,043 Mecklenburg 10 0.894 47,510 Union 14 0.285 3,387 Wake 13 0.624 29,070	Table 1. Number of screens among child	airports, estimate of lea ren age 9 months to 7 y	d emissions fro ears in study co	om aircrafts, and nun ounties, North Carol	nber of blood le ina (1995-2003	ead 3)
Exhibit No. 3 ; Page 11 of 22-Pages	Carteret Cumberland Guilford Mecklenburg Union	Number of Airports 8 11 10 10 10 14	Emissions (Tons/Year) 0.224 0.238 0.369 0.894 0.285	Blood Lead Screens 3,333 14,854 27,043 47,510 3,387		
Exhibit No. 3 ; Page 11 of 22-Pages						
Exhibit No. 3_; Page 11_ of 22-Pages						
Exhibit No. 3_; Page 11_ of 22-Pages						
Exhibit No. 3_; Page 11_ of 22-Pages						
Exhibit No. 3_; Page 11_ of 22-Pages						
Exhibit No. 3_; Page 11_ of 22-Pages						
Exhibit No. 3_; Page 11 of 22-Pages						
Exhibit No. 3 ; Page 11 of 22-Pages						
Exhibit No. 3 ; Page 11 of 22-Pages						
Exhibit No. 3 ; Page 17 of 22-Pages						
Exhibit No. <u>2</u> ; Page 11 of <u>22</u> Pages			[2		
				Exhibit No. <u>3</u> ;	Page 11 of 7	22 Pages

Page 17 of	21			048	
				17	
	Table 2. Individual and gr		of children age 9 mo	onths to 7 years who were	
	screened for blood lead in Characteristic	1995-2003 (N=125,197)	Value		
	Individual-level		3.88 ± 2.94		
	Blood lead level (µg/dL), a mean ± SD	arithmetic	3.88 ± 2.94		
	Season in which blood lead	d screening			
	occurred ^a , % (n) Winter		21.72 (27,189)		
	Spring		24.44 (30,593)		
	Summer		28.16 (35,256)		
	Fall Residential proximity to ai	irport % (n)	25.69 (32,159)		
	Within 500 m of an air		1.01 (1,267)		
	Within 1000 m of an a	irport	2.92 (3,649)		
	Within 1500 m of an ai	irport	6.49(8,122)		
	Within 2000 m of an ai Greater than 2000 m of	f an airport	10.77 (13,478) 89.23 (111,719)		
	Year built of child's reside		1970 ± 20.10		
	Group-level, mean ± SD				
	Proportion black ^b		0.39 ± 0.33		
	Proportion Hispanic ^b	(10.000.)5	0.09 ± 0.15		
	Household median income Proportion receiving public		4.38 ± 2.09 0.04 ± 0.05		
	^a Winter refers to the month	hs of December, January,	and February, spring	g the months of March	
	through May, summer Jun	e through August, and fa	ll, September through	h November.	
	^b Resolved at the Census bl ^c Resolved at the Census bl				
		5 1			
				3 - 17 - 17-	
			Exhibit No.	3; Page 18 of 22P	ages



Page 19 of 2	048
	19
	Figure Legends
	Figure 1. Study counties.
	Figure 2. Illustration of airports buffered at distances of 500 m, 1000 m, 1500 m, and 2000 m in
	Wake County, North Carolina, plotted along with a jittered representation of the residential
	addresses of the children screened for blood lead.
	Exhibit No. <u>3</u> ; Page <u>20</u> of <u>22</u> Pages





ENVIRONMENTAL PROTECTION AGENCY 40 CFR Part 745 [OPPT3-e2156H; FRL-8763-5] RIN 2070-AC63 Lead; Identification of Dangerous Levels of Lead AGENCY: Environmental Protection Agency (EPA). ACTON: Final rule. SUMMARY: EPA is issuing a final regulation under section 403 of the Toxic Substances Control Act (TSC/ as amended by the Residential Lead Based Paint Hazard Reduction Acto 1992, also known as "Title X (ten)."	 hazard evaluation and contr Federally-owned housing pr and housing receiving Feder assistance, and U.S. Departm Housing and Urban Develop grants to local jurisdictions 1 lead hazard control. In addit action also establishes, unde of TSCA section 402, resider dust cleanup levels and ame 	ol in ior to sale al nent of ment (HUD) o perform ion, today's	Cunningham, Director, Office of Program Management and Evaluation, Office of Pollution Prevention and Toxics (7401), Environmental Protection	
establish standards for lead-based p hazards in most pre-1978 housing at child-occupied facilities. This regulation supports the implemental of regulations already promulgated, others under development, which d with worker training and certificatio lead hazard disclosure in real estate transactions, requirements for lead	torin 430 of the supporting implementation , troit Act (TSCA), provisions of Title X and by guidance to all owners and c freduction Act of 1786 Action (1997) to 1978 housing and track and the support of the support 1978 housing and child prevente lead poisoning in	tial lead ndments to rements A section ogram By f the major providing iccupants of occupied help to ildren ctive on II be judicial light time NTACT: For	number: 202–554–1404; e-mail address: TSCA-Hottine@pa.gov. For technical information contact: Dave Topping, National Program Chemicals Division (7404), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, DC 20460; telephone number: (202) 260–7737; e-mail addresse:	
Category	y Examples of Entities	NAICS or SIC codes	Effect of Regulation	
Lead abatement professionals	sionals Workers, supervisors, inspectors, risk assessors, and project designers engaged in lead-based paint activi- ties.	562910	Provides standards that risk assessors would use to identify hazards and evaluate clear- ance tests; helps determine when certified professionals would need to be employed to perform lead cleanup	
Training providers	Firms providing training services in lead-based paint activities	611519	Provides standards that training providers would have to teach in their courses	
Federal agencies that own residential property		92511, 92811	Standards identify hazards that Federal agen- cies or purchasers of Federal property would have to abate in pre 1960 housing prior to sale, under Title X, section 1013.	
Property owners that receive assist- ance through Federal housing pro- grams	receive assist al housing pro- ties, owners of multifamily rental properties that receive project- based assistance, owners of rental properties that lease units under HUD's tenant-based assistance pro- gram	53110, 531311	Standards identify hazards that property owners would have to abate or reduce as specified by regulations issued by HUD under authority of Title X, section 1012	
Property owners	Owner occupants, rental property owners, public housing authorities, Federal agencies	531110, 531311	Standards identify hazards that, when known, would have to be disclosed under EPA/HUD joint regulations promulgated under Title X, section 1018	
This listing is not intended to be exhaustive, but rather provides a gui for entities likely to be affected by the action. Other types of entities not lis in the table in this unit could also be affected. To determine whether you your business is affected by this acti	r provides a guide e affected by this fentities not listed it could also be te whether you or	elevant questions f this action t the e FOR CT section.	B. How Can I Get Additional Information. Including Cogies of this Document or Other Related Documents? 1. Electronically. You may obtain electronic copies of this document, and certain other related documents that might be available electronically. by t No. 4; Page of 2 Pages	

Federal Register / Vol. 66, No. 4 / Friday, January 5, 2001 / Rules and Regulations 1207

<page-header><text><text><section-header><section-header><text><text><text><text><text><text>

account reliability, effectiveness, and safety" (15 U.S.C. 2682(a)(1)). Section 404 requires States and Tribes seeking to administer and enforce standards, regulations, or other requirements under section 402, 406, or both to seek authorization from EPA. C. Guiding Principles

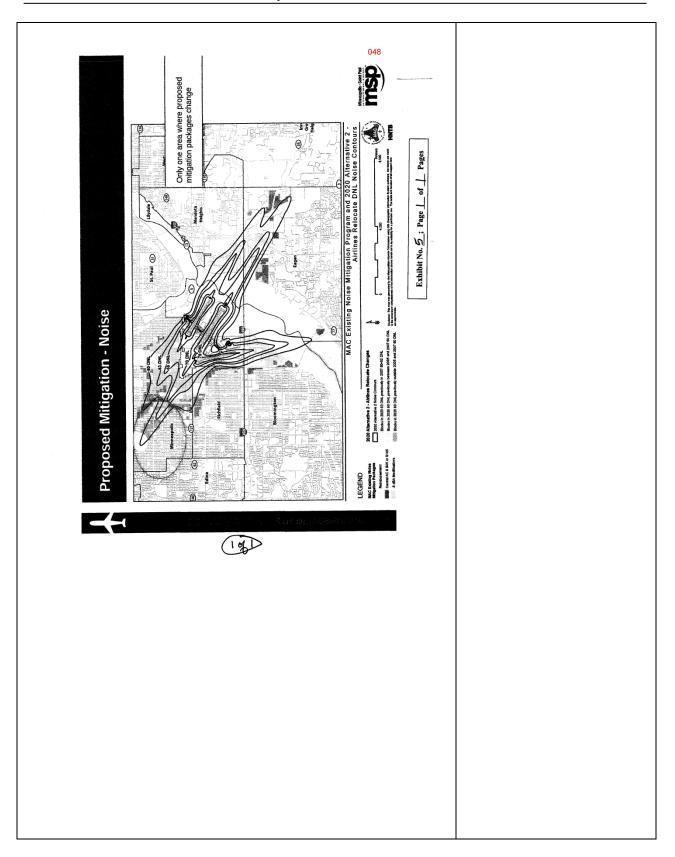
048

authorization from EPA. C. Guiding Principles Reducing exposure to lead has been an important issue for EPA for more than 2 decades. Young children are especially vulnerable to the toxic effects of settil evolution and the toxic of the set of settil evolution and the set especial way of the head to which they are especially vulnerable to the toxic effects and the set of the set of the set associated with lead are thought to be inversible. In light of the impacts on children and the nature of the health exposed. Many of the health exposure to harmful levels of lead. This goal has informed Agency actions such additive formed Agency actions such additive formed Agency actions such the difficuity of determining the level at which to set the standards given the uncertainties in information to level is the difficuit profile many actually cause particular blood lead levels that effects. EPA expercy has town that the second with adverse health effects. The Agency has town that the second with adverse health effects. The Agency has town that evolution profile medium may actually cruster particle with adverse health effects. The Agency has town that even and the town of the second to the set of the appecific medium may actually conseparticular blood lead levels. Given the analysis supporting the establishment to four the set of the set of the second to the set of the set of the set of the set of the town of the set of the town of the set of the set

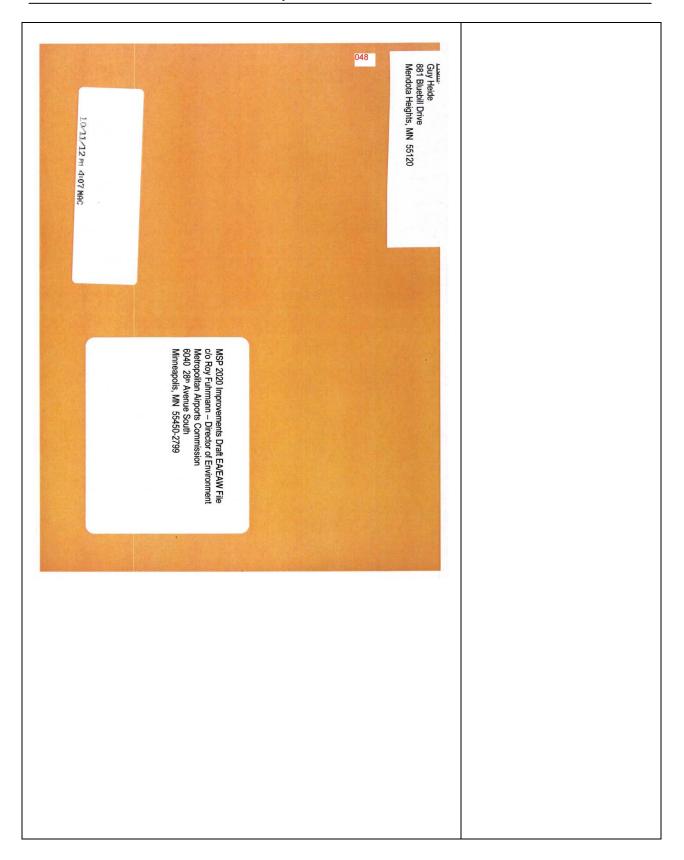
levele are associated with certain increases in blood lead levels. Given the range of uncertainty shown in its analysis supporting the establishment of a hazard level under this rule, EPA has developed a technical analysis that considers hazard standards for dust and soil at the lowest levels at which the analysis shows that across-the-board abatement on a national level could be justified. EPA recognizes, however that for any levels of lead in dust or soil judgment must be exercised as to how to treat the medium, and interim controls as well as abatement could be effective. In addition, EPA recognizes, however that for any levels of lead in dust or soil subatement on addition, ePA recommends that organizations and individuals consider some form of interim control in consider some form of interim control in tend levels are below the hazard standard if there is a concern that children under 6 might spend substantial torelist form lang areas or twellings. While the risks from lead at these lower levels are less than the hazardous lead levels in play areas to dwellings. While the risks from lead at health will be further protected if

Exhibit No. <u>4</u>; Page <u>2</u> of <u>2</u> Pages

Minneapolis-St. Paul International Airport 2020 Improvements Draft EA/EAW



RO S		City	Airport Name	SL	물	CY 10 Enplanements	CY 09 Enplanements	% Change	1
			Hartsfield - Jackson Atlanta	-				I	
1 SO GA 2 GL IL		Atlanta Chicago	International Chicago O'Hare International	P P	L	43,130,585 32,171,831	42,280,868 31,135,732	2.01% 3.33%	
3 WP CA		Los Angeles	Los Angeles International	Ρ	L	28,857,755	27,439,897	5.17%	
4 SW TX		Fort Worth	Dallas/Fort Worth International		L	27,100,656	26,663,984	1.64%	
5 NM CC 6 EA NY		Denver New York	Denver International John F Kennedy International		L	25,241,962 22,934,047	24,013,669 22,710,272	5.11% 0.99%	
			George Bush	1					
7 SW TX		Houston San Francisco	Intercontinental/Houston	P	L	19,528,631	19,290,239	1.24%	
8 WP CA 9 WP NV		International Airport	San Francisco International McCarran International	P	L	19,359,003	18,467,908 19,445,952	4.83% -2.31%	
		Las Vegas	Phoenix Sky Harbor	1	-	18,996,738			
10 WP AZ	PHX	Phoenix	International	P	L	18,907,171	18,559,647	1.87%	
11 SO NO		Charlotte	Charlotte/Douglas International		L	18,629,181	17,165,376	8.53%	
12 SO FL 13 SO FL		Miami Orlando	Miami International Orlando International		L	17,017,654 17,017,491	16,187,768 16,371,016	5.13% 3.95%	
14 EA NJ	EWR	Newark	Newark Liberty International Detroit Metropolitan Wayne	Ρ	L	16,571,754	16,659,441	-0.53%	
15 GL MI	DTW	Detroit	County	Ρ	L	15,643,890	15,211,402	2.84%	
			Minneapolis-St Paul International/Wold-						
16 GL M		Minneapolis	Chamberlain	P	L	15,512,487	15,551,206	-0.25%	
17 NM W/ 18 EA PA		Seattle Philadelphia	Seattle-Tacoma International Philadelphia International		L	15,406,243 14,951,254	15,273,092 15,002,961	0.87% -0.34%	
19 NE MA		Boston	General Edward Lawrence Logan International	Р	1	13,561,814	12,566,797	7.92%	
20 EA NY		New York	La Guardia	P	L	12,001,501	11,084,300	8.27%	
21 EA VA	IAD	Dulles	Washington Dulles International	Р	L	11,276,481	11,132,098	1.30%	
			Baltimore/Washington		Ť				
22 EA M	вм	Glen Burnie	International Thurgood Marshal	Р	L	10,848,633	10,338,950	4.93%	
23 SO FL	FLL	Fort Lauderdale	Fort Lauderdale/Hollywood International	Р	L	10,829,810	10,258,118	5.57%	
24 NM UT	SLC	Salt Lake City	Salt Lake City International	Ρ	L	9,910,493	9,903,821	0.07%	
25 WP HI		Honolulu	Honolulu International Ronald Reagan Washington	P	L	8,740,077	8,739,389	0.01%	
26 EA VA	DCA	Arlington	National	P	L	8,736,804	8,490,288	2.90%	
27 GL IL	MDW	Chicago	Chicago Midway International	Р	L	8,518,957	8,253,620	3.21%	
28 WP CA 29 SO FL		San Diego Tampa	San Diego International Tampa International	P P	L	8,430,509 8,137,222	8,453,854 8,263,294	-0.28% -1.53%	
	29			P	L				
30 NM OF		Portland	Portland International	<u> </u>	M		6,430,119	2.37%	
31 CE MC 32 CE MC		St. Louis Kansas City	Lambert-St Louis International Kansas City International	P	M	6,044,760 4,946,173	6,084,070 4,894,349	-0.65% 1.06%	
33 SO TN	MEM	Memphis	Memphis International	Ρ	М	4,930,935	5,054,191	-2.44%	
34 GL WI	MKE	Milwaukee	General Mitchell International Metropolitan Oakland	P	M		3,822,542		
35 WP CA	OAK	Oakland	International Cleveland-Hopkins	Р	м	4,673,417	4,612,631	1.32%	
36 GL OF	I CLE	Cleveland	International Page 1 of 9	Р	м	4,591,097	4,704,329	-2.41%	



Sirois Kro	n, Christene 048	Page 1 of 1
From: Sent: To: Subject:	G HEIDE [guyheide@msn.com] Thursday, October 11, 2012 2:57 PM msp2020drafteaw COMMENTS IN RE "DRAFT ENVIRONMENTAL ASSESSMENT (EA)/ENVIRONMENTAL ASSESSMENT WORKSHEET (EAW)"	
	s: #2 - MSP 2020 Improvements comments (Roy Fuhrmann).doc	
	ISP 2020 Improvements Draft EA/EAW File Ihrmann – Director of Environment	
Guy Heide ENVIRON	hereby delivers on October 11, 2012, prior to 5:00 pm, his comments in re "DRAFT JMENTAL	
mail.	IENT (EA)/ENVIRONMENTAL ASSESSMENT WORKSHEET (EAW)" by e-	
Sincerely		
Guy Heide 881 Blueb Mendota I Voice: 65	e ill Drive Heights, MN 55120 1-454-7440	
10/10/1		
10/12/2012	2	

October 11, 2012 Guy Heide 881 Bluebill Drive Mendota Heights, MN Telephone: 651-454-7 Comment(s) in re MSP 2020 Improvements Draft EA/E VIA E-MAIL AND MESSENGER TO: MSP 2020 Improvements Draft EA/EAW File c/o Roy Fuhrman – Director of Environment Metropolitan Airports Commission 6040 28 th Avenue South Minneapolis, MN 55450-2799 Date: Me Eukement	pages R-169 through R-194.
<text><list-item><list-item><list-item><list-item><list-item><list-item><list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></text>	ant (EA)/ State Envi- (") pursuant to notice hat written comments 31 048-31. See Response to Comment #048-1. rbal comments in re- g, Development and d Hearing. Commis- g. In Undersigned's to the NEPA process ge a Public Hearing 31 S AUTHORITY 'KRULL') is the re- licy Act (hereinafter, prescribed in NEPA, KRULL must "fur- independently evalu- esponsibilities for the sibility under [Chap-

048	
4. KRULL must implement the NEPA process prescribed in Council on Environmental Quality regulations in part 1500-1508 of title 40, Code of Federal Regulations. CEQ Regulations "tell [FAA] what they must do to comply with the procedures and achieve the goals of [NEPA]." 40 C.F.R. § 1500.1(a). CEQ Regulations mandate the following, <i>inter alia</i> :	
NEPA procedures must insure that environmental information is available to citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are es- sential to implementing NEPA.	
40 C.F.R. § 1500.1(b).	
 [FAA] shall to the fullest extent possible: (a) Interpret and administer the policies, regulations, and public laws of the United States in accordance with the policies set forth in the Act and in these regulations. (b) Implement procedures to make the NEPA process more useful to the public ; 	
 (d) Encourage and facilitate public involvement in decisions which affect the quality of the human environment. (e) Use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment. 	
Id. § 1500.2.	
Parts 1500 through 1508 of this title provide regulations applicable to and binding on [FAA] for implementing the procedural provisions of the National Environmental Policy Act of 1969 These regulations, unlike the predecessor guidelines, are not confined to [NEPA] sec. 102(2)(C) (environmental impact statements). The regulations apply to the whole of [NEPA] section 102(2).	
<i>Id.</i> § 1500.3.	
The phrase "to the fullest extent possible" in [NEPA] section 102 means that [FAA] shall comply with that section unless existing law applicable to the agency's operations expressly prohibits or makes compliance impossible.	
Id. § 1500.6.	
5. In a normative ¹ decision concerning sufficiency of notice and an opportunity for public comment in informal agency rulemaking, the court in <i>United States v. Nova Scotia Food Products Corp.</i> , 568 F.2d 240 (C.A.2 1977) held:	
To suppress meaningful comment by failure to disclose the basic data [constituting the fac- tual material that was] relied upon [by agency] is akin to rejecting comment altogether. For	
¹ Cf. Air Transport Ass'n of America v. F.A.A., 169 F.3d 1 (C.A.D.C. 1999) where informal rulemaking was required to expose " <u>critical factual material</u> " to "refutation" "in the proceeding." <i>Id.</i> at 252. And, see <i>Independent U.S. Tanker Owners Committee v. Lewis,</i> 600 F.2d 908 (C.A.D.C. 1982) where it was held that where agency's task " <i>begins</i> " with forecasts in an informal rulemaking proceeding, such forecasts must be disclosed "so that interested parties can comment upon the conclusions properly to be drawn from them." <i>Id.</i> at 926, italic in original.	
Page 2 of 20	

048 unless there is common ground, the comments are unlikely to be of a quality that might impress a careful agency. The inadequacy of comment in turn leads in the direction of arbitrary decision-making. Id. at 252. The Nova Scotia court concluded "that the failure to disclose to interested persons the scientific data" was "procedurally erroneous." Ibid. 6. Draft Federal EA provided for public comment is a NEPA statement prepared by MAC, a State public agency with jurisdiction over Minneapolis-St. Paul International Airport ("MSP") in possession of additional property rights in associated reliever airports located in the Minneapolis-St. Paul metropolitan area, but without jurisdiction over other major airports in the State of Minnesota, e.g. substantial airports located in Rochester, Duluth, and St. Cloud, Minnesota. 7. Said Draft Federal EA proposed a major Federal action. 8. Under NEPA, U. S. Department of Transportation Federal Aviation Administration 6. Onder NEPA, O. S. Department of Transportation redetal Aviation Aviation Aviation and thereinafter, "FAA") may permit a State of Minnesota agency or official to prepare a NEPA statement for any major Federal action funded under a program of grants to States <u>only</u> if "the State agency or official has <u>statewide jurisdiction</u>." A U.S.C. § 4332(D)(i), underline added. By said words, Congress clearly intended said Draft Federal EA must be prepared by an agency with legal responsibility to serve and protect the public interest of the entire State of Minnesota and not the narrow, parochial interest of the Minneapolis-St. Paul metropolitan area alone. COMMENT ONE Undersigned objects to said Draft Federal EA, commenting preparing said Draft Federal EA is ultra vires MAC's authority for MAC does not enjoy "statewide jurisdiction" as required 32 048-32. See Response to by NEPA, supra, and to permit MAC's action to stand would make NEPA largely superfluous or inoperative. Comment #048-2. 10. Undersigned further comments, for aforesaid reason, he objects to said Draft Federal EA and respectfully requests that KRULL vacate this proceeding set in motion by an illegal Draft Federal EA and provide a legal draft Federal environmental assessment for public com-33 048-33. See Response to ment, in a new proceeding to come into compliance with CEQ Regulations that required KRULL to comply with NEPA "to the fullest extent possible," meaning to comply "unless existing law Comment #048-3. applicable to [FAA operations] expressly prohibits or makes compliance impossible." 40 C.F.R. § 1500.6. 11. Undersigned finally comments, if KRULL dispenses with preparing an environmental 048-34. See Response to sasessment on proposed Federal action and directly proceeds to prepare an environmental impact statement on said action, as requested in comments four and five, *infra*, that such agency action, in Undersigned's opinion, would effectively moot this comment as aforesaid alleged NEPA vio-34 Comment #048-4. lation can be remedied in that new proceeding. COMMENT TWO "NO ACTION" SCENARIOS ARE SERIOUSLY INACCURATE, FATALLY FLAWED STATEMENT 12. Undersigned restates and incorporates by reference par. 3-5, supra, as though fully set forth herein. Page 3 of 20

048		
13. Draft Federal EA provided for public comment materially represented, if "no action" is taken, it followed MSP will <u>not</u> have capacity to accommodate airport operations forecast in 2020 and 2025, in the following words:		
The purpose of the proposed development is to accommodate the expected demand such that the level of service is acceptable throughout MSP's terminal and landside facilities through 2020 and the regional roadway system through 2030. MSP's terminal and landside facilities <u>do not and/or will not</u> meet current and forecasted demand.		
Draft Federal EA section ES-2.		
14. Said Draft Federal EA materially represented in preparing its 2020 and 2025 "No Ac- tion" depictions (hereinafter, "Scenario(s)") of the human environment at MSP it used the fol- lowing airport operation counts:		
2020 (forecast) 484,879 airport operations 2025 (forecast) 526,040 airport operations		
Draft Federal EA at p. 2-4. 15. Said Draft Federal EA materially represented its 2020 "no action" Scenario was based		
on an airport operation count of "484,879" operations, in the following words:		
Based on the 484.879 total forecast operations in 2020, approximately 4,388 acres are in the 65+ DNL noise contour and approximately 11,240 acres are in the 60+ DNL noise of the No Action Alternative. Table 5.14.3 contains the count of single-family and multifamily dwelling units and population in the 2020 and 2025 No Action Alternative DNL noise contours.		
Draft Federal EA sub-section 5.14.5.1 ("No Action Alternative Noise").		
16. From aforesaid admission that its 2020 "no action" Scenario was based on its forecast airport operation count of "484,879" operations, it can reasonably be inferred that its 2025 "no action" Scenario was also based on its forecast airport operation count of "526,040" operations.		
COMMENT TWO 17. Undersigned objects to said Draft Federal EA's depictions of the human environment at MSP in 2020 and 2025 for said "no action" depictions are repugnant to its fundamental premise that in 2020 and 2025 MSP will <u>not</u> have capacity to accommodate airport operations forecast in said years. From said premise it reasonably followed MSP would handle substantially <u>less</u> than the "484,879" operations forecast for 2020 and substantially <u>less</u> than the "526,040" operations forecast in 2025. Said Draft Federal EA's 2020 and 2025 "no action" depictions are clearly ficti- tious and dishonest in presenting the public with false choices for public comment. Wherefore Undersigned further comments and respectfully requests that KRULL vacate this proceeding set	35	048-35. See Response to Comment #048-5.
in motion by a seriously inaccurate draft Federal environmental assessment and provide an ade- quate draft Federal environmental assessment for public comment with accurate depictions of the human environment at MSP in 2020 and 2025 in a new proceeding, to come into compliance with CEQ Regulations that required FAA to provide information "of high quality" which in- cluded only "[a]ccurate scientific analysis, expert agency comments" so as to expose such infor- mation to "public scrutiny." 40 C.F.R. § 1500.1(b).		048-36. See Response to
18. Undersigned further comments, in his opinion, said Draft Federal EA, in preparing 2020 and 2025 "no action" depictions based on inaccurate assumptions of MSP's capacity, effec-	36	Comment #048-6.
Page 4 of 20		

						1
				04	48	
	tively camouflaged significant impacts directly at years, and that accurate "no action" Scenarios will				36	048-36. See response above.
	impact statement.	ungger me n	eeu to prepare	an environmentar		
	•	r 1			1.1	
	 Undersigned finally comments, if KRUL assessment on proposed Federal action and directly 					049 27 See Personal to
	statement on said action, as requested in comments				37	048-37. See Response to
	in Undersigned's opinion, would effectively moot				1 A A A A A A A A A A A A A A A A A A A	Comment #048-7.
	lation can be remedied in that new proceeding.	-		-		
	COMMENT	THREE				
	ALTERNATIVE SCENARIOS ARE SERIOUS		RATE, FAT	ALLY FLAWED		
	STATEM					
-	20. Undersigned restates and incorporates by	reference par	: 3-5, supra, a	as though fully set		
	forth herein.					
	21. Draft Federal EA provided for public co					
	Area Forecast (hereinafter, "TAF") "was not used					
	Action," "Alternative 1" and "Alternative 2" depict					
	environment at MSP. It materially represented that tions were used in preparing said Scenarios:	i, in its place,	ule following	neet mix assump-		
	Tabl Summary of Pertinent F	e 2.2.2	ft Operations			
1. A.	Summary of Pertinent Fo			2025		
		2010	2020	2025		
	Domestic Scheduled Air Carrier ("AC")	367,851	410,410	448,074		
	International Scheduled Air Carrier ("AC")	26,556	29,530	32,886		
	Charter	103	96	106 12,826		
	All-Cargo Carrier General Aviation and Air Taxi	12,499 27,921	12,764 29,934	30,003		
	Military	2,145	2,145	2,145		
	Total	437,075	484,879	526,040		
	Draft Federal EA at pp. 2-3, 2-4. It materially rep	presented, in r	espect to afor	esaid forecast that		
	"[t]here are almost no differences in the number of					
	p. 2-5.					
	22. Government's 2011 official TAF forecas	st, in pertinen	t part, actually	y forecast the fol-		
	lowing:					
	Summary of Pertinent 2011 T	AF Forecast A	Aircraft Operat	ions		
		2010	2020	2025		
	Air Taxi (hereinafter, "AT") General Aviation (hereinafter, "GA")	135,477 13,448	153,474 13,932	167,794 14,070		
	Total (AT + GA)	148,925	167,406	181,864		
	Undersigned respectfully requests that Exhibit No.			-		
	of aforesaid Government TAF forecast, be entere					
	representations.			ToroBound		
	•					
	Page 5 of	20				
						,

38

39

048-38. See Response to

048-39. See Response to

Comment #048-8.

Comment #048-9.

23. Comparing said Draft Federal EA's airport operations count, *supra*, for both Air Taxi ("AT") and General Aviation ("GA") to TAF's corresponding counts, *supra*, disclosed the following:

Year	Draft EA Total (AT + GA)	TAF Total (AT + GA)
2010	27,921	148,925
2020	29.934	167,406
2025	30,003	181,864

24. FAA has defined an "Air Taxi" as an aircraft designed to have a maximum seating capacity of 60 seats or less.

25. FAA has defined "General Aviation" as civil aircraft.

26. FAA has defined "Air Carrier" as an aircraft with seating capacity of more than 60 seats.

COMMENT THREE

27. Undersigned objects to all of said Draft Federal EA Scenarios of the human environment at MSP in 2010, 2020 and 2025 for said Scenarios are clearly based on a fleet mix that <u>understated</u> air taxi ("AT") and general aviation ("GA") aircraft operations, and, for that reason, inexorably <u>overstated</u> air carrier ("AC") aircraft operations in said years. Stated another way, said Draft Federal EA's fleet mix assumed AT and GA represented 6.4% of total aircraft operations in 2010, 6.2% in 2020, and 5.7% in 2025, while TAF stated AT and GA represented 34.1%, 34.5%, and 34.6% respectively. From said comparison, said Draft Federal EA representation, supra, that its forecast was substantially similar to TAF ("[t]here are almost no differences in the number of operations") is seriously inaccurate. Since AT and GA aircraft by definition, supra, are substantially <u>smaller</u> and <u>lighter</u> than AC aircraft, supra, it reasonably followed said Draft Federal EA 2010, 2020 and 2025 "No Action," "Alternative 1" and "Alternative 2" Scenarios are likewise seriously inaccurate. Wherefore Undersigned further comments and respectfully requests that KRULL vacate this proceeding set in motion by a seriously inaccurate draft Federal assessment for public comment with accurate depictions of the human environment at MSP in 2010, 2020 and 2025 in a new proceeding, to come into compliance with CEQ Regulations that required FAA to provide information "of high quality" which included only "[a]ccurate scientific analysis, expert agency comments" so as to expose such information to "public scrutiny." 40 C.F.R. § 1500.1(b).

28. Undersigned finally comments, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement on said action, as requested in comments four and five, *infra*, that such agency action, in Undersigned's opinion, would effectively moot this comment as aforesaid alleged NEPA violation can be remedied in that new proceeding.

<u>COMMENT FOUR</u> ALTERNATIVE SCENARIOS DISCLOSED "SIGNIFICANT" IMPACT STATEMENT

29. Undersigned restates and incorporates by reference par. 3-5, supra, as though fully set forth herein.

Page 6 of 20

			04	8
	Appendix A p. A-60, FAA relied of whether a change in noise associate			
that change results is greater in either a la patible under Apper	eration of an airport creates a sub- n an increase in the yearly day-nigh nd area which was formerly compa- ndix A (Table 1), or in a land area e under that Table and whose non	ht average sound le atible but is thereby which was previo	vel of 1.5 dB or made noncom- usly determined	
14 C.F.R. § 150.21(d)(1).				
 Order 1050.1E set nificant: 	following standard for determining	g whether a change	e in noise is sig-	
cause noise sensitiv or above DNL 65 d same timeframe. Fo cant impact. Specia of noise impacts on and historic sites, in threshold does not a tional park or nation a generally recogniz	impact would occur if analysis sh e areas to experience an increase in B noise exposure when compared to rexample, an increase from 63.5 d I consideration needs to be given to noise sensitive areas within nation tocluding traditional cultural propert dequately address the effects of nois al wildlife refuge where other nois ed purpose and attribute.	n noise of DNL 1. to the no action al B to 65 dB is cons to the evaluation of hal parks, national ties. For example, ise on visitors to an	5 dB or more at ternative for the idered a signifi- the significance wildlife refuges the DNL 65 dB eas within a na-	
Order 1050.1E, Appendix A	-			
with Draft Federal EA prov ally represented proposed F sensitive land uses would	ovements Draft EA/EAW Open H ided for public comment. Said Pre 'ederal action would not have a sign experience a 1.5 dB or greater inc io and showed the following acres or ts 2020 Scenarios:	esentation on page nificant noise impa crease within the 65	18 of 36 materi- act ("no areas of 5 dB DNL noise	
Scenario	DNL Contour:	<u>65-69</u> 70-74 2,795 928	<u>75+</u> 665	
2020 No Action 2020 Alternative 1	4,388 acres: 4,386 acres:	2,793 928	665	
	4,387 acres: t counts of residential units on land	2,793 928 areas within MSP	666. 's 65 DNL con-	
tour:		(() = = = = = = = = = = = = = = = = =	75	
Scenario 2020 No Action 2020 Alternative 1	2,162 units:	<u>65-69</u> 70-74 2,115 47 2,124 48	 0 0	
2020 Alternative 1 2020 Alternative 2	2,172 units: 2,166 units:	2,124 48 2,133 33	0.	
And, the following pertine MSP's 65 DNL contour:	ent population counts of individua	als residing on la	nd areas within	
Scenario	DNL Contour:	65-69 70-74	75+	
	Page 7 of 20			

