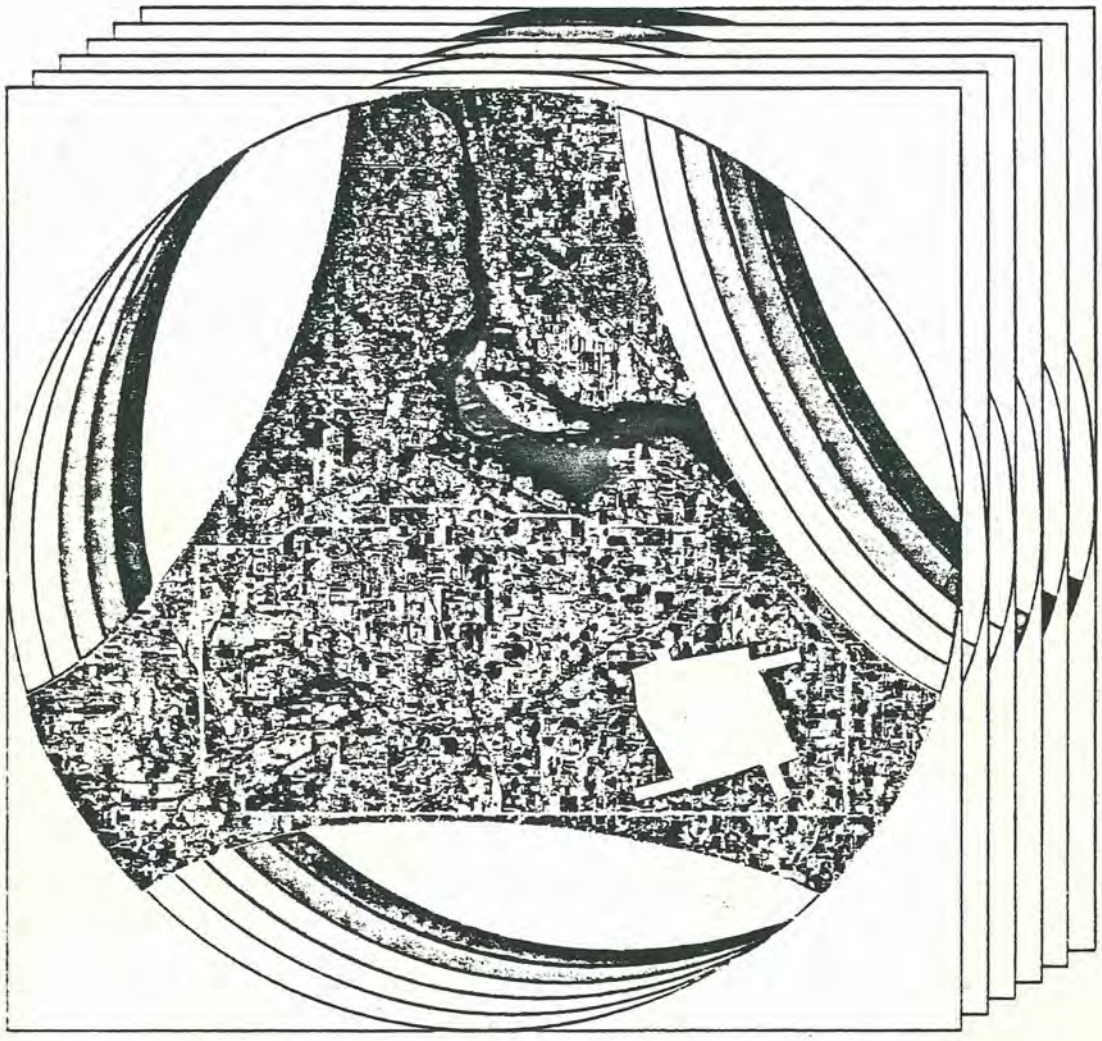
DRAFT

Dual Track Airport Planning Process



New Airport Comprehensive Plan

Final Alternative Environmental Document

Metropolitan Airports Commission

Dual Track Airport Planning Process

New Airport Comprehensive Plan

Final Alternative Environmental Document

Three alternative comprehensive plans for a possible new airport in Dakota County to meet the year 2020 air transportation needs of the region are presented. The plans contain the runways, taxiways, terminal and concourses, and supporting facilities. The social, economic, and environmental impacts that are different between the alternative plans are discussed.