<text><text><text><list-item><list-item><list-item><list-item><text><text><text><text><text></text></text></text></text></text></list-item></list-item></list-item></list-item></text></text></text>			
2020 Alternative 1 5.048 individuals: 4.94 12 0 0 2020 Alternative 2 5.048 individuals: 4.96 8 3 0 0 Mark construction 2 Formatives Alternatives Alternatives I and Alternatives 2 are shown, support or individual residing therein: Undersigned respectfully requests that Exhibits to 2, enclosed herein 16 alternatives and improvements Dand formatives, the proposed Federal action can reduce the serve within MSP's 65 DNL contour individuals residing therein for appening, as a matter of first impression, unscientifie and mark for this determinations on that Undersigned can commer the first impression, unscientifie and mark for this determinations on that Undersigned can commer the first impression, unscientifie and mark for this determinations on that Undersigned can commer the first impression, unscientifie and mark for this determination so that Undersigned can commer the first impression, unscientifie and mark for this determination so that Undersigned can commer the first impression, unscientifie and mark for this determination so that Undersigned can commer the first impression, unscientifie and mark for this determination on that Undersigned can commer the first impression, unscientifie and mark for this determination on that Undersigned can commer the first impression acceleration and the set on the propession field with a first impression acceleration acceleration and the set on the propession field with the set on that proposed Federal action, under bot hadron framewice, and first mergine Statu St	04	48	
2020 Attentions Ó. Spát individualis 4.94 B.1 D 2020 Attentiative Ó. Spát individualis 4.94 B.1 D 2020 Attentiative Ó. Spát individualis 4.94 B.1 D 2020 Attentiative Ó. Spát individualis 4.94 B.1 D D Stabulation Spát individualis 4.94 B.1 D <td< td=""><td>2020 No Astion 5.027 individuals: 4.018 110 0</td><td></td><td></td></td<>	2020 No Astion 5.027 individuals: 4.018 110 0		
 brighter in eartes within MSP's 65 DNL contour and, at the same time, increase the number of residential units and individuals residing thereio. Undersigned respectively, instelling and MSP's 65 DNL contour and, at the same time, increase the number of residential units and individuals residential units and individuals residential and the same time, increase the number of residential units and individuals residential units and individuals residential, at the same time, increase the number of residential units and individuals residential, at the same time, increase the number of residential units and individuals residential units and individuals residential, at the same time, increase the number of residential units and individuals residential, at the same time increase the access with MSP's 65 DNL contour under 14 CH2 Respectively, intelligently and meaning to ompliance with CEQ Regulations that required KRULL to comply with NEPA to the fullest content possible." A OLER & 1900. 1. Undersigned further comments, if if it the cases outside MSP's how the fullest content and at the same time, increase the targe sould calculate the same sould as a signed further comments, if if the case that proposed Federal action, under both further torus increases, the number of residential units and individuals foreseen to be added within MSP's 65 DNL contour and, at the same time, increase the targe sould atternative is ginificant for forescendy to reduce the acres within MSP's 65 DNL contour as notation. 1. Undersigned further comments and respectfully requests that Respective the proposed Federal action, under both forescendy to reduce the acres inside an any or 's 65 DNL contour as notating. 1. South case of the designed to a signed to a sinder the signed to a sinder the signed to a sig	2020 Alternative 1 5,062 individuals: 4,941 121 0		
 1. Indersigned objects to said Draft Pederal EA's determination, grayer, that, under both residential units and proposed Pederal action, and grayers, that, under both residential units and individuals residing there in for appearaing, as a matter of first impression, unscientified and material, believed to appear the to disclose the basic scientifie data, or factual material, believed to appear the to disclose the basic scientifie data, or factual material, believed to appear to the conclusions properly to be drawn concerning it in a new proceeding, to come it in the conclusions appearly to be drawn concerning it in a new proceeding, to come it in the residential units and individuals residential units and individual residential andividual residential units and individual residential andividual residential andita individual residential andits and residential units andia fe	to <u>reduce</u> the acres within MSP's 65 DNL contour and, at the same time, <u>increase</u> the number of residential units and individuals residing therein. Undersigned respectfully requests that Exhibit No. 2, enclosed herewith, which exhibit is a copy of aforesaid "MSP 2020 Improvements Draft EA/EAW Open House Presentation" page 18 of 36, be entered in proceeding's record to verify foregoing representations.		
alternatives, can simultaneously reduce the acres within MSP's 65 DNL contour under its "no action" scenario and, at the same time, increase the number of residential units and individuals forescene to be added within MSP's 65 DNL contour under Alternative 1 and/or Alternative 2 must reside on land areas outside MSP's "no action" 65 DNL contour, and, for that reason, the noise impact of said alternatives is <u>significant</u> for foresceabily creating <u>new</u> land areas. <i>i.e.</i> formerly compatible land outside, but now inside MSP's 65 DNL contour, land areas "which [were] formerly compatible land outside, but now inside MSP's 65 DNL contour, land areas "which [were] formerly compatible land outside, but now inside moncompatible land - classified land areas inside an airport's 65 DNL contour as noncompatible but proceed to prepare an environmental impact statement on said action to come into compliance with NEPA, CEQ Regulations and Order 1050.IE that mandatel FAA must prepare an environmental impact statement, that such agency action, in Undersigned's option, would effectively moot this comment's request to disclose factual material relied on to decision, as such can be remedied in that new proceeding. 41 48 48 48 August and the rest of the origination of the proceeding. 648-41. See Response to Comment and the proceeding. 648-42. See Response to Comment and the proceeding. COMMENT FIVE COMMENT FIVE August proceeding. 648-42. See Response to Comment and the proceeding. COMMENT FIVE Comment's request of disclose factual material relied on to decision, as such can be remedied in that new proceeding. 648-42. See Response to Comment and the proceeding. COMMENT FIVE Statement for add	33. Undersigned objects to said Draft Federal EA's determination, <i>supra</i> , that, under both alternatives, the proposed Federal action can <u>reduce</u> the acres within MSP's 65 DNL contour under its 'no action' scenario and, at the same time, <u>increase</u> the number of residential units <u>and</u> individuals residing therein for appearing, as a matter of first impression, unscientific and manufactured, and further comments and requests, under the ruling in <i>Nova Scotia, supra</i> , that KRULL instruct MAC to disclose the basic scientific data, or factual material, believed to support this determination so that Undersigned can comment effectively, intelligently and meaningfully on the conclusions properly to be drawn concerning it in a new proceeding, to come into compliance with CEQ Regulations that required KRULL to CIPA 'to the fullest extent possible," meaning to comply 'unless existing law applicable to [FAA operations] expressly prohibits or makes compliance impossible." 40 C.F.R. § 1500.6.	40	
directly proceed to prepare an environmental impact statement on said action to come into com- pliance with NEPA, CEQ Regulations and Order 1050.1E that mandated FAA must prepare an environmental impact statement for actions significantly affecting the human environment and, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement, that such agency action, in Un- dersigned's opinion, would effectively moot this comment's request to disclose factual material relied on to decision, as such can be remedied in that new proceeding. <u>COMMENT FIVE</u> ALTERNATIVE SCENARIOS DISCLOSED "SIGNIFICANT" IMPACT STATEMENT	alternatives, can simultaneously reduce the acres within MSP's 65 DNL contour under its "no action" scenario and, at the same time, increase the number of residential units and individuals therein, that the residential units and individuals foreseen to be added within MSP's 65 DNL contour under Alternative 1 and/or Alternative 2 must reside on land areas outside MSP's "no action" 65 DNL contour and, for that reason, the noise impact of said alternatives is <u>significant</u> for foreseeably creating <u>new</u> land areas, <i>i.e.</i> formerly compatible land outside, but now inside MSP's 65 DNL contour, land areas "which [were] formerly compatible but [are] thereby made noncompatible under Appendix A (Table 1)," § 150.21(d)(1), <i>supra</i> , by the proposed Federal action, noting said Table 1 classified land areas inside an airport's 65 DNL contour as noncom-	41	
ALTERNATIVE SCENARIOS DISCLOSED "SIGNIFICANT" IMPACT STATEMENT	directly proceed to prepare an environmental impact statement on said action to come into com- pliance with NEPA, CEQ Regulations and Order 1050.1E that mandated FAA must prepare an environmental impact statement for actions significantly affecting the human environment and, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement, that such agency action, in Un- dersigned's opinion, would effectively moot this comment's request to disclose factual material	42	
Page 8 of 20	ALTERNATIVE SCENARIOS DISCLOSED "SIGNIFICANT" IMPACT		
Page 8 of 20			
	Page 8 of 20		

_						
				04	48	
36. Undersigned restates and infully set forth herein.	corporates by reference p	oar. 3-5,	30-31, su	pra, as though		
37. "MSP 2020 Improvements						
with Draft Federal EA provided for put the following acres within MSP's 65 narios:						
Scenario 2025 No Action	5,006 acres:	<u>65-69</u> 3,188	70-74	<u>75+</u> 740		
2025 Alternative 1	5,018 acres:	3,205	1,074	739		
2025 Alternative 2 And, the following pertinent counts of	5,002 acres: fresidential units on land	3,181 areas wit	1,081 hin MSP	740. s 65 DNL con-		
tour:						
Scenario 2025 No Action	DNL Contour: 2,742 units:	<u>65-69</u> 2,657	70-74 85	<u>75+</u> 0		
2025 Alternative 1	2,661 units:	2,583	78	0		
2025 Alternative 2 And, the following pertinent popular	2,832 units: tion counts of individual	2,747 Is residir	85 og og lan	0. d areas within		
MSP's 65 DNL contour:			- on tall			
Scenario 2025 No Action	DNL Contour: 6,501 individuals:	65-69 6,286	70-74 215	<u>75+</u> 0		
2025 Alternative 1	6,294 individuals:	6,096	198	0		
2025 Alternative 2 When compared to the "no action" a	6,727 individuals:		215			
acres within MSP's 65 DNL contour	and, at the same time,	reduce th	ne numbe	r of residential		
units and individuals residing therein number of acres and, at the same time						
residing therein.	COMMENTERVE					
38. Undersigned objects to said 1	COMMENT FIVE Draft Federal EA's determ	nination,	<i>supra</i> , th	at, under Alter-	1	
native 1, the proposed Federal action of its "no action" scenario and, at the sa						
viduals residing therein for appearing	unscientific and manufac	tured, an	d further	comments and		049 42 See Despense to
requests, under the ruling in Nova Sco scientific data, or factual material, beli					43	048-43. See Response to
comment effectively, intelligently an concerning it in a new proceeding, to						Comment #048-13.
KRULL to comply with NEPA "to the	e fullest extent possible,"	meaning	to compl	y "unless exist-		
ing law applicable to [FAA operation 40 C.F.R. § 1500.6.	ns] expressly prohibits of	makes of	complian	ce impossible."		
39. Undersigned objects to said						048-44. See Response to
native 2, the proposed Federal action its "no action" scenario and, at the sar					44	Comment #048-14.
viduals residing therein for appearing,						
	Page 9 of 20					
	1 450 3 61 20					

04	3	
tured, and further comments and requests, under the ruling in Nova Scotia, supra, that KRULL instruct MAC to disclose the basic scientific data, or factual material, believed to support this determination so that Undersigned can comment effectively, intelligently and meaningfully on the conclusions properly to be drawn concerning it in a new proceeding, to come into compliance with CEQ Regulations that required KRULL to comply with NEPA "to the fullest extent possible," meaning to complia cumpossible." 40 C.F.R. § 1500.6.	44	048-44. See response above.
40. Undersigned further comments, if it is the case that proposed Federal action, under Al- ternative 1, can simultaneously increase the acres within MSP's 65 DNL contour under its "no action" scenario and, at the same time, reduce the number of residential units and individuals residing therein that the land areas ("acres") to be added within MSP's 65 DNL contour under Alternative 1 must be outside MSP's "no action" 65 DNL contour and, for that reason, the noise impact of said alternative is <u>significant</u> for foreseeably creating new land areas, <i>i.e.</i> formerly compatible land outside, but now inside MSP's 65 DNL contour, land areas "which [were] for- merly compatible but [are] thereby made noncompatible under Appendix A (Table 1)," § 150.21(d)(1), <i>supra</i> , by the proposed Federal action, noting said Table 1 classified land areas inside an airport's 65 DNL contour as noncompatible for residential use.	45	048-45. See Response to Comment #048-15.
41. Undersigned further comments, if it is the case that proposed Federal action, under Alternative 2, can simultaneously reduce the acres within MSP's 65 DNL contour under its "no action" scenario and, at the same time, increase the number of residential units and individuals residing therein that the residential units and individuals for scenario and, for that reason, the noise impact of said alternative is <u>significant</u> for foreseeably contour and, for that reason, the noise impact of said alternative is <u>significant</u> for foreseeably creating new land areas "which [were] formerly compatible land outside, but now inside MSP's 65 DNL contour, land areas "which [were] formerly compatible but [are] thereby made noncompatible under Appendix A (Table 1)," § $150.21(d)(1)$, <i>supra</i> , by the proposed Federal action, noting said Table 1 classified land areas inside an airport's 65 DNL contour as noncompatible for residential use.	46	048-46. See Response to Comment #048-16.
42. For that reason, Undersigned finally comments and respectfully requests that KRULL directly proceed to prepare an environmental impact statement on said action to come into compliance with NEPA, CEQ Regulations and Order 1050.1E that mandated FAA must prepare an environmental impact statement for actions significantly affecting the human environment and, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement, that such agency action, in Undersigned's opinion, would effectively mout this comment's request to disclose factual material relied on to decision, as such can be remedied in that new proceeding. <u>COMMENT SIX</u> <u>EFFECT OF LEADED AVIATION GASOLINE TO CHILDREN'S HEALTH SHOULD BE ASSESSED</u> STATEMENT	47	048-47. See Response to Comment #048-17.
 43. Undersigned restates and incorporates by reference par. 3-5, <i>supra</i>, as though fully set forth herein. 44. Lead emitted from aircraft using leaded aviation gas is currently the largest source of lead in air in the United States, constituting about 50 percent of lead emissions in 2005. Under- 		
Page 10 of 20		
		L

48

signed respectfully requests that Exhibit No. 3, enclosed herewith, which exhibit is a copy of "A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels," be entered in proceeding's record to verify foregoing representation found in said Analysis at p. 4.

45. The Center for Disease Control has stated "that there is no 'safe' level for blood lead in children" and a large body of research has demonstrated evidence of "learning disabilities and behavioral disorders, associated with lead exposure levels well below the CDC's action level," and of "<u>early</u> childhood blood lead levels as low as 2 μ g/dL" associated with "significant impacts on academic performance as measured by end-of-grade test scores." Exhibit No. 3 at p. 5 of 22, underline added.

46. The Environmental Protection Agency (hereinafter, "EPA") has taken notice of the special status, or vulnerability, of "[y]oung" children when it comes to lead exposure, in the following words:

Young children are especially vulnerable to the toxic effects of lead because their nervous systems are still developing and they absorb more of the lead to which they are exposed. Many of the health effects associated with lead are thought to be irreversible. Moreover, the effects at lower levels of exposure are often asymptomatic.

Federal Register, vol. 66, no. 4, at p. 1207. The term "asymptomatic" means children residing near MSP can be harmed by lead and not exhibit symptoms. For that reason, children may be harmed without their parents recognizing it. Undersigned respectfully requests that Exhibit No. 4, enclosed herewith, which exhibit is a copy of pertinent *Federal Register* page, be entered in proceeding's record to verify foregoing EPA representation.

47. Draft Federal EA provided for public comment in Chapter 5 ("Environmental Consequences") in section 5.17, sub-section 5.17.1, addressed "Children's Health and Safety Risks" in the following words:

Socioeconomic impacts may result from relocation of residences and businesses, alteration of surface transportation, division of established communities, disruption of orderly planned development, or changes in employment.

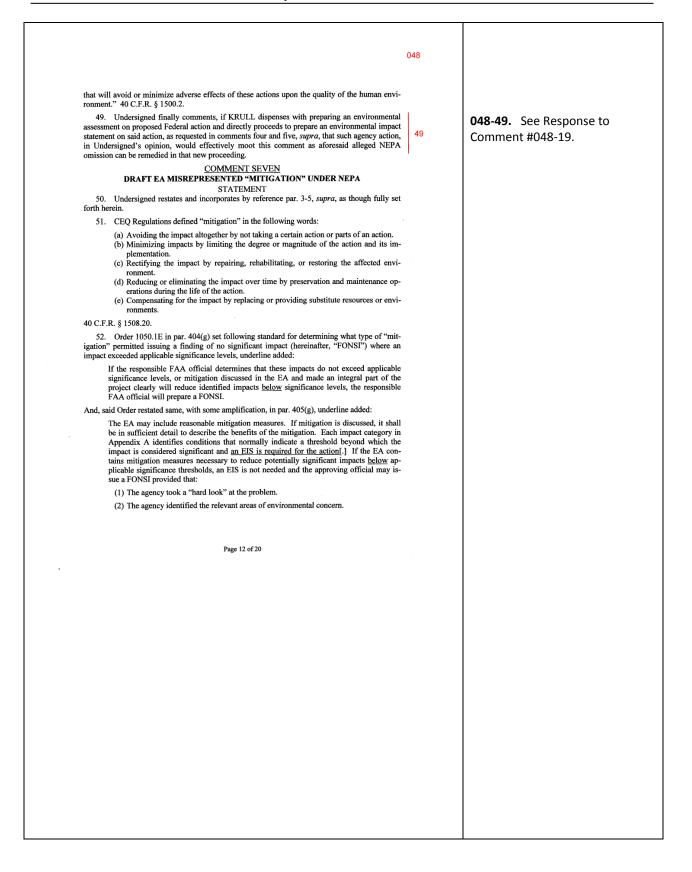
Draft Federal EA, sub-section 5.17.1. Said sub-section identified "the relocation of one business, the SuperAmerica [gas station]" as the only effect meriting attention in respect to children's health and safety. In other words, there was no attention given to the effects of aviation gasoline on childhood blood levels in said Draft Federal EA.

COMMENT SIX

48. Undersigned objects to said Draft Pederal EA's oversight in failing to address the effects of leaded aviation gasoline on childhood blood lead levels and comments and respectfully requests that KRULL vacate this proceeding set in motion by an inadequate Draft Federal EA and provide an adequate Federal environmental assessment that addresses children's health and safety risks from leaded aviation gasoline so that Undersigned can comment effectively, intelligently and meaningfully on the conclusions properly to be drawn concerning it in a new proceeding, to come into compliance with CEQ Regulations that required KRULL to comply with NEPA 'to the fullest extent possible," meaning to comply "unless existing law applicable to [FAA operations] expressly prohibits or makes compliance impossible," 40 C.F.R. § 1500.6, and "(u)se the NEPA process to identify and assess the reasonable alternatives to proposed actions

Page 11 of 20

048-48. See Response to Comment #048-18.



04	D	
(3) The EA supports the agency's determination that the potential impacts will be in- significant.		
(4) The agency has identified mitigation measures that will be sufficient to reduce po- tential impacts <u>below</u> applicable significance thresholds and has assured commit- ments to implement these measures.		
53. "MSP 2020 Improvements Draft EA/EAW Open House Presentation" was provided with Draft Federal EA provided for public comment. Said Presentation on page 20 stated that its noise exposure map's noise contours materially represented, in pertinent part, "MAC Existing Noise Mitigation Program." Undersigned respectfully requests that Exhibit No. 5, enclosed herewith, which exhibit is a copy of aforesaid "MSP 2020 Improvements Draft EA/EAW Open House Presentation" age 20 of 36, be entered in proceeding's record to verify foregoing representation.		
54. Draft Federal EA provided for public comment, admitting Federal action exceeded the noise threshold beyond which its impact is considered significant, materially represented an environmental impact statement would not be required as affected land areas had been 'mitigated':		
[1]n both 2020 and 2025 all residential units within the 65+ DNL noise contours of the development alternatives being considered have been provided noise <u>mitigation</u> and, as such, are considered a <u>mitigated</u> incompatible land use. However, in consideration of the circumstances unique to MSP by virtue of past mitigation activities, the terms of the Consent Decree, and the local land use compatibility guidelines defined by the Metropolitan Council, this EA/EAW proposes mitigation in the 2020 Sponsor's Preferred Alternative 60+ DNL noise contours in a way that is consistent with the provisions of the Consent Decree. The noise mitigation will begin when the level of total annual operations at MSP reaches 484,879 or in the year 2020, whichever comes first.		
Draft Federal EA sub-section ES.4.4.1.		
COMMENT SEVEN 55. Undersigned comments that at said Draft Federal EA's October 1, 2012, Public Hear- ing, a City of Minneapolis resident appeared to comment for the record that he had recently been provided an opportunity to have his residence insulated and, for that recent event, he was of the opinion proposed Federal action significantly impacted his residential property, which comment, if accurately recollected by Undersigned and true, suggested said Draft Federal EA did not tell the truth when materially representing, <i>supra</i> , "all residential units within the 65+ DNL noise contours of the development alternatives being considered <u>have been</u> provided noise mitigation." 56. Undersigned further comments said Draft Federal EA's material representation that "all residential units within the 65+ DNL noise contours of the development alternatives being con- sidered have been provided noise mitigation," <i>supra</i> , appeared in the record to be supported only by aforesaid noise exposure map that represented its noise contours accurately represented "MAC Existing Noise Mitigation Program." The noise contours in said map are <u>not</u> the FAA- approved "2007" Part 150 noise contour map which is the legal map for purposes of assessing MSP's "existing noise mitigation program." In Undersigned's opinion, said noise contours may represent contours developed in a judicial settlement between MAC and certain parties in a judi- cial proceeding in which neither FAA nor Undersigned was plaintiff or defendant. Such a noise	50	 048-50. See Response to Comment #048-20. 048-51. See Response to Comment #048-21.
exposure map would have no force and effect upon any parties not subject to that judicial pro-		
Page 13 of 20		

04	18	
ceeding, and such map is clearly not a legal Part 150 noise contour map. Wherefore Under- signed further comments and respectfully requests, under the ruling in <i>Nova Scotia, suppra</i> , that KRULL instruct MAC to disclose the factual material believed to support the representation that the noise exposure map in Exhibit No. 5, <i>infra</i> , represents MAC's Part 150 existing mitigation	51	040 54 . Commune al sur
program so that Undersigned can comment effectively, intelligently and meaningfully on the conclusions properly to be drawn concerning it in a new proceeding, to come into compliance with CEQ Regulations that required KRULL to comply with NEPA "to the fullest extent possible," meaning to comply "unless existing law applicable to [FAA operations] expressly prohibits or makes compliance impossible." 40 C.F.R. § 1500.6. 57. Undersigned further comments that the applicable standard to dispense with preparing		048-51. See response above.
an environmental impact statement is <u>only</u> where "identified mitigation measures [will] reduce potentially significant impacts below applicable significance thresholds," Order 1050.1E, par. 405(g), <i>supra</i> . Said Draft Federal EA appeared to be identifying MAC's residential noise insula- tion program where it represented, <i>supra</i> , that "all residential units have been provided noise <u>mitigation</u> and, as such, are considered a <u>mitigated</u> incompatible land," underline added. Under- signed further comments MAC's residential noise insulation program is not "mitigation" under		
NEPA. Said residential noise insulation program agreements, by their terms, generally grant MAC an air casement over a residential land area and shield MAC from legal process for taking property for a public purpose without compensation, but residential noise insulation does not "reduce," par. 405(g), supra, that specific land area <u>from</u> exposure to noise levels of 65 DNL, or above, to a level less than 65 DNL, <i>i.e.</i> to a level " <u>below</u> applicable significance thresholds." Order 1050.1E, par. 405(g), underline added. For that reason, Undersigned objects to said Draft Federal EA's representation, supra, that MAC's residential home insulation program is "mitiga- tion" under NEPA and further comments and respectfully requests that KRULL vacate this pro- ceeding set in motion by a seriously inaccurate draft Federal environmental assessment and pro- vide an adequate draft Federal environmental assessment for public comment in a new proceeding, to come into compliance with CEQ Regulations that required FAA to provide infor- mation "of high quality" which included only "[a]ccurate scientific analysis, expert agency comments" so as to expose such information to "public scrutiny." 40 C.F.R. § 1500.1(b).	52	048-52. See Response to Comment #048-22.
58. Undersigned finally comments, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement on said action, as requested in comments four and five, <i>supra</i> , that such agency action, in Undersigned's opinion, would effectively moot this comment as aforesaid alleged NEPA violation can be remedied in that proceeding. <u>COMMENT EIGHT</u>	53	048-53. See Response to Comment #048-23.
DRAFT EA MISREPRESENTED EXTENT OF "PUBLIC" PARTICIPATION STATEMENT 59. Undersigned restates and incorporates by reference par. 3-5, <i>supra</i> , as though fully set forth herein.		
60. Draft Federal EA represented that, in its preparation, there had been adequate coordination with the public, in the following words: The MAC coordinated with the public throughout the preparation of the EA. Coordina-		
tion began early in the NEPA process with Agency and Community Briefings in late 2010. These briefings were followed by presentations and briefings at various Noise		
Page 14 of 20		

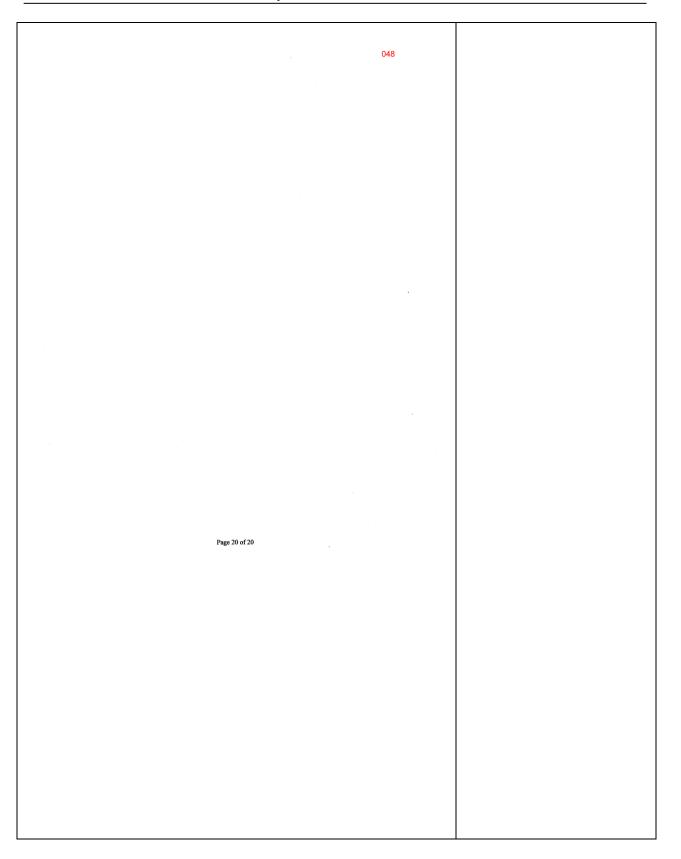
04	8	
	-	
Oversight Committee (NOC) meetings. Also, the MAC conducted three open houses; two in July Committee (NOC) meetings.		
Draft Federal EA section ES.5.1.		
COMMENT EIGHT 61. Undersigned comments that he attended MAC's July 14, 2011 "Public Information Meeting" at Washburn High School and MAC's January 31, 2012 "Open House" and that he objects to the characterization of same as having provided any meaningful opportunity to partici- pate in "the preparation of the EA," supra, as no such opportunity was provided. Aforesaid oc- casions consisted of viewing information boards prepared by MAC concerning which, when asked, the individuals hosting said occasions were unable, or unwilling, to provide meaningful answers nor would they accept any comment or any request for information to better understand proposed Federal action. Said occasions appeared to be <i>pro forma</i> ("for the sake of form") and were devoid of any effective opportunity to participate in the preparation of said Draft Federal EA. For these reasons Undersigned objects to Draft Federal EA's representation that "coordi- nat[ion]" took place that offered any effective, meaningful opportunity to public participation in the preparation of said Draft Federal environmental assessment that RRULL vacate this pro- ceeding set in motion by a draft Federal environmental assessment for public com- ment in a new proceeding, to come into compliance with CEQ Regulations that required FAA to provide information "o high quality" which included only "[a]ccurate scientific analysis, expert agency comments" so as to expose such information to "public scrutiny." 40 C.F.R. § 1500.1(b).	54	048-54. See Response to Comment #048-24.
62. Undersigned finally comments, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement on said action, as requested in comments four and five, <i>supra</i> , that such agency action, in Undersigned's opinion, would effectively moot this comment as aforesaid alleged NEPA misrepresentation can be remedied in that proceeding.	55	048-55. See Response to Comment #048-25.
COMMENT NINE DRAFT EA MISREPRESENTED NUMBER OF PASSENGERS IN 2010		
STATEMENT 63. Undersigned restates and incorporates by reference par. 3-5, <i>supra</i> , as though fully set		
forth herein.		
64. Introduction to Draft Federal EA provided for public comment materially represented the following in discussing need for proposed Federal action: "[i]n 2010, MSP served nearly 33 million passengers ranking it 15th in North America" Draft Federal EA section 1-1.		
65. Draft Federal EA cited two authorities, in footnotes, as support for aforesaid representa- tion ("[i]n 2010, MSP served nearly 33 million passengers ranking it 15 th in North America"). The first footnote referred to MAC's own statistics and the second referred to an analysis by ACI North America, an advocacy group promoting airport development. Draft Federal EA does not appear to have provided either of these cited authorities for public comment.		
66. Government's 2010 official report stated MSP had "15,512,487" passenger enplane- ments in Calendar Year 2010. Undersigned respectfully requests that Exhibit No. 6, enclosed herewith, which exhibit is a copy of aforesaid Government enplanement report, be entered in proceeding's record to verify foregoing representation.		
Page 15 of 20		

048		
040		
COLORDITATIO		
COMMENT NINE 67. Undersigned comments an official Government report of MSP's passenger enplane- ments in 2010, <i>supra</i> , disclosed MSP enplanements were not "33 million" in 2010, and further showed said enplanements actually <u>declined</u> that year, from 15,551,206 in 2009 to 15,512,487 in 2010, and finally showed MSP was not ranked "15" that year. See Exhibit No. 6, <i>infra</i> . Under- signed objects to said Draft Federal EA's material representation "[i]n 2010, MSP served nearly 33 million passengers ranking it 15th in North America," for appearing, as a matter of first impression, calculated to be misunderstood, and further comments and respectfully requests, under the ruling in <i>Nova Scotia</i> , supra, that KRULL instruct MAC to disclose the factual mate- rial believed to support the representation that "[i]n 2010, MSP served nearly 33 million passen- gers ranking it 15th in North America, " <i>supra</i> , so that Undersigned can comment effec- tively, intelligently and meaningfully on the conclusions properly to be drawn concerning it in a new proceeding, to come into compliance with CEQ Regulations that required KRULL to com- ply with NEPA "to the fullest extent possible," meaning to comply "unless existing law applica- ble to [FAA operations] expressly prohibits or makes compliance impossible." 40 C.F.R. § 1500.6.	56	048-56. See Response to Comment #048-26.
68. Undersigned further comments that the 2010 Government report, <i>supra</i> , reporting MSP had "15,512,487" passenger enplanements in Calendar Year 2010 is best evidence and that it does not appear possible, under any set of facts, to conclude, as said Draft Federal EA has, that MSP served "33 million passengers," <i>supra</i> , in 2010, unless one adopts a twisted definition of "passenger," and, for that reason Undersigned objects to said Draft Federal EA and respectfully requests that KRULL vacate this proceeding set in motion by a draft Federal environmental assessment calculated to be misunderstood and provide an adequate draft Federal environmental assessment for public comment in a new proceeding, to come into compliance with CEQ Regulations that required KRULL to provide information "of high quality" which included only "[a]ccurate scientific analysis, expert agency comments" so as to expose such information to "public scrutiny." 40 C.F.R. § 1500.1(b).	57	048-57. See Response to Comment #048-27.
69. Undersigned finally comments, if KKULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement on said action, as requested in comments four and five, <i>supra</i> , that such agency action, in Undersigned's opinion, would effectively moot this comment as aforesaid alleged NEPA misrepresentation can be remedied in that proceeding.	58	048-58. See Response to Comment #048-28.
<u>COMMENT TEN</u> AGENCY INTERFERENCE WITH NEPA PROCESS (GROSS ERROR) STATEMENT		
70. Undersigned restates and incorporates by reference par. 3-5, <i>supra</i> , as though fully set forth herein.		
71. CEQ Regulations mandate "NEPA procedures must insure that environmental informa- tion is available to citizens <u>before</u> decisions are made and <u>before</u> actions are taken" and that "public scrutiny [is] essential to implementing NEPA." 40 C.F.R. § 1500.1(b), underline added.		
72. Draft Federal EA provided for public comment materially represented "FAA reviewed and approved the EA forecast in July 2012" and, on that point, supplied a letter from Stephen Obenauer (FAA) (hereinafter, "OBENAUER") to Roy Fuhrmann (MAC) dated July 2, 2012 in its Appendix A. Draft Federal EA at p. 2-5, Appendix A at p. 3 (unfolioed).		
Page 16 of 20		

				048	
73. Said Draft Federal EA stated C					
"was not used" in preparing its 2010, 2020 tive 2" Scenarios of the human environme					
the following fleet mix assumptions were					
	Table 2.2.2				
Summary of Pe	rtinent Forecast Aircr	-			
	2010	2020	2025		
Domestic Scheduled Air Carrier (" International Scheduled Air Carrier		410,410 29,530	448,074 32,886		
Charter	103	96	106		
All-Cargo Carrier General Aviation and Air Taxi	12,499 27,921	12,764 29,934	12,826 30,003		
Military	2,145	2,145	2,145		
Total	437,075	484,879	526,040		
Draft Federal EA at pp. 2-3, 2-4. It mate "[t]here are almost no differences in the mp. 2-5.	erially represented, in umber of operations"	respect to afor when compare	resaid forecast the ed to TAF. Ibid.	at at	
74. Said Draft Federal EA noted that	under FAA guideline	s "[florecasts	[that] differ by le	SS	
than 10 percent in the 5-year forecast period be considered consistent with TAF and n	od, and 15 percent in naterially represented	the 10-year fo its forecast "r	recast period" ma neets this criterio	ay	
for aircraft operations," and offered the		t part, in suppo	ort thereof:		
Comparison of	Table 2.2.3 f MSP Aviation Activ	ity Forecasts			
	2010	2020	2025		
Operations					
EA Forecast	437,075	484,879	526,040		
2011 TAF % difference	427,558	485,065 0.0	525,526 0.1		
Draft Federal EA at p. 2-5.					
75. Government's 2011 official TA	F forecast, in pertine	nt part, actual	y forecast the fo	əl-	
lowing:	, in perator	r,			
Summary of Pertinen	nt 2011 TAF Forecast	Aircraft Opera	tions		
	2010	2020	2025		
Air Taxi ("AT")	135,477	153,474	167,794		
General Aviation ("GA") Total (AT + GA)	13,448 148,925	13,932 167,406	14,070 181,864		
Exhibit No. 1, <i>infra</i> .	170,723	107,400	101,004		
76. Comparing said Draft Federal E	A's airport operation	s count super	for both Air Ta	xi	
("AT") and General Aviation ("GA") to					
lowing:					
	Page 17 of 20				

048 Draft EA's Draft EA Total (AT + GA) TAF Total (AT + GA) Year Deviation 2010 27,921 148,925 (-81%) 2020 29.934 167,406 (-82%) 2025 30,003 181,864 (-84%) COMMENT TEN 77. Undersigned objects to OBENAUER's approval of said Draft Federal EA's 2010 (ac-11. Ondersigned objects to OBENATOR'S approval of sale Dial releval DA's 2010 (actual), 2020 (forecast) and 2025 (forecast) airport operation counts, for said counts, when disag-gregated, show that each seriously failed to meet FAA guidelines, viz., "[f]orecasts [that] differ by less than 10 percent in the 5-year forecast period, and 15 percent in the 10-year forecast pe-riod" may be considered consistent with TAF. Supra. Undersigned comments OBENAUER erred when he approved said Draft Federal EA's 2010 (actual) and proposed 2020 and 2025 forecast aircraft operations <u>before</u> the factual material supporting said forecasts was exposed to public scrutiny so that the public could comment on the conclusions properly to be drawn from it, and that to permit Obenauer's approval of critical, even decisive, information to stand <u>before</u> 048-59. See Response to 59 that information was exposed to "public scrutiny" would effectively make NEPA largely super-fluous or inoperative in this proceeding. Undersigned objects to a Draft Federal EA prepared Comment #048-29. with reliance on a premature and, likely, prejudicial exercise of FAA discretion and respectfully requests that KRULL vacate this proceeding set in motion by a tainted draft Federal environmental assessment and provide an adequate draft Federal environmental assessment for public comment in a new public hearing, to come into compliance with CEQ Regulations that required KRULL to provide an effective, meaningful opportunity to expose Draft Federal EA's 2010 (actual), 2020 (forecast) and 2025 (forecast) airport operation counts, *supra*, to "public scrutiny" "before [agency] decisions are made and before [agency] actions are taken." 40 C.F.R. § 1500.1(b 78. Undersigned finally comments, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement on said action, as requested in comments four and five, *supra*, that such agency action, 048-60. See Response to 60 Comment #048-30. in Undersigned's opinion, would effectively moot this comment as aforesaid alleged gross error can be remedied in that proceeding. CONCLUSION 79. On October 11, 2012, Undersigned will deliver, prior to 5:00 p.m., the original of these comments in an envelope addressed to: MSP 2020 Improvements Draft EA/EAW File c/o Roy Fuhrmann - Director of Environment Metropolitan Airports Commission 6040 28th Avenue South Minneapolis, MN 55450-2799, to MAC at 6040 28th Avenue South, Minneapolis, MN 555450, and also provide MAC a copy of these comments by e-mail² on October 11, 2012, prior to 5:00 p.m. (without exhibits). Sincerely, ² To "msp2020draft EAW@mspmac.org." Page 18 of 20

048 Guy Heide in his individual capacity and-or official capacity as Airport Noise Reduction Committee Secretary <u>Enclosure(s)</u>: Exhibit No. 1 – APO Terminal Area Forecast 2011 (FAA; reproduced from FAA's internet website) Exhibit No. 2 - MSP 2020 Improvements Draft EA/EAW Open House Presentation, p. 18 of 36 Exhibit No. 2 – MSP 2020 Improvements Dratt EA/EAW Open House Presentation, p. 10 of 30 (excerpt)
 Exhibit No. 3 – A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels, Marie Lynn Miranda, Rebecca Anthopolos, and Douglas Hastings, Children's Environmental Health Initiative, Nicholas School of the Environment, Duke University, Durham, North Carolina
 Exhibit No. 4 – *Federal Register*, vol. 66, no. 4, p. 1206-1207
 Exhibit No. 5 – MSP 2020 Improvements Draft EA/EAW Open House Presentation, p. 20 of 36 (avacarret) Exhibit No. 6 – Enplanements at Primary Airports (Rank Order) CY 10 (FAA; reproduced from FAA's internet website) Page 19 of 20



From: Sent: To: Subject: Attachment c/o Roy Fr Guy Heidd ENVIROP ASSESSM mail. Please no comments I have dec Sincerely Guy Heidd 881 Blueb Mendota H	ided it would be prudent to send this twice to ensure delivery. e ill Drive Heights, MN 55120	Page 1 of 1	The following comments from Mr. Guy Heide were received via Email three minutes after the previous version and appear to be the same as the comments received via Messenger and Email of 11 Oct 2012 at 2:57 p.m., except for attachments. All responses to comments are contained in pages R-169 through R-194.
Voice: 65	2		

	048		
	0 . 1 . 11 . 0010		
	October 11, 2012		
	Guy Heide		
	881 Bluebill Drive		
	Mendota Heights, MN 55120		
	Telephone: 651-454-7440.		
Comment(s) in re MSP 2020 Im	provements Draft EA/EAW		
VIA E-MAIL AND MESSENGER TO:			
MSB 2020 Improvements Droft EA/EAW File			
MSP 2020 Improvements Draft EA/EAW File c/o Roy Fuhrmann – Director of Environment			
Metropolitan Airports Commission			
6040 28 th Avenue South			
Minneapolis, MN 55450-2799			
Dear Mr. Fuhrmann:			
1. The undersigned (hereinafter, "Undersigned	d") is an interested person who seeks to submit		
written comments with regard to "Draft Federal"			
ronmental Assessment Worksheet (EAW)" (herein			
provided by the Metropolitan Airports Commission will be accepted until 5:00 pm on October 11, 2012			
		1	
 On Monday, October 1, 2012, Undersigner spect to Draft Federal EA at its Public Heat 			048-61. See Response to
Environment Committee appointed itself to act a			-
sioner Paul Rehkamp, Chair of said Committee,	presided at said Hearing. In Undersigned's	61	Comment #048-31.
opinion, Commissioner Rehkamp refused to allow			
and, to that end, abused the powers normally a engineered to cast Draft Federal EA in an improper			
• • • •	-	1	
<u>COMMEN</u> PREPARING DRAFT FEDERAL EA WAS			
STATEM			
3. Environmental Protection Specialist Kand			
sponsible Federal official described in the Nati			
"NEPA") who alone is entrusted with responsibili CEQ Regulations, and Order 5050.4B, as hereina			
nish[] guidance and participate[] in [preparing Dr			
ate[] such statement prior to its approval and adopt	ption," and must bear "responsibilities for the		
scope, objectivity, and content of the entire statemeter 55 – National Environmental Policy]." 42 U.S.			
ter 55 – National Environmental Folicy]. 42 0.5.	C. §§ 4552(D)(II), 4552(D)(III), 4552(D).		
	500		
Page 1 o	f 20		

048	•
4. KRULL must implement the NEPA process prescribed in Council on Environmental Quality regulations in part 1500-1508 of title 40, Code of Federal Regulations. CEQ Regulations "tell [FAA] what they must do to comply with the procedures and achieve the goals of [NEPA]." 40 C.F.R. § 1500.1(a). CEQ Regulations mandate the following, <i>inter alia</i> :	
NEPA procedures must insure that environmental information is available to citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are es-	
sential to implementing NEPA. 40 C.F.R. § 1500.1(b).	
[FAA] shall to the fullest extent possible:	
 (a) Interpret and administer the policies, regulations, and public laws of the United States in accordance with the policies set forth in the Act and in these regulations. (b) Implement procedures to make the NEPA process more useful to the public 	
 (d) Encourage and facilitate public involvement in decisions which affect the quality of the human environment.	
(e) Use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.	
<i>Id.</i> § 1500.2.	
Parts 1500 through 1508 of this title provide regulations applicable to and binding on [FAA] for implementing the procedural provisions of the National Environmental Policy Act of 1969 These regulations, unlike the predecessor guidelines, are not confined to [NEPA] sec. 102(2)(C) (environmental impact statements). The regulations apply to the whole of [NEPA] section 102(2).	
<i>Id.</i> § 1500.3.	
The phrase "to the fullest extent possible" in [NEPA] section 102 means that [FAA] shall comply with that section unless existing law applicable to the agency's operations expressly prohibits or makes compliance impossible.	
<i>Id.</i> § 1500.6.	
 In a normative¹ decision concerning sufficiency of notice and an opportunity for public comment in informal agency rulemaking, the court in United States v. Nova Scotia Food Prod- ucts Corp., 568 F.2d 240 (C.A.2 1977) held: 	
To suppress meaningful comment by failure to disclose the basic data [constituting the fac- tual material that was] relied upon [by agency] is akin to rejecting comment altogether. For	
¹ Cf. Air Transport Ass'n of America v. F.A.A., 169 F.3d 1 (C.A.D.C. 1999) where informal rulemaking was required to expose " <u>critical factual material</u> " to "refutation" "in the proceeding." Id. at 252. And, see Independent U. S. Tanker Owners Committee v. Lewis, 690 F.2d 908 (C.A.D.C. 1982) where it was held that where agency's task "begins" with forecasts in an informal rulemaking proceeding, such forecasts must be disclosed "so that interested parties can comment upon the conclusions properly to be drawn from them." Id. at 926, italic in original.	
Dece 2 a 520	
Page 2 of 20	

	04	8	
	the comments are unlikely to be of a quality that might im- quacy of comment in turn leads in the direction of arbitrary		
•	cluded "that the failure to disclose to interested persons the neous." <i>Ibid.</i>		
 Draft Federal EA provided for State public agency with jurisdiction of possession of additional property right St. Paul metropolitan area, but <u>withou</u> 	public comment is a NEPA statement prepared by MAC, a public comment is a NEPA statement prepared by MAC, a ver Minneapolis-St. Paul International Airport ("MSP") in s in associated reliever airports located in the Minneapolis- t jurisdiction over other major airports in the State of Min- in Rochester, Duluth, and St. Cloud, Minnesota.		
7. Said Draft Federal EA propose	d a major Federal action.		
(hereinafter, "FAA") may permit a S statement for any major Federal actic State agency or official has <u>statewidd</u> By said words, Congress clearly inten with legal responsibility to serve and	nent of Transportation Federal Aviation Administration tate of Minnesota agency or official to prepare a NEPA n funded under a program of grants to States <u>only</u> if "the <u>i jurisdiction.</u> " 42 U.S.C. § 4332(D)(i), underline added. ded said Draft Federal EA must be prepared by an agency protect the public interest of the entire State of Minnesota of the Minneapolis-St. Paul metropolitan area alone.		
9. Undersigned objects to said D	COMMENT ONE raft Federal EA, commenting preparing said Draft Federal	1	
EA is ultra vires MAC's authority for	r MAC does <u>not</u> enjoy "statewide jurisdiction" as required s action to stand would make NEPA largely superfluous or	62	048-62. See Response to Comment #048-2.
	nts, for aforesaid reason, he objects to said Draft Federal RULL vacate this proceeding set in motion by an illegal		
ment, in a new proceeding to come int to comply with NEPA "to the fullest applicable to [FAA operations] expres	l draft Federal environmental assessment for public com- o compliance with CEQ Regulations that required KRULL extent possible," meaning to comply "unless existing law sly prohibits or makes compliance impossible." 40 C.F.R.	63	048-63. See Response to Comment #048-3.
assessment on proposed Federal action statement on said action, as requested	nts, if KRULL dispenses with preparing an environmental and directly proceeds to prepare an environmental impact in comments four and five, <i>infra</i> , that such agency action, tively moot this comment as aforesaid alleged NEPA vio- ceeding.	64	048-64. See Response to Comment #048-4.
	COMMENT TWO E SERIOUSLY INACCURATE, FATALLY FLAWED		
	STATEMENT corporates by reference par. 3-5, <i>supra</i> , as though fully set		
forth herein.			
	Page 3 of 20		
	rage 5 01 20		
L			1

048	3	
13. Draft Federal EA provided for public comment materially represented, if "no action" is taken, it followed MSP will <u>not</u> have capacity to accommodate airport operations forecast in 2020 and 2025, in the following words:		
The purpose of the proposed development is to accommodate the expected demand such that the level of service is acceptable throughout MSP's terminal and landside facilities through 2020 and the regional roadway system through 2030. MSP's terminal and landside facilities <u>do not and/or will not</u> meet current and forecasted demand.		
Draft Federal EA section ES-2.		
14. Said Draft Federal EA materially represented in preparing its 2020 and 2025 "No Ac- tion" depictions (hereinafter, "Scenario(s)") of the human environment at MSP it used the fol- lowing airport operation counts:		
2020 (forecast)484,879 airport operations2025 (forecast)526,040 airport operations		
Draft Federal EA at p. 2-4.		
 Said Draft Federal EA materially represented its 2020 "no action" Scenario was based on an airport operation count of "484,879" operations, in the following words: 		
Based on the 484,879 total forecast operations in 2020, approximately 4,388 acres are in the 65+ DNL noise contour and approximately 11,240 acres are in the 60+ DNL noise of the <u>No Action</u> Alternative. Table 5.14.3 contains the count of single-family and multi-family dwelling units and population in the 2020 and 2025 <u>No Action</u> Alternative DNL noise contours.		
Draft Federal EA sub-section 5.14.5.1 ("No Action Alternative Noise").		
16. From aforesaid admission that its 2020 "no action" Scenario was based on its forecast airport operation count of "484,879" operations, it can reasonably be inferred that its 2025 "no action" Scenario was also based on its forecast airport operation count of "526,040" operations.		
COMMENT TWO 17. Undersigned objects to said Draft Federal EA's depictions of the human environment at MSP in 2020 and 2025 for said "no action" depictions are repugnant to its fundamental premise that in 2020 and 2025 MSP will <u>not</u> have capacity to accommodate airport operations forecast in said years. From said premise it reasonably followed MSP would handle substantially less than the "484,879" operations forecast for 2020 and substantially less than the "526,040" operations forecast in 2025. Said Draft Federal EA's 2020 and 2025 "no action" depictions are clearly ficti- tious and dishonest in presenting the public with false choices for public comment. Wherefore Undersigned further comments and respectfully requests that KRULL vacate this proceeding set	65	048-65. See Response to Comment #048-5.
in motion by a seriously inaccurate draft Federal environmental assessment and provide an ade- quate draft Federal environmental assessment for public comment with accurate depictions of the human environment at MSP in 2020 and 2025 in a new proceeding, to come into compliance with CEQ Regulations that required FAA to provide information "of high quality" which in- cluded only "[a]ccurate scientific analysis, expert agency comments" so as to expose such infor- mation to "public scrutiny." 40 C.F.R. § 1500.1(b).		
18. Undersigned further comments, in his opinion, said Draft Federal EA, in preparing 2020 and 2025 "no action" depictions based on inaccurate assumptions of MSP's capacity, effec-	66	048-66. See Response to Comment #048-6.
Page 4 of 20		

			048		
			040		
tively camouflaged significant impacts directly at years, and that accurate "no action" Scenarios will impact statement.				66	048-66. See response above.
 Undersigned finally comments, if KRUL assessment on proposed Federal action and directly statement on said action, as requested in comments in Undersigned's opinion, would effectively moot 	proceeds to p four and five	repare an envi	ironmental impact ich agency action,	67	048-67. See Response to Comment #048-7.
lation can be remedied in that new proceeding. <u>COMMENT</u> ALTERNATIVE SCENARIOS ARE SERIOUS		RATE, FATA	ALLY FLAWED	•	
STATEM 20. Undersigned restates and incorporates by forth herein.		. 3-5, <i>supra</i> , a	s though fully set		
21. Draft Federal EA provided for public cc Area Forecast (hereinafter, "TAF") "was not used Action," "Alternative 1" and "Alternative 2" depict environment at MSP. It materially represented tha tions were used in preparing said Scenarios:	l" in preparing tions (hereinaft	g its 2010, 20 ter, "Scenario(20 and 2025 "No (s)") of the human		
Tabl Summary of Pertinent Fo	le 2.2.2 orecast Aircraf	t Operations			
Domestic Scheduled Air Carrier ("AC") International Scheduled Air Carrier ("AC")	2010 367,851 26,556	2020 410,410 29,530	2025 448,074 32,886		
Charter All-Cargo Carrier General Aviation and Air Taxi	103 12,499 27,921	96 12,764 29,934	106 12,826 30,003		
Military Total Draft Federal EA at pp. 2-3, 2-4. It materially rep	2,145 437,075 presented, in re	2,145 484,879 espect to afore	2,145 526,040 esaid forecast that		
"[t]here are almost no differences in the number of p. 2-5.22. Government's 2011 official TAF forecas	-	-			
lowing: Summary of Pertinent 2011 T					
Summary of Perunent 2011 1	2010	2020	2025		
Air Taxi (hereinafter, "AT") General Aviation (hereinafter, "GA") Total (AT + GA)	135,477 13,448 148,925	153,474 13,932 167,406	167,794 14,070 181,864		
Undersigned respectfully requests that Exhibit No. of aforesaid Government TAF forecast, be entere representations.					
Page 5 of	f 20				

68

048-68. See Response to Comment #048-8.

048-69. See Response to

Comment #048-9.

23. Comparing said Draft Federal EA's airport operations count, *supra*, for both Air Taxi ("AT") and General Aviation ("GA") to TAF's corresponding counts, *supra*, disclosed the following:

Year	Draft EA Total (AT + GA)	TAF Total (AT + GA)
2010	27,921	148,925
2020	29.934	167,406
2025	30.003	181.864

24. FAA has defined an "Air Taxi" as an aircraft designed to have a maximum seating capacity of 60 seats or less.

25. FAA has defined "General Aviation" as civil aircraft.

26. FAA has defined "Air Carrier" as an aircraft with seating capacity of more than 60 seats.

COMMENT THREE

27. Undersigned objects to all of said Draft Federal EA Scenarios of the human environment at MSP in 2010, 2020 and 2025 for said Scenarios are clearly based on a fleet mix that <u>understated</u> air taxi ("AT") and general aviation ("GA") aircraft operations, and, for that reason, inexorably <u>overstated</u> air carrier ("AC") aircraft operations in said years. Stated another way, said Draft Federal EA's fleet mix assumed AT and GA represented 6.4% of total aircraft operations in 2010, 6.2% in 2020, and 5.7% in 2025, while TAF stated AT and GA represented 34.1%, 34.5%, and 34.6% respectively. From said comparison, said Draft Federal EA represented 34.1%, 34.5%, and 34.6% respectively. From said comparison, said Draft Federal EA representation, *supra*, that its forecast was substantially similar to TAF ("[t]here are almost no differences in the number of operations") is seriously inaccurate. Since AT and GA aircraft by definition, *supra*, are substantially <u>smaller</u> and <u>infer</u> than AC aircraft, *supra*, it reasonably followed said Draft Federal EA 2010, 2020 and 2025 "No Action," "Alternative 1" and "Alternative 2" Scenarios are likewise seriously inaccurate. Wherefore Undersigned further comments and respectfully requests that KRULL vacate this proceeding set in motion by a seriously inaccurate draft Federal environmental assessment and provide an adequate draft Federal environmental assessment for public comment with accurate depictions of the human environment at MSP in 2010, 2020 and 2025 in a new proceeding, to come into compliance with CEQ Regulations that required FAA to provide information "of high quality" which included only "[alccurate scientific analysis, expert agency comments" so as to expose such information to "public scrutiny." 40 C.F.R. § 1500.1(b).

28. Undersigned finally comments, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement on said action, as requested in comments four and five, *infra*, that such agency action, in Undersigned's opinion, would effectively moot this comment as aforesaid alleged NEPA violation can be remedied in that new proceeding.

COMMENT FOUR ALTERNATIVE SCENARIOS DISCLOSED "SIGNIFICANT" IMPACT STATEMENT

29. Undersigned restates and incorporates by reference par. 3-5, *supra*, as though fully set forth herein.

Page 6 of 20

•							
						048	
	inter alia, in determining whether	endix A p. A-60, FAA relied o er a change in noise associate					
	cant:						
	that change results in an i greater in either a land are patible under Appendix A to be noncompatible und	n of an airport creates a sub- ncrease in the yearly day-nigh ea which was formerly compa A (Table 1), or in a land area er that Table and whose non-	t average s tible but is which was	sound lev thereby previou	vel of 1.5 dB made nonco sly determin	or m- ed	
	increased. 14 C.F.R. § 150.21(d)(1).						
	31. Order 1050.1E set follo	wing standard for determining	g whether a	a change	in noise is s	ig-	
	cause noise sensitive area or above DNL 65 dB noi same timeframe. For exar cant impact. Special cons of noise impacts on noise and historic sites, includi threshold does not adeque	ct would occur if analysis shi is to experience an increase ir se exposure when compared f mple, an increase from 63.5 dl sideration needs to be given to sensitive areas within nation ng traditional cultural propert tely address the effects of noi ldlife refuge where other noise prose and attribute.	n noise of a to the no a B to 65 dB the evalua al parks, n ies. For ex se on visit	DNL 1.5 ction alto is consi ation of t ational v ample, t ors to are	dB or more ernative for t dered a signi he significan wildlife refug he DNL 65 eas within a r	at the fi- tice ges dB ta-	
	Order 1050.1E, Appendix A par.						
		ents Draft EA/EAW Open H for public comment. Said Pre- l action would not have a sign prience a 1.5 dB or greater inc. I showed the following acres w	sentation on ificant no rease with	n page 1 ise impacin the 65	8 of 36 mate et ("no areas dB DNL no	ri- of ise	
	Scenario	DNL Contour:	65-69	70-74	75+		
	2020 No Action 2020 Alternative 1	4,388 acres: 4,386 acres:	2,795 2,793	928 928	665 665		
	2020 Alternative 2	4,387 acres:	2,793	928	666.		
	And, the following pertinent cour		areas with	in MSP'	s 65 DNL co	n-	
	tour:						
	Scenario	DNL Contour:	65-69	70-74	75+		
	2020 No Action	2,162 units:	2,115	47	0	_	
	2020 Alternative 1 2020 Alternative 2	2,172 units: 2,166 units:	2,124 2,133	48 33	0 0.		
		pulation counts of individua	ıls residing	g on lan	d areas with	in	
	MSP's 65 DNL contour:	DNI Contour	65.60	70.74	75+		
		DNL Contour:	65-69	70-74	75+		
	MSP's 65 DNL contour:	DNL Contour: Page 7 of 20	65-69	70-74			
	MSP's 65 DNL contour:		65-69	70-74	75+		
	MSP's 65 DNL contour:		65-69	<u>70-74</u>	75+		
	MSP's 65 DNL contour:		65-69	_70-74			
	MSP's 65 DNL contour:		65-69	_70-74	75+_		
	MSP's 65 DNL contour:		65-69	_70-74	<u>75+</u>		
	MSP's 65 DNL contour:		65-69	_70-74	75+		
	MSP's 65 DNL contour:		65-69	_70-74			
	MSP's 65 DNL contour:		65-69	70-74			
	MSP's 65 DNL contour:		65-69	70-74			
	MSP's 65 DNL contour:		65-69	70-74	<u>75+</u>		
	MSP's 65 DNL contour:		65-69	_70-74	<u>75+</u>		
	MSP's 65 DNL contour:		65-69	_70-74	<u>_75+</u>		
	MSP's 65 DNL contour:		65-69	70-74	<u>75+</u>		
	MSP's 65 DNL contour:		65-69	70-74	<u>75+</u>		
	MSP's 65 DNL contour:		65-69	_70-74	75+		
	MSP's 65 DNL contour:		65-69	_70-74	<u>75+</u>		
	MSP's 65 DNL contour:		65-69	70-74	<u>75+</u>		
	MSP's 65 DNL contour:		65-69	70-74	<u>75+</u>		
	MSP's 65 DNL contour:		65-69	70-74	<u>75+</u>		
	MSP's 65 DNL contour:		65-69	70-74	<u>75+</u>		
	MSP's 65 DNL contour:		65-69	70-74	75+		
	MSP's 65 DNL contour:		65-69	70-74	75+		
	MSP's 65 DNL contour:		65-69	70-74	75+		
	MSP's 65 DNL contour:		65-69	70-74	75+		

	•	
048		
2020 No Action 5,037 individuals: 4,918 119 0 2020 Alternative 1 5,062 individuals: 4,941 121 0 2020 Alternative 2 5,048 individuals: 4,965 83 0.		
When compared to the "no action" alternative, Alternative 1 and Alternative 2 are shown, <i>supra</i> , to <u>reduce</u> the acres within MSP's 65 DNL contour and, at the same time, <u>increase</u> the number of residential units and individuals residing therein. Undersigned respectfully requests that Exhibit No. 2, enclosed herewith, which exhibit is a copy of aforesaid "MSP 2020 Improvements Draft EA/EAW Open House Presentation" page 18 of 36, be entered in proceeding's record to verify foregoing representations.		
COMMENT FOUR 33. Undersigned objects to said Draft Federal EA's determination, <i>supra</i> , that, under both alternatives, the proposed Federal action can <u>reduce</u> the acres within MSP's 65 DNL contour under its "no action" scenario and, at the same time, <u>increase</u> the number of residential units <u>and</u> individuals residing therein for appearing, as a matter of first impression, unscientific and manu- factured, and further comments and requests, under the ruling in <i>Nova Scotia, supra</i> , that KRULL instruct MAC to disclose the basic scientific data, or factual material, believed to sup- port this determination so that Undersigned can comment effectively, intelligently and meaning- fully on the conclusions properly to be drawn concerning it in a new proceeding, to come into	70	048-70. See Response to Comment #048-10.
compliance with CEQ Regulations that required KRULL to comply with NEPA "to the fullest extent possible," meaning to comply "unless existing law applicable to [FAA operations] ex- pressly prohibits or makes compliance impossible." 40 C.F.R. § 1500.6.		
34. Undersigned further comments, if it is the case that proposed Federal action, under both alternatives, can simultaneously reduce the acres within MSP's 65 DNL contour under its "no action" scenario and, at the same time, increase the number of residential units and individuals therein, that the residential units and individuals foreseen to be added within MSP's 65 DNL contour under Alternative 1 and/or Alternative 2 must reside on land areas outside MSP's "no action" 65 DNL contour and, for that reason, the noise impact of said alternatives is <u>significant</u> for foreagehu angenghu agenciable and a significant.	71	048-71. See Response to
for foreseeably creating <u>new</u> land areas, <i>i.e.</i> formerly compatible land outside, but now inside MSP's 65 DNL contour, land areas "which [were] formerly compatible but [are] thereby made noncompatible under Appendix A (Table 1)," § 150.21(d)(1), <i>supra</i> , by the proposed Federal action, noting said Table 1 classified land areas inside an airport's 65 DNL contour as noncompatible for residential use. 35. For that reason, Undersigned finally comments and respectfully requests that KRULL		Comment #048-11.
directly proceed to prepare an environmental impact statement on said action to come into com- pliance with NEPA, CEQ Regulations and Order 1050.1E that mandated FAA must prepare an environmental impact statement for actions significantly affecting the human environment and, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement, that such agency action, in Un- dersigned's opinion, would effectively moot this comment's request to disclose factual material relied on to decision, as such can be remedied in that new proceeding.	72	048-72. See Response to Comment #048-12.
<u>COMMENT FIVE</u> ALTERNATIVE SCENARIOS DISCLOSED "SIGNIFICANT" IMPACT STATEMENT		
Page 8 of 20		

048 36. Undersigned restates and incorporates by reference par. 3-5, 30-31, supra, as though fully set forth herein 37. "MSP 2020 Improvements Draft EA/EAW Open House Presentation" was provided with Draft Federal EA provided for public comment. Said Presentation on page 18 of 36 showed the following acres within MSP's 65 DNL contour *i.e.* sensitive land areas, under the 2025 scenarios: DNL Contour: 65-69 70-74 75+ Scenario 2025 No Action 3,188 1,078 740 5,006 acres: 1.074 739 2025 Alternative 1 5.018 acres: 3,205 2025 Alternative 2 3,181 1,081 740. 5,002 acres: And, the following pertinent counts of residential units on land areas within MSP's 65 DNL contour: DNL Contour: 70-74 75+ Scenario 65-69 2025 No Action 2,742 units: 2,657 2,583 85 0 2025 Alternative 1 78 2.661 units: 0 2025 Alternative 2 2,832 units: 2,747 85 0. And, the following pertinent population counts of individuals residing on land areas within MSP's 65 DNL contour: 75+ DNL Contour: 65-69 70-74 Scenario 2025 No Action 2025 Alternative 1 6,501 individuals: 6,286 6,294 individuals: 6,096 215 0 198 0 2025 Alternative 2 6,727 individuals: 6,512 215 0. When compared to the "no action" alternative, Alternative 1 is shown, *supra*, to <u>increase</u> the acres within MSP's 65 DNL contour and, at the same time, <u>reduce</u> the number of residential units and individuals residing therein. Similarly, Alternative 2 is shown, *supra*, to <u>reduce</u> the number of acres and, at the same time, increase the number of residential units and individuals residing therein. COMMENT FIVE 38. Undersigned objects to said Draft Federal EA's determination, supra, that, under Alternative 1, the proposed Federal action can increase the acres within MSP's 65 DNL contour under its "no action" scenario and, at the same time, reduce the number of residential units and indi-viduals residing therein for appearing unscientific and manufactured, and further comments and requests, under the ruling in Nova Scotia, supra, that KRULL instruct MAC to disclose the basic scientific data, or factual material, believed to support this determination so that Undersigned can 048-73. See Response to 73 comment effectively, intelligently and meaningfully on the conclusions properly to be drawn Comment #048-13. concerning it in a new proceeding, to come into compliance with CEQ Regulations that required KRULL to comply with NEPA "to the fullest extent possible," meaning to comply "unless existing law applicable to [FAA operations] expressly prohibits or makes compliance impossible." 40 C.F.R. § 1500.6. 048-74. See Response to 39. Undersigned objects to said Draft Federal EA's determination, supra, that, under Alternative 2, the proposed Federal action can reduce the acres within MSP's 65 DNL contour under 74 Comment #048-14. its "no action" scenario and, at the same time, increase the number of residential units and indi-viduals residing therein for appearing, as a matter of first impression, unscientific and manufac-Page 9 of 20

048	•	
tured, and further comments and requests, under the ruling in Nova Scotia, supra, that KRULL instruct MAC to disclose the basic scientific data, or factual material, believed to support this determination so that Undersigned can comment effectively, intelligently and meaningfully on the conclusions properly to be drawn concerning it in a new proceeding, to come into compliance with CEQ Regulations that required KRULL to comply with NEPA "to the fullest extent possible," meaning to comply "unless existing law applicable to [FAA operations] expressly prohibits or makes compliance impossible." 40 C.F.R. § 1500.6.	74	048-74. See response above.
40. Undersigned further comments, if it is the case that proposed Federal action, under Al- ternative 1, can simultaneously increase the acres within MSP's 65 DNL contour under its "no action" scenario and, at the same time, reduce the number of residential units and individuals residing therein that the land areas ("acres") to be added within MSP's 65 DNL contour under Alternative 1 must be outside MSP's "no action" 65 DNL contour and, for that reason, the noise impact of said alternative is <u>significant</u> for foreseeably creating new land areas, <i>i.e.</i> formerly compatible land outside, but now inside MSP's 65 DNL contour, and areas "which [were] for- merly compatible but [are] thereby made noncompatible under Appendix A (Table 1)," § 150.21(d)(1), <i>supra</i> , by the proposed Federal action, noting said Table 1 classified land areas inside an airport's 65 DNL contour as noncompatible for residential use.	75	048-75. See Response to Comment #048-15.
41. Undersigned further comments, if it is the case that proposed Federal action, under Al- ternative 2, can simultaneously reduce the acres within MSP's 65 DNL contour under its "no action" scenario and, at the same time, increase the number of residential units and individuals residing therein that the residential units and individuals foreseen to be added within MSP's 65 DNL contour under Alternative 2 must reside on land areas outside MSP's "on oaction" 65 DNL contour and, for that reason, the noise impact of said alternative is <u>significant</u> for foreseeably creating new land areas, <i>i.e.</i> formerly compatible land outside, but now inside MSP's 65 DNL contour, land areas "which [were] formerly compatible but [are] thereby made noncompatible under Appendix A (Table 1)," § 150.21(d)(1), <i>supra</i> , by the proposed Federal action, noting said Table 1 classified land areas inside an airport's 65 DNL contour as noncompatible for residential use.	76	048-76. See Response to Comment #048-16.
 42. For that reason, Undersigned finally comments and respectfully requests that KRULL directly proceed to prepare an environmental impact statement on said action to come into compliance with NEPA, CEQ Regulations and Order 1050.1E that mandated FAA must prepare an environmental impact statement for actions significantly affecting the human environment and, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental assessment, that such agency action, in Undersigned's opinion, would effectively mot this comment's request to disclose factual material relied on to decision, as such can be remedied in that new proceeding. <u>COMMENT SIX</u> <u>EFFECT OF LEADED AVIATION GASOLINE</u> <u>TO CHILDREN'S HEALTH SHOULD BE ASSESSED</u> <u>STATEMENT</u> 43. Undersigned restates and incorporates by reference par. 3-5, <i>supra</i>, as though fully set forth herein. 44. Lead emitted from aircraft using leaded aviation gas is currently the largest source of lead in air in the United States, constituting about 50 percent of lead emissions in 2005. Under- 	77	048-77. See Response to Comment #048-17.
Page 10 of 20		

78

signed respectfully requests that Exhibit No. 3, enclosed herewith, which exhibit is a copy of "A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels," be entered in proceeding's record to verify foregoing representation found in said Analysis at p. 4.

45. The Center for Disease Control has stated "that there is no 'safe' level for blood lead in children" and a large body of research has demonstrated evidence of "learning disabilities and behavioral disorders, associated with lead exposure levels well below the CDC's action level," and of "early childhood blood lead levels as low as 2 μ g/dL" associated with "significant impacts on academic performance as measured by end-of-grade test scores." Exhibit No. 3 at p. 5 of 22, underline added.

46. The Environmental Protection Agency (hereinafter, "EPA") has taken notice of the special status, or vulnerability, of "[y]oung" children when it comes to lead exposure, in the following words:

Young children are especially vulnerable to the toxic effects of lead because their nervous systems are still developing and they absorb more of the lead to which they are exposed. Many of the health effects associated with lead are thought to be irreversible. Moreover, the effects at lower levels of exposure are often asymptomatic.

Federal Register, vol. 66, no. 4, at p. 1207. The term "asymptomatic" means children residing near MSP can be harmed by lead and not exhibit symptoms. For that reason, children may be harmed without their parents recognizing it. Undersigned respectfully requests that Exhibit No. 4, enclosed herewith, which exhibit is a copy of pertinent *Federal Register* page, be entered in proceeding's record to verify foregoing EPA representation.

47. Draft Federal EA provided for public comment in Chapter 5 ("Environmental Consequences") in section 5.17, sub-section 5.17.1, addressed "Children's Health and Safety Risks" in the following words:

Socioeconomic impacts may result from relocation of residences and businesses, alteration of surface transportation, division of established communities, disruption of orderly planned development, or changes in employment.

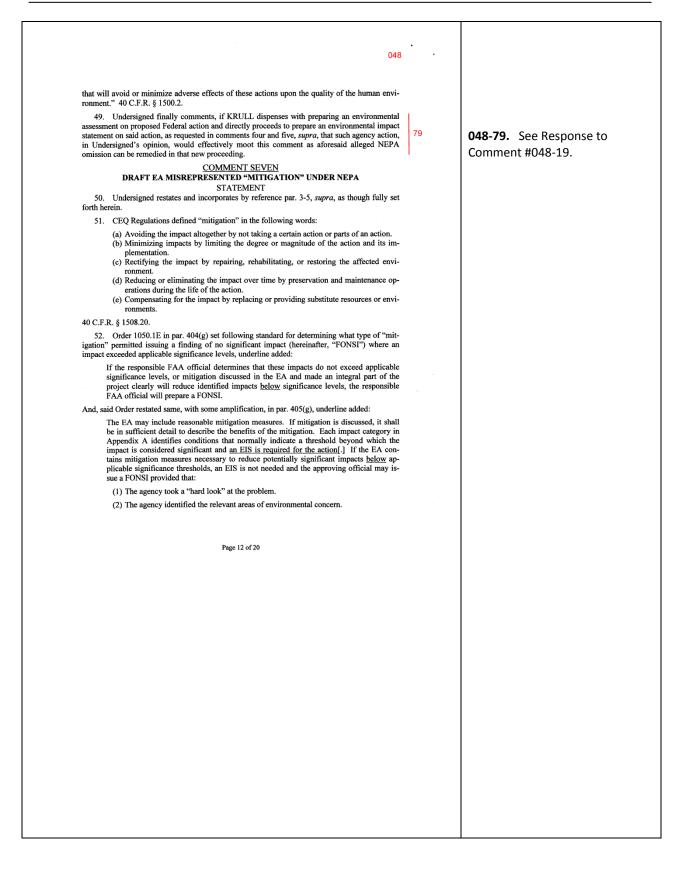
Draft Federal EA, sub-section 5.17.1. Said sub-section identified "the relocation of one business, the SuperAmerica [gas station]" as the only effect meriting attention in respect to children's, health and safety. In other words, there was no attention given to the effects of aviation gasoline on childhood blood levels in said Draft Federal EA.

COMMENT SIX

48. Undersigned objects to said Draft Federal EA's oversight in failing to address the effects of leaded aviation gasoline on childhood blood lead levels and comments and respectfully requests that KRULL vacate this proceeding set in motion by an inadequate Draft Federal EA and provide an adequate Federal environmental assessment that addresses children's health and safety risks from leaded aviation gasoline so that Undersigned can comment effectively, intelligently and meaningfully on the conclusions properly to be drawn concerning it in a new proceeding, to come into compliance with CEQ Regulations that required KRULL to comply with NEPA 'to the fullest extent possible," meaning to comply 'unless existing law applicable to [FAA operations] expressly prohibits or makes compliance impossible," 40 C.F.R. § 1500.6, and "(u)set the NEPA process to identify and assess the reasonable alternatives to proposed actions

Page 11 of 20

048-78. See Response to Comment #048-18.



80

81

(3) The EA supports the agency's determination that the potential impacts will be insignificant.

(4) The agency has identified mitigation measures that will be sufficient to reduce potential impacts <u>below</u> applicable significance thresholds and has assured commitments to implement these measures.

53. "MSP 2020 Improvements Draft EA/EAW Open House Presentation" was provided with Draft Federal EA provided for public comment. Said Presentation on page 20 stated that its noise exposure map's noise contours materially represented, in pertinent part, "MAC Existing Noise Mitigation Program." Undersigned respectfully requests that Exhibit No. 5, enclosed herewith, which exhibit is a copy of aforesaid "MSP 2020 Improvements Draft EA/EAW Open House Presentation" page 20 of 36, be entered in proceeding's record to verify foregoing representation.

54. Draft Federal EA provided for public comment, admitting Federal action exceeded the noise threshold beyond which its impact is considered significant, materially represented an environmental impact statement would not be required as affected land areas had been 'mitigated':

[I]n both 2020 and 2025 all residential units within the 65+ DNL noise contours of the development alternatives being considered have been provided noise <u>mitigation</u> and, as such, are considered a <u>mitigated</u> incompatible land use. However, in consideration of the circumstances unique to MSP by virtue of past mitigation activities, the terms of the Consent Decree, and the local land use compatibility guidelines defined by the Metropolitan Council, this EA/EAW proposes mitigation in the 2020 Sponsor's Preferred Alternative 60+ DNL noise contours in a way that is consistent with the provisions of the Consent Decree. The noise mitigation will begin when the level of total annual operations at MSP reaches 484,879 or in the year 2020, whichever comes first.

Draft Federal EA sub-section ES.4.4.1.

COMMENT SEVEN

55. Undersigned comments that at said Draft Federal EA's October 1, 2012, Public Hearing, a City of Minneapolis resident appeared to comment for the record that he had recently been provided an opportunity to have his residence insulated and, for that recent event, he was of the opinion proposed Federal action significantly impacted his residential property, which comment, if accurately recollected by Undersigned and true, suggested said Draft Federal EA did not tell the truth when materially representing, *supra*, "all residential units within the 65+ DNL noise contours of the development alternatives being considered have been provided noise mitigation."

56. Undersigned further comments said Draft Federal EA's material representation that "all residential units within the 65+ DNL noise contours of the development alternatives being considered have been provided noise mitigation," *supra*, appeared in the record to be supported only by aforesaid noise exposure map that represented its noise contours accurately represented "MAC Existing Noise Mitigation Program." The noise contours in said map are *upit* the FAA-approved "2007" Part 150 noise contour map which is the legal map for purposes of assessing MSP's "existing noise mitigation program." In Undersigned's opinion, said noise contours may represent contours developed in a judicial settlement between MAC and certain parties in a judicial proceeding in which noise exposure map would have no force and effect upon any parties not subject to that judicial pro-

Page 13 of 20

048-81. See Response to Comment #048-21.

048-80. See Response to Comment #048-20.

048		
ceeding, and such map is clearly not a legal Part 150 noise contour map. Wherefore Under- signed further comments and respectfully requests, under the ruling in <i>Nova Scotia, supra</i> , that KRULL instruct MAC to disclose the factual material believed to support the representation that the noise exposure map in Exhibit No. 5, <i>infra</i> , represents MAC's Part 150 existing mitigation program so that Undersigned can comment effectively, intelligently and meaningfully on the conclusions properly to be drawn concerning it in a new proceeding, to come into compliance with CEQ Regulations that required KRULL to comply with NEPA "to the fullest extent possi- ble," meaning to comply "unless existing law applicable to [FAA operations] expressly prohibits or makes compliance impossible." 40 C.F.R. § 1500.6.	81	048-81. See response above.
57. Undersigned further comments that the applicable standard to dispense with preparing an environmental impact statement is <u>only</u> where "identified mitigation measures [will] reduce potentially significant impacts below applicable significance thresholds," Order 1050.1E, par. 405(g), <i>supra</i> . Said Draft Federal EA appeared to be identifying MAC's residential noise insulation program where it represented, <i>supra</i> , that "all residential units have been provided noise <u>mitigation</u> and, as such, are considered a <u>mitigated</u> incompatible land," underline added. Undersigned further comments MAC's residential noise insulation program is not "mitigation" under NEPA. Said residential noise insulation program agreements, by their terms, generally grant MAC an air easement over a residential and area and shield MAC from legal process for taking property for a public purpose without compensation, but residential noise insulation does not "reduce," par. 405(g), <i>supra</i> , that specific land area <u>from</u> exposure to noise levels of 65 DNL, or above, to a level less than 65 DNL, <i>i.e.</i> to a level "below applicable significance thresholds." Order 1050.1E, par. 405(g), underline added. For that reason, Undersigned objects to said Draft Federal EA's representation, <i>supra</i> , that MAC's residential home insulation program is "mitigation" under NEPA and further comments and respectfully requests that KRULL vacate this proceeding set in motion by a seriously inaccurate draft Federal environmental assessment for public comment in a new proceeding, to come into compliance with CEQ Regulations that required FAA to provide information "of high quality" which included only "[a]ecurate scientific analysis, expert agency comments" as to expose such information to "public scrutiny." 40 C.F.R. § 1500.(b). 58. Undersigned finally comments, fi KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement on said action, as requested in comm	82	048-82. See Response to Comment #048-22. 048-83. See Response to Comment #048-23.
COMMENT EIGHT DRAFT EA MISREPRESENTED EXTENT OF "PUBLIC" PARTICIPATION STATEMENT 59. Undersigned restates and incorporates by reference par. 3-5, <i>supra</i> , as though fully set forth herein. 60. Draft Federal EA represented that, in its preparation, there had been adequate coordina- tion with the public, in the following words: The MAC coordinated with the public throughout the preparation of the EA. Coordina- tion began early in the NEPA process with Agency and Community Briefings in late 2010. These briefings were followed by presentations and briefings at various Noise		
Page 14 of 20		

84

85

048-84. See Response to

048-85. See Response to

Comment #048-24.

Comment #048-25.

Oversight Committee (NOC) meetings. Also, the MAC conducted three open houses; two in July Committee (NOC) meetings.

Draft Federal EA section ES.5.1.