Prepared for:

Metropolitan Airports Commission

The Responsible Governmental Unit

Contact Person:
Nigel D.Finney, Deputy Executive Director - Planning and Environment
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, Minnesota 55450
(612)726-8187

Prepared by:

HNTB

HOWARD NEEDLES TAMMEN & BERGENDOFF
ARCHITECTS ENGINEERS PLANNERS
and associated firms

March 1995

FINAL ALTERNATIVE ENVIRONMENTAL DOCUMENT

TABLE OF CONTENTS

LIST OF TABLES

LIST OF TABLES

- **Water Resources** -- All alternatives will affect the Vermillion River. Development of airport facilities will involve construction of runway structures across the river, filling of floodway fringe areas and alteration of existing drainage. There is also the potential for surface water runoff to the Mississippi and Vermillion rivers. The alternatives are also comprised of areas classified as highly sensitive or very highly sensitive to ground water contamination due to the permeability of the soils and proximity to the acquifers.

- **Wetlands** -- Alternative 3 would displace 0.2 acres of Type 1 wetland; Alternatives 1 and 2 would not disturb any wetland.

Hearing and Approval Process

A draft of this environmental document was prepared by the Metropolitan Airports Commission, a public hearing was held on it, and this final version of the document was prepared, incorporating comments received during the 60-day comment period. This environmental analysis will be a consideration in the selection of one of the development alternatives for the new airport comprehensive plan.

As stated earlier, similar environmental analysis and comprehensive plan development has been conducted for the Minneapolis-St. Paul International Airport and was completed in February 1995. Evaluation, analysis and comparison of both of these alternatives and other feasible alternatives will be presented in the EIS, with a recommendation to the Legislature in July 1996.

SUMMARY OF IMPACTS

CRITERION		IMPACT OF ALTERNATIVE		
		1	2	3
Air Quality				
1. Number of times that concentrations of carbon monoxide, hydrocarbons, nitrogen oxides, sulfur oxides and particulates would exceed standards.		0	0	0
Archaeological Resources				
2. Number of known archaeological properties potentially eligible for the National Register that would be disturbed.		4	4	4
Biotic Communities				
3. Number of species on federal list of endangered and threatened species (nesting bald eagles) that would be jeopardized.		0	0	0
4. Number of affected breeding territories of loggerhead shrikes (threatened species in Minnesota).		2	2	2
Bird-Aircraft Hazards	Spring Lake Area	0	0	0
5. Difference in monthly aircraft operations less than 500 feet over areas where birds congregate.	Gores Pool Wildlife Management Area	0	0	0
	Protected Wetland 341W	1,800	0	0
	Protected Wetland 340W	0	0	0
	Pine Bend Landfill	0	0	0
Farmland				
6. Number of farmsteads within the airport boundary.		44	43	35
7. Acres of prime farmland and farmland of statewide importance within airport boundary.		8,000	7,794	7,367
8. Acres of isolated, triangulated and severed farmland.		2,790	2,365	2,325
Floodplains				
9. Acres of floodplain lost to airport development that must be recreated.		230	160	320
Historic/Architectural Resources				
10. Number of known historic/architectural properties eligible for the National Register that would be demolished.		0	0	0
11. No. of known historic/architectural properties eligible for the National Register within the DNL 65+ noise contour.		1	0	0
Land Use				
12. Number of communities, within three miles of airport, potentially requiring changes in existing/planned land use.		5	5	5