COMMENT EIGHT

61. Undersigned comments that he attended MAC's July 14, 2011 "Public Information Meeting" at Washburn High School and MAC's January 31, 2012 "Open House" and that he objects to the characterization of same as having provided any meaningful opportunity to participate in "the preparation of the EA," *supra*, as no such opportunity was provided. Aforesaid occasions consisted of viewing information boards prepared by MAC concerning which, when asked, the individuals hosting said occasions were unable, or unwilling, to provide meaningful answers nor would they accept any comment or any request for information to better understand proposed Federal action. Said occasions appeared to be *pro forma* ("for the sake of form") and were devoid of any effective opportunity to participate in the preparation of said Draft Federal EA's representation that "coordinat[ion]" took place that offered any effective, meaningful opportunity for public participation in the preparation of said Draft Federal EA and respectfully requests that KRULL vacate this proceeding, to come into compliance with CEQ Regulations that required FAA to provide an adequate draft Federal environmental assessment that appears calculated to be provide in a new proceeding, to come into compliance with CEQ Regulations that required FAA to provide information "so as to expose such information to "public scrutiny." 40 C.F.R. § 1500.1(b).

62. Undersigned finally comments, if KRULL dispenses with preparing an environmental assessment on proposed Federal action and directly proceeds to prepare an environmental impact statement on said action, as requested in comments four and five, *supra*, that such agency action, in Undersigned's opinion, would effectively most this comment as aforesaid alleged NEPA mis-representation can be remedied in that proceeding.

COMMENT NINE DRAFT EA MISREPRESENTED NUMBER OF PASSENGERS IN 2010 STATEMENT

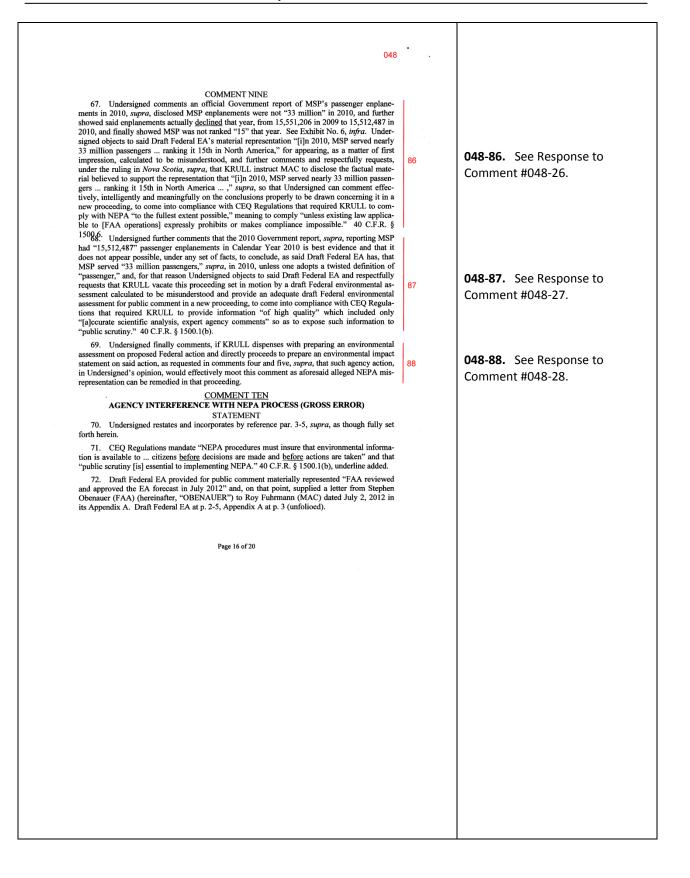
63. Undersigned restates and incorporates by reference par. 3-5, *supra*, as though fully set forth herein.

64. Introduction to Draft Federal EA provided for public comment materially represented the following in discussing need for proposed Federal action: "[i]n 2010, MSP served nearly 33 million passengers ... ranking it 15th in North America ... " Draft Federal EA section 1-1.

65. Draft Federal EA cited two authorities, in footnotes, as support for aforesaid representation ("[i]n 2010, MSP served nearly 33 million passengers ... ranking it 15th in North America"). The first footnote referred to MAC's own statistics and the second referred to an analysis by ACI North America, an advocacy group promoting airport development. Draft Federal EA does not appear to have provided either of these cited authorities for public comment.

66. Government's 2010 official report stated MSP had "15,512,487" passenger enplanements in Calendar Year 2010. Undersigned respectfully requests that Exhibit No. 6, enclosed herewith, which exhibit is a copy of aforesaid Government enplanement report, be entered in proceeding's record to verify foregoing representation.

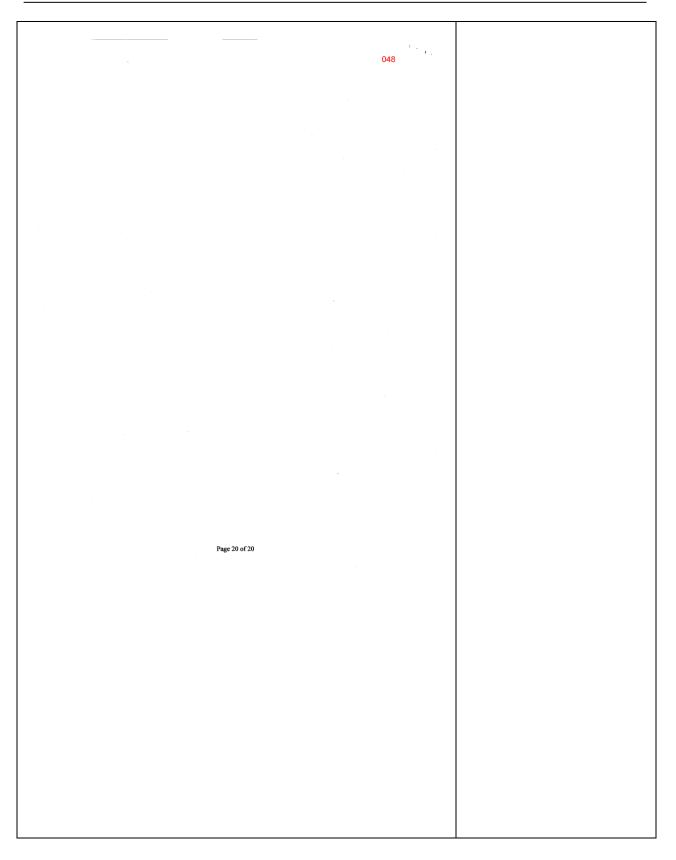
Page 15 of 20



-								
, x					048			
	73. Said Draft Federal EA stated Governme "was not used" in preparing its 2010, 2020 and 202 tive 2" Scenarios of the human environment at MS	25 "No Actio	on," "Alternativ	e 1" and "Alt	erna-			
	the following fleet mix assumptions were used in p	reparing said	l Scenarios:					
		e 2.2.2						
	Summary of Pertinent Fe		-	2025				
		2010	2020	2025				
	Domestic Scheduled Air Carrier ("AC") International Scheduled Air Carrier ("AC") Charter	367,851 26,556 103	410,410 29,530 96	448,074 32,886 106				
	All-Cargo Carrier	12,499	12,764	12,826				
	General Aviation and Air Taxi Military	27,921 2,145	29,934 2,145	30,003 2,145				
	Total	437,075	484,879	526,040				
	Draft Federal EA at pp. 2-3, 2-4. It materially rep "[t]here are almost no differences in the number of p. 2-5.							
	74. Said Draft Federal EA noted that under F. than 10 percent in the 5-year forecast period, and 1	5 percent in	the 10-year for	ecast period"	' may			
	be considered consistent with TAF and materially for aircraft operations," and offered the following Table				erion			
	Comparison of MSP A		vity Forecasts			-		
		2010	2020	2025				
	Operations							
	EA Forecast 2011 TAF	437,075 427,558	484,879 485,065	526,040 525,526				
	% difference	427,558	485,005	0.1				
	Draft Federal EA at p. 2-5.							
	75. Government's 2011 official TAF forecas lowing:	st, in pertine	nt part, actually	y forecast the	e fol-			
	Summary of Pertinent 2011 T	AF Forecast	Aircraft Operat	tions				
		2010	2020	2025				
	Air Taxi ("AT")	135,477	153,474	167,794				
	General Aviation ("GA")	13,448	13,932	14,070				
	Total (AT + GA)	148,925	167,406	181,864				
	Exhibit No. 1, <i>infra</i> .			c	m .			
· .	 Comparing said Draft Federal EA's airpo ("AT") and General Aviation ("GA") to TAF's co lowing: 							
	Page 17 o	f 20						
						6		

			040	5	
			048		
Year	Draft EA Total (AT + GA) TAF Total (AT + GA)	Draft EA's Deviation		
2010	27,921	148,925	(-81%)		
2020 2025	29.934 30,003	167,406 181,864	(-82%) (-84%)		
2023	COMMENT		(-0470)		
	objects to OBENAUER's ap	proval of said Draft Federal			
	and 2025 (forecast) airpor at each seriously failed to n				
	ercent in the 5-year forecast pered consistent with TAF. S				
erred when he approve	ed said Draft Federal EA's	2010 (actual) and proposed	2020 and 2025		
	ons <u>before</u> the factual mater the public could comment or				
it, and that to permit Ol	benauer's approval of critica exposed to "public scrutin	l, even decisive, information	n to stand before	89	048-89. See Response to
superfluous or inoperat	tive in this proceeding. U	Indersigned objects to a D	raft Federal EA		Comment #048-29.
	on a premature and, likely, at KRULL vacate this proce				
environmental assessme	ent and provide an adequate	draft Federal environmenta	al assessment for		
required KRULL to pro	ew public hearing, to come ovide an effective, meaningf	ul opportunity to expose Dr	aft Federal EA's		
	precast) and 2025 (forecast) cy] decisions are made and b				
	finally comments, if KRULI				
assessment on proposed	Federal action and directly a, as requested in comments	proceeds to prepare an envir	onmental impact	90	048-90. See Response to
in Undersigned's opinio	on, would effectively moot t				Comment #048-30.
can be remedied in that					comment #0+0-50.
79. On October 11	CONCLUS 1, 2012, Undersigned will de		original of these		
comments in an envelop					
	ments Draft EA/EAW File – Director of Environment				
Metropolitan Airpor	rts Commission				
6040 28 th Avenue S Minneapolis, MN 5					
	venue South, Minneapolis, N				
these comments by e-ma Sincerely,	ail ² on October 11, 2012, pri	or to 5:00 p.m. (without exh	idits).		
Sincerery,					
² To "msp2020draft EA	W@manmaa and "				
10 msp2020draft EA	w@mspmac.org.				
	Page 18 of	20			
	Ū				

048 Guy Heide in his individual capacity and-or official capacity as Airport Noise Reduction Committee Secretary Enclosure(s): Exhibit No. 1 - APO Terminal Area Forecast 2011 (FAA; reproduced from FAA's internet website) Exhibit No. 2 – MSP 2020 Improvements Draft EA/EAW Open House Presentation, p. 18 of 36 (excerpt) Exhibit No. 3 – A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels, Marie Lynn Miranda, Rebecca Anthopolos, and Douglas Hastings, Children's Environmental Health Initiative, Nicholas School of the Environ-Exhibit No. 4 – Federal Register, vol. 66, no. 4, p. 1206-1207 Exhibit No. 5 – MSP 2020 Improvements Draft EA/EAW Open House Presentation, p. 20 of 36 (excerpt) Exhibit No. 6 – Enplanements at Primary Airports (Rank Order) CY 10 (FAA; reproduced from FAA's internet website) Page 19 of 20



			A DECEMBER OF		
	Jean Wage State Represent			Minnesota	L
	Since Ser			House of	
	District 62B Hennepin County			Representa	atives
		MITTER: ENNIDONI		SOURCES POLICY AND FINANCE	
			LEGACY FUNDING DIVISIO WAYS AND MEANS		
	Oct 9 th 2012				
		vements Draft E			
	Metropolitan Air	nn- Director of E ports Commissio		10-10-12P03:30 RI	
	6040 28th Ave S. Minneapolis, MN			- KI	VD
	Dear Mr. Furhma	inn:			
			nment on the 2020 improve	amont death EAW	
					11
			ouncil Member Colvin Roy ay comments on the lack of	y speaking on behalf of data in your air quality section,	
		ens and the state f		e health care costs that will be se in fine particulate matter, also	2
	You project an in	crease in passens	ger traffic from \$15 million	n to \$20 million in 2020 and an	
	increase in arriva	ls and departures	from \$437,000 to \$484,87	9. That is a substantial increase. fine particulate matter from	3
			ars, ground operations and		
				to exceeding National Ambient	4
	Air Quality Stand matter clearly wa		ticulate matter. Your subst	antial increase in fine particulate	F
	With regard to air	r quality and parti	icularly fine particulate ma	tter, the EIS must look at the	1
	health care costs	imposed on citize	ens. The EIS must also det		5
	costs of the non-a			animent and what the associated	
				as are not interested in your	1
	in air quality beca	ause poor air qual	lity has real health impacts	quality. Citizens are interested and real costs to people. Yet	6
	you not only don'	't look at the heal	th costs, you don't even m	ention the word health.	•
	04 - 11th Ave. S., Minneap ate Office Building, 100 Re	ev Dr Martin Luther Kir	ng Jr Blvd, St. Paul, Minnesota 551		(612) 822-3347 (651) 296-4200
,		FA	XX: (651) 296-8605 Email: rep.jean	i.wagenius@house.mn	

049-1. Comment noted.

049-2. The Air Quality Assessment was conducted in accordance with USEPA and FAA guidance. The Air Quality Assessment included aircraft operations, ground support equipment, motor vehicles, and stationary sources associated with the airport. The USEPA Region 5 completed a review of the Air Quality Assessment and concluded in its October 10, 2012, comment letter that the "...EPA commends the thorough assessment of air quality..." No other comments were received from the USEPA on the Air Quality Assessment.

Based on the Air Quality Assessment in the Draft EA/EAW, the Action Alternatives are not expected to adversely affect ambient air quality. The PM_{2.5} concentrations at the two air monitoring stations closest to MSP are well within the National Ambient Air Quality Standards (NAAQS) and the trend over the past three years is decreasing concentrations. In May 2006, the MPCA published a study of ambient monitoring conditions near MSP. The monitoring study included measurements of air toxics and PM_{2.5} at two locations on MSP Airport and at Wenonah School and Richfield Intermediate School. Overall, median and average concentrations of pollutants monitored near MSP were similar to concentrations monitored at other locations in the Twin Cities Metropolitan Area. There is no difference between the PM_{2.5} emissions from Alternatives 1 and 2 versus the No Action Alternative during 2020 and 2025. The PM_{2.5} emissions during 2020 are 36 tons

and during 2025 are 39 tons for all alternatives (i.e., No Action and Action Alternatives). Thus, the Action Alternatives are not expected to affect PM _{2.5} concentrations adversely. For more information, see General Response GR # 04.
049-3. As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action. Also, see the Response to Comment #049-2.
049-4. Based on the evaluation in the EA/EAW an EIS is not required. Refer to GR # 01. Also, see the Responses to Comments #049-2 and 049-3.
049-5. Based on the evaluation in the EA/EAW, an EIS is not required. Refer to GR # 01.
The air quality assessment was conducted in accordance with FAA guidelines for NEPA documents which have been reviewed and agreed upon by the EPA. These guidelines are intended to help insure that airport-related emissions do not cause a deleterious impact on the health and welfare of citizens – including those associated with particulate matter. In addition, the air quality assessment included an emissions inventory (and dispersion modeling for CO) that demonstrated that the planned improvements to MSP are not expected to alter the attainment/non-attainment designations in the Minneapolis/St. Paul area.
Per FAA guidance (given the state of the science), other than HAP emission inventories NEPA

other type of HAP assessment including, but not limited to, hazards identification, dispersion modeling (fate and chemical transformation), exposure evaluation, toxicity weighting, dose-response assessment, health risk characterization, health care impact cost estimates, or cost-benefit analysis of mitigation measures. That is, without development of the health impact assessment, additional analysis regarding health impacts cost and mitigation measures is not possible. Also, note the comments of several review agencies regarding

the analysis in the Draft EA/EAW. The USEPA commended the MAC on the thorough air quality analysis in the Draft EA/EAW. Refer to the letter #027 from the USEPA. Upon review of the Draft EA/EAW, the Metropolitan Council found than an EIS was not necessary and that the EA/EAW was complete with the exception of sewers. The Final EA/EAW includes the requested information regarding sewers. See letter #042 from the Metropolitan Council. In addition, vehicular traffic forecasts, modeling, and the draft interstate access report for the diverging diamond interchange at 34th Avenue were approved by MnDOT. Refer to letter #044 from MnDOT.

049-6. See Responses to Comment #049-2 and #049-5.

049 Peer reviewed studies at Harvard done more than ten years ago provide the basis for calculating health costs. These studies provided the basis for determining the health cost of the Riverside electricity generating facility when it was fueled by coal and showed the distinct savings of changing to natural gas. Since the initial studies at Harvard, there have been more showing additional health impacts. One example is a September 2012 Harvard study that says 049-7. See Response to 7 Comment #049-5. breathing fine particulates during pregnancy may increase a woman's risk of giving birth to premature or low birth weight babies. There are other examples. 049-8. See Response to I look forward to the frank discussion of health care costs that an EIS would provide. 8 Comment #049-5. See also, Sincerely General Response GR # 01. Jean Wagenius State Representative Cc: Sandy Colvin-Roy John Quincy

		050	
_		MAC Public Hearing, 10/1/2012 Page: 32	
	1	I'm going to call, and I would like you, even though I	The pages with the reference #
	2	have a card here, if you would stand at the microphone	50 at the top are from the
	3	there and state your name and where you live for the	October 1, 2012 public hearing
	4	public record. And I'm going to ask, first of all, she	transcript. The first 31 pages of
	5	doesn't need to do that because we know her, Councilwoman	the transcript were not included
	6	Sandy Colvin Roy, who represents our neighbor here to the	here as they do not contain
	7	north of the airport.	public comments. The public
	8	MS. COLVIN ROY: Thank you very much. My	hearing transcript in its entirety including the first 31 pages may
	9	address is 4821 30th Avenue South. So don't worry, these	be found in Appendix N, Public
	10	pages don't all represent comments. I am the only person	and Agency Involvement.
:	11	here tonight, the only elected official speaking for the	
	12	City of Minneapolis. The mayor and Councilmember Quincy,	
	13	my colleague, would like to be here but they are on other	
	14	city business. You will hear from them at a future	
	15	public hearing. I cannot give you a copy of the official	
	16	Minneapolis comments yet either, because while they	
	17	passed, they've been approved by a committee, they will	
	18	not get through the full city council until next Friday.	
	19	You'll have them before the deadline. So tonight what	
	20	I'm going to say is not inconsistent with anything that	
	21	Minneapolis will say, but there will be more to the	
	22	comments when they get to you.	050-1. See General Response GR
	23	We need an EIS. I listened to the presentation,	# 01.
	24	I've seen the information before. But the Environmental	
	25	Assessment and so I understand the determinations that	
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com	

Τ

	050 MAC Public Hearing, 10/1/2012 Page: 3.	3
1	were made, the determination that an Environmental	
2	Assessment would be good enough, but it doesn't	0E0 2 See Constal Personalse CP
3	adequately address the mental and physical health impacts	050-2. See General Response GR # 08.
4	of airport noise and operations because sometimes it's	# 06.
5	felt rather than heard, and the additional pollution, and	
6	the Environmental Assessment doesn't adequately consider	050-3. See General Responses
7	the impact of the additional vehicles on the airport	GR # 02 and GR # 05.
8	grounds, and it can't possibly be complete in its	
9	environmental impact detail without the inclusion of RNAV	
10	and the new kind of operations that are already being	050-4. As explained in the
11	considered in process and are part of the near future	introduction to this appendix, the
12	probably, in all probability, and so we question why do	RNAV project is separate from the
13	this now.	airport development project and
14	Minneapolis/St. Paul Minneapolis, anyway	the alternatives analyzed in the Draft EA/EAW. The proposed
15	is in attainment for most things, you're correct, not	RNAV procedures are the subject
16	disagreeing with that, but we're very close to	of a separate NEPA process being
17	nonattainment as an area, and without more investigation	completed by the FAA Air Traffic
18	of the cumulative effects, I mean nobody will deny that	Organization.
19	airport operations are adding pollutants to the air.	
20	Without more investigation of the cumulative effects, it	While the EA/EAW does not
21	is not at all sure that we won't be pushed into	provide environmental review or approval of the proposed RNAV
22	nonattainment. And then for at least our city, and maybe	procedures, the proposed RNAV
23	others in this area if they slide into nonattainment with	procedures, the proposed have
24	us, a big part of the economic benefits that come from	incorporated into the forecasted
25	this airport, and which our city recognizes, and I do,	scenarios noise contours in the
	612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #6685 www.paradigmreporting.com	Final EA/EAW. See General Response GR # 06.
		050-5. The Air Quality Assessment was conducted in accordance with USEPA and FAA regulations and guidance. The Air Quality Assessment included aircraft operations, ground support equipment, motor vehicles, and stationary sources associated with the airport. On pages 5-13 through 5-16, the Draft EA/EAW demonstrates compliance with the National Ambient Air Quality Standards (NAAQS), which are determined based on health and welfare criteria, and General Conformity requirements for carbon

difference in estimated emissions for all pollutants between the future year No Action Alternative and the Action Alternatives is not significant. For many conditions estimated emissions associated with the Action Alternatives are less than emissions associated with the No Action Alternative, as a result of reduced aircraft taxi times. Moreover, emissions from construction activities associated with the Proposed Action, such as fugitive dust, will be minimized by implementing best management practices. Thus, the Action Alternatives would not be expected to adversely affect ambient air quality or human health. Also, see General Responses GR # 02, GR # 03 and GR #04.

		050 MAC Public Hearing, 10/1/2012 Page: 34	
1	1	too, but those will be undercut or gone, because it's a	
	2	very expensive prospect for cities to come out of that	050-5. See response above.
5	3	nonattainment, and it doesn't happen quickly, if you look	
	4	at other cities around the country that have gone through	
	5	it, so we need an EIS.	
	6	The topic of mitigation has to be discussed,	
	7	should be, is being discussed, and I don't want you to	
	8	think that I and the City of Minneapolis did not notice	
	9	the recommendation to add some homes to a similar sound	
	10	insulation-type mitigation program within the 60 DNL, but	
	11	under the proposal noise could increase a hundredfold and	
	12	nothing would change until we got to a specific number of	
	13	flights per year, or the year 2020, and that just doesn't	
	14	make sense. Sometimes, I guess, a number of flights has	
6	15	a direct connection with noise but not always, and as	050 -6. The proposed noise
	16	we've experienced in this past year and a half, a simple	mitigation program was revised after the publication of the Draft
	17	change in practice to even recent policies can make a	EA/EAW. The proposed
	18	huge change in the experience on the ground. So	mitigation in the Draft EA/EAW
	19	mitigation should be linked to the noise people	was modified to base mitigation
	20	experience.	eligibility and timing on annually-
	21	It will be a little harder to come up with a	developed actual noise contours
	22	trigger using the number of flights, I'm using the word	instead of the 2020 Preferred
	23	"trigger," but that's what would trigger mitigation as	Alternative noise contours. Thus,
	24	it's proposed. Minneapolis has repeatedly expressed	the proposed mitigation in the Final EA/EAW is based on actual
	25	concerns about using the DNL as a metric, and I know DNL	noise contours. See General
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com	Responses GR # 07 and GR # 10.

050	
MAC Public Hearing, 10/1/2012 Page: 35	
	050-7. The MAC will continue to
	report, and consider the use of,
	alternative noise metrics.
	However, DNL is FAA's accepted
	noise metric, and the MAC has
have to deal with, and so maybe it's the place to do	used FAA's INM-generated DNL
something different.	noise contours as the mechanism
An independent noise study would begin to give	for implementing a \$500 million
us real-world, on-the-ground, what-it-feels-like-to-	noise mitigation program at MSP since the early 1990s. The noise
live-with data about the impacts of the airport. And	mitigation program, relying on
this is not all about the individuals who live in the	DNL and INM, has substantial
houses now. Much as they are directly impacted with	community support. See General
their lives now, and they will come and speak for	Response GR # 07.
themselves, this is about how destabilizing it can be for	
a large part of a community if it becomes known as a	
difficult or uncomfortable place to live, and that's	
another economic impact. Many of the people who will	
speak, by the way, have talked to me about they don't	
want money for their house; they'll buy new doors if they	050-8. See General Response GR
want them. They want to be able to use their yards.	# 07.
They come to live around a lake, by a creek, by the river	
so they can be outside. That gets to talking about	
operations and how many planes you can pump out in an	
hour.	
www.paradigmreporting.com	
	something different. An independent noise study would begin to give us real-world, on-the-ground, what-it-feels-like-to- live-with data about the impacts of the airport. And this is not all about the individuals who live in the houses now. Much as they are directly impacted with their lives now, and they will come and speak for themselves, this is about how destabilizing it can be for a large part of a community if it becomes known as a difficult or uncomfortable place to live, and that's another economic impact. Many of the people who will speak, by the way, have talked to me about they don't want money for their house; they'll buy new doors if they want them. They want to be able to use their yards. They come to live around a lake, by a creek, by the river so they can be outside. That gets to talking about operations and how many planes you can pump out in an hour. 612-339-035 * Paradigm Reporting & Captioning * 800-543-9668 #6656

			050-9. See General Response GR # 01.
		050	# 01.
1		MAC Public Hearing, 10/1/2012 Page: 36	050-10. Data supporting the
9	1	So as I said, we need an EIS, and why do it now,	need to implement the Proposed
	2	and when you're doing it, check the mitigation and how	Action are included in Appendix O
10	3	that should be determined. The big question is whether	of the Draft EA/EAW.
10	4	you've shown it's necessary or just a convenience. And I	050-11. The commenter is
	5	don't minimize the value of convenience for paying	correct that MSP has adequate
	6	customers, but you've just been rated the most popular	airfield capacity beyond the 20-
	7	airport in the country. This airport's handled the	year planning horizon. The items
	8	projected number of operations before with this number of	that need to be added at MSP to
	9	runways. Tonight a lot of the focus in the presentation	accommodate the region's air
	10	was not about additional gates but about what happens to	transportation needs are
	11	the customer inside the terminal or getting to park, but	primarily landside facilities such
11	12	we're not even projected to exceed the annual operations	as roads, parking and terminal
- ''	13	we've already handled until sometime after 2025, which	facilities. As discussed in Chapter
	14	brings me back to please don't rush this.	2 of the Draft EA/EAW, landside
I.	15	Can some air traffic be handled at other	facilities (including gates) are
	16	airports? I'd say it's not been adequately shown that it	needed to maintain an adequate
	17	can't. And I heard the comment that it may not be	level of customer service at the
	18	impossible I'm not quoting but I'll try to get	airport. As air travel grows and
12	19	there it may not be impossible but it's not being	economic conditions change the
	20	done, and that's what started me thinking about how	airlines adjust their operating
	21	unique this airport is. So just because it's not being	model. In response to current conditions, airlines are using
	22	done doesn't mean that it shouldn't have more	larger planes with higher load
	23	investigation, because this won't be the last time	factors. As a result there are
	24	probably that there's growth hopefully. I mean this	fewer operations per thousand
	25	won't be the last time that yourselves, or other people	passengers than in the past and
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856	less pressure on the airfield.
		www.paradigmreporting.com	However, the larger nearly full
			aircraft require more gate
			frontage and bigger hold rooms.
			Also, because air travel is growing
			there is an increase in the number
			passengers. As the number of
			passengers increase so does the
			need for expanded landside
			facilities such as bag claim,
			security checkpoints, parking and
			access roads.
			The Draft EA/EAW process was
			not rushed. The Draft EA/EAW
			process began in November 2010
			with community briefings. Public
			open houses were conducted in
			July 2011, January 2012 and
			September 2012, in addition to
			the Public Hearing held on
			October 1, 2012. In-depth

analysis of potential
environmental impacts including
air quality and noise took place
throughout 2011 and the first half
of 2012. The Draft EA/EAW was
published on August 30, 2012.
Comments on the Draft EA/EAW
were accepted until October 11,
2012. The length of the comment
period is in accordance with FAA
Order 5050.4B Also, note that
the projects included in the
Proposed Action will be
implemented when demand
dictates.

050-12. The potential for shifting MSP traffic to other airports with unused capacity was discussed in Section 3.1.1 of the Draft EA/EAW. It was concluded that (1) neither the development of a competing hub nor a supplemental airport appears likely given current airline behavior and trends and, (2) even if the studied airports were able to capture 100 percent of their respective markets, the need for MSP terminal and landside improvements would be delayed only temporarily. Therefore, the Other Airports Alternative was dismissed from further consideration. MSP is geographically best

located to serve the majority of the Minnesota passenger market, and it therefore would be very difficult to induce airlines and passengers to use airports that are less optimally located.

The MAC is adhering to the 2030 Long Term Comprehensive Plan for MSP. The Metropolitan Council confirmed that the Draft EA/EAW is consistent with the Long Term Comprehensive Plan adopted by the MAC. Refer to letter # 042 from the Metropolitan Council.

		050	
		MAC Public Hearing, 10/1/2012 Page: 37	
	1	in your chairs, will have to consider growth at the	
	2	airport, growth in traffic here.	
	3	Can the newest runway be used as it was	050-13. See General Response GR # 09.
13	4	projected to be used in order to maximize the usefulness	GR # 09.
	5	of that investment? It appears to us, and to people who	050-14. As explained in the
	6	are sitting in their yards sometimes counting, or walking	introduction to this appendix, the
	7	around the golf course with their cell phone, that it's	growth in operations would occur
	8	not being used as it was projected to be used, and that	naturally with or without the
	9	could make some mitigation that isn't buying windows and	Proposed Action. The proposed
	10	doors. I don't want you to think that this is all about	projects are for the purpose of
	11	individuals just trying to get an improved house. It's	providing an acceptable level of
	12	not.	service for the Minneapolis-St.
14	13	Or is this about getting more flights out during	Paul Metropolitan area and the greater region. Normal traffic
	14	peak hours? And that is what becomes very difficult, as	peaks that occur now and are
	15	I understand it. I'm, luckily, just across the street	projected to occur in the future
	16	from the mitigation area, and I can attest that the	are part of the determination
	17	number of flights that bother my house has been reduced	regarding the extent of facilities
	18	since '96. I'm not sure why. The house didn't move.	that will be needed in the future.
	19	But peak hours, a mother said between 6:30 and 8:30 in	Facilities are not planned for
	20	the morning every day she gets waked up and has a hard	absolute peaks, but to a level that
15	21 22	time getting her baby back to sleep. It's that kind of impact we don't believe the DNL measures, and that is	provides adequate service during
10	22	what can possibly, you know, destabilize the community.	average peaks. See also Draft EA/EAW Appendix O.
	23	Can the flights be scheduled differently?	
16	25	Probably being done right now in a way that everybody who	050-15. See General Response
	2.5		GR # 07.
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com	
			050-16. See General Responses
			GR # 05 and GR # 09.

			050
_		MAC Public Hearing, 10/1/2012 Pa	age: 38
	1	is making decisions thinks is best, I get that, but	
	2	sometimes you have to kind of push on the assumptions,	
	3	and that's what we're asking.	
	4	What's the rush to approve? I read in the Sta	ar
	5	Tribune comments from a commissioner, and I'm okay,	
	6	thank you, Commissioner King, I couldn't remember which	h
	7	one it was that you don't have to pull the trigger of	
	8	a particular project until it's needed, but you have al	
	9	the environmental requirements in place. I get that.	
	10	It's prudent to plan ahead and prepare for the future.	
	11	But even the presentation tonight seemed to indicate	
	12	there isn't one of these projects that needs to happen	
	13	within an 18-month to two-year time frame, that has to	
	14	So airport-adjacent residents shouldn't be	·
	15	exposed to more flights, more noise and more pollution	
	16	for convenience, and the overall economic benefits of a	
	17	growing airport might be undercut for some of us if we	
	18	slide into nonattainment. State Representative Jean	
	19	Wagenius had planned to be here tonight but I don't	
	20	believe she's been able to make it. She will talk when	
			n
	21	she gets the chance, or submit comments about this	
	22	attainment/nonattainment issue, and the fine particulat	te
	23	matter and the precarious spot that we're getting to.	
	24	And that is not only linked to health, which you've ta	ken
	25	a step in agreeing to be a part of the PARTNER study,	
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 # www.paradigmreporting.com	#66856

050-17. The Draft EA/EAW s not rushed. The Draft ocess began in 2010 with community Public open houses ucted in July 2011, 12 and September dition to the Public ld on October 1, 2012. alysis of potential ntal impacts including and noise took place 2011 and the first half ne Draft EA/EAW was on August 30, 2012. on the Draft EA/EAW ted until October 11, length of the comment accordance with FAA .4B.

050-18. As explained in the introduction to this appendix, the growth in operations would occur naturally with or without the Proposed Action.

ality Assessment was in accordance with FAA guidance. The Air essment included erations, ground uipment, motor nd stationary sources with the airport. The ion 5 completed a he Air Quality t and concluded in its , 2012, comment letter EPA commends the ssessment of air lo other comments ed from the USEPA on lity Assessment.

Based on the Air Quality Assessment in the Draft EA/EAW, the Action Alternatives are not expected to adversely affect ambient air quality. The PM_{2.5} concentrations at the two air monitoring stations closest to

MSP are well within the National Ambient Air Quality Standards (NAAQS) and the trend over the past three years is decreasing concentrations. In May 2006, the MPCA published a study of ambient monitoring conditions near MSP. The monitoring study included measurements of air toxics and PM_{2.5} at two locations on MSP Airport and at Wenonah School and Richfield Intermediate School. Overall, median and average concentrations of pollutants monitored near MSP were similar to concentrations monitored at other locations in the Twin Cities Metropolitan Area. There is no difference between the PM_{2.5} emissions from Alternatives 1 and 2 versus the No Action Alternative during 2020 and 2025. The $PM_{2.5}$ emissions during 2020 are 36 tons and during 2025 are 39 tons for all alternatives (i.e., No Action and Action Alternatives). Thus, the Action Alternatives are not expected to affect PM_{2.5} concentrations adversely. For more information, see General Responses GR # 02 and GR # 04.

		050 MAC Bublic Harrier 10/(2012) Barry 20	
	1	MAC Public Hearing, 10/1/2012 Page: 39	
19	2	you've taken a step towards examining the health impacts, it also would have a big economic impact. So, please,	050-19. See General Response
19	3	don't rush this before knowing the full impacts of the	GR # 08.
	4	operations with RNAV, don't rush this without an EIS.	050-20. As explained in the
20	5	Please go forward with an EIS that considers the full	introduction to this appendix, the
1	6	environmental and health impacts of the operations you	RNAV project is separate from the
	7	project. Thank you very much. I appreciate your	airport development project and
	8	patience.	the alternatives analyzed in the
	9	(Applause.)	Draft EA/EAW. The proposed
	10	CHAIR REHKAMP: Our next commenter is James	RNAV procedures are the subject
	11	Easton.	of a separate NEPA process being
	12	MR. EASTON: I am James Easton. My house	completed by the FAA Air Traffic
	13	was built in 1920, and is located at 3944 30th Avenue	Organization. See General Response GR # 06.
	14	South, which is just immediately north of Roosevelt High	Response dr # 00.
	15	School, and I've lived in this house and owned this house	The Draft EA/EAW process was
	16	since '01. For the first ten years airplane noise was	not rushed. See Response to
	17	acceptable, tolerable to me, but within the last year and	Comment #050-17.
	18	a half, with this north-south runway, the planes are	
	19	going over just as they are right now. So one afternoon	An EIS is not required. See
	20	I sat in my house, and since I had this pen and paper, I	General Response GR #01.
	21	recorded the times that the airplanes went over; at 3:22,	
	22	3:24, 3:27, 3:29, 3:13, 3:32, 3:35, 3:37, 3:39 and 3:43.	
	23	Within a half hour. And, also, when I go outside and	
	24	look at the planes, these planes are still ascending,	
	25	kind of just barely going over the tallest trees. So I	
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com	
		www.puruaigmreporung.com	

Т

		050	
		MAC Public Hearing, 10/1/2012 Page: 40	050-21. As explained in the
	1	have noticed a big increase in airplane noise and	introduction to this appendix, the
21	2	something just needs to be done about it. That's all I	growth in operations would occur
	3	have to say.	naturally with or without the
	4	(Applause.)	Proposed Action.
	5	CHAIR REHKAMP: Next is Rob Mehta.	
	6	MR. MEHTA: Close enough.	The forecast flight tracks used in
	7	CHAIR REHKAMP: Help me with that.	the Draft EA/EAW (2020 and
	8	MR. MEHTA: Mehta.	2025) included operational assumptions based on recent FAA
	9	CHAIR REHKAMP: And your address, please?	ATC implementation of increased
	10	MR. MEHTA: Well, I live in the suburbs. I	heading dispersion for
	11	hate to say that, but I do.	northbound departure operations
	12	AUDIENCE MEMBER: So do I.	off Runway 30R as requested by
	13	MR. MEHTA: Good, I don't feel so alone	the City of Minneapolis, the MSP
	14	now. I grew up about two blocks away, and I work in real	Noise Oversight Committee (NOC)
	15	estate. I work for Coldwell Banker Burnet. I sell a lot	and the MAC. Additionally, the
	16	of property.	HESTN ONE and SLAYR ONE Area
	17	CHAIR REHKAMP: Would you, please, Rob,	Navigation (RNAV) Standard Instrument Departures (SIDs) off
	18	give us your address?	Runway 17, as implemented on
	19	MR. MEHTA: Sure. 4100 Berkshire Lane	November 30, 2012 by FAA ATC,
	20	North in Plymouth.	per the request of the NOC and
	21	CHAIR REHKAMP: Thank you.	MAC, were modeled in the
	22	MR. MEHTA: So I spend a lot of time here	forecast flight tracks in the Draft
	23	in south Minneapolis, all over Minneapolis, and my	EA/EAW. See page G-43 of
	24	comments tonight, I agree with the comments that have	Appendix G.
	25	been made so far, the environmental impact, all of that,	
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com	Also, see General Response GR # 05 and GR # 10.

		050 MAC Public Hearing, 10/1/2012 Page: 41			
	1	I think that's terrific. It has to be done, I realize			
	2	that. You know, the noise, I grew up three blocks away,			
	3	literally on the north side of 62 and Crosstown, and I			
	4	can tell you, one, and this is just my opinion, but when			
	5	my parents bought this house the airport was here, and			
	6	they've owned it for 15 years and the airport's still			
	7	been here, so I've never heard them once complain about			
	8	noise. They knew it going into the situation. When you			
	9	buy in the city, when you buy by a major airport, that's			
	10	what you get. I don't think they ever thought the			
	11	airport was going to shut down and close up shop and the			
	12	noise would be gone. So the noise is here.			
	13	I'm a pilot, so I'm a little biased. I have an			
	14	airplane out of Crystal, I fly out of Crystal. I just			
	15	fly privately, I don't fly commercially, so I don't have			
	16	an opinion on that. I guess my thought, and my couple			
	17	comments that I wanted to throw out there, was that, one,			
	18	I think we can either welcome the business and the growth			
	19	here or we can tell the growth to go someplace else and			
	20	it will. Because to fly a commercial jet from LA and			
	21	connect in O'Hare or connect at MSP is not that big of a			
	22	difference to the airlines, I personally don't think, in			
	23	terms of the cost, so either we can welcome it here and			
22	24	we can grow here and we can have an economic benefit, or	050-22.	Comment noted.	
	25	we say, no, you know what, this business can go			
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com			

	1	elsewhere, and I think it will.	
	2	That being said, I do have a problem with, you	
	3	know, I've seen both proposals with the keeping Delta and	
	4	the SkyTeam at Lindbergh versus moving them over to	
	5	and I know it's Terminal 1 and Terminal 2 now and	050
	6	moving them to Terminal 2. You know, from what I've seen	mai
	7	over the years, and I think many of us can attest to	gate
	8	this, Minneapolis is one of the most expensive markets to	new
	9	fly out of, with Northwest originally and now Delta, and	The
T.	10	I think by basically having Delta and the SkyTeam sort of	star
	11	take over 1, I think, is not going to help our case, it's	airli onc
	12	not going to help competition, so that is a concern I've	cap
	13	got. It's a little bit different concern than what's	This
	14	been voiced so far, but I just want to put my two cents	for
	15	out there. I saw the short-term and I agree with that.	pois
	16	It might be a short-term fix, but it might not be a	SOO
	17	long-term benefit to us as consumers, so those are my two	Wh
	18	cents. Thanks.	Ter
	19	CHAIR REHKAMP: Thank you.	2-H mai
	20	(Applause.)	as g
	21	CHAIR REHKAMP: Next is Bryan Barnes.	bot
	22	MR. BARNES: Hi. I'm Bryan Barnes, I live	nor
	23	at 5200 27th Avenue South in Minneapolis, and I have a	2-H
	24	couple comments here. You know, I really think expanding	the
	25	the airport and your, I guess the rates that you had were	whi
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com	red Line
			roa
			faci
			mo
			and
			Ter
			are
			are

The best way to competition is to have ilable when needed for ants or existing airlines. y for a new entrant to vice quickly or existing o add service quickly ir current gates are at is vital to competition. e of the primary reasons ing that the MAC is add facilities at MSP as hey are needed. the gates are at 1-Lindbergh or Terminal rey is not an issue for ing competition, as long acilities are provided at ninals. Having all the eam airlines at Terminal rey makes it easier for ling public to know minal to use. It also pressure on Terminal 1h parking, curbs, , check-in and bag claim and makes it easier and t efficient to rehabilitate nately modify facilities at 1-Lindbergh when they ed.

			50 re: 43
		0,	(c; +o)
	1	lower than what you had for airplanes coming in in the	
	2	past couple years, or what has been. You even had that	
	3	big lower threshold than what you previously had.	
	4	Well, to quote the "Field of Dreams," "if you build it,	050-24. As explained in the
	5	they will come." And I think then it's just going to	introduction to this appondix the
~	7	give the airlines in a better economy to say, hey, we'r	growth in operations would occur
24	8	got more capacity at MSP, let's fly out, let's put some more airplanes in there and, you know, I think your	naturally with or without the
	9	estimates are going to be, are a little shortsighted th	Proposed Action.
	10	way. You know, I think you look at a better economy,	at
	11	these estimates are made in a down economy, I think you	The Draft EA/EAW forecasts were
	12	look at a better economy, you're going to have that muc	prepared using economic
	13	more of these airlines wanting to put more planes in he	projections provided by the
	14	to make more money. I mean even look at Bill Gates	Poole Economics, the U.S.
	14	once said 64K would work for a computer for everybody.	Department of Energy, and the
	16	Well, hell, my iPhone pardon my language my iPhon	
	17	has one gigabyte of RAM in it right now. So I think it	
	18	a little shortsighted.	050-25. The MAC is investigating
	19	And one other thing I would say is, regarding	options to increase the
	20	the website and using the thing to report, I think you	www.macnoise.com website
	21	need to take a look at making an app for iPhone, Andro:	usability on mobile devices.
	22	whatever, so that we can grab real-time data as far as	~,
25	23	our GPS, our time and date, so you know exactly where w	e
	24	are, because, hey, I'm outside most of the time when I	
	25	hearing these planes go over. I don't want to run	
			66856
		www.paradigmreporting.com	

		050	
		MAC Public Hearing, 10/1/2012 Page: 44	
	1	inside, try and write it down somewhere and then run	
	2	inside and put it into the website or try and use the	
	3	website through my phone. It just doesn't work.	
26	4	And I really think I would also like to say	050-26. See General Response
	5	that the environmental impact study is greatly needed. I	GR # 01.
	6	mean I'm outside, I was outside at a party the other	
	7	night, and there was planes every couple of minutes. So	
	8	thank you.	
	9	CHAIR REHKAMP: Thank you.	
	10	(Applause.)	
	11	CHAIR REHKAMP: Next is Guy Heide.	
	12	MR. HEIDE: My name is Guy Heide, I reside	
	13	at 881 Bluebill Drive in the City of Mendota Heights,	
	14	Minnesota. I presume the Federal Aviation	
	15	Administration, or FAA, has guided and participated in	
	16	the preparation of all public hearing materials as	
	17	mandated by the National Environmental Policy Act, or	
	18	NEPA, at Section 4332(D) of Title 42 in the U.S. Code.	
	19	NEPA permits the FAA to allow a public agency to prepare	
	20	an environmental statement, but the FAA must guide it and	
	21	participate in it. I assume they're here this evening.	
	22	And they also ultimately will take responsibility for the	
	23	objectivity and for the contents of every statement that	
	24	is in the Environmental Assessment. I have eight	
	25	comments and a question. The comments are not long.	
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com	
		www.paraanseporning.com	

050 MAC Public Hearing, 10/1/2012 Page: 45 1 MSP 2020 Improvements are considered a federal 2 action, thus the FAA is under an obligation to prepare an 3 environmental statement, but the NEPA mandates that a 4 special statement must be made if a federal action has a 5 significant effect on the human environment. Then the 6 FAA must prepare what is called a detailed statement or,	
1 MSP 2020 Improvements are considered a federal 2 action, thus the FAA is under an obligation to prepare an 3 environmental statement, but the NEPA mandates that a 4 special statement must be made if a federal action has a 5 significant effect on the human environment. Then the	
2 action, thus the FAA is under an obligation to prepare an 3 environmental statement, but the NEPA mandates that a 4 special statement must be made if a federal action has a 5 significant effect on the human environment. Then the	
 a environmental statement, but the NEPA mandates that a 4 special statement must be made if a federal action has a 5 significant effect on the human environment. Then the 	
4 special statement must be made if a federal action has a 5 significant effect on the human environment. Then the	
5 significant effect on the human environment. Then the	
6 FAA must prepare what is called a detailed statement or,	
7 in our terms, an Environmental Impact Statement, and not	
8 an Environmental Assessment. In other words, an	
9 Environmental Assessment is not a detailed statement for	
10 purposes of the NEPA Act. An increase of 1.5 decibels or	
11 greater in the yearly day-night average sound level in	
12 any land area within MSP 65 decibel DNL noise contour, or	
13 a 1.5 decibel increase that moves any land area from	
14 outside to inside MSP 65 decibel DNL contour is, by	
15 definition, a significant environmental effect legally	
16 adequate to trigger the making of the detailed	
17 Environmental Impact Statement required by NEPA.	
18 Now FAA's and I refer to FAA as they are	
19 responsible for this FAA's "MSP 2020 Improvements	
20 Draft EA/EAW Open House Presentation" represented on page	
21 18 of 36 that "there are no areas of sensitive land uses 050-27. The threshold of	
22 that would experience a 1.5 decibel or greater increase," significance for noise is trigge	
27 23 and this claim is repeated on page 26. However, said if the action alternative would cause an increase of 1.5 dB DI	
24 page 18, which I notice HNTB omitted from their or greater for a noise sensitive	
25 presentation, showed land areas within the 65 to 69 DL land use at or above the 65 D	_
612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 noise exposure when compar-	
to the No Action Alternative.	
referenced table showed tota	
acres within each contour. Se	
General Response GR # 01, an Responses to Comments 048-	
and 048-11.	10

		050		
		MAC Public Hearing, 10/1/2012 Page: 46		
	1	contour significantly increased, okay? They increased		
	2	from 3,188 acres under the EA No Action 2025 scenario to		
	3	3,205 acres under the EA's Alternative No. 1 2025		0F0 27 See recourse above
27	4	scenario, and said page 18 showed land areas within the		050-27. See response above.
	5	70 to 74 DNL contour significantly increased from 1,078		
	6	under EA's No Action 2025 scenario to 1,081 acres under		
	7	EA's Alternative No. 2 2025 scenario. I do not see in		
	8	this plan any mitigation that would render the impact		
	9	less than significant. FAA's analysis and comments above		
	10	to the effect that there were no areas of sensitive land		
	11	uses that would experience a 1.5 decibel or greater		
	12	increase appears to be clearly inaccurate, unscientific		
	13	and unprofessional.		
	14	My first comment is that I object to this		
	15	proceeding for being set in motion by patently inadequate		
	16	information, and I respectfully request that this		
	17	proceeding be stayed until FAA has provided accurate		
	18	analysis and comments concerning MSP's 2020 Improvements		
	19	Environmental Assessment and obedience to Section 1500.1		
28	20	of Title 40 of the Code of Federal Regulations, which is		050-28. See Response to
	21	the Council of Environmental Quality Regulations, which		Comment #048-3.
	22	mandate FAA must provide high-quality, accurate		
	23	scientific analysis and expert agency comments to enable		
	24	the public to comment effectively, intelligently and		
	25	meaningfully on the conclusions properly to be drawn		
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com	í	

		050	
28		MAC Public Hearing, 10/1/2012 Page: 47	
	1	concerning it.	050-28. See response above.
	2	My second comment. In the record the proposed	
	3	MSP 2020 Improvements under Alternative No. 1 and	
	4	Alternative No. 2 are shown to significantly affect the	050-29. No environmental
	5	human environment around MSP, and my second comment is	category impacts in the Draft
29	6	that FAA should dispense with preparing an Environmental	EA/EAW exceed the level of
	7	Assessment and immediately proceed to prepare the	significance as defined by NEPA,
	8	detailed environmental statement, normally termed an	CEQ Regulations, FAA Orders
	9	Environmental Impact Statement, as mandated for all	1050.1, Environmental Impacts:
	10	federal actions significantly affecting the human	Policies and Procedures
1	11	environment under NEPA.	(Appendix A), FAA Order 5050.4B,
	12	My third comment. Lead emitted from aircraft	National Environmental Policy Act
	13	using leaded aviation gas is currently the largest source	(NEPA) Implementing Instructions
	14	of lead in air in the United States, constituting about	for Airport Actions (Table 7-1), MEPA and the EQB rules
	15	50 percent of lead emissions in 2005. The combustion of	implementing the MEPA. Also,
	16	leaded aviation gas recently posed and poses a realistic	see General Response GR # 01.
	17	health risk to children who live or attend school near	
	18	MSP. Credible scientific studies have indicated living	
	19	within 1,000 meters of an airport where aviation gasoline	
	20	is used has a significant effect on blood levels in	
	21	children, with children living close to the airport at	
	22	highest risk. As acknowledged by EPA in Volume 66, No. 4	
	23	of the Federal Register, "Young children are especially	
	24	vulnerable to the toxics effects of lead because their	
	25	nervous systems are still developing and they absorb more	
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856	
		www.paradigmreporting.com	

			050	
		MAC Public Hearing, 10/1/2012 F	age: 48	
		l of the lead to which they are exposed."		
		2 CHAIR REHKAMP: Mr. Heide, you've exceed	ed	
		the five minutes. Are you getting close to the time?		
		MR. HEIDE: Yes.		
		CHAIR REHKAMP: Please.		
		MR. HEIDE: I continue the quote. "Many	of	050-30. Air monitoring data for
		the health effects associated with lead are thought to	be	lead in the MSP area are well
		irreversible. Moreover, the effects at lower levels of	f	below the national Ambient Air
		exposure are often asymptomatic." In other words, a		Quality Standards. Lead
	1	child can have the problem but there are no symptoms.		emissions are not typically considered in emission
	1:	L Chapter 4 of FAA's Draft Environmental Assessment clai	med	inventories for commercial
	1:	to address children's health and safety risks, but the	re	service airports because lead
	1:	is nothing in Chapter 4 that specifically addressed th	e	emissions result primarily form
	1.	effects of aviation gasoline on childhood blood lead		piston engine aircraft and the use
3	0 1!	levels and, as a matter of fact, there does not appear	to	of aviation gasoline (avgas or
	1	be any information at all in said chapter that address	es	100LL). Notably, the estimated
	1	7 children's health.		lead emissions at MSP total less than 0.04 tons per year, or only
	1	My third comment then is FAA erred in omittin	g	four percent of the applicable
	1	to adequately address the effects of aviation gasoline	of	one-ton threshold. For additional
	2	childhood blood lead levels in its Draft Environmental		information, see Response to
3	2	Assessment, and that this proceeding set in motion by	an	Comment #048-18.
	2	inadequate notice should be stayed until FAA has provi	ded	
	23	adequate notice concerning the effects of aviation		
	2.	gasoline on childhood blood lead levels with respect t	0	050-31. Air monitoring data for lead in the MSP area are well
	2	children living near MSP in obedience to the Council of	f	below the national Ambient Air
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 www.paradigmreporting.com	#66856	Quality Standards. Lead
		www.puruuiginreporting.com		emissions are not typically
				considered in emission
				inventories for commercial
				service airports because lead
				emissions result primarily form
				piston engine aircraft and the use of aviation gasoline (avgas or
				100LL). Notably, the estimated
				lead emissions at MSP total less
				than 0.04 tons per year, or only
				four percent of the applicable
				one-ton threshold. For additional
				information, see Response to
				Comment #048-18.
1				
L				

	MAC Public Hearing, 10/1/2012	Page: 50
1	more than five minutes.	
2	CHAIR REHKAMP: And I've afforded you a	bout
3	three times what the councilwoman had.	
4	MR. HEIDE: You have not.	
5	CHAIR REHKAMP: Yes, I have.	
6	MR. HEIDE: How much time have you?	
7	CHAIR REHKAMP: I thank you for your	
8	comments. They will be recorded. I ask you to submi	t
9	any additional comments in writing. We have a number	
10	people who want to speak tonight who are probably goi	
11	to go to work tomorrow, and I would like to afford th	-
12	people an opportunity to	
13	AUDIENCE MEMBER: I'll give up my time	as
14	well. I'll give up my time.	
15	AUDIENCE MEMBER: I think you should le	t.
16	him talk. I think it's only fair.	
17	AUDIENCE MEMBER: Yes, let him talk.	
18	CHAIR REHKAMP: Mr. Heide, why don't yo	u
19	have a seat, and if	
20	MR. HEIDE: No, I	
21	CHAIR REHKAMP: No, you're not listenin	a to
22	me, Mr. Heide. Have a seat, please, and if there's t	
23	at the end of this hearing for you to make additional	
24	comments I will allow you to do that, but I want to g	
25	other people a chance here to speak first, and that i	
20		
	612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 www.paradigmreporting.com	#66856

<pre>the protocol and that is the process we decided on here, and that is what we are going to do. MR. HEIDE: The only observation is I believe you have abused the powers of the chair. CHAIR REHKAMP: Well, you have every right to make that comment. MR. HEIDE: But I will wait. CHAIR REHKAMP: And it's been recorded. Thank you. MR. HEIDE: I will wait and I will continue with my comments. CHAIR REHKAMP: Sit down, please. (Applause.) CHAIR REHKAMP: Next we have Bob Friedman. MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that</pre>	1 the protocol and that is the process we decided on here 2 and that is what we are going to do. 3 MR. HEIDE: The only observation is I 4 believe you have abused the powers of the chair. 5 CHAIR REHKAMP: Well, you have every right 6 to make that comment. 7 MR. HEIDE: But I will wait. 8 CHAIR REHKAMP: And it's been recorded. 9 Thank you. 10 MR. HEIDE: I will wait and I will continuation with my comments. 11 with my comments. 12 CHAIR REHKAMP: Sit down, please. 13 (Applause.) 14 CHAIR REHKAMP: Next we have Bob Friedman 15 MR. FRIEDMAN: Thank you for having this 16 hearing time. My name is Bob Friedman, I live at 4237 17 22nd Avenue South, just north of the golf course. I call 18 my house Heading 360. Before I begin, I do have a 19 comment. Jim Spensley, president of SMAAC, asked me in 20 an email today he's out of town awaiting the birth or 21 twins and he asked me to make sure that the group her 22 got both of his he did a revised of his seven-page<		050
<pre>and that is what we are going to do. MR. HEIDE: The only observation is I believe you have abused the powers of the chair. CHAIR REHKAMP: Well, you have every right to make that comment. MR. HEIDE: But I will wait. CHAIR REHKAMP: And it's been recorded. Thank you. MR. HEIDE: I will wait and I will continue with my comments. CHAIR REHKAMP: Sit down, please. (Applause.) CHAIR REHKAMP: Next we have Bob Friedman. MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that</pre>	2 and that is what we are going to do. 3 MR. HEIDE: The only observation is I 4 believe you have abused the powers of the chair. 5 CHAIR REHKAMP: Well, you have every right 6 to make that comment. 7 MR. HEIDE: But I will wait. 8 CHAIR REHKAMP: And it's been recorded. 9 Thank you. 10 MR. HEIDE: I will wait and I will continue with my comments. 11 CHAIR REHKAMP: Sit down, please. 13 (Applause.) 14 CHAIR REHKAMP: Next we have Bob Friedman 15 MR. FRIEDMAN: Thank you for having this 16 hearing time. My name is Bob Friedman, I live at 4237 17 22nd Avenue South, just north of the golf course. I call 18 my house Heading 360. Before I begin, I do have a 19 an email today he's out of town awaiting the birth or 21 twins and he asked me to make sure that the group hes 22 got both of his he did a revised of his seven-page 23 report and comments, and he wanted to make sure that you 24 got a revised edition. There were some corrections that 25 he made, so hopeful		MAC Public Hearing, 10/1/2012 Page: 5
MR. HEIDE: The only observation is I believe you have abused the powers of the chair. CHAIR REHKAMP: Well, you have every right to make that comment. MR. HEIDE: But I will wait. CHAIR REHKAMP: And it's been recorded. Thank you. MR. HEIDE: I will wait and I will continue with my comments. CHAIR REHKAMP: Sit down, please. (Applause.) CHAIR REHKAMP: Next we have Bob Friedman. MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that	3 MR. HEIDE: The only observation is I 4 believe you have abused the powers of the chair. 5 CHAIR REHKAMP: Well, you have every right 6 to make that comment. 7 MR. HEIDE: But I will wait. 8 CHAIR REHKAMP: And it's been recorded. 9 Thank you. 10 MR. HEIDE: I will wait and I will continue 11 with my comments. 12 CHAIR REHKAMP: Sit down, please. 13 (Applause.) 14 CHAIR REHKAMP: Next we have Bob Friedman 15 MR. FRIEDMAN: Thank you for having this 16 hearing time. My name is Bob Friedman, I live at 4237 17 22nd Avenue South, just north of the golf course. I cai 18 my house Heading 360. Before I begin, I do have a 19 comment. Jim Spensley, president of SMAAC, asked me in 20 an email today he's out of town awaiting the birth openation 21 twins and he asked me to make sure that the group heil 22 got both of his he did a revised of his seven-page 23 report and comments, and he wanted to make sure that you 24 got a revised edition. There were some correction	1	the protocol and that is the process we decided on here,
believe you have abused the powers of the chair. CHAIR REHKAMP: Well, you have every right to make that comment. MR. HEIDE: But I will wait. CHAIR REHKAMP: And it's been recorded. Thank you. MR. HEIDE: I will wait and I will continue with my comments. CHAIR REHKAMP: Sit down, please. (Applause.) CHAIR REHKAMP: Next we have Bob Friedman. MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that	 believe you have abused the powers of the chair. CHAIR REHKAMP: Well, you have every right to make that comment. MR. HEIDE: But I will wait. CHAIR REHKAMP: And it's been recorded. Thank you. MR. HEIDE: I will wait and I will continue with my comments. CHAIR REHKAMP: Sit down, please. (Applause.) CHAIR REHKAMP: Next we have Bob Friedman MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I cai my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group her got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that he made, so hopefully you can make sure that that 	2	and that is what we are going to do.
CHAIR REHKAMP: Well, you have every right to make that comment. MR. HEIDE: But I will wait. CHAIR REHKAMP: And it's been recorded. Thank you. MR. HEIDE: I will wait and I will continue with my comments. CHAIR REHKAMP: Sit down, please. (Applause.) CHAIR REHKAMP: Next we have Bob Friedman. MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that	5 CHAIR REHKAMP: Well, you have every right 6 to make that comment. 7 MR. HEIDE: But I will wait. 8 CHAIR REHKAMP: And it's been recorded. 9 Thank you. 10 MR. HEIDE: I will wait and I will continue 11 with my comments. 12 CHAIR REHKAMP: Sit down, please. 13 (Applause.) 14 CHAIR REHKAMP: Next we have Bob Friedman 15 MR. FRIEDMAN: Thank you for having this 16 hearing time. My name is Bob Friedman, I live at 4237 17 22nd Avenue South, just north of the golf course. I cai 18 my house Heading 360. Before I begin, I do have a 19 comment. Jim Spensley, president of SMAAC, asked me in 20 an email today he's out of town awaiting the birth of 21 twins and he asked me to make sure that the group her 22 got both of his he did a revised of his seven-page 23 report and comments, and he wanted to make sure that that 24 got a revised edition. There were some corrections that 25 he made, so hopefully you can make sure that that	3	MR. HEIDE: The only observation is I
<pre>6 to make that comment. 7 MR. HEIDE: But I will wait. 8 CHAIR REHKAMP: And it's been recorded. 9 Thank you. 0 MR. HEIDE: I will wait and I will continue 1 with my comments. 2 CHAIR REHKAMP: Sit down, please. 3 (Applause.) 4 CHAIR REHKAMP: Next we have Bob Friedman. 5 MR. FRIEDMAN: Thank you for having this 6 hearing time. My name is Bob Friedman, I live at 4237 7 22nd Avenue South, just north of the golf course. I call 8 my house Heading 360. Before I begin, I do have a 9 comment. Jim Spensley, president of SMAAC, asked me in 1 an email today he's out of town awaiting the birth of 1 twins and he asked me to make sure that the group here 2 got both of his he did a revised of his seven-page 3 report and comments, and he wanted to make sure that you 4 got a revised edition. There were some corrections that</pre>	 to make that comment. MR. HEIDE: But I will wait. CHAIR REHKAMP: And it's been recorded. Thank you. MR. HEIDE: I will wait and I will continue with my comments. CHAIR REHKAMP: Sit down, please. (Applause.) CHAIR REHKAMP: Next we have Bob Friedman MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I cail my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group he: got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that that 612-339-0545 *Paradigm Reporting & Captioning * 800-545-9668 	4	believe you have abused the powers of the chair.
MR. HEIDE: But I will wait. CHAIR REHKAMP: And it's been recorded. Thank you. MR. HEIDE: I will wait and I will continue with my comments. CHAIR REHKAMP: Sit down, please. (Applause.) CHAIR REHKAMP: Next we have Bob Friedman. MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that	7 MR. HEIDE: But I will wait. 8 CHAIR REHKAMP: And it's been recorded. 9 Thank you. 10 MR. HEIDE: I will wait and I will continue 11 with my comments. 12 CHAIR REHKAMP: Sit down, please. 13 (Applause.) 14 CHAIR REHKAMP: Next we have Bob Friedman 15 MR. FRIEDMAN: Thank you for having this 16 hearing time. My name is Bob Friedman, I live at 4237 17 22nd Avenue South, just north of the golf course. I call 18 my house Heading 360. Before I begin, I do have a 19 comment. Jim Spensley, president of SMAAC, asked me in 20 an email today he's out of town awaiting the birth operation 21 twins and he asked me to make sure that the group heiling 22 got both of his he did a revised of his seven-page 23 report and comments, and he wanted to make sure that you 24 got a revised edition. There were some corrections that 25 he made, so hopefully you can make sure that that	5	CHAIR REHKAMP: Well, you have every right
CHAIR REHKAMP: And it's been recorded. Thank you. MR. HEIDE: I will wait and I will continue with my comments. CHAIR REHKAMP: Sit down, please. (Applause.) CHAIR REHKAMP: Next we have Bob Friedman. MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that	8 CHAIR REHKAMP: And it's been recorded. 9 Thank you. 10 MR. HEIDE: I will wait and I will continue 11 with my comments. 12 CHAIR REHKAMP: Sit down, please. 13 (Applause.) 14 CHAIR REHKAMP: Next we have Bob Friedman 15 MR. FRIEDMAN: Thank you for having this 16 hearing time. My name is Bob Friedman, I live at 4237 17 22nd Avenue South, just north of the golf course. I call 18 my house Heading 360. Before I begin, I do have a 19 comment. Jim Spensley, president of SMAAC, asked me in 20 an email today he's out of town awaiting the birth or 21 twins and he asked me to make sure that the group her 22 got both of his he did a revised of his seven-page 23 report and comments, and he wanted to make sure that you 24 got a revised edition. There were some corrections that 25 he made, so hopefully you can make sure that that	6	to make that comment.
9 Thank you. MR. HEIDE: I will wait and I will continue with my comments. CHAIR REHKAMP: Sit down, please. (Applause.) CHAIR REHKAMP: Next we have Bob Friedman. MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that	 9 Thank you. MR. HEIDE: I will wait and I will continue with my comments. 12 CHAIR REHKAMP: Sit down, please. 13 (Applause.) 14 CHAIR REHKAMP: Next we have Bob Friedman MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 17 22nd Avenue South, just north of the golf course. I can my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group he: got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that he made, so hopefully you can make sure that that 	7	MR. HEIDE: But I will wait.
MR. HEIDE: I will wait and I will continue with my comments. CHAIR REHKAMP: Sit down, please. (Applause.) CHAIR REHKAMP: Next we have Bob Friedman. MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that	MR. HEIDE: I will wait and I will continue with my comments. CHAIR REHKAMP: Sit down, please. (Applause.) CHAIR REHKAMP: Next we have Bob Friedman MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I cal my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group hei got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that he made, so hopefully you can make sure that that	8	CHAIR REHKAMP: And it's been recorded.
<pre>with my comments. CHAIR REHKAMP: Sit down, please. (Applause.) CHAIR REHKAMP: Next we have Bob Friedman. MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that</pre>	with my comments. CHAIR REHKAMP: Sit down, please. (Applause.) CHAIR REHKAMP: Next we have Bob Friedman MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group her got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that he made, so hopefully you can make sure that that	9	Thank you.
 CHAIR REHKAMP: Sit down, please. (Applause.) CHAIR REHKAMP: Next we have Bob Friedman. MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that 	CHAIR REHKAMP: Sit down, please. (Applause.) CHAIR REHKAMP: Next we have Bob Friedman MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I can my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group he: got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that he made, so hopefully you can make sure that that 612-339-0545 *Paradigm Reporting & Captioning * 800-545-9668 #6	10	MR. HEIDE: I will wait and I will continue
(Applause.) CHAIR REHKAMP: Next we have Bob Friedman. MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that	(Applause.) CHAIR REHKAMP: Next we have Bob Friedman MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group hei got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that he made, so hopefully you can make sure that that 612-339-0545 *Paradigm Reporting & Captioning * 800-545-9668	11	with my comments.
 CHAIR REHKAMP: Next we have Bob Friedman. MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that 	CHAIR REHKAMP: Next we have Bob Friedman MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I cal my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group her got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that he made, so hopefully you can make sure that that 612-339-0545 *Paradigm Reporting & Captioning * 800-545-9668	12	CHAIR REHKAMP: Sit down, please.
MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that	MR. FRIEDMAN: Thank you for having this hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I can my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group hes got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that he made, so hopefully you can make sure that that 612-339-0545 *Paradigm Reporting & Captioning * 800-545-9668	13	(Applause.)
hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that	hearing time. My name is Bob Friedman, I live at 4237 22nd Avenue South, just north of the golf course. I cal my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group he got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that he made, so hopefully you can make sure that that 612-339-0545 *Paradigm Reporting & Captioning * 800-545-9668 #6	14	CHAIR REHKAMP: Next we have Bob Friedman.
7 22nd Avenue South, just north of the golf course. I call my house Heading 360. Before I begin, I do have a 9 comment. Jim Spensley, president of SMAAC, asked me in 0 an email today he's out of town awaiting the birth of 1 twins and he asked me to make sure that the group here 2 got both of his he did a revised of his seven-page 3 report and comments, and he wanted to make sure that you 4 got a revised edition. There were some corrections that	22nd Avenue South, just north of the golf course. I cal my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group her got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that he made, so hopefully you can make sure that that 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #6	15	MR. FRIEDMAN: Thank you for having this
my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that	my house Heading 360. Before I begin, I do have a comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group he got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that he made, so hopefully you can make sure that that <i>612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #6</i>	16	hearing time. My name is Bob Friedman, I live at 4237
9 comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of 1 twins and he asked me to make sure that the group here 2 got both of his he did a revised of his seven-page 3 report and comments, and he wanted to make sure that you 4 got a revised edition. There were some corrections that	19 comment. Jim Spensley, president of SMAAC, asked me in an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group he: got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that he made, so hopefully you can make sure that that 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #60	17	22nd Avenue South, just north of the golf course. I call
an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that	an email today he's out of town awaiting the birth of twins and he asked me to make sure that the group he got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that he made, so hopefully you can make sure that that <u>612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668</u> #6	18	my house Heading 360. Before I begin, I do have a
twins and he asked me to make sure that the group here got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that	twins and he asked me to make sure that the group he: got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that he made, so hopefully you can make sure that that <u>612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668</u> #6	19	comment. Jim Spensley, president of SMAAC, asked me in
2 got both of his he did a revised of his seven-page 3 report and comments, and he wanted to make sure that you 4 got a revised edition. There were some corrections that	got both of his he did a revised of his seven-page report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that he made, so hopefully you can make sure that that 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #60	20	an email today he's out of town awaiting the birth of
report and comments, and he wanted to make sure that you got a revised edition. There were some corrections that	23 report and comments, and he wanted to make sure that you 24 got a revised edition. There were some corrections that 25 he made, so hopefully you can make sure that that <u>612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668</u> #6	21	twins and he asked me to make sure that the group here
4 got a revised edition. There were some corrections that	24 got a revised edition. There were some corrections that 25 he made, so hopefully you can make sure that that 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #6	22	got both of his he did a revised of his seven-page
	25 he made, so hopefully you can make sure that that 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #6	23	report and comments, and he wanted to make sure that you
	612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #6	24	got a revised edition. There were some corrections that
5 ne made, so noperully you can make sure that that		25	he made, so hopefully you can make sure that that

	050	
	MAC Public Hearing, 10/1/2012 Page: 52	
	happened.	050-32. Comment noted. As
32	2 The Environmental Assessment for 2020 expansion	explained in the introduction to
	is inadequate and incomplete. The expansion will lead to	this appendix, the growth in
	increased harm to the neighborhoods surrounding this	operations would occur naturally
	airport. This urban airport is like a giant jigsaw	with or without the Proposed
	5 puzzle. Many pieces go into making it whole; pieces for	Action. The USEPA commended
	keeping it safe and efficient, for adding to our local	the MAC on the noise and air
	economy, for jobs, for environmental considerations, for	quality analysis. See letter #027
	creating a livable space outside the boundaries for the	from the USEPA.
1		
1		
1	,	
1		
33 1		
1		
1		050.22 No environmental
1		050-33. No environmental category impacts in the Draft
2		EA/EAW exceed the level of
34 2		significance as defined by NEPA,
2		CEQ Regulations, FAA Orders
2		1050.1, Environmental Impacts:
2	CRJs are being mothballed will have no significant	Policies and Procedures
2	impact? Increased operations due to expansion will send	(Appendix A), FAA Order 5050.4B, National Environmental Policy Act
	612-339-0545 *Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com	 (NEPA) Implementing Instructions for Airport Actions (Table 7-1), MEPA and the EQB rules implementing the MEPA. Also, see General Response GR # 01. 050-34. Comment noted. See General Response GR # 07.