CRITERION		IMPACT OF ALTERNATIVE		
		1	2	3
Noise				
13. Number of persons residing in the year 2005 DNL 65 + noise contour.	Douglas Twp.	5	15	5
	Hampton Twp.	0	0	0
	Marshan Twp.	70	60	110
	Nininger Twp.	<5	<5	<5
	Ravenna Twp.	0	0	0
	Vermillion Twp.	50	40	75
	TOTAL	130	115	195
14. Number of persons residing in the year 2005 DNL 60-65 noise contour.	Douglas Twp.	115	105	110
	Hampton Twp.	15	10	0
	Marshan Twp.	270	275	265
	Nininger Twp.	80	75	90
	Ravenna Twp.	15	15	10
	Vermillion Twp.	165	175	190
	TOTAL	655	660	670
15. Number of persons residing in the year 2005 $L_{10}65$ noise contour.		2,375	2,265	2,245
16. Number of noise sensitive land uses in year 2005 DNL 65 + noise contour.		1	1	1
Socioeconomic				
17. Number of residents displaced.		590	556	467
18. Number of households displaced.		173	163	137
19. Number of businesses and employees displaced.	Businesses	11	11	11
	Employees	242	242	242
20. Percentage of tax capacity lost by townships.	Marshan	31.8	28.4	20.4
	Vermillion	18.4	16.7	21.3
21. Percentage of tax capacity lost by School District 200.		3.29	2.95	2.66
22. Difference in estimated development costs (millions).		$29.8	$20.2	$0
Transportation Access				
23. Difference in impacts of potential roadway improvements due to airport.		0	0	0
Water Resources				
24. Difference in impacts of stormwater discharges to Vermillion River watersheds.		0	0	0
Wetlands				
25. Number of acres of wetlands filled.		0	0	0.2

I. PURPOSE AND NEED FOR ACTION

A. Purpose and Need for Action

The Purpose and Need section usually describes the proposed action and why it is needed. At this point in the Dual Track process there is no proposed action (federal or state). The Dual Track process (explained in Part C of this section) was enacted to compare the environmental effects, benefits and costs of expanding the existing airport vs. building a new replacement airport to satisfy the air transportation needs through the year 2020. The Minnesota legislature will determine what action is appropriate at the conclusion of the process.

The purpose of the Alternative Environmental Document (AED) is to present for public and agency review and comment the social, economic and environmental impacts that *differ* between the three New Airport Comprehensive Plan alternatives selected in the scoping process for further evaluation.

The need for this AED is found in 1989 Minnesota Statute, Section 473.616, Subdivision 3, New Airport; Site Selection; Comprehensive Plan — in which the Metropolitan Airports Commission (MAC or Commission) is mandated to select a site and prepare a comprehensive plan for a major new airport in the search area designated by the Metropolitan Council, by January 1, 1996. The Commission selected a site in March of 1994, and most of the issues and impacts presented in this document are a refinement of those addressed in the selection of the site.

B. Format of the Document

The AED is structured to facilitate understanding by the reviewing public and agencies. The usual format of a federal environmental document is to have separate chapters describing the affected environment and consequences of the issues and impact categories for the alternatives under consideration. These are combined in this document. Also, the figures (graphics) are placed at the end of the document in Appendix C. As shown in the table of contents, the general format is the following:

1. Purpose and Need for Action
2. Alternatives (under consideration and eliminated)
3. Issues and Impacts (of the alternatives under consideration); the issues/impacts are arranged alphabetically from A. Air Quality to M. Wetlands.

C. Background

The New Airport Comprehensive Plan is part of the airport planning legislation enacted by the Minnesota legislature in 1989 (known as the Dual Track Airport Planning Process). The purpose of the legislation is to determine whether the long-term air transportation needs of the metropolitan area and the state can best be met by enhancing capacity at Minneapolis-St. Paul International Airport (MSP) or by developing a replacement airport within the metropolitan area. The 1989 legislation specified actions for both the Metropolitan Council and the Metropolitan Airports Commission during the 1989-1996 planning period.

The following actions have since been taken:

1. The Metropolitan Council (MC or Council) amended its aviation plan in January, 1990 to include both airport improvements and enhancement of capacity at the existing Minneapolis-St. Paul International Airport (MSP) and the location and development of a new major airport — as alternatives for major airport development in the Metropolitan Area for the next 30 years.

2. The Council, in December 1991, designated the Dakota Search Area in Dakota County as the location for the planning and development of a new major airport. The process utilized by the Council in designating the search area was approved by the Minnesota Environmental Quality Board (MEQB) on October 18, 1990 as an alternative environmental review process.

3. The Metropolitan Airports Commission adopted in November, 1991, a long-term comprehensive plan for MSP.

4. The Commission submitted an alternative environmental review process for the Dual Track Airport Planning Process to the MEQB, which was approved on March 19, 1992.

5. A First Phase Scoping Report describing the Dual Track Airport Planning Process was prepared and made available for public and agency review on March 30, 1992. Three public meetings were held in April 1992 for public and agency comment. Responses to substantive comments were published in March 1993.

6. The Scoping Document and Draft Scoping Decision Document for the selection of a new airport site were prepared by MAC and made available for public and agency review on March 1, 1993. A public scoping meeting was held March 18 and the Scoping Decision Document, including responses to comments, was adopted by the Commission on June 21, 1993.

7. The Draft AED for the selection of a new airport site, including the identification of a preferred site, was adopted by MAC on September 20, 1993, for public/agency review and comment. A public hearing was held November 18 and the Final AED, including responses to comments, was approved by the Commission on January 27, 1994, for public/agency review and comment. The Commission determined the adequacy of the Final AED and selected Site 3 on March 21, 1994.

8. The Scoping Environmental Assessment Worksheet (EAW) and Draft Scoping Decision Document for the update of alternative comprehensive plans for MSP were prepared by MAC and made available for public and agency review on January 17, 1994. A public scoping meeting was held February 15 and the Scoping Decision Document was adopted by the Commission on March 21, 1994.

9. The Scoping EAW and Draft Scoping Decision Document for the development of alternative comprehensive plans at the New Airport Site 3 were prepared by MAC and made available for review and comment on April 25, 1994. A public scoping meeting was held May 12 and the Scoping Decision Document was adopted by the Commission on June 20, 1994.

10. The Draft AED for the selection of the MSP Long-Term Comprehensive Plan was prepared by MAC and made available on September 26, 1994 for public/agency review and comment. A public hearing was held on October 26, 1994. The Commission determined the adequacy of the Final AED and selected Alternative 6 on February 21, 1995.

11. The Draft AED for the selection of the New Airport Comprehensive Plan was prepared by MAC and made available on December 6, 1994 for public/agency review and comment. A public hearing was held on January 18 and the Final AED was approved by MAC on March 20, 1995 for public/agency review and comment.

Future actions:

12. MAC will determine the adequacy of the New Airport Final AED and select the New Airport Comprehensive Plan. (April 1995)

13. MAC, in concert with FAA, will prepare EIS scoping documents, hold a public meeting, and adopt a Scoping Decision Document on alternatives, including "no action," to meet the long-term air transportation needs in the Metropolitan Area. (July 1995)

14. MAC will prepare the Draft EIS in concert with FAA, hold public hearings, and prepare the State Final EIS. (February 1996)

15. The MEQB will determine the adequacy of the State Final EIS. (April 1996)

16. The MAC and MC will prepare a joint Report to the Legislature with recommendations and submit to the Minnesota legislature. (June 1996)

17. The Minnesota legislature will select the appropriate alternative (proposed action). (1997 ?)

18. The FAA will prepare the Federal Final EIS on the proposed action. (1997 ?)

II. ALTERNATIVES

A. General Description

The New Airport Comprehensive Plan includes the runways, taxiways, apron, internal roadways, terminal, concourses, people mover, building areas and treatment facilities that would be required to accommodate the future air transportation needs of the region. The location of the possible new major airport is shown in **Figure 1** in Appendix C.

B. Alternatives Under Consideration

The alternatives selected in the scoping process for further study and evaluation are Alternatives 1, 2, and 3 (see Scoping Decision Document, New Airport Comprehensive Plan, Dual Track Airport Planning Process, June 1994). Each alternative plan is situated within Site 3 — the site selected by MAC for the development of a possible new airport **(Figure 1)**. The alternatives are shown in **Figures 2, 3 and 4**. Each alternative has six runways — four main parallel runways oriented NW-SE, and two crosswind runways roughly perpendicular to the main runways. The location of the runways and associated taxiways affects the location of the airport support facilities (air cargo, maintenance, military, administrative, treatment, etc.).

Alternative 1

Alternative 1, shown in **Figure 2**, is the largest of the alternatives, encompassing about 9,560 acres. With some minor modifications, it is the same layout identified during the site selection process. The two sets of main parallel runways are staggered to reduce taxi times, while the runways within each set are also staggered to eliminate runway crossings. The runway spacing would provide for four simultaneous landings in poor weather conditions. In order to increase the percentage of time all six runways can be used, the two crosswind runways are moved away from the main parallel runways (this allows greater use of the crosswind runways during poor weather). The airport is laid out so aircraft land on the three runways on one side of the airport toward the terminal area, and depart away from the terminal area on the three runways on the other side of the airport. The symmetrical shape of the runway layout allows this "flow-through" system to operate in multiple directions.