 MAC Public Houring. 12 Page 1 nore planes over more unmitigated homes at even more frequency in narrow tracks than we have today, and you claim no significant impact. We call for the dismissal of this EA in favor of an EIS, the Environmental Impact Statement, a much more thorough examination for expansion. When I say "we," I'm speaking for many of my neighbors who culd not be here tonight. We want a provision for immediate mitigation of our homes where we currently already suffer greatly from increased overflights since the 2010 cross-over incident. I have neighbors who likely will be moving away because of the noise. Our home values are dropping and will further drop with expansion. I was not around for the earlier mitigation fegal battles, but I do sense a feeling in my neighborhood today of litigate to mitigate. We want the implemented in a few years to be fully considered before more flights are sent over our unmitigated homes. The RNAV procedures I don't believe are considered in this EA. I call for the City of Minneapolis to arrange and pay for a full independent sound study collection for bich departures and landings. I call for an acceptance df this expansion plan only to occur when our city, state and federal elected officials and airport reps agree 			050	
 more planes over more unnitigated homes at even more frequency in narrow tracks than we have today, and you claim no significant impact. We call for the dismissal of this EA in favor of an EIS, the Environmental Impact Statement, a much more thorough examination for expansion. When I say "we," I'm speaking for many of my neighbors who could not be here tonight. We want a provision for immediate mitigation of our homes where we currently already suffer greatly from increased overflights since the 2010 cross-over incident. I have neighbors who likely will be moving away because of the neighbors who likely will be moving away because of the neighborhood today of litigate to mitigate. We want the I magat of the new RNNV procedures that will be more flights are sent over our unmitigated homes. The RNAV procedures I don't believe are considered in this EA. I call for the City of Minneapolis to arrange and pay for a full independent sound study collection for both departures and landings. I call for an acceptance of this expansion plan only to occur when our city, state and federal elected officials and airport reps agree 12/339-84543**Prandigm Reporting * 808-543-9863 16/2339-84543**Prandigm Reporting * 808-543-9863 				
 ² frequency in narrow tracks than we have today, and you claim no significant impact. We call for the dismissal of this EA in favor of an EIS, the Environmental Impact 5 Statement, a much more thorough examination for 6 expansion. When I say "we," I'm speaking for many of my neighbors who could not be here tonight. We want a provision for immediate mitigation of our homes where we currently already suffer greatly from increased 10 overflights since the 2010 cross-over incident. I have neighbors who likely will be moving away because of the neighbors who likely will be moving away because of the neighbors who likely will be moving away because of the neighborhood today of litigate to mitigate. We want the implemented in a few years to be fully considered before 19 more flights are sent over our unmitigated homes. The RNAV procedures I don't believe are considered in this EA. I call for the City of Minneapolis to arrange and 22 pay for a full independent sound study collection for 23 both departures and landings. I call for an acceptance of this expansion plan only to occur when our city, state and federal elected officials and alirport reps agree 262-332-04535 *2madigm Repursing & Cuptoming * 800-545-94655 	[1	<u>0</u>	
 claim no significant impact. We call for the diamissal of this EA in favor of an EIS, the Environmental Impact Statement, a much more thorough examination for expansion. When I say "we," I'm speaking for many of my neighbors who could not be here tonight. We want a provision for immediate mitigation of our homes where we currently already suffer greatly from increased overflights since the 2010 cross-over incident. I have neighbors who likely will be moving away because of the noise. Our home values are dropping and will further drop with expansion. I was not around for the earlier mitigation is legal battles, but I do sense a feeling in my neighborhood today of litigate to mitigate. We want the impact of the new RNAV procedures that will be implemented in a few years to be fully considered before more flights are sent over our unmitigated homes. The RNAV procedures I don't believe are considered in this EA. I call for the City of Minneapolis to arrange and pay for a full independent sound study collection for 2 both departures and landings. I call for an acceptance of this expansion plan only to occur when our city, state and federal elected officials and airport reps agree MAV procedures and landings. I call for an acceptance of the sexpansion plan only to occur when our city, state and federal elected officials and airport reps agree MAV procedures are the subject of a separate NEPA process bein completed by the FAA Air Traffic Organization. See General 				
 of this EA in favor of an EIS, the Environmental Impact of this EA in favor of an EIS, the Environmental Impact Statement, a much more thorough examination for expansion. When I say "we," I'm speaking for many of my neighbors who could not be here tonight. We want a provision for immediate mitigation of our homes where we currently already suffer greatly from increased overflights since the 2010 cross-over incident. I have noise. Our home values are dropping and will further drop with expansion. I legal battles, but I do sense a feeling in my neighborhood today of litigate to mitigate. We want the implemented in a few years to be fully considered before more flights are sent over our unmitigated homes. The RANX procedures I don't believe are considered in this EA. I call for the City of Minneapolis to arrange and pay for a full independent sound study collection for both departures and landings. I call for an acceptance of this expansion plan only to occur when our city, state and federal elected officials and airport reps agree <i>B1233Pa515 * Paualigm Reporting & Cuptioning* 800-515-968</i> <i>B233Pa515 * Paualigm Reporting & Cuptioning* 800-515-968</i> 				
 Statement, a much more thorough examination for expansion. When I say "we," I'm speaking for many of my neighbors who could not be here tonight. We want a provision for immediate mitigation of our homes where we currently already suffer greatly from increased overflights since the 2010 cross-over incident. I have neighbors who likely will be moving away because of the noise. Our home values are dropping and will further drop with expansion. I was not around for the earlier mitigation legal battles, but I do sense a feeling in my neighborhood today of litigate to mitigate. We want the implemented in a few years to be fully considered before more flights are sent over our unmitigated homes. The RNAV procedures I don't believe are considered in this EA. I call for the City of Minneapolis to arrange and pay for a full independent sound study collection for both departures and landings. I call for an acceptance of this expansion plan only to occur when our city, state and federal elected officials and airport reps agree 612-339-6315 *mandigm Reporting & Cupinming* 806-515-9663 763 both departures de Aprimating * 806-515-9663 764 separate NEPA process bein completed by the FAA Air Traffic Organization. See General 	35			
 expansion. When I say "we," I'm speaking for many of my neighbors who could not be here tonight. We want a provision for immediate mitigation of our homes where we currently already suffer greatly from increased overflights since the 2010 cross-over incident. I have neighbors who likely will be moving away because of the neighbors who likely will be moving away because of the noise. Our home values are dropping and will further drop with expansion. I was not around for the earlier mitigation 15 legal battles, but I do sense a feeling in my neighborhood today of litigate to mitigate. We want the implemented in a few years to be fully considered before more flights are sent over our unmitigated homes. The RNAV procedures I don't believe are considered in this EA. I call for the City of Minneapolis to arrange and pay for a full independent sound study collection for 23 both departures and landings. I call for an acceptance of the alternatives analyzed in the 21 madgemenoring.com B123042515 *Paradigm.Reporting & Captioning * 800-515-968 B1330-B15 *Paradigm.Reporting & Captioning * 800-515-968 B14 B15 B15 B15 B16 B16 B17 B18 B19 B20 B2330-8515 *Paradigm.Reporting & Captioning * 800-515-968 B16 B17 B18 B18 B19 B21 B2330-8515 *Paradigm.Reporting & Captioning * 800-515-968 B16 B17 B18 B18 B21 B2330-8515 *Paradigm.Reporting & Captioning * 800-515-968 B16 B16 B17 B18 B18 B19 B19 B230 B10 B230 B10 B230 B10 B11 B11 B12 B12 B13 B14 B15 B14 B15 B15 B1	· '			-
 ⁷ neighbors who could not be here tonight. We want a provision for immediate mitigation of our homes where we currently already suffer greatly from increased ⁸ overflights since the 2010 cross-over incident. I have neighbors who likely will be moving away because of the neighbors who likely will be moving away because of the noise. Our home values are dropping and will further ¹¹ noise. Our home values are dropping and will further ¹² drop with expansion. ¹⁴ I was not around for the earlier mitigation ¹⁵ legal battles, but I do sense a feeling in my ¹⁶ neighborhood today of litigate to mitigate. We want the implemented in a few years to be fully considered before ¹⁹ more flights are sent over our unmitigated homes. The ²⁰ RNAV procedures I don't believe are considered in this ²¹ EA. I call for the City of Minneapolis to arrange and ²² pay for a full independent sound study collection for ²³ both departures and landings. I call for an acceptance ²⁴ of this expansion plan only to occur when our city, state ²¹ and federal elected officials and airport reps agree ²¹ 612-339-0545 *Parudigm Reporting & Captioning * 800-545-968 ²¹ 82-339-0545 *Parudigm Reporting & Captioning * 800-545-968 ²¹ 82-339-0545 *Parudigm Reporting & Captioning * 800-545-968 ²¹ 82-339-0545 *Parudigm Reporting & Captioning * 800-545-968 			_	
 Policies and Procedures provision for immediate mitigation of our homes where we currently already suffer greatly from increased overflights since the 2010 cross-over incident. I have neighbors who likely will be moving away because of the noise. Our home values are dropping and will further drop with expansion. I was not around for the earlier mitigation legal battles, but I do sense a feeling in my neighborhood today of litigate to mitigate. We want the implemented in a few years to be fully considered before more flights are sent over our unmitigated homes. The RNAV procedures I don't believe are considered in this EA. I call for the City of Minneapolis to arrange and pay for a full independent sound study collection for both departures and landings. I call for an acceptance of this expansion plan only to occur when our city, state and federal elected officials and airport reps agree 				
 ³⁶ 9 currently already suffer greatly from increased overflights since the 2010 cross-over incident. I have neighbors who likely will be moving away because of the noise. Our home values are dropping and will further ¹¹ noise. Our home values are dropping and will further ¹³ drop with expansion. ¹⁴ I was not around for the earlier mitigation ¹⁵ legal battles, but I do sense a feeling in my ¹⁶ neighborhood today of litigate to mitigate. We want the ¹⁷ impact of the new RNAV procedures that will be ¹⁸ implemented in a few years to be fully considered before ¹⁹ more flights are sent over our unmitigated homes. The ²⁰ RNAV procedures I don't believe are considered in this ²¹ EA. I call for the City of Minneapolis to arrange and ²² pay for a full independent sound study collection for ²³ both departures and landings. I call for an acceptance ²⁴ of this expansion plan only to occur when our city, state ²⁵ and federal elected officials and airport reps agree ²⁶ <i>literal Science are the subject of a separate NEPA process beir completed by the FAA Air Traffic Organization. See General</i> 				
 overflights since the 2010 cross-over incident. I have neighbors who likely will be moving away because of the noise. Our home values are dropping and will further drop with expansion. I was not around for the earlier mitigation legal battles, but I do sense a feeling in my neighborhood today of litigate to mitigate. We want the implemented in a few years to be fully considered before more flights are sent over our unmitigated homes. The RNAV procedures I don't believe are considered in this EA. I call for the City of Minneapolis to arrange and pay for a full independent sound study collection for both departures and landings. I call for an acceptance of this expansion plan only to occur when our city, state and federal elected officials and airport reps agree 	36		-	(Appendix A), FAA Order 5050.4
 reighbors who likely will be moving away because of the noise. Our home values are dropping and will further drop with expansion. I was not around for the earlier mitigation legal battles, but I do sense a feeling in my neighborhood today of litigate to mitigate. We want the implemented in a few years to be fully considered before more flights are sent over our unmitigated homes. The RNAV procedures I don't believe are considered in this EA. I call for the City of Minneapolis to arrange and pay for a full independent sound study collection for both departures and landings. I call for an acceptance of this expansion plan only to occur when our city, state and federal elected officials and airport reps agree 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 mwm.paradigmreporting.com 	· '			National Environmental Policy A
 12 noise. Our home values are dropping and will further 13 drop with expansion. 14 I was not around for the earlier mitigation 15 legal battles, but I do sense a feeling in my 16 neighborhood today of litigate to mitigate. We want the 17 impact of the new RNAV procedures that will be 18 implemented in a few years to be fully considered before 19 more flights are sent over our unmitigated homes. The 20 RNAV procedures I don't believe are considered in this 21 EA. I call for the City of Minneapolis to arrange and 22 pay for a full independent sound study collection for 23 both departures and landings. I call for an acceptance 24 of this expansion plan only to occur when our city, state 25 and federal elected officials and airport reps agree 			-	(NEPA) Implementing Instruction
 drop with expansion. I was not around for the earlier mitigation legal battles, but I do sense a feeling in my neighborhood today of litigate to mitigate. We want the implemented in a few years to be fully considered before implemented in a few years to be fully considered before more flights are sent over our unmitigated homes. The RNAV procedures I don't believe are considered in this EA. I call for the City of Minneapolis to arrange and pay for a full independent sound study collection for both departures and landings. I call for an acceptance of this expansion plan only to occur when our city, state and federal elected officials and airport reps agree 612-339-0545 *Paradigm Reporting & Captioning * 800-545-9668 www.paradigmreporting.com 				
Implementing the MEPA. See General Responses GR # 01, GR 05, GR # 06 and Responses to Comments #007-20 and #007-50 050-36. See General Responses GR # 08 and GR # 10. In implementating the MEPA. See General Responses GR # 01, GR 05, GR # 06 and Responses to Comments #007-20 and #007-50 050-36. See General Responses GR # 08 and GR # 10. In implementating the MEPA. See General Responses GR # 01, GR 05, GR # 06 and Responses to Comments #007-20 and #007-50 050-36. See General Responses GR # 08 and GR # 10. In implementating the MEPA. See General Responses GR # 01, GR 050-37. As identified in the introduction to this appendix, th RNAV project is separate from the airport development project and the alternatives analyzed in the Draft EA/EAW. The proposed RNAV procedures are the subject of a separate NEPA process bein completed by the FAA Air Traffic Organization. See General				
 15 legal battles, but I do sense a feeling in my 16 neighborhood today of litigate to mitigate. We want the 17 impact of the new RNAV procedures that will be 18 implemented in a few years to be fully considered before 19 more flights are sent over our unmitigated homes. The 20 RNAV procedures I don't believe are considered in this 21 EA. I call for the City of Minneapolis to arrange and 22 pay for a full independent sound study collection for 23 both departures and landings. I call for an acceptance 24 of this expansion plan only to occur when our city, state 25 and federal elected officials and airport reps agree Alternatives analyzed in the subject of a separate NEPA process bein completed by the FAA Air Traffic Organization. See General				
3716neighborhood today of litigate to mitigate. We want the impact of the new RNAV procedures that will be implemented in a few years to be fully considered before more flights are sent over our unmitigated homes. The RNAV procedures I don't believe are considered in this EA. I call for the City of Minneapolis to arrange and pay for a full independent sound study collection for both departures and landings. I call for an acceptance of this expansion plan only to occur when our city, state and federal elected officials and airport reps agree050-37. As identified in the introduction to this appendix, th RNAV project is separate from the airport development project and the alternatives analyzed in the Draft EA/EAW. The proposed RNAV procedures are the subject of a separate NEPA process bein completed by the FAA Air Traffic Organization. See General			_	· · · · · ·
 impact of the new RNAV procedures that will be implemented in a few years to be fully considered before more flights are sent over our unmitigated homes. The RNAV procedures I don't believe are considered in this EA. I call for the City of Minneapolis to arrange and pay for a full independent sound study collection for both departures and landings. I call for an acceptance of this expansion plan only to occur when our city, state and federal elected officials and airport reps agree 				
37 18 implemented in a few years to be fully considered before 19 more flights are sent over our unmitigated homes. The 20 RNAV procedures I don't believe are considered in this 21 EA. I call for the City of Minneapolis to arrange and 22 pay for a full independent sound study collection for 23 both departures and landings. I call for an acceptance 24 of this expansion plan only to occur when our city, state 25 and federal elected officials and airport reps agree 2612-339-0545 *Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com				
 Implemented in a rew years to be fully considered before more flights are sent over our unmitigated homes. The RNAV procedures I don't believe are considered in this EA. I call for the City of Minneapolis to arrange and pay for a full independent sound study collection for both departures and landings. I call for an acceptance of this expansion plan only to occur when our city, state and federal elected officials and airport reps agree 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com 	37		<u>k</u>	
20RNAV procedures I don't believe are considered in this21EA. I call for the City of Minneapolis to arrange and22pay for a full independent sound study collection for23both departures and landings. I call for an acceptance24of this expansion plan only to occur when our city, state25and federal elected officials and airport reps agree612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668#66856www.paradigmreporting.com				OFO 27 As identified in the
21EA. I call for the City of Minneapolis to arrange and22pay for a full independent sound study collection for23both departures and landings. I call for an acceptance24of this expansion plan only to occur when our city, state25and federal elected officials and airport reps agree612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668#66856www.paradigmreporting.com				050-37. As identified in the
22pay for a full independent sound study collection for23both departures and landings. I call for an acceptance24of this expansion plan only to occur when our city, state25and federal elected officials and airport reps agree612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856www.paradigmreporting.com			-	introduction to this appendix, th
airport development project and both departures and landings. I call for an acceptance of this expansion plan only to occur when our city, state and federal elected officials and airport reps agree 612-339-0545 *Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com 612-339-0545 *Paradigm Reporting.com				RNAV project is separate from th
24 of this expansion plan only to occur when our city, state 25 and federal elected officials and airport reps agree 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com				airport development project and
25 and federal elected officials and airport reps agree 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com Dialt EA/EAW. The proposed RNAV procedures are the subject of a separate NEPA process bein completed by the FAA Air Traffic Organization. See General				
612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com 612-339-0545 * Paradigm Reporting.com 612-339-0545 * Paradigm Reporting.com 612-339-0545 * Paradigm Reporting.com 612-339-0545 * Paradigm Reporting.com 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 0 f a separate NEPA process bein completed by the FAA Air Traffic				
www.paradigmreporting.com completed by the FAA Air Traffic Organization. See General	l	25		
				completed by the FAA Air Traffic Organization. See General

l		050	
		MAC Public Hearing, 10/1/2012 Page: 54	
	1	unanimously to accept it.	050-38. The potential for shifting MSP traffic to other airports with
1	2	And one more thing, for now anyway, what about	unused capacity, including St.
38	3	this underused St. Cloud airport? Build it and they did	Cloud, was discussed in Section
	4	not come. But put in good transportation, substantial	3.1.1 of the Draft EA/EAW. No
	5	investment into transportation and into fast ground	airline has been able to sustain
	6	transportation and they will come. I urge you to lead	continuous commercial service at
	7	the way to a societal change that is needed in this	St. Cloud. Even with additional
	8	country. We do not need to continue to pave paradise.	ground transportation
	9	Do not continue to build more places to park cars.	improvements and new airline service, improvements would still
	10	Create a ground transportation system that gets people in	be needed to accommodate
	11	and out of this airport without having to do that, and	future terminal and landside
	12	put the investment that you would use for that into a	demand at MSP. The airfield is
	13	better regional transportation plan, and this is the	able to accommodate the
	14	supported view of our Mayor Rybak.	projected operations. The growth
	15	The holes in the big puzzle box need fixing, the	in operations would occur
	16	puzzle pieces on the floor need attention. Too many	naturally with or without the Proposed Action.
	17	citizens of south Minneapolis north and northwest of the	Proposed Action.
	18	golf course would agree that overflight noise issues are	
39	19	still unsettled and controversial. We ask for a pause in	
	20	this process while a full EIS can be done. Thank you.	050-39. See General Response
	21	(Applause.)	GR # 01.
	22	CHAIR REHKAMP: Thank you. Lucinda Nelson.	
	23	MS. NELSON: Lucinda Nelson, 4444 29th	
	24	Avenue South, Minneapolis. I'm going to keep it very	
	25	short, and I want this gentleman to have the rest of my	
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com	

 time. First, several neighbors I talked to about coming to the meeting tonight said, why bother, I've been before, nobody listens. The power brokers have made their decisions, I'm not going to bother. The second is last night I was reading a summary study of the effect of salinity in San Antonio Bay in Teass and the effect on the population of whooping cranes. The researcher that's been working with those cranes for the last 30 years has just retired. He had his down-and-dirty methods knowing those birds. Well, I they put in some new methods; basically flyover, we've got our little spot. A number of birds have died because of increased salinity, they think juveniles. Well, by goily, they went down and they counted bodies. The guy that was down and dirty, who was really down on the there living with this noise. Unless the people that are making these decisions are down there living with this, I don't think they should have any say in it. (Applause.) CHAIR REHKAMP: Judy Arginteanu? Help me out, Judy. MS. ARGINTEANU: Close enough. CHAIR REHKAMP: Say that again. 612-339-8633 "Paradigan Reporting & Guydoning" 808-555-5663
2 to the meeting tonight said, why bother, I've been 3 before, nobody listens. The power brokers have made 4 their decisions, I'm not going to bother. 5 The second is last night I was reading a summary 6 study of the effect of salinity in San Antonio Bay in 7 Texas and the effect on the population of whooping 8 cranes. The researcher that's been working with those 9 cranes for the last 30 years has just retired. He had 10 his down-and-dirty methods knowing those birds. Well, 11 they put in some new methods; basically flyover, we've 12 got our little spot. A number of birds have died because 13 of increased salinity, they think juveniles. Well, by 14 golly, they went down and they counted bodies. The guy 15 that was down and dirty, who was really down on the 16 ground counting those birds, had the right numbers. 17 Flyovers and numbers and the DSL, huh-uh. We're down 18 there living with this noise. Unless the people that are 19 making these decisions are down there living with this, I 20 CHAIR REHKAMP: Judy Arginteanu? Help me 21 MS. ARGINTEANU: Close e
3 before, nobody listens. The power brokers have made 4 their decisions, I'm not going to bother. 5 The second is last night I was reading a summary 6 study of the effect of salinity in San Antonio Bay in 7 Texas and the effect on the population of whooping acranes. The researcher that's been working with those made only after the cor 9 cranes for the last 30 years has just retired. He had 10 his down-and-dirty methods knowing those birds. Well, 11 they up in some new methods; basically flyover, we've 12 got our little spot. A number of birds have died because 13 of increased salinity, they think juveniles. Well, by 14 golly, they went down and they counted bodies. The guy 15 that was down and dirty, who was really down on the 16 ground counting those birds, had the right numbers. 17 Flyovers and numbers and the DSL, huh-uh. We're down 18 there living with this noise. Unless the people that are 19 making these decisions are down there living with this, I 20 CHAIR REHKAMP: Judy Arginteanu? Help me 21 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say th
4 their decisions, I'm not going to bother. 5 The second is last night I was reading a summary 6 study of the effect of salinity in San Antonio Bay in 7 Texas and the effect on the population of whooping c cranes. The researcher that's been working with those made only after the cor 9 cranes for the last 30 years has just retired. He had 10 his down-and-dirty methods knowing those birds. Well, 11 they put in some new methods; basically flyover, we've 12 got our little spot. A number of birds have died because 13 of increased salinity, they think juveniles. Well, by 14 golly, they went down and they counted bodies. The guy 15 that was down and dirty, who was really down on the 16 ground counting those birds, had the right numbers. 17 Flyovers and numbers and the DSL, huh-uh. We're down 18 there living with this noise. Unless the people that are 19 making these decisions are down there living with this, I 20 CHAIR REHKAMP: Judy Arginteanu? Help me 21 (Applause.) 22 CHAIR REHKAMP: Say that again. 24 MS. ARGINTEANU: Close enough.
5 The second is last night I was reading a summary 6 study of the effect of salinity in San Antonio Bay in 7 Texas and the effect on the population of whooping 8 cranes. The researcher that's been working with those 9 cranes for the last 30 years has just retired. He had 10 his down-and-dirty methods knowing those birds. Well, 11 they put in some new methods; basically flyover, we've 12 got our little spot. A number of birds have died because 13 of increased salinity, they think juveniles. Well, by 14 golly, they went down and they counted bodies. The guy 15 that was down and dirty, who was really down on the 16 ground counting those birds, had the right numbers. 17 Flyovers and numbers and the DSL, huh-uh. We're down 18 there living with this noise. Unless the people that are 19 making these decisions are down there living with this, I 20 CHAIR REHKAMP: Judy Arginteanu? Help me 21 (Applause.) 22 CHAIR REHKAMP: Say that again. 23 Out, Judy. 24 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say that again
6 study of the effect of salinity in San Antonio Bay in 7 Texas and the effect on the population of whooping 8 cranes. The researcher that's been working with those 9 cranes for the last 30 years has just retired. He had 10 his down-and-dirty methods knowing those birds. Well, 11 they put in some new methods; basically flyover, we've 12 got our little spot. A number of birds have died because 13 of increased salinity, they think juveniles. Well, by 14 golly, they went down and they counted bodies. The guy 15 that was down and dirty, who was really down on the 16 ground counting those birds, had the right numbers. 17 Flyovers and numbers and the DSL, huh-uh. We're down 18 there living with this noise. Unless the people that are 19 making these decisions are down there living with this, I 20 CHAIR REHKAMP: Judy Arginteanu? Help me 23 out, Judy. 24 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say that again. 102-339-0545 *Paradigm Reporting & Capitoning * 800-545-9668
7 Texas and the effect on the population of whooping of the EA/EAW, which incorporates public input 8 cranes. The researcher that's been working with those of the EA/EAW, which incorporates public input 9 cranes for the last 30 years has just retired. He had his down-and-dirty methods knowing those birds. Well, incorporates public input 11 they put in some new methods; basically flyover, we've got our little spot. A number of birds have died because of increased salinity, they think juveniles. Well, by 14 golly, they went down and they counted bodies. The guy that was down and dirty, who was really down on the 16 ground counting those birds, had the right numbers. Flyovers and numbers and the DSL, huh-uh. We're down 18 there living with this noise. Unless the people that are making these decisions are down there living with this, I 20 CHAIR REHKAMP: Judy Arginteanu? Help me 050-41. Comment not 23 out, Judy. MS. ARGINTEANU: Close enough. 160836 25 CHAIR REHKAMP: Say that again. #66856
8 cranes. The researcher that's been working with those incorporates public input 9 cranes for the last 30 years has just retired. He had incorporates public input 10 his down-and-dirty methods knowing those birds. Well, incorporates public input 11 they put in some new methods; basically flyover, we've got our little spot. A number of birds have died because of increased salinity, they think juveniles. Well, by 14 golly, they went down and they counted bodies. The guy that was down and dirty, who was really down on the 16 ground counting those birds, had the right numbers. Flyovers and numbers and the DSL, huh-uh. We're down 18 there living with this noise. Unless the people that are making these decisions are down there living with this, I 20 CHAIR REHKAMP: Judy Arginteanu? Help me out, Judy. 24 MS. ARGINTEANU: Close enough. EMAIR REHKAMP: Say that again. 25 CHAIR REHKAMP: Say that again. #66856
9 cranes for the last 30 years has just retired. He had 10 his down-and-dirty methods knowing those birds. Well, 11 they put in some new methods; basically flyover, we've 12 got our little spot. A number of birds have died because 13 of increased salinity, they think juveniles. Well, by 14 golly, they went down and they counted bodies. The guy 15 that was down and dirty, who was really down on the 16 ground counting those birds, had the right numbers. 17 Flyovers and numbers and the DSL, huh-uh. We're down 18 there living with this noise. Unless the people that are 19 making these decisions are down there living with this, I 20 CHAIR REHKAMP: Judy Arginteanu? Help me 21 CHAIR REHKAMP: Say that again. 22 CHAIR REHKAMP: Say that again.
11 they put in some new methods; basically flyover, we've 12 got our little spot. A number of birds have died because 13 of increased salinity, they think juveniles. Well, by 14 golly, they went down and they counted bodies. The guy 15 that was down and dirty, who was really down on the 16 ground counting those birds, had the right numbers. 17 Flyovers and numbers and the DSL, huh-uh. We're down 18 there living with this noise. Unless the people that are 19 making these decisions are down there living with this, I 20 CHAIR REHKAMP: Judy Arginteanu? Help me 21 (Applause.) 22 CHAIR REHKAMP: Say that again. 24 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say that again.
12 got our little spot. A number of birds have died because 13 of increased salinity, they think juveniles. Well, by 14 golly, they went down and they counted bodies. The guy 15 that was down and dirty, who was really down on the 16 ground counting those birds, had the right numbers. 17 Flyovers and numbers and the DSL, huh-uh. We're down 18 there living with this noise. Unless the people that are 19 making these decisions are down there living with this, I 20 don't think they should have any say in it. 21 (Applause.) 22 CHAIR REHKAMP: Judy Arginteanu? Help me 23 out, Judy. 24 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say that again.
13 of increased salinity, they think juveniles. Well, by 14 golly, they went down and they counted bodies. The guy 15 that was down and dirty, who was really down on the 16 ground counting those birds, had the right numbers. 17 Flyovers and numbers and the DSL, huh-uh. We're down 18 there living with this noise. Unless the people that are 19 making these decisions are down there living with this, I 20 don't think they should have any say in it. 21 (Applause.) 22 CHAIR REHKAMP: Judy Arginteanu? Help me 23 out, Judy. 24 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say that again.
14 golly, they went down and they counted bodies. The guy 15 that was down and dirty, who was really down on the 16 ground counting those birds, had the right numbers. 17 Flyovers and numbers and the DSL, huh-uh. We're down 18 there living with this noise. Unless the people that are 19 making these decisions are down there living with this, I 20 don't think they should have any say in it. 21 (Applause.) 22 CHAIR REHKAMP: Judy Arginteanu? Help me 23 out, Judy. 24 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say that again.
15 that was down and dirty, who was really down on the 16 ground counting those birds, had the right numbers. 17 Flyovers and numbers and the DSL, huh-uh. We're down 18 there living with this noise. Unless the people that are 19 making these decisions are down there living with this, I 20 don't think they should have any say in it. 21 (Applause.) 22 CHAIR REHKAMP: Judy Arginteanu? Help me 23 out, Judy. 24 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say that again.
16 ground counting those birds, had the right numbers. 17 Flyovers and numbers and the DSL, huh-uh. We're down 18 there living with this noise. Unless the people that are 19 making these decisions are down there living with this, I 20 don't think they should have any say in it. 21 (Applause.) 22 CHAIR REHKAMP: Judy Arginteanu? Help me 23 out, Judy. 24 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say that again.
17 Flyovers and numbers and the DSL, huh-uh. We're down 18 there living with this noise. Unless the people that are 19 making these decisions are down there living with this, I 20 don't think they should have any say in it. 21 (Applause.) 22 CHAIR REHKAMP: Judy Arginteanu? Help me 23 out, Judy. 24 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say that again.
18 there living with this noise. Unless the people that are 19 making these decisions are down there living with this, I 20 don't think they should have any say in it. 21 (Applause.) 22 CHAIR REHKAMP: Judy Arginteanu? Help me 23 out, Judy. 24 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say that again.
19 making these decisions are down there living with this, I 0 20 don't think they should have any say in it. 050-41. Comment note 21 (Applause.) 22 CHAIR REHKAMP: Judy Arginteanu? Help me 23 out, Judy. 24 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say that again.
20 don't think they should have any say in it. 050-41. Comment note 21 (Applause.) 22 CHAIR REHKAMP: Judy Arginteanu? Help me 23 out, Judy. 24 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say that again. 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668
20 doin to chillik they should have any say in it. 21 (Applause.) 22 CHAIR REHKAMP: Judy Arginteanu? Help me 23 out, Judy. 24 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say that again. 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668
22 CHAIR REHKAMP: Judy Arginteanu? Help me 23 out, Judy. 24 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say that again. 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856
<pre>23 out, Judy. 24 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say that again. 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856</pre>
24 MS. ARGINTEANU: Close enough. 25 CHAIR REHKAMP: Say that again. 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856
25 CHAIR REHKAMP: Say that again. 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856
612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856

		050
	MAC Public Hearing, 10/1/2012 F	Page: 56
	we are respectfully requesting an Environmental Impact	
		а,
	of course, you know, the standard saying about if you	
	talk about averages, which is a really basic mathemati	050-43. The MAC's system of 39
	formula, Bill Gates walks into a homeless shelter and	all towers is one of the single largest
1	of a sudden the average income skyrockets. We need	towers is one of the single largest installations of its kind in the
1	hey, it's true. I know that much math. So we really	
1	need to have a thorough Environmental Impact Statement	
1	we need better noise collection and noise measurement	microphones at all 39 tower
43 1-	processes, as suggested by Councilwoman Colvin Roy.	locations will be completed in
1	And also health and impact statements. I kno	_{pw} 2012.
1	that my cortisol, my stress hormone has definitely ris	sen
1	when I have overflights that are two minutes apart. I	050-44. See General Responses GR # 01 and GR # 08.
44 1	also counted them like this gentleman. So, again, I	
1	would respectfully request that we slow down this proc	The Draft EA/EAW process began
2	and gather hard data that is based on what's really	in late 2010 with community and
2	happening out there. Thank you very much.	agency briefings. Public meetings
2.	CHAIR REHKAMP: Thank you.	were conducted in July 2011,
2	(Applause.)	January 2012 and September
2	CHAIR REHKAMP: Next is Kevin Kirsch.	2012, in addition to the Public Hearing held on October 1, 2012.
2	MR. KIRSCH: Hi there. My name is Kevir	Comments received as a result of
	612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 www.paradigmreporting.com	the briefings were considered in the development of the Draft EA/EAW. The Draft EA/EAW was published on August 30, 2012. Comments on the Draft EA/EAW were accepted until October 11, 2012. Submitted comments are addressed in this response to comments and in the Final EA/EAW.

		050 MAC Public Hearing, 10/1/2012 Page: 57	
	1	Kirsch, I live at 3911 24th Avenue South, and I'm here	
	2	tonight because I want to echo the councilwoman's	
1	3	comments that we need an independent study about the	050-45. See General Responses
45	4	noise, and also about the environmental impacts. The	GR # 01 and GR # 07.
1	5	report is very thorough but it's also very full of	
	6	jargon, and when I talked to my neighbors about it, they	
	7	didn't even know this was happening, and they're pretty	
	8	engaged people. But for something that is happening	050-46. The Draft EA/EAW
	9	eight years from now, I'm not entirely clear why we are	process was not rushed. The
46	10	having one month to push this through. It seems like	Draft EA/EAW process began in late 2010 with community and
40	11	it's really important to do the due diligence,	agency briefings. Public open
	12	particularly on the noise and the environment, so that we	houses were conducted in July
	13	know and understand the impact of what this expansion	2011, January 2012 and
	14	means.	September 2012, in addition to
	15	I just moved to my house in July, and partly why	the Public Hearing held on
	16	I moved there was I looked at the maps of where the noise	October 1, 2012. Comments
	17	was, and those two fingers that jut out over Lake	received as a result of the
	18	Harriet, which is where I moved from, didn't go	briefings were considered in the
	19	north-south where I live now, and I understand there's a	development of the Draft EA/EAW. The Draft EA/EAW was
	20	new runway north-south that sometimes flights go there,	published on August 30, 2012.
	21	and I know this because there are times when I go to bed	Comments on the Draft EA/EAW
	22	at 10:00 p.m. to the sound of airplanes, and when I wake	were accepted until October 11,
47	23	up at 6:30 I wake up to the sound of airplanes. And when	2012. Submitted comments are
	24	we talk about the impact on a life, it is very stressful	addressed in this response to
	25	and I don't like it. I understand I live in the	comments and in the Final
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com	EA/EAW.
			Also, note that the USEPA
			commended the MAC on the
			thorough noise and air quality
			analysis in the Draft EA/EAW. Se
			letter # 027 from the USEPA.
			050-47. As explained in the
			introduction to this appendix, the growth in operations would occu
			naturally with or without the
			Proposed Action. See General
			Responses GR # 05 and GR # 08.

		050	
		MAC Public Hearing, 10/1/2012 Page: 58	
	1	neighborhood, I understand it's a part of it, but I would	
	2	like you to fully understand the impact of what it means	
	3	for this expansion. Thank you.	
	4	(Applause.)	
	5	CHAIR REHKAMP: Thank you. Next is Tom	
	6	Nickelson. I think that's Nickelson.	
	7	MR. KNICKELBINE: Knickelbine.	
	8	CHAIR REHKAMP: Knickelbine.	
	9	MR. KNICKELBINE: 4824 Irving.	
	10	CHAIR REHKAMP: Thank you.	
	11	MR. KNICKELBINE: I'm really here to just	
	12	reiterate some of the things we've heard. You know, I	
1	13	looked at this study, and I'm a little bit, almost	050-48. As identified in the Draft
	14	offended by the conclusion that the environmental impacts	EA/EAW, no environmental category impacts exceed the level
	15	don't exceed significant thresholds. I'm one of the 400	of significance as defined by
	16	homes that's proposed to have a significant change, what	NEPA, CEQ Regulations, FAA
48	17	I would consider a significant change in noise levels as	Orders 1050.1, Environmental
40	18	a result of this. I wouldn't say that. I don't think	Impacts: Policies and Procedures,
	19	that's been determined that this isn't significant. If	FAA Order 5050.4B, National
	20	you're talking about offering insulation and different	Environmental Policy Act (NEPA)
	21	sound levels to 400 houses, how is that not significant?	Implementing Instructions for Airport Actions, MEPA and the
	22	I don't understand that. That's significant to me, and	EQB rules implementing the
	23	it's significant to my family and my kids. It's very	MEPA. Also, see General
	24	significant to me. I understand that there are	Response GR # 01.
	25	previously defined definitions, but 400 houses are going	
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856	The growth in operations would
		012-359-0343 " raraagm Reporting & Capitoning " 800-343-9008 #00830 www.paradigmreporting.com	occur naturally with or without
			the Proposed Action.
			That said, mitigation was proposed in the Draft EA/EAW to
			address the increase in noise due
			to the natural growth in
			operations. The mitigation
			addresses the change in noise
			due to the natural growth in
			aircraft operations that would
			occur with or without the
			Preferred Alternative.

				050-4
			050	proces Draft E
		MAC Public Hearing, 10/1/2012 P	age: 59	late 20
	1	to be affected. That's significant. I would expect t	hat	agency
1	2	some of those houses would be notified. I agree peopl	e	house
	3	don't know about this. It really has, it seems like i	t's	2011,
49	4	very rushed and it seems like it's not well-advertised		Septer
	5	I don't think my neighbors know much about this at all	,	the Pu
	6	and I live around all of these 400 houses.		Octob
	7	I looked at also the analysis about the volum	es,	receiv
	8	and the projected volumes to get back to 2005 are way		briefir
	9	down the line if we increase capacity. So we're talki	ng	develo
	10	about a huge increase in passengers with not an increa	se	EA/EA
	11	in volume, that's the projections, so what that means		, publis
	12	much, much larger aircraft. That has to be, by		Comm
	13	definition, simple math. And I think if those volumes		werea
	14	were to increase substantially, the noise impact could		2012.
T.	15	much greater than what's listed there. How confident		addre
	16	we in those numbers? I don't understand why we don't		comm
	17		25	EA/EA
		think we're going to get to 2005 volume until 2020 or		open
50	18	If I read that right, that's what that proposed. We was 2005 lowels at 540,000 pet that long and why is i		are in
	19	at 2005 levels at 540,000 not that long ago. Why is i	C.	
	20	going to take another 15 years to get there? So I'm		
1	21	perplexed by that.		050-5
	22	The second thing is, you know, I recognize on		2 of th
	23	of the comments about, you know, people don't know abo		and la
	24	this and they also don't necessarily feel represented,		gates)
	25	but there is a precedent here for the homeowner, and I		adequ
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 www.paradigmreporting.com	#66856	servic
		www.paraagineponing.com		travel
				condi
				adjust
				respo
				airline
				with h
				larger
				factor
				opera
				passer
				less p
				Howe
				aircrat
				fronta
				In add
				growi
				the nu
				numb
				does t
				termir
				such a

050-49. The Draft EA/EAW was not rushed. The 'EAW process began in) with community and riefings. Public open vere conducted in July nuary 2012 and er 2012, in addition to c Hearing held on 1, 2012. Comments as a result of the were considered in the nent of the Draft The Draft EA/EAW was d on August 30, 2012. ts on the Draft EA/EAW epted until October 11, bmitted comments are d in this response to ts and in the Final Copies of notices of the uses and public hearings ded in Appendix N.

As discussed in Chapter Draft EA/EAW, terminal side facilities (including e needed to maintain an e level of customer t the airport. As air ows and economic ns change, the airlines eir operating model. In to current conditions, re using larger planes er load factors. With anes and higher load here are fewer ns per thousand ers than in the past and sure on the airfield. , the larger nearly full equire more gate and bigger hold rooms. on, because air travel is there is an increase in ber passengers. As the of passengers increase so need for expanded and landside facilities ag claim, security

checkpoints, parking and access roads. The proposed project does not increase airfield capacity.

The Draft EA/EAW forecasts were prepared using economic projections provided by the Metropolitan Council, Woods & Poole Economics, the U.S. Department of Energy, and the FAA. That said, as noted in the introduction to Draft EA/EAW Appendix A:

"Forecasting, however, is not an exact science. Departures from forecast levels in the local and national economy and in the airline business environment may have a significant effect on the projections presented herein. These uncertainties increase towards the end of the forecast period, when new technologies and business strategies, and changes in work and recreational practices may also have an unpredictable impact on aviation activity. For these reasons, the forecasts should be periodically compared with actual Airport activity levels, and Airport plans and policies adjusted accordingly."

Note that if aviation demand does not materialize in accordance with the forecasts, the MAC has the ability to delay facility expansion until the demand materializes.

		050		
		MAC Public Hearing, 10/1/2012 Page: 60		
	1	don't know if people know it, but there's two rulings		
	2	that have happened in the past, and I'm not a lawyer, but		
	3	I've been told about these by friends. One is the		
	4	O'Neill ruling, which had a substantial reduction in the		
	5	value of his property and was able to achieve legal		
	6	recourse for that. The other one I did get my hands on,		
	7	which goes back to 1974, a Supreme Court ruling, and I'll		
	8	read a little bit of it. "The Supreme Court held that	050 51	
51	9	any property owner may have cause of action in inverse	GR # 11.	See General Response
	10	combination against an airport operator if he can show a	GR # 11.	
	11	direct and substantial invasion of his property rights of		
	12	such a magnitude that he is deprived of practical		
	13	enjoyment of his property and that such invasion resulted		
	14	in a definite and measurable diminution of market value		
	15	of that property." We just heard about an individual who		
	16	moved from an area because of this. There is a		
	17	precedent, it's happening. We have a Realtor who could		
	18	attest to that.		
	19	Another subsection under eminent domain, "Use		
	20	and enjoyment of one's property without unduly irritating		
	21	noise vibrations and gaseous fumes have arisen to status		
52	22	of a property right," a property right, "for which	050 50	Common to a to d
	23	property owner may demand compensation when it is denied	050-52.	Comment noted.
	24	to him by government activity." That's what this is. So		
	25	those 400 people have a legal recourse, I think, and I'm		
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com		
			I	

Τ

53	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	<page-header><page-header><page-header><page-header></page-header></page-header></page-header></page-header>	 050-53. The Draft EA/EAW process was not rushed. The Draft EA/EAW process began in late 2010 with community and agency briefings. Public open houses were conducted in July 2011, January 2012 and September 2012, in addition to the Public Hearing held on October 1, 2012. Comments received as a result of the briefings were considered in the development of the Draft EA/EAW. The Draft EA/EAW was published on August 30, 2012. Comments on the Draft EA/EAW were accepted until October 11, 2012. Submitted comments are addressed in this response to comments and in the Final EA/EAW. Noise mitigation is discussed in Draft EA/EAW. The Draft EA/EAW. Noise mitigation is discussed in Draft EA/EAW. Noise mitigation is discussed in Draft EA/EAW. Noise mitigation and GR # 10. 050-54. See General Responses GR # 01 and GR # 05.
	25	(Applause.) 612-339-0545 *Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com	

	050 MAC Public Hearing, 10/1/2012 Page: 62
1	CHAIR REHKAMP: Thank you. That concludes
2	the list I had. Mr. Heide, I will respectfully give you
3	some more time to speak. I would ask that you try to
4	limit oh, sorry?
5	MR. WATSON: I did turn in a card.
6	CHAIR REHKAMP: Is it still outside?
7	MR. WATSON: No, they came around and
8	picked it up right out of my hand. The name is Steve
9	Watson.
10	CHAIR REHKAMP: Come on up and give your
11	name and address. I'm sorry, I missed it. You did have
12	it here. Steve Watson, please.
13	MR. WATSON: Yes, my name is Steve Watson,
14	and I'm at 4841 Garfield Avenue South, homeowner. I
15	really related to that comment about the stress hormones,
16	that just felt right to me, and I think everybody
17 18	experiences it, and yet I'm partly up here to relieve stress hormones, too, so let's try for that. First of
19	all, I want to say I'm a child of Wold-Chamberlain, which
20	means I came out here, down 28th Avenue, and it was a
21	wonderful place. You know, it was a great place to
22	listen to the old prop planes. I'm from a family with
23	eight kids, so it was party time out here, and that's
24	just the way to start the program here. The kids that I
25	work with now, I have two grandkids, and believe it or
	612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com

		050	
		MAC Public Hearing, 10/1/2012 Page: 63	
	1	not, I'm a fan of the airport still. We have a couch	
	2	facing south, south runway going northwest to southeast,	
	3	and I've taught them to drum out, "We want an airplane,	
	4	we want an airplane," and so I celebrate this airport and	
	5	I, you know, I still love it for what it is, and I get to	
	6	go places that I don't go to very often, but it's	050-55. The proposed noise
	7	wonderful.	mitigation program was revised
1	8	So now, I think I shared with Chad and Greg my	after the publication of the Draft
	9	special place on a flight path, and if you were to look	EA/EAW. The proposed
	10	west, and I think you can throw a stone that far and you	mitigation in the Draft EA/EAW
	11	would hit the house that is going to get the mitigation,	was modified to base mitigation
55	12	and if you threw a stone to the north you would have to	eligibility and timing on annually-
55	13	throw a whole block, and then to the east you have to	developed actual noise contours
	14	throw a short block to get to the mitigation, and then if	instead of the 2020 Preferred
	15	you go to the south, you can throw a rock kind of over	Alternative noise contours. Thus,
	16	your shoulder and you'll, well, if you're good at it	the proposed mitigation in the
2	17	you'll hit the other house that has mitigation, so we're	Final EA/EAW is based on actual
	18 19	in a little block of, we'll call it the noise block. So, anyway, that was my initial kind of selfish reason to be	noise contours. Also, see General
	20	here.	Response GR # 10.
	21	And I did study the maps, the mitigation maps,	
	22	and I remember in the '90s, I saved my mitigation map	
	23	because I thought, I saw how this would be better, and so	
	24	the new maps came out and I thought, well, eventually	
	25	I'll sell my house and it will get better, but it's kind	
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com	
		nn ngar wagan eportageon	

		050 MAC Public Hearing, 10/1/2012 Page: 64	
	1	of gone in the other direction. I'm in a little box. So	
	2	selfishly I do say that even though I'm thinking about my	
	3	grandkids being at my house, I also want to add that if	
1	4	you have any kind of health issues and you have to get	
	5	your sleep, this is a problem unless you have that	050-56. See General Response
56	6	mitigation, and we do have that issue at our house as	GR # 08.
	7	well.	
1	8	At any rate, I bring this up because as I look,	
	9	I expand outward from my little box of selfishness, I see	
	10	that Lake Harriet, you know, is our gem, and the maps	
	11	place some good mitigation now, at least proposed	
	12	mitigation out in that direction, but I think it's what I	
	13	would call an expansive model. They were treated very	
	14	well, I think, in terms of how this has been addressed.	
	15	In fact, if you nick one of the blocks near Lake Harriet,	
	16	that whole block sweeps outward, and it looks like	
	17	they're going to be treated the way they should be, and I	
	18	also think that whatever is happening at Lake Harriet is	
	19	an expansive model that should be considered citywide.	
	20	In other words, yeah, we do want to be expansive about	
	21	what we're treating, how we're treating all the people	
	22	that hear the airplanes and, again, this is just a case	
	23	study of mine. I think the study is good that has been	
	24	done, I think the study is better that approaches what	
	25	people need to hear back from the MAC. And if we, if we	
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com	

MAC Public Hearing, 10/1/2012 Page: 62 1 were to take an expansive rather than what I call the 2 exclusive model, I think I'm in an exclusion zone right 3 now but I would love to be part of inclusion. I know the 4 numbers are going up, I'm pretty sure I'm going to hear 5 every one of those airplanes, and I just hope that 6 inclusion is the big model rather than exclusion. So at 7 any rate, thanks very much. 8 CHAIR REHKAMP: Thank you. 9 (Applause.) 10 CHAIR REHKAMP: Did I miss anybody else 11 here inadvertently? All right. Mr. Heide, I will 12 respectfully give you another five minutes. I would ask 13 that you respect me and conclude your remarks within that 14 time frame. 15 MR. HEIDE: My only comment is it's not a 16 matter of respect. In the notice that you furnished the 17 public you did not indicate that you were going to limit 18 time to five minutes. Your doing so appears to be 19 calculated to frustrate adequate comment. 21
 exclusive model, I think I'm in an exclusion zone right now but I would love to be part of inclusion. I know the numbers are going up, I'm pretty sure I'm going to hear every one of those airplanes, and I just hope that inclusion is the big model rather than exclusion. So at any rate, thanks very much. CHAIR REHKAMP: Thank you. (Applause.) CHAIR REHKAMP: Did I miss anybody else here inadvertently? All right. Mr. Heide, I will respectfully give you another five minutes. I would ask that you respect me and conclude your remarks within that time frame. MR. HEIDE: My only comment is it's not a matter of respect. In the notice that you furnished the public you did not indicate that you were going to limit time to five minutes. Your doing so appears to be calculated to frustrate adequate comment. Let me return to Comment No. 4. CHAIR REHKAMP: You're using up your time, Mr. Heide, and in my remarks at the beginning I indicated five minutes. Thank you. MR. HEIDE: I take your threat seriously.
3 now but I would love to be part of inclusion. I know the 4 numbers are going up, I'm pretty sure I'm going to hear 5 every one of those airplanes, and I just hope that 6 inclusion is the big model rather than exclusion. So at 7 any rate, thanks very much. 8 CHAIR REHKAMP: Thank you. 9 (Applause.) 10 CHAIR REHKAMP: Did I miss anybody else 11 here inadvertently? All right. Mr. Heide, I will 12 respectfully give you another five minutes. I would ask 13 that you respect me and conclude your remarks within that 14 time frame. 15 MR. HEIDE: My only comment is it's not a 16 matter of respect. In the notice that you furnished the 17 public you did not indicate that you were going to limit 18 time to five minutes. Your doing so appears to be 19 calculated to frustrate adequate comment. 21 Let me return to Comment No. 4. 22 CHAIR REHKAMP: You're using up your time, 23 Mr. Heide, and in my remarks at the beginning I indicated 24 five minutes. Thank you. 25 MR. HEIDE
4 numbers are going up, I'm pretty sure I'm going to hear 5 every one of those airplanes, and I just hope that 6 inclusion is the big model rather than exclusion. So at 7 any rate, thanks very much. 8 CHAIR REHKAMP: Thank you. 9 (Applause.) 10 CHAIR REHKAMP: Did I miss anybody else 11 here inadvertently? All right. Mr. Heide, I will 12 respectfully give you another five minutes. I would ask 13 that you respect me and conclude your remarks within that 14 time frame. 15 MR. HEIDE: My only comment is it's not a 16 matter of respect. In the notice that you furnished the 17 public you did not indicate that you were going to limit 18 time to five minutes. Your doing so appears to be 19 calculated to frustrate adequate comment. 21 Let me return to Comment No. 4. 22 CHAIR REHKAMP: You're using up your time, 23 Mr. Heide, and in my remarks at the beginning I indicated 24 five minutes. Thank you. 25 MR. HEIDE: I take your threat seriously.
 every one of those airplanes, and I just hope that inclusion is the big model rather than exclusion. So at any rate, thanks very much. CHAIR REHKAMP: Thank you. (Applause.) CHAIR REHKAMP: Did I miss anybody else here inadvertently? All right. Mr. Heide, I will respectfully give you another five minutes. I would ask that you respect me and conclude your remarks within that time frame. MR. HEIDE: My only comment is it's not a matter of respect. In the notice that you furnished the public you did not indicate that you were going to limit time to five minutes. Your doing so appears to be calculated to frustrate adequate comment. Let me return to Comment No. 4. CHAIR REHKAMP: You're using up your time, Mr. Heide, and in my remarks at the beginning I indicated five minutes. Thank you. MR. HEIDE: I take your threat seriously.
 inclusion is the big model rather than exclusion. So at any rate, thanks very much. CHAIR REHKAMP: Thank you. (Applause.) CHAIR REHKAMP: Did I miss anybody else here inadvertently? All right. Mr. Heide, I will respectfully give you another five minutes. I would ask that you respect me and conclude your remarks within that time frame. MR. HEIDE: My only comment is it's not a matter of respect. In the notice that you furnished the public you did not indicate that you were going to limit time to five minutes. Your doing so appears to be calculated to frustrate adequate comment. Let me return to Comment No. 4. CHAIR REHKAMP: You're using up your time, Mr. Heide, and in my remarks at the beginning I indicated five minutes. Thank you. MR. HEIDE: I take your threat seriously.
any rate, thanks very much. CHAIR REHKAMP: Thank you. (Applause.) CHAIR REHKAMP: Did I miss anybody else here inadvertently? All right. Mr. Heide, I will respectfully give you another five minutes. I would ask that you respect me and conclude your remarks within that time frame. MR. HEIDE: My only comment is it's not a matter of respect. In the notice that you furnished the public you did not indicate that you were going to limit time to five minutes. Your doing so appears to be capricious and, as I stated, an abuse of the chair calculated to frustrate adequate comment. Let me return to Comment No. 4. CHAIR REHKAMP: You're using up your time, Mr. Heide, and in my remarks at the beginning I indicated five minutes. Thank you. MR. HEIDE: I take your threat seriously.
8 CHAIR REHKAMP: Thank you. 9 (Applause.) 10 CHAIR REHKAMP: Did I miss anybody else 11 here inadvertently? All right. Mr. Heide, I will 12 respectfully give you another five minutes. I would ask 13 that you respect me and conclude your remarks within that 14 time frame. 15 MR. HEIDE: My only comment is it's not a 16 matter of respect. In the notice that you furnished the 17 public you did not indicate that you were going to limit 18 time to five minutes. Your doing so appears to be 19 capricious and, as I stated, an abuse of the chair 20 CHAIR REHKAMP: You're using up your time, 21 Let me return to Comment No. 4. 22 CHAIR REHKAMP: You're using up your time, 23 Mr. Heide, and in my remarks at the beginning I indicated 24 five minutes. Thank you. 25 MR. HEIDE: I take your threat seriously.
 9 (Applause.) 10 CHAIR REHKAMP: Did I miss anybody else 11 here inadvertently? All right. Mr. Heide, I will 12 respectfully give you another five minutes. I would ask 13 that you respect me and conclude your remarks within that 14 time frame. 15 MR. HEIDE: My only comment is it's not a 16 matter of respect. In the notice that you furnished the 17 public you did not indicate that you were going to limit 18 time to five minutes. Your doing so appears to be 19 capricious and, as I stated, an abuse of the chair 20 calculated to frustrate adequate comment. 21 Let me return to Comment No. 4. 22 CHAIR REHKAMP: You're using up your time, 23 Mr. Heide, and in my remarks at the beginning I indicated 24 five minutes. Thank you. 25 MR. HEIDE: I take your threat seriously.
10 CHAIR REHKAMP: Did I miss anybody else 11 here inadvertently? All right. Mr. Heide, I will 12 respectfully give you another five minutes. I would ask 13 that you respect me and conclude your remarks within that 14 time frame. 15 MR. HEIDE: My only comment is it's not a 16 matter of respect. In the notice that you furnished the 17 public you did not indicate that you were going to limit 18 time to five minutes. Your doing so appears to be 19 capricious and, as I stated, an abuse of the chair 20 calculated to frustrate adequate comment. 21 Let me return to Comment No. 4. 22 CHAIR REHKAMP: You're using up your time, 23 Mr. Heide, and in my remarks at the beginning I indicated 24 five minutes. Thank you. 25 MR. HEIDE: I take your threat seriously.
here inadvertently? All right. Mr. Heide, I will respectfully give you another five minutes. I would ask that you respect me and conclude your remarks within that time frame. MR. HEIDE: My only comment is it's not a matter of respect. In the notice that you furnished the public you did not indicate that you were going to limit time to five minutes. Your doing so appears to be capricious and, as I stated, an abuse of the chair calculated to frustrate adequate comment. Let me return to Comment No. 4. CHAIR REHKAMP: You're using up your time, Mr. Heide, and in my remarks at the beginning I indicated five minutes. Thank you. MR. HEIDE: I take your threat seriously.
12 respectfully give you another five minutes. I would ask 13 that you respect me and conclude your remarks within that 14 time frame. 15 MR. HEIDE: My only comment is it's not a 16 matter of respect. In the notice that you furnished the 17 public you did not indicate that you were going to limit 18 time to five minutes. Your doing so appears to be 19 capricious and, as I stated, an abuse of the chair 20 calculated to frustrate adequate comment. 21 Let me return to Comment No. 4. 22 CHAIR REHKAMP: You're using up your time, 23 Mr. Heide, and in my remarks at the beginning I indicated 24 five minutes. Thank you. 25 MR. HEIDE: I take your threat seriously. 26 612-339-0545 *Paradigm Reporting & Captioning * 800-545-9668 #6685.
13 that you respect me and conclude your remarks within that 14 time frame. 15 MR. HEIDE: My only comment is it's not a 16 matter of respect. In the notice that you furnished the 17 public you did not indicate that you were going to limit 18 time to five minutes. Your doing so appears to be 19 capricious and, as I stated, an abuse of the chair 20 calculated to frustrate adequate comment. 21 Let me return to Comment No. 4. 22 CHAIR REHKAMP: You're using up your time, 23 Mr. Heide, and in my remarks at the beginning I indicated 24 five minutes. Thank you. 25 MR. HEIDE: I take your threat seriously. 612-339-0545 *Paradigm Reporting & Captioning * 800-545-9668 #6685.
13 that you respect me and conclude your remarks within that 14 time frame. 15 MR. HEIDE: My only comment is it's not a 16 matter of respect. In the notice that you furnished the 17 public you did not indicate that you were going to limit 18 time to five minutes. Your doing so appears to be 19 capricious and, as I stated, an abuse of the chair 20 calculated to frustrate adequate comment. 21 Let me return to Comment No. 4. 22 CHAIR REHKAMP: You're using up your time, 23 Mr. Heide, and in my remarks at the beginning I indicated 24 five minutes. Thank you. 25 MR. HEIDE: I take your threat seriously. 612-339-0545 *Paradigm Reporting & Captioning * 800-545-9668 #6685.
14 time frame. 15 MR. HEIDE: My only comment is it's not a 16 matter of respect. In the notice that you furnished the 17 public you did not indicate that you were going to limit 18 time to five minutes. Your doing so appears to be 19 capricious and, as I stated, an abuse of the chair 20 calculated to frustrate adequate comment. 21 Let me return to Comment No. 4. 22 CHAIR REHKAMP: You're using up your time, 23 Mr. Heide, and in my remarks at the beginning I indicated 24 five minutes. Thank you. 25 MR. HEIDE: I take your threat seriously. 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668
16 matter of respect. In the notice that you furnished the 17 public you did not indicate that you were going to limit 18 time to five minutes. Your doing so appears to be 19 capricious and, as I stated, an abuse of the chair 20 calculated to frustrate adequate comment. 21 Let me return to Comment No. 4. 22 CHAIR REHKAMP: You're using up your time, 23 Mr. Heide, and in my remarks at the beginning I indicated 24 five minutes. Thank you. 25 MR. HEIDE: I take your threat seriously. 3612-339-0545 *Paradigm Reporting & Captioning * 800-545-9668 #6685.
16 matter of respect. In the notice that you furnished the 17 public you did not indicate that you were going to limit 18 time to five minutes. Your doing so appears to be 19 capricious and, as I stated, an abuse of the chair 20 calculated to frustrate adequate comment. 21 Let me return to Comment No. 4. 22 CHAIR REHKAMP: You're using up your time, 23 Mr. Heide, and in my remarks at the beginning I indicated 24 five minutes. Thank you. 25 MR. HEIDE: I take your threat seriously. 2612-339-0545 *Paradigm Reporting & Captioning * 800-545-9668 #6685.
 public you did not indicate that you were going to limit time to five minutes. Your doing so appears to be capricious and, as I stated, an abuse of the chair calculated to frustrate adequate comment. Let me return to Comment No. 4. CHAIR REHKAMP: You're using up your time, Mr. Heide, and in my remarks at the beginning I indicated five minutes. Thank you. MR. HEIDE: I take your threat seriously.
 18 time to five minutes. Your doing so appears to be 19 capricious and, as I stated, an abuse of the chair 20 calculated to frustrate adequate comment. 21 Let me return to Comment No. 4. 22 CHAIR REHKAMP: You're using up your time, 23 Mr. Heide, and in my remarks at the beginning I indicated 24 five minutes. Thank you. 25 MR. HEIDE: I take your threat seriously.
 19 capricious and, as I stated, an abuse of the chair 20 calculated to frustrate adequate comment. 21 Let me return to Comment No. 4. 22 CHAIR REHKAMP: You're using up your time, 23 Mr. Heide, and in my remarks at the beginning I indicated 24 five minutes. Thank you. 25 MR. HEIDE: I take your threat seriously.
 calculated to frustrate adequate comment. Let me return to Comment No. 4. CHAIR REHKAMP: You're using up your time, Mr. Heide, and in my remarks at the beginning I indicated five minutes. Thank you. MR. HEIDE: I take your threat seriously.
21 Let me return to Comment No. 4. 22 CHAIR REHKAMP: You're using up your time, 23 Mr. Heide, and in my remarks at the beginning I indicated 24 five minutes. Thank you. 25 MR. HEIDE: I take your threat seriously. 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #6685.
 CHAIR REHKAMP: You're using up your time, Mr. Heide, and in my remarks at the beginning I indicated five minutes. Thank you. MR. HEIDE: I take your threat seriously.
 23 Mr. Heide, and in my remarks at the beginning I indicated 24 five minutes. Thank you. 25 MR. HEIDE: I take your threat seriously. 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #6685.
24 five minutes. Thank you. 25 MR. HEIDE: I take your threat seriously. 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66855
25 MR. HEIDE: I take your threat seriously. 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856
612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #6685
612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66850 www.paradigmreporting.com

		050	
		MAC Public Hearing, 10/1/2012 Page: 66	
	1	On page 1-2 of the introduction to the relevant	
	2	Environmental Assessment, FAA represented the following	
	3	fact as material to establishing the need for the	
	4	proposed MSP 2020 Improvements, and I quote, "In 2010 MSP	
	5	served nearly 33 million passengers." Two footnotes are	050-57. The "nearly 33 million
	6	cited as authority for FAA's aforesaid analysis and	passengers" and "15th in North
	7	comments. The first footnote refers to MAC's own	America" ranking statements are
	8	statistics, which statistics should clearly not be relied	both accurate. The 33 million
	9	on for objective, reliable information, given MAC's	passengers refers to total
	10	presumptive bias to get this Environmental Assessment	passengers, which includes revenue passenger enplanements
	11	approved.	and deplanements, as well as
	12	The second footnote refers to an analysis by	non-revenue passengers. The
	13	ACI-North America, which does not appear to have been	FAA statistics include only
57	14	included in the record. ACI-North America is an advocacy	revenue passenger
	15	group, of which MAC presumably is a member, and ACI-North	enplanements. According to the
	16	America also should clearly not be relied on for	ACI North American Airports
	17	objective, reliable information on this critical, even	Ranking for 2010, cited as the
	18	decisive fact because of its advocacy for airport	source in the Draft EA/EAW, MSP did in fact rank 15th in 2010 for
	19	development. FAA's analysis and comments cited above to	total passengers.
	20	the effect that in 2010 MSP served nearly 33 million	
	21	passengers is repugnant to the 2010 official report on	
	22	FAA's website which reported MSP had only 15,512,487	
	23	passenger enplanements in calendar year 2010.	
	24	My fourth comment is that it does not appear	
	25	possible, under any set of facts, that MSP served 33	
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com	

		050 MAC Public Heaving 10// 2012 Page 67	
		MAC Public Hearing, 10/1/2012 Page: 67	
	1	million passengers in 2010 unless one adopts a twisted	
	2	definition of passenger, and that this proceeding, set in	
	3	motion by a misleading notice, should be stayed until FAA	
	4	has provided accurate scientific analysis and expert	
	5	agency comments concerning the number of enplaned	
	6	passengers served by MSP in 2010 in obedience to the Code	
	8	of Federal Regulations, and so that the public could comment properly on the conclusions to be drawn there	
	9		
		from.	
	10 11	No. 5. A noise contour map on page 20 of 36 in	
	11	FAA's "MSP 2020 Improvements Draft EA/EAW Open House Presentation" purports to show a representation of "MAC	
	13	Existing Noise Mitigation Program." The noise contour	
	14	map represented there as MSP's existing noise mitigation	
58	14	program is not the FAA-approved 2007 Part 150 Noise	050-58. The label on the exhibit
50	16	Contour Map, which is the legal map for purposes of	accurately describes what is
	17	assessing MSP's existing noise mitigation program. I	pictured on the map. See
	18	believe the noise contours represented on said page 20	Response to Comment #048-21.
	19	may be the noise contours developed in the judicial	
	20	settlement between MAC and certain parties. Said noise	
	21	contour map had and has no force and effect upon any	
	22	parties not subject to that legal case and said map is	
	23	not, is clearly not a legal Part 150 noise exposure map.	
	24	My fifth comment is that FAA's analysis and	
	25	comments, based on the noise contour map that is not the	
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856	
		www.paradigmreporting.com	

		050 MAC Public Hearing 10/1/2012 Pages 65	
		MAC Public Hearing, 10/1/2012 Page: 68	
	1	FAA-approved Part 150 noise contour map, namely the 2007	
	2	map, are not to be relied on, and are seriously	
	3	inaccurate, and that this proceeding, set in motion by an	
	4	inadequate notice, should be stayed until FAA has	
	5	provided accurate scientific analysis and expert agency	
	6	comments concerning the comparison of noise impacts	
	8	between the FAA-approved Part 150 2007 noise contour map	
	9	and the alternatives proposed.	
	10	Comment 6. Page 6 of 36 in FAA's "MSP 2020	
	10	Improvements Draft EA/EAW Open House Presentation" states	
	12	FAA approved the ostensible final EA/EAW forecast on	
	13	July 2, 2012. The Council of Environmental Quality	
	13	Regulations state that NEPA procedures must ensure that environmental information is available to public	
	15	officials and citizens before decisions are made, and	
	16	before actions are taken and, "public scrutiny is	
	17	essential to implementing NEPA."	
1	18	My sixth comment is that FAA erred in approving	
	19	the proposed EA/EAW forecast on July 2, 2012, before the	
59	20	factual material supporting said MAC forecast was exposed	050-59. See Response to
55	21	to public scrutiny so that the public could comment on	Comment #048-29.
	22	the conclusions properly to be drawn from it, and that	
	23	this proceeding, set in motion by a premature exercise of	
	24	FAA discretion, should be stayed until FAA has provided	
	25	the factual material relied on in determining the final	
		www.paradigmreporting.com	

		050 MAC Public Hearing, 10/1/2012 Page: 69	
	1	EA/EAW forecast. So I will conclude with six. I will just	
	2		
	3	briefly refer to my seventh comment. In my written	
	4	comments I will formally request additional factual	
	5	material supporting your unverifiable claims. I won't	
	6	take time to refer them, but these, these are all	
	7	conclusory claims. Well, perhaps I should cite some so	
	8	that you know I'm not dreaming this up. Page 2-1, you	
	9	say it's currently overcrowded, the terminal. There's no	
60	10	evidence for that. You state that current congestion	050-60. Data supporting the
	11	will be exacerbated and spread on page 2-2. You provide	need to implement the Proposed
	12	no evidence for that. You provide no evidence about	Action are included in Appendix O
	13	traffic in the appropriate exhibit. You just make	of the Draft EA/EAW.
1	14 15	conclusory claims. This is contrary to the law.	
		Since you have been kind enough to give me	
	16	another minute or so, I cite here Nova Scotia Food	
	17	Products where it says, "to suppress meaningful comment	
	18 19	by failure to disclose the basic data constituting the	
	20	scientific material which is believed to support the rule	
	20	relied upon is akin to rejecting comment all together." What we have today here is an empty ceremony because	
	21	and I will request that factual material and that this be	
	23	stayed until you produce it.	
	24	My seventh comment, and I won't make it, but it	
	25	deals with my concern whether or not Howard Needles	
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856	
		www.paradigmreporting.com	

		050	
		MAC Public Hearing, 10/1/2012 Page: 70	
	1	Tammen & Bergendoff, normally referred to as HNTB, may	
61	2	safely be entrusted to perform professional services in	050-61. The Draft EA/EAW was
	3	respect to the "MSP 2020 Improvements Draft EA/EAW." And	prepared in accordance with
	4	in my written comments I will give you commissioners and	NEPA and MEPA. See Response to
	5	the FAA documentary evidence, and I have one here but I	Comment #048-2. No
	6	don't know if the audience or you would permit me to go	documentary evidence was provided.
	7	into it.	provided.
	8	CHAIR REHKAMP: I think you've made your	
	9	points, Mr. Heide. If you submit your written documents,	
	10	they will be responded to and they will be included in	
	11	the hearing officer's report that comes before the full	
	12	commission, and I thank you.	
	13 14	MR. HEIDE: Well, I just want to say I'm	
		extremely disappointed in your management of this	
	15	hearing. This was not a public hearing, this was a	
	16	hearing which you have stage-managed to accomplish	
	17	CHAIR REHKAMP: That is also being	
	18	recorded, Mr. Heide. Thank you.	
	19	MR. HEIDE: I hope it is.	
	20	(Applause.)	
	21	CHAIR REHKAMP: Is there anyone here who	
	22	has not had a chance to speak that wishes to do so?	
	23	(No response.)	
	24 25	CHAIR REHKAMP: Okay, then. We've heard	
	25	from all the speakers signed up to present comments and 612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856	
		612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com	

	050 MAC Public Hearing, 10/1/2012 Page: 71
1	those who were asked to. I will officially adjourn this
2	public hearing. I thank you for coming this evening and
3	participating in our environmental review process. Good
4	evening. Thank you.
5	(Proceedings concluded at 8:47 p.m.)
6	
7	
8	
9	
10	
11	
12	
13 14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
	612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66856 www.paradigmreporting.com

MAC Public Hearing, 10//2012 Page: 72 1 REPORTER'S CERTIFICATE 2
2 3 4 5 I, Elizabeth J. Gangl, a Registered Professional 6 Reporter in the State of Minnesota, do hereby certify 7 that the foregoing pages of typewritten material 8 constitutes an accurate verbatim record transcribed from 9 the stenotype notes taken by me of the proceedings 1 times and place specified. 2 3 4 5 5 DATED: October 8, 2012
I, Elizabeth J. Gangl, a Registered Professional Reporter in the State of Minnesota, do hereby certify that the foregoing pages of typewritten material constitutes an accurate verbatim record transcribed from the stenotype notes taken by me of the proceedings aforementioned on the 1st day of October 2012, at the times and place specified. DATED: October 8, 2012
45567777899<
5I, Elizabeth J. Gangl, a Registered Professional6Reporter in the State of Minnesota, do hereby certify7that the foregoing pages of typewritten material8constitutes an accurate verbatim record transcribed from9the stenotype notes taken by me of the proceedings0aforementioned on the 1st day of October 2012, at the1times and place specified.23455DATED: October 8, 2012789
Reporter in the State of Minnesota, do hereby certify that the foregoing pages of typewritten material constitutes an accurate verbatim record transcribed from the stenotype notes taken by me of the proceedings aforementioned on the 1st day of October 2012, at the times and place specified. DATED: October 8, 2012
that the foregoing pages of typewritten material constitutes an accurate verbatim record transcribed from the stenotype notes taken by me of the proceedings aforementioned on the 1st day of October 2012, at the times and place specified. DATED: October 8, 2012
<pre>8 constitutes an accurate verbatim record transcribed from 9 the stenotype notes taken by me of the proceedings aforementioned on the 1st day of October 2012, at the 1 times and place specified. 2 3 4 5 6 DATED: October 8, 2012 7 8 9</pre>
9 the stenotype notes taken by me of the proceedings aforementioned on the 1st day of October 2012, at the times and place specified. 3 4 5 6 DATED: October 8, 2012 7
aforementioned on the 1st day of October 2012, at the times and place specified. DATED: October 8, 2012
<pre>times and place specified. times and place specified. DATED: October 8, 2012 DATED: October 8, 2012 </pre>
2 3 4 5 5 6 DATED: October 8, 2012 7 8 9 9
3 4 5 6 DATED: October 8, 2012 7 8 9
4 5 6 DATED: October 8, 2012 7 8 9
5 6 DATED: October 8, 2012 7 8 9
6 DATED: October 8, 2012 7 8 9
7 8 9
8 9
9
1 Elizabeth J. Lang
1 Currensern y. Dany
2 Elizabeth J. Gangl
3 Registered Professional Reporter
4
5
612-339-0545 * Paradigm Reporting & Captioning * 800-545-9668 #66850 www.paradigmreporting.com

Attachment 1:

Update on Air Monitoring near the Minneapolis St. Paul International Airport



Update on Air Monitoring near the Minneapolis St. Paul International Airport

May 2006



Appendix R

Minnesota Pollution Control Agency, 520 Lafayette Rd. N., St. Paul, MN 55155-4194 (651) 296-6300, TOLL-FREE (800) 657-3864, TTY (651) 282-5332 OR (800) 657-3864 This material can be made available in alternative formats for people with disabilities. 1-1

Summary

In 2005, the Minnesota Pollution Control Agency (MPCA) added air toxic and fine particulate air monitoring sites in residential neighborhoods near the Minneapolis St. Paul International Airport (MSP Airport). The new sites are located on Wenonah School in Minneapolis and Richfield Intermediate School. The MPCA has completed analysis of six months of air toxics and fine particulate data at the sites. The resulting air toxics concentrations were compared to other Twin Cities' monitoring locations as well as inhalation health benchmarks provided by the Environmental Protection Agency and the Minnesota Department of Health.

In general, concentrations of monitored compounds were similar to levels at other sites in the Twin Cities. The only compound routinely over a health benchmark was formaldehyde; however, concentrations near the airport are similar to concentrations found throughout the Twin Cities. A few compounds, particularly toluene, were slightly elevated at the Richfield Intermediate School location. None of the elevated concentrations were near health benchmark values. The higher concentrations were primarily in July and are believed to be related to remodeling that occurred at the school in the summer. Concentrations after August are similar to concentrations seen at the other sites near the airport and other monitoring locations in the Twin Cities. In general, median and average concentrations of fine particulate and hazardous air pollutants at the sites near the airport are similar to concentrations seen at other locations in the Twin Cities Metropolitan Area.

Introduction

The Minnesota Pollution Control Agency (MPCA) has been monitoring air toxic chemicals and fine particles ($PM_{2.5}$) near the Minneapolis St. Paul International Airport (MSP Airport) since 2002. In 2005, in response to local concerns, the MPCA began monitoring air toxics (including volatile organic compounds (VOCs), carbonyl compounds and metals) and $PM_{2.5}$ at neighborhood schools near the MSP Airport in Minneapolis and Richfield. The MPCA has also been monitoring black carbon which is a component of $PM_{2.5}$ and is sometimes used as a surrogate for concentrations of diesel exhaust in the air since diesel emissions cannot be measured directly.

Site	Site Name	Address	Started	Ended	Monitored Chemicals
ID					
964	MSP Airport	Former Airport Terminal Building	Feb 2002	May 2004	PM _{2.5} , VOCs, Carbonyls, Metals
968	MSP Airport	MAC Headquarters 6040 28 th Ave. S. Mpls, MN	June 2004	On going	PM _{2.5} , VOCs, Carbonyls, Metals
969	Wenonah School	5625 28 th Ave. S. Mpls, MN	April 2005	On going	PM _{2.5} , VOCs, Carbonyls
961	Richfield Intermediate School	7020 12 th Ave S. Richfield, MN	July 2005	On going	PM _{2.5} , VOCs, Carbonyls

Table 1: MPCA air monitoring locations near MSP Airport

The locations of the monitoring sites are shown in Figure 1. The sites are located to the west or northwest of the airport. A wind rose is also provided showing the predominant wind directions near the airport. Generally the wind blows from the northwest or southeast. When the wind blows from the southeast or south, airport emissions tend to blow toward the monitors.

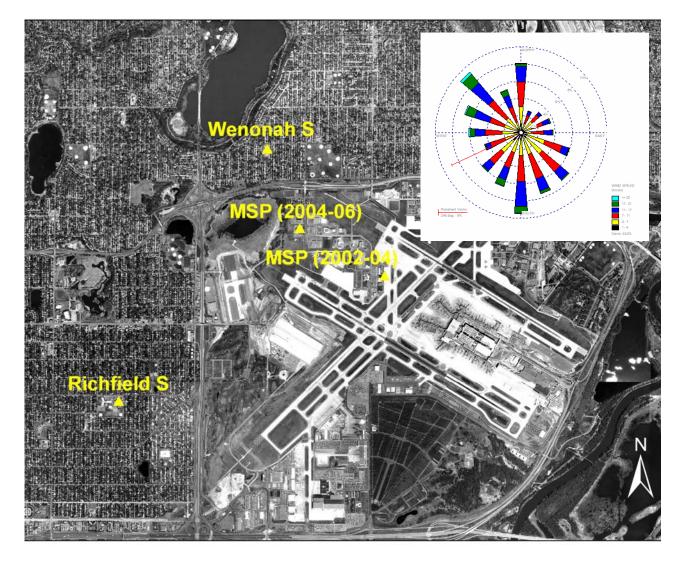
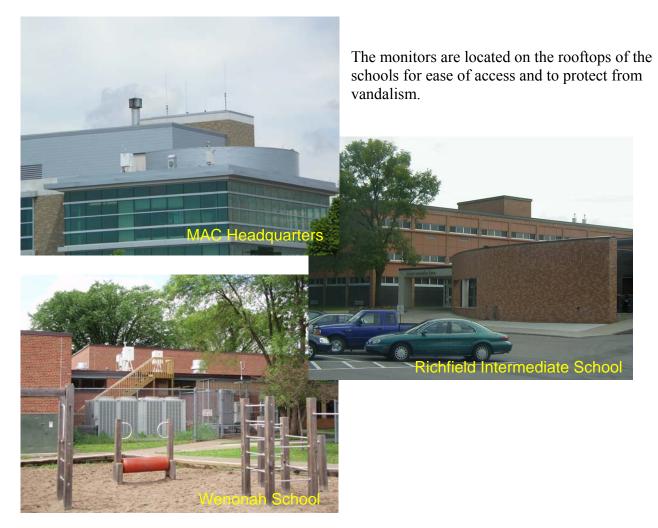


Figure 1: MPCA ambient air monitoring locations near MSP Airport (2005-2006)



The air toxics and fine particles are collected once every six days for a 24 hour period. The one exception is $PM_{2.5}$ at Wenonah School which is collected continuously. Hourly particulate results from Wenonah School can be viewed at the MPCA's Air Quality Index site at <u>http://aqi.pca.state.mn.us/final.cfm?hour=0&poll=BAMR24H&thedate=2006-01-20®ion=Twin%20Cities</u> by selecting the appropriate date.

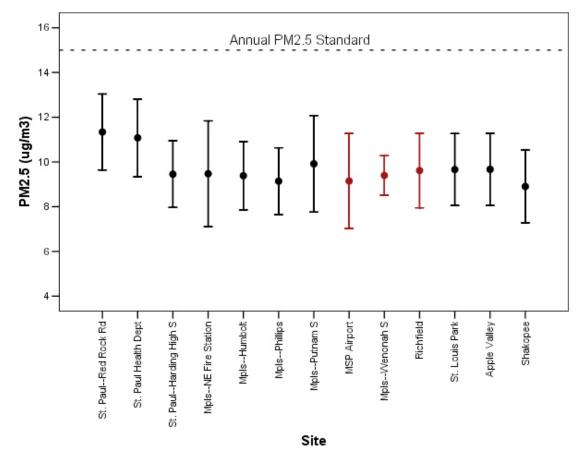
The air concentration data from the monitoring is compared to health standards or benchmarks. Fine particles ($PM_{2.5}$) have a National Ambient Air Quality Standard (NAAQS). None of the other pollutants measured near the airport have standards. Their concentrations are compared to inhalation health benchmarks when available. An inhalation health benchmark is a concentration of a chemical in ambient air, at or below which the chemical is unlikely to cause an adverse health effect to the general public. Health benchmarks are guidelines which are primarily provided by the Environmental Protection Agency (EPA) (<u>http://www.epa.gov/iris/</u>) or by the Minnesota Department of Health (<u>http://www.health.state.mn.us/divs/eh/air/hrvtable.htm</u>).

Fine particulate matter (PM_{2.5})

Fine particulate matter is a complex mixture of very small liquid droplets or solid particles in the air. These particles can be directly released when coal, gasoline, diesel fuels and wood are burned. Many fine particles are also formed in the atmosphere from chemical reactions of other compounds. Fine particulates are associated with increased hospitalizations and deaths due to respiratory and heart disease and can worsen the symptoms of asthma. Fine particles are also major contributors to reduced visibility (haze).

The EPA has set an annual standard of 15 μ g/m³ and a 24 hour standard of 65 μ g/m³ for fine particulates. The EPA has also proposed a lower 24 hour standard of 35 μ g/m³ which is under review. Currently no site in Minnesota (including the airport sites) exceeds these standards. Since monitoring began in 2005, there has been no difference in PM_{2.5} concentrations between the airport sites and other sites in the Twin Cities Metropolitan Area. Figure 2 shows the average fine particulate levels in the Twin Cities from filter monitors. In this chart, only the Wenonah monitor collects data continuously.

Figure 2: Average PM_{2.5} concentrations with 95 percent confidence intervals in the Twin Cities Metropolitan Area (July-December 2005)

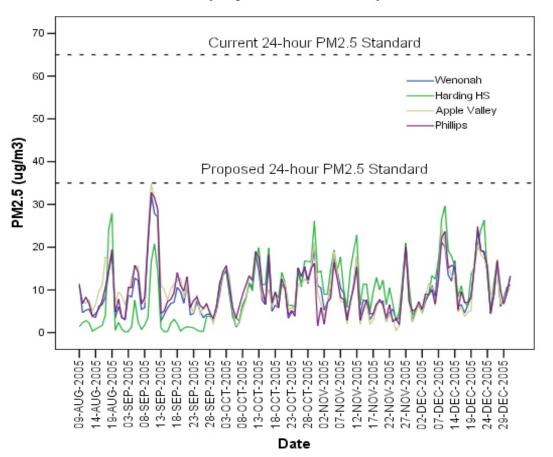


PM2.5 Concentrations in the Twin Cities (July - December 2005)

Fine particles have been monitored at Richfield School since 1999. Concentrations have been similar to other Twin Cities locations.

Figure 3 shows results from the continuous $PM_{2.5}$ monitor at Wenonah. Results are compared to other Twin Cities locations at Harding High School in St. Paul, the Phillips neighborhood in Minneapolis and Westview Elementary in Apple Valley. These results illustrate the regional nature of $PM_{2.5}$ with concentrations rising and falling in unison across the metropolitan region.

Figure 3: Continuous PM_{2.5} concentrations in the Twin Cities Metropolitan Area

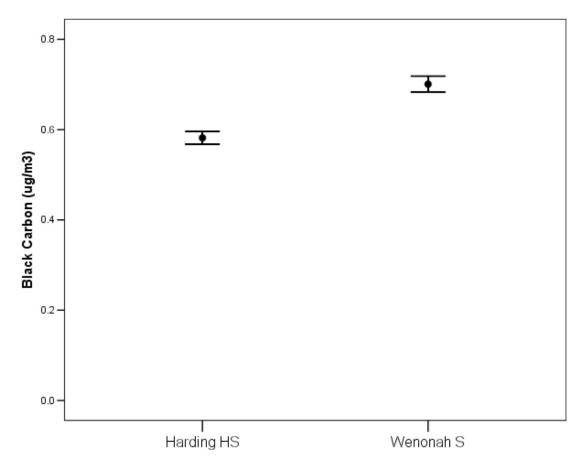


PM2.5 Daily Concentrations (July - December 2005)

Black Carbon

Black carbon is also monitored at Wenonah School. Black carbon is a component of $PM_{2.5}$ that is often used as a surrogate for diesel exhaust concentrations. There is no health benchmark or standard for black carbon. However, there is a noncancer health benchmark of 5 μ g/m³ for diesel exhaust and EPA considers it likely to be a human carcinogen. Figure 4 shows the average concentration of black carbon at Wenonah School and at Harding High School in St. Paul. The average is slightly higher at Wenonah.

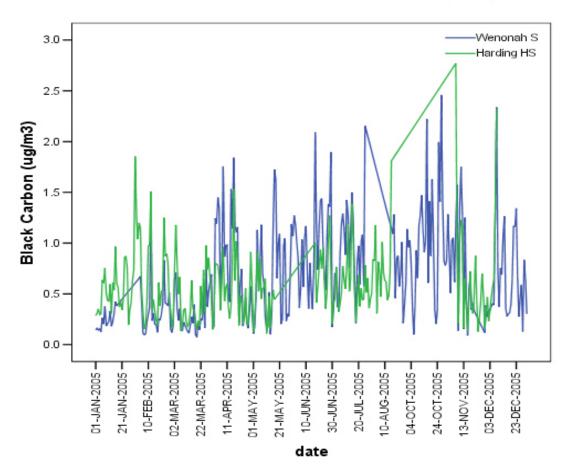
Figure 4: Average Black Carbon concentrations in the Twin Cities Metropolitan Area (2005)



Black Carbon Concentrations (2005)

Black carbon is monitored continuously. Figure 5 illustrates the daily concentrations of black carbon at Wenonah and Harding High School. The straight lines in the graph are areas where data is missing due to equipment malfunction. The two sites follow the same general pattern where data is available at both locations.

Figure 5: Continuous PM_{2.5} concentrations in the Twin Cities Metropolitan Area



Black Carbon Daily Concentrations (2005)

Hazardous Air Pollutants

The MPCA monitors 56 VOCs, 7 carbonyls and 16 metals. According to a report prepared by URS Corporation for the Federal Aviation Administration, 14 hazardous air pollutants or HAPs are associated with aircraft, airports and aviation. These same compounds are associated with other vehicles such as cars and trucks.

Table 2: Hazardous air pollutants associated with aircraft, airports and aviation

Formaldehyde	Xylene	*Acrolein
Acetaldeyde	Lead	*Naphthalene
Benzene	Propionaldehyde	*2,2,4-Trimethylpentane
Toluene	Ethylbenzene	*PAHs
1,3-Butadiene	Styrene	

*Not monitored by MPCA

The results from these compounds are shown in error bar charts in Appendix A.

Formaldehyde is the only HAP with concentrations above the health benchmark. Concentrations of formaldehyde are above the benchmark at all locations in Minnesota and the sites near the airport are not significantly higher than other locations. Formaldehyde, acetaldehyde and propionaldehyde are carbonyl compounds which are monitored separately from the other HAPs. In comparisons to other labs, the MPCA lab tends to get higher readings of carbonyls. Changes are being made in the lab to improve accuracy. It is possible that the true formaldehyde concentrations from 2005 may be as much as 50 percent lower than the concentrations reported here. Therefore, true average formaldehyde concentrations may be nearer 2 μ g/m³ rather than 3 μ g/m³, which would still exceed the health benchmark.

All of the other HAPs are below health benchmarks. Benzene is near its benchmark, but concentrations have been decreasing for many years. Richfield had the highest concentration of the three airport sites for all HAPs except 1,3-butadiene although the differences in concentration were not statistically different. Richfield also had the highest average concentration of toluene among the Twin Cities monitors. However, the concentrations were still well below health benchmarks.

The higher concentrations generally occurred in the first few samples in July when monitoring first began (see Figures 6 and 7). The Richfield Intermediate School underwent an extensive remodel in the summer of 2005 including new paint, floor tile, carpet, electrical and plumbing upgrades and a new kitchen. It is likely that this remodeling contributed to the elevated HAP levels seen at the Richfield monitoring location.

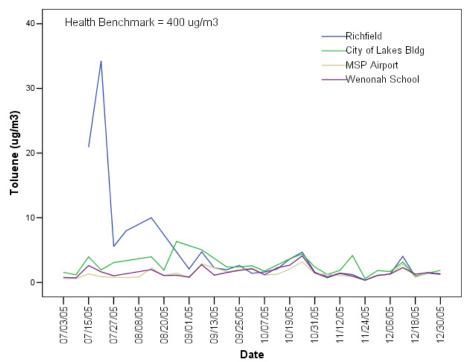


Figure 6: Trends in toluene concentrations (July-December 2005)

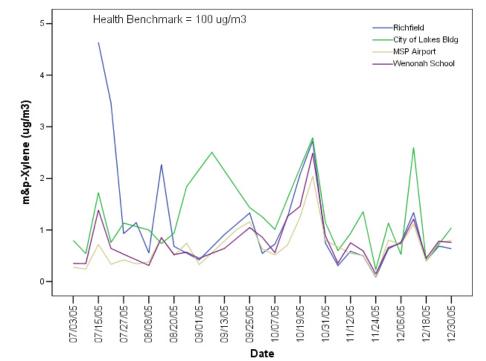


Figure 7: Trends in xylene concentrations (July-December 2005)

Metals are collected on total suspended particulate (TSP) filters. Only the MSP Airport site 968 monitors for metals. The metal concentrations were not higher at the airport location than other Twin Cities monitors. The only metal with an average estimated concentration above a health benchmark was chromium. However, the benchmark is for chromium VI, while the MPCA monitors for total chromium. The other species of chromium are less toxic and chromium VI concentrations are expected to be below inhalation health benchmarks. In addition, concentrations of chromium are below MPCA's detection limit, so any concentrations are estimated.

Summary data for the other monitored compounds are provided in the appendices. The three airport sites are included as well as the downtown Minneapolis site on the City of Lakes Building for comparison purposes.

Conclusions

The MPCA has completed analysis of six months of air toxics data for monitors near the MSP Airport. The resulting air toxics concentrations were compared to other Twin Cities' monitoring locations as well as inhalation health benchmarks provided by the Environmental Protection Agency and the Minnesota Department of Health.

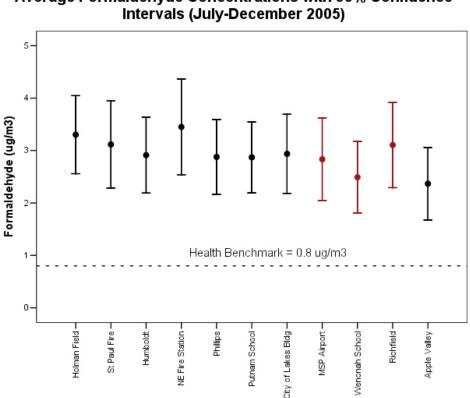
The only compound routinely over a health benchmark is formaldehyde; however concentrations near the airport are similar to concentrations found throughout the Twin Cities. A few compounds were elevated in Richfield. The higher concentrations were primarily in July when monitoring first began and are thought to be related to remodeling at the school. Concentrations

after July are similar to concentrations seen at the other sites near the airport and other monitoring locations in the Twin Cities.

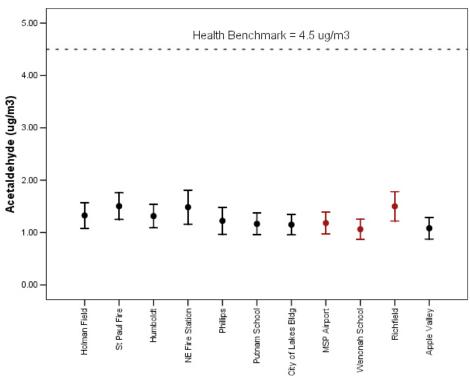
Overall, median and average concentrations of pollutants monitored near the MSP Airport are similar to concentrations monitored at other locations in the Twin Cities Metropolitan Area.

Appendix A: Mobile Source Air Toxics

The average concentration results for the ten pollutants MPCA monitors which are associated with airports and other transportation sources are shown in the following charts. The charts show the airport sites compared with other monitoring locations in the Twin Cities Metropolitan Area. The circle is the average concentration from July to December 2005. The bars show the range where it is 95 percent certain that the true average of the data falls. The dotted line shows the concentration of the health benchmark. If the circles and bars fall below the line, adverse health effects are not expected to result from exposures to that chemical.

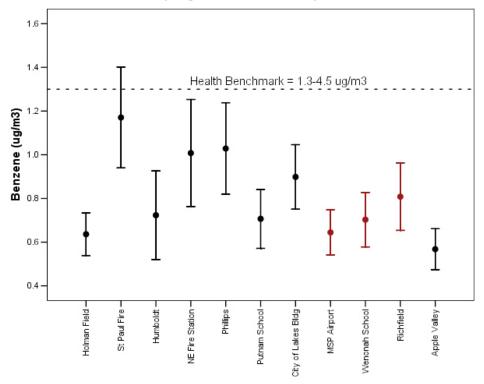


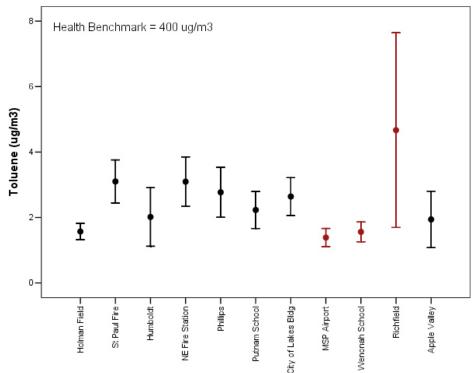
Average Formaldehyde Concentrations with 95% Confidence



Average Acetaldehyde Concentrations with 95% Confidence Intervals (July-December 2005)

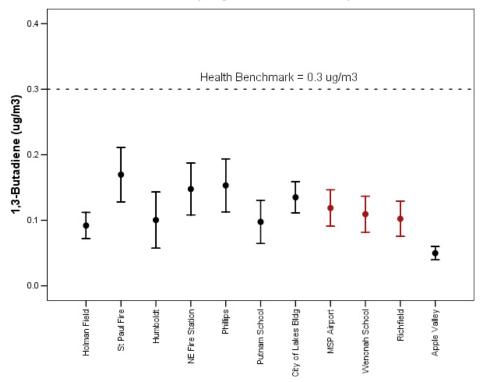
Average Benzene Concentrations with 95% Confidence Intervals (July-December 2005)

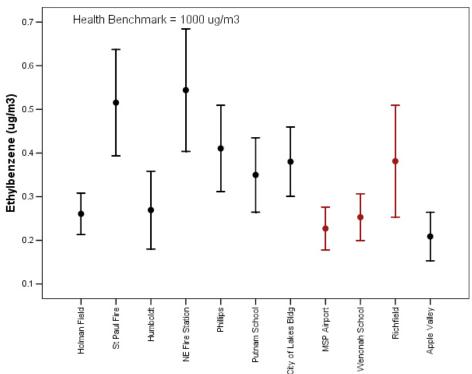




Average Toluene Concentrations with 95% Confidence Intervals (July-December 2005)

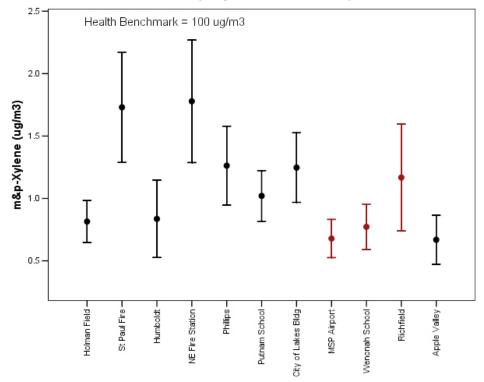
Average1,3-Butadiene Concentrations with 95% Confidence Intervals (July-December 2005)



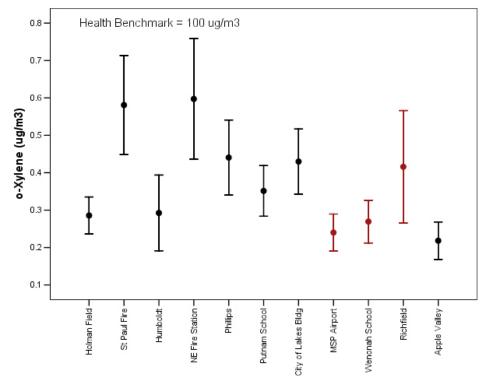


Average Ethylbenzene Concentrations with 95% Confidence Intervals (July-December 2005)

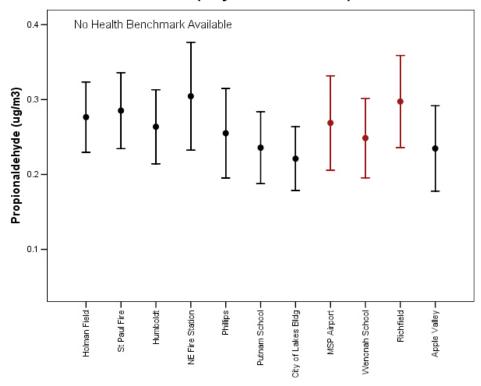
Average m&p-Xylene Concentrations with 95% Confidence Intervals (July-December 2005)



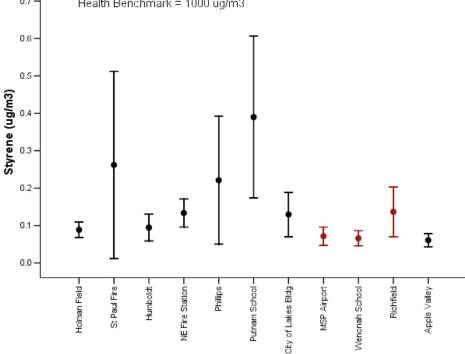
Average o-Xylene Concentrations with 95% Confidence Intervals (July-December 2005)



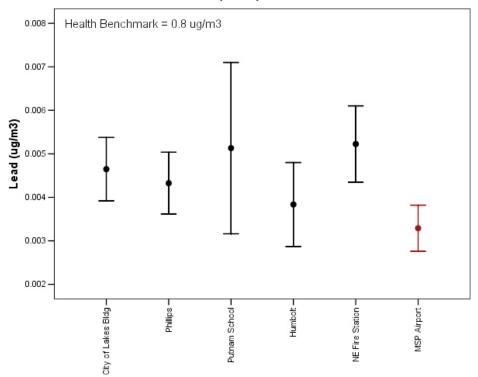
Average Propionaldehyde Concentrations with 95% Confidence Intervals (July-December 2005)







Average Lead Concentrations with 95% Confidence Intervals (2005)



				Acute Health	Chronic			Richfie	ld	
			Detection		Health			Standard		
Compound	AIRS Code	CAS Number	Limit	Benchmark	Benchmark	Mean	Median	Error	Maximum	Valid N
Benzene	45201	71-43-2	0.223	1,000	1.3	0.808	0.700	0.075	5 1.936	5 25
Benzyl chloride	45809	100-44-7	0.176	240	0.20	ND	ND	ND	ND	ND
Bromodichloromethane	43828	75-27-4	0.274			ND	ND	ND	ND	ND
Bromoform	43806	75-25-2	0.436		9.1	ND	ND	ND	ND	ND
Butadiene, 1,3-	43218	106-99-0	0.125		0.30	0.102	0.087	0.013	0.341	28
Carbon disulfide	42153	75-15-0	0.178	6,000	700	0.053	0.034	0.014	0.383	28
Carbon tetrachloride	43804	56-23-5	0.423	1,900	0.7	0.567	0.573	0.021	0.956	6 26
Chlorobenzene	45801	108-90-7	0.387		1,000	0.023	0.018	0.003	0.069	28
Chloroform	43803	67-66-3	0.357	150	300	0.106	0.100	0.008	0.244	- 28
Cyclohexane	43248	110-82-7	0.166		6,000	0.163	0.148	0.020	0.375	5 26
Dibromochloromethane	43832	124-48-1	0.418			ND	ND	ND	ND	ND
Dichlorobenzene (m)	45806	541-73-1	0.252			ND	ND	ND	ND	ND
Dichlorobenzene (o)	45805	95-50-1	0.438		200	ND	ND	ND	ND	ND
Dichlorobenzene (p)	45807	106-46-7	0.284		0.9	0.056	0.036	0.009	0.186	5 28
Dichlorodifluoromethane (Freon 12)	43823	75-71-8	0.283		200	2.582	2.512	0.094	4.594	27
Dichloroethane, 1,1-	43813	75-34-3	0.414		6.3	ND	ND	ND	ND	ND
Dichloroethene, cis-1,2-	43839	156-59-2	0.204			ND	ND	ND	ND	ND
Dichloroethene, trans-1,2-	43838	156-60-5	0.237			ND	ND	ND	ND	ND
Dichloromethane	43802	75-09-2	0.306	10,000	21	0.371	0.233	0.095	2.601	26
Dichloropropane, 1,2-	43829	78-87-5	0.225		4.0	ND	ND	ND	ND	ND
Dichloropropene, cis-1,3-	43831	10061-01-5	0.137		2.5	ND	ND	ND	ND	ND
Dichloropropene, trans-1,3-	43830	10061-02-6	0.382		2.5	ND	ND	ND	ND	ND
Dichlorotetrafluoroethane (Freon 114)	43208	76-14-2	0.342			0.106	0.105	0.003	0.133	8 28
Ethyl chloride	43812	75-00-3	0.148	100,000	10,000	ND	ND	ND	ND	ND
Ethylbenzene	45203	100-41-4	0.168	10,000	1,000	0.381	0.250	0.062	1.537	28
Ethylene chloride	43815	107-06-2	0.244		0.38	0.024	0.024	0.002	0.053	8 28
Ethylene dibromide	43843	106-93-4	0.675		0.05	ND	ND	ND	ND	ND
Ethyltoluene, 4-	45228	622-96-8	0.511			0.211	0.111	0.054	1.180	28
Heptane	43232	142-82-5	0.191			0.428	0.312	0.062	1.352	2 27
Hexachloro-1,3-butadiene, 1,1,2,3,4,4-	43844	87-68-3	1.922		0.45	ND	ND	ND	ND	ND
Hexane	43231	110-54-3	0.200		2,000	0.788	0.571	0.099	9 1.967	27
Methyl bromide	43819	74-83-9	0.208	2,000	5.0	0.034	0.027	0.004	0.140	28
Methyl butyl ketone	43559	591-78-6	0.981			0.055	0.010	0.016	0.336	5 28
Methyl chloride	43801	74-87-3	0.126		5.6	0.856	0.846	0.029	1.196	5 24
Methyl chloroform	43814	71-55-6	0.231	140,000	1,000	0.102	0.104	0.003	0.142	28
Methyl ethyl ketone	43552	78-93-3	0.240	10,000	5,000	1.084	0.773	0.163	4.132	2 27
Methyl tert-butyl ether	43372	1634-04-4	0.322		38	ND	ND	ND	ND	ND

					Chronic			Richfiel	d	
			Detection	Acute Health	Health			Standard		
Compound	AIRS Code	CAS Number	Limit	Benchmark	Benchmark	Mean	Median	Error	Maximum	Valid N
Propanol, 2-	43312	67-63-0	0.239			0.658	0.413	0.234	5.843	25
Propylene	43205	115-07-1	0.230		3,000	1.982	1.804	0.216	5.860	27
Styrene	45220	100-42-5	0.214	21,000	1,000	0.137	0.094	0.032	0.890	27
Tetrachloroethane, 1,1,2,2-	43818	79-34-5	0.379		0.17	ND	ND	ND	ND	ND
Tetrachloroethene	43817	127-18-4	0.384	20,000	1.7	0.197	0.126	0.032	0.760	28
Tetrahydrofuran	46401	109-99-9	0.207			0.062	0.024	0.024	0.681	28
Toluene	45202	108-88-3	0.162	37,000	400	4.669	2.018	1.444	34.244	26
Trichlorobenzene, 1,2,4-	45810	120-82-1	2.467		200	ND	ND	ND	ND	ND
Trichloroethane, 1,1,2-	43820	79-00-5	0.374		0.6	ND	ND	ND	ND	ND
Trichloroethene	43824	79-01-6	0.374	2,000	5.0	0.094	0.073	0.013	0.274	26
Trichlorofluoromethane (Freon 11)	43811	75-69-4	0.325		700	1.263	1.292	0.063	1.601	25
Trichlorotrifluoroethane (Freon 113)	43207	76-13-1	0.488		30,000	0.586	0.582	0.015	0.736	26
Trimethylbenzene, 1,2,4-	45208	95-63-6	0.305			0.784	0.411	0.210	4.557	28
Trimethylbenzene, 1,3,5-	45207	108-67-8	0.460			0.219	0.108	0.061	1.519	28
Vinyl acetate	43447	108-05-4	0.452		200	1.494	1.523	0.157	4.053	26
Vinyl chloride	43860	75-01-4	0.139	180,000	1.1	0.008	0.010	0.001	0.015	28
Vinylidene chloride	43826	75-35-4	0.343		200	ND	ND	ND	ND	ND
Xylene (m&p)	45109	108-38-3	0.526	43,000	100	1.168	0.738	0.208	4.638	26
Xylene (o)	45204	95-47-6	0.389	43,000	100	0.416	0.274	0.073	1.880	27

Concentratons in ug/m3 ND=Not Detected

			MSP Airp	ort				Wenonah	School			(City of Lake	s Bldg	g
			Standard					Standard	1				Standard		
Compound	Mean	Median	Error	Maximum	Valid N	Mean	Median	Error	Maximum	Valid N	Mean	Median	Error	Max	kimum
Benzene	0.645	0.612	0.050	1.51	1 28	0.703	0.693	0.06	1 1.827	28	0.898	0.847	0.07	1	1.645
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Butadiene, 1,3-	0.119	0.097	0.014	0.37	3 30	0.109	0.096	0.01	3 0.423	30	0.135	0.126	0.01	2	0.308
Carbon disulfide	0.047	0.033	0.009	0.27	1 30	0.036	0.028	0.00	4 0.128	30	ND	ND	ND	ND	
Carbon tetrachloride	0.559	0.554	0.016	0.71	7 29	0.522	0.503	0.01	7 0.692	28	0.559	0.547	0.01	7	0.768
Chlorobenzene	0.013	0.009	0.002	0.03	7 30	0.003	0.005	0.00	1 0.018	31	0.024	0.014	0.00	5	0.106
Chloroform	0.087	0.088	0.004	0.14	2 30	0.091	0.088	0.00	5 0.195	5 31	0.110	0.105	0.00	8	0.225
Cyclohexane	0.124	0.117	0.014	0.34	3 29	0.134	0.108	0.01	5 0.361	30	0.179	0.174	0.01	7	0.361
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Dichlorobenzene (m)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Dichlorobenzene (o)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Dichlorobenzene (p)	0.040	0.030	0.005	0.11	4 30	0.039	0.024	0.00	6 0.126	5 31	0.097	0.099	0.01	0	0.210
Dichlorodifluoromethane (Freon 12)	2.516	2.468	0.057	3.11	6 30	2.625	2.576	0.06	2 3.259	29	2.640	2.572	0.06	9	3.847
Dichloroethane, 1,1-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Dichloroethene, cis-1,2-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Dichloroethene, trans-1,2-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Dichloromethane	0.251	0.210	0.024	0.73	4 27	0.374	0.249	0.07	4 1.514	28	0.307	0.241	0.03	6	0.784
Dichloropropane, 1,2-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Dichloropropene, cis-1,3-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Dichloropropene, trans-1,3-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Dichlorotetrafluoroethane (Freon 114)	0.108	0.108	0.003	0.14) 30	0.104	0.105	0.00	5 0.147	30	0.104	0.105	0.00	5	0.154
Ethyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Ethylbenzene	0.227	0.222	0.024	0.63	4 29	0.253	0.219	0.02	6 0.725	5 30	0.380	0.332	0.03	8	0.847
Ethylene chloride	0.025	0.024	0.002	0.05	3 30	0.023	0.020	0.00	2 0.053	31	0.023	0.024	0.00	2	0.049
Ethylene dibromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Ethyltoluene, 4-	0.094	0.084	0.010	0.24	6 30	0.098	0.079	0.01	1 0.295	5 31	0.222	0.197	0.02	8	0.580
Heptane	0.325	0.287	0.040	0.98	3 29	0.333	0.303	0.03	8 0.869	29	0.442	0.418	0.04	5	0.918
Hexachloro-1,3-butadiene, 1,1,2,3,4,4-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Hexane	0.566	0.525	0.057	1.42	3 27	0.689	0.612	0.07	2 1.731	28	0.900	0.804	0.09	1	1.946
Methyl bromide	0.044	0.031	0.007	0.21	4 30	0.080	0.068	0.00	8 0.206	30	0.043	0.031	0.01	0	0.264
Methyl butyl ketone	0.013	0.000	0.004	0.09	3 30	0.020	0.000	0.00	9 0.242	31	0.062	0.008	0.01	8	0.352
Methyl chloride	0.905	0.963	0.041	1.22	5 28	0.859	0.888	0.04	3 1.280	26	0.925	0.939	0.05	4	1.425
Methyl chloroform	0.099	0.104	0.003	0.12	30	0.093	0.098	0.00	3 0.120) 31	0.103	0.104	0.00	3	0.147
Methyl ethyl ketone	0.939	0.703	0.136	3.67	3 26	0.855	0.670	0.10	6 2.942	2 27	1.163	1.165	0.14	3	3.275
Methyl tert-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	

			MSP Airp	ort				Wenonah S	chool		City of Lakes Bldg				
			Standard					Standard					Standard		
Compound	Mean	Median	Error	Maximum	Valid N	Mean	Median	Error	Maximum	Valid N	Mean	Median	Error	Maximum	
Propanol, 2-	0.517	0.229	0.150	3.982	27	0.569	0.111	0.229	5.491	26	1.025	0.327	0.367	8.456	
Propylene	1.812	1.675	0.181	3.860	25	1.938	1.776	0.189	4.387	29	2.255	2.009	0.224	4.915	
Styrene	0.072	0.060	0.012	0.349	29	0.066	0.055	0.010	0.290	30	0.130	0.081	0.029	0.699	
Tetrachloroethane, 1,1,2,2-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Tetrachloroethene	0.154	0.139	0.021	0.509	30	0.161	0.142	0.018	0.421	31	0.195	0.180	0.026	0.563	
Tetrahydrofuran	0.025	0.022	0.004	0.086	30	0.023	0.018	0.004	0.083	31	0.035	0.029	0.005	0.106	
Toluene	1.387	1.229	0.136	3.188	29	1.561	1.323	0.148	4.119	29	2.641	2.389	0.279	6.335	
Trichlorobenzene, 1,2,4-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Trichloroethane, 1,1,2-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Trichloroethene	0.106	0.083	0.014	0.344	28	0.069	0.054	0.013	0.382	28	0.183	0.145	0.027	0.554	
Trichlorofluoromethane (Freon 11)	1.273	1.270	0.038	1.652	27	1.184	1.214	0.055	1.702	28	1.604	1.562	0.119	3.174	
Trichlorotrifluoroethane (Freon 113)	0.572	0.586	0.017	0.728	30	0.539	0.552	0.019	0.690	28	0.587	0.575	0.022	0.912	
Trimethylbenzene, 1,2,4-	0.314	0.285	0.035	0.875	29	0.330	0.293	0.037	1.003	30	0.642	0.602	0.082	1.632	
Trimethylbenzene, 1,3,5-	0.084	0.079	0.009	0.246	30	0.087	0.074	0.011	0.300	31	0.203	0.179	0.027	0.536	
Vinyl acetate	1.163	1.180	0.121	2.708	27	1.162	1.067	0.135	3.007	27	1.644	1.618	0.169	3.722	
Vinyl chloride	0.009	0.008	0.001	0.015	30	0.009	0.008	0.001	0.018	30	0.008	0.008	0.001	0.018	
Vinylidene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Xylene (m&p)	0.679	0.671	0.074	2.041	28	0.773	0.651	0.089	2.488	28	1.247	1.088	0.135	2.788	
Xylene (o)	0.240	0.230	0.024	0.677	28	0.269	0.248	0.028	0.829	29	0.430	0.376	0.042	0.916	

Concentratons in ug/m3 ND=Not Detected

Compound	Vali	d N
Benzene		25
Benzyl chloride	ND	
Bromodichloromethane	ND	
Bromoform	ND	
Butadiene, 1,3-		27
Carbon disulfide	ND	
Carbon tetrachloride		26
Chlorobenzene		28
Chloroform		28
Cyclohexane		28
Dibromochloromethane	ND	
Dichlorobenzene (m)	ND	
Dichlorobenzene (o)	ND	
Dichlorobenzene (p)		28
Dichlorodifluoromethane (Freon 12)		27
Dichloroethane, 1,1-	ND	
Dichloroethene, cis-1,2-	ND	
Dichloroethene, trans-1,2-	ND	
Dichloromethane		25
Dichloropropane, 1,2-	ND	
Dichloropropene, cis-1,3-	ND	
Dichloropropene, trans-1,3-	ND	
Dichlorotetrafluoroethane (Freon 114)		27
Ethyl chloride	ND	
Ethylbenzene		26
Ethylene chloride		28
Ethylene dibromide	ND	
Ethyltoluene, 4-		28
Heptane		25
Hexachloro-1,3-butadiene, 1,1,2,3,4,4-	ND	
Hexane		25
Methyl bromide		27
Methyl butyl ketone		28
Methyl chloride		25
Methyl chloroform		28
Methyl ethyl ketone		24
Methyl tert-butyl ether	ND	

B-5

Compound	Valid N
Propanol, 2-	24
Propylene	24
Styrene	28
Tetrachloroethane, 1,1,2,2-	ND
Tetrachloroethene	28
Tetrahydrofuran	28
Toluene	25
Trichlorobenzene, 1,2,4-	ND
Trichloroethane, 1,1,2-	ND
Trichloroethene	26
Trichlorofluoromethane (Freon 11)	25
Trichlorotrifluoroethane (Freon 113)	25
Trimethylbenzene, 1,2,4-	26
Trimethylbenzene, 1,3,5-	28
Vinyl acetate	24
Vinyl chloride	27
Vinylidene chloride	ND
Xylene (m&p)	26
Xylene (o)	26

Concentratons in ug/m3 ND=Not Detected

Attachment 1

Appendix C: Carbonyl Summary Data, July-December 2005

					Chronic			Richfiel	d	
Compounds	AIRS Code	CAS Number	Detection Limit	Acute Health Benchmark	Health Benchmark	Mean	Median	Standard Error	Maximum	Valid N
Formaldehyde	43502	50-00-0	0.004	94	0.8	3.11	2.47	0.39	8.98	25
Acetaldehyde	43503	75-07-0	0.005		4.5	1.50	1.42	0.14	3.02	26
Propionaldehyde	43504	123-38-6	0.017			0.30	0.25	0.03	0.78	26
Butyraldehyde-	43510	123-72-8	0.015			0.41	0.37	0.05	1.13	26
Crotonaldehyde	43520	123-73-9	0.009			ND	ND	ND	ND	ND
Acetone	43551	67-64-1	0.012			1.55	1.56	0.21	3.47	28
Benzaldehyde	45501	100-52-7	0.022			0.22	0.20	0.03	0.53	26

Concentratons in ug/m3

ND=Not Detected

Appendix C: Carbonyl Summary Data, July-December 2005

		С	ity of Lake	s Bldg				MSP Airp	ort		Wenonah School				
			Standard					Standard					Standard		
Compounds	Mean	Median	Error	Maximum	Valid N	Mean	Median	Error	Maximum	Valid N	Mean	Median	Error	Maximum	Valid N
Formaldehyde	2.94	2.51	0.37	8.33	25	2.83	2.02	0.38	7.99	27	2.49	1.98	0.33	7.67	27
Acetaldehyde	1.15	1.20	0.09	1.91	26	1.18	1.11	0.10	2.94	28	1.06	1.04	0.09	2.12	28
Propionaldehyde	0.22	0.20	0.02	0.49	26	0.27	0.22	0.03	0.70	28	0.25	0.21	0.03	0.62	28
Butyraldehyde-	0.26	0.22	0.03	0.75	26	0.26	0.23	0.03	0.78	28	0.23	0.23	0.02	0.57	28
Crotonaldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	0.87	0.73	0.14	2.76	26	1.04	1.09	0.14	2.72	28	0.95	0.84	0.14	2.58	28
Benzaldehyde	0.11	0.09	0.01	0.36	26	0.10	0.08	0.01	0.35	28	0.09	0.09	0.01	0.17	28

Concentratons in

ug/m3

ND=Not Detected

Appendix D: Metals Summary Data, 2005

					Chronic		Ci	ty of Lakes	Bldg	
Compound	AIRS Code	CAS Number	Detection Limit	Acute Health Benchmark	Health Benchmark	Mean	Median	Standard Error	Maximum	Valid N
Aluminum	12101	7429-90-5	0.4163			0.252	0.220	0.025	0.948	60
Antimony	12102	7440-36-0	0.0234		0.2	ND	ND	ND	ND	60
Arsenic	12103	7440-38-2	0.0215	0.19	0.002	ND	ND	ND	ND	60
Beryllium	12105	7440-41-7	0.0145		0.004	ND	ND	ND	ND	60
Barium	12107	7440-39-3	0.0690		0.5	0.019	0.018	0.002	0.088	60
Cadmium	12110	7440-43-9	0.0136		0.006	ND	ND	ND	ND	60
Chromium	12112	7440-47-3	0.0122		0.0008	ND	ND	ND	ND	60
Cobalt	12113	7440-48-4	0.0148			ND	ND	ND	ND	60
Copper	12114	7440-50-8	0.0295	100		0.102	0.082	0.011	0.410	60
Iron	12126	7439-89-6	0.1013			0.639	0.563	0.045	1.498	60
Lead	12128	7439-92-1	0.0158		0.8	ND	ND	ND	0.012	60
Manganese	12132	7439-96-5	0.0179		0.2	0.019	0.015	0.002	0.064	60
Nickel	12136	2/2/7440	0.0081	11	0.04	ND	ND	ND	ND	60
Mercury	12142	7439-97-6	0.0667	1.8	0.3	ND	ND	ND	ND	60
Selenium	12154	7782-49-2	0.0235		20	ND	ND	ND	ND	60
Zinc	12167	7440-66-6	0.0382			0.042	0.038	0.003	0.143	60

Concentratons in ug/m3 ND=Not Detected

Appendix D: Metals Summary Data, 2005

		MSP Airport										
Compound	Mean	Median	Standard Error	Maximum	Valid N							
Aluminum	0.193	0.134	0.024	0.792	59							
Antimony	ND	ND	ND	ND	59							
Arsenic	ND	ND	ND	ND	59							
Beryllium	ND	ND	ND	ND	59							
Barium	0.011	0.009	0.002	0.072	59							
Cadmium	ND	ND	ND	ND	59							
Chromium	ND	ND	ND	ND	59							
Cobalt	ND	ND	ND	ND	59							
Copper	0.309	0.222	0.032	1.200	59							
Iron	0.436	0.334	0.038	1.208	59							
Lead	ND	ND	ND	0.010	59							
Manganese	0.017	0.012	0.002	0.061	59							
Nickel	ND	ND	ND	ND	59							
Mercury	ND	ND	ND	ND	59							
Selenium	ND	ND	ND	ND	59							
Zinc	0.025	0.022	0.002	0.071	59							

Concentratons in ug/m3 ND=Not Detected