Cargo facilities are located between the two west parallel runways and face west. Aircraft maintenance facilities are located on the western edge of the airport to allow for unrestricted building heights. Military facilities are located north of the east crosswind runway.

Alternative 2

This layout is similar to Alternative 1, except that the southern crosswind runway is moved closer to the terminal to reduce taxi times and decrease the size of the airport. A consequence of this move is that the utilization of the crosswind runways in tandem with the main parallel runways will be lower than under Alternative 1. Alternative 2 encompasses about 9,330 acres.

Alternative 3

This alternative is the smallest (8,640 acres) of the alternatives. The main sets of parallel runways, as well as the inboard runways within each set, are less staggered to reduce taxi times and land area. With the stagger reduced, some runway crossings may be required, and some other operational constraints may result.

Cargo facilities are shifted slightly east and face the east side of the airport. The location of the state safety zones on the north side of the field require military facilities to be moved to the east, making access to these facilities less convenient.

C. Alternatives Eliminated

The following alternatives were eliminated by MAC in the scoping process for the New Airport.

Runway Layout Concepts P and L

Early in the scoping process runway layout Concepts P, L and T were considered and evaluated. (Concept T was selected and incorporated in Alternatives 1, 2 and 3.) Concepts P and L, shown in **Figure 5**, were eliminated for the following reasons (see New Airport Comprehensive Plan Scoping Environmental Assessment Worksheet, MAC, April 1994 for evaluation of the concepts).

Concept P would have a slightly greater runway delay per operation than Concept T. At least one runway would have to accommodate a mixture of arrivals and departures in all operating configurations. A free-flowing configuration in which arriving and departing aircraft would be segregated would not be achievable in all modes. Another disadvantage is that flight path distances would be relatively high (34 miles per operation vs. 31 miles per operation for the T Concept), due to the lack of crosswind runways. Approximately 50 percent of the air traffic would have to traverse a large portion of terminal airspace to reach the opposite airspace gate or runway end. With no crosswind runways, the airport would have to close for an equivalent of 3 to 4 days a year due to a combination of strong crosswinds and snow/icing conditions.

Concept L has significant operational problems under less-than-favorable wind conditions (which would occur approximately 40 percent of the time). Aircraft would have long taxi distances and would have to cross under the flight paths of arriving aircraft. Average taxi distances would be approximately 9,900 feet per operation, the greatest of the three concepts. During periods of poor visibility, the airport would have to revert to operations in a single direction which would reduce capacity. Although this would occur only 3 to 4 percent of the year, it would result in a less than optimal configuration. Concept L would also have relatively high average flight path distances (34 miles per operation vs. 31 miles per operation for Concept T).

Alternative 4

Alternative 4 **(Figure 6)** was one of the four alternatives considered in the scoping process for the selected runway layout (Concept T). Alternative-4 was eliminated in the Scoping Decision Document, MAC, June 1994, because of operational inefficiencies resulting from trying to minimize the size of the site (Alternative 4 consisted of 7,350 acres compared to 9,800 acres for Alternative 1).

The elimination of runway staggers and the close proximity of the crosswind runways to the main runways result in several inefficiencies. First, aircraft landing or departing on the outboard runways (about one-third of all aircraft operations) would not have a clear route to/from the terminal as afforded by the other three alternatives. Instead, they would be required to cross active runways, resulting in numerous delays. Second, the elimination of runway stagger would also increase average taxi distances, because many aircraft would have to back-track on their route to/from the terminal.

Finally, the location of the crosswind runways would require higher cloud ceiling and visibility minima to operate the desired three-in/three-out flow-through system, reducing the percentage of time this most efficient operation mode could be used. More aircraft would have to fly past the airport to sequence themselves on the final approach course to one of the main parallels instead of flying directly to a crosswind runway — resulting in greater airspace distances and air pollution from jet exhaust than the other alternatives.

Alternative 4 is only about six percent smaller than Alternative 3. Its smaller size would not offset its significantly inferior operational characteristics.

For these reasons, and since there are three remaining alternatives with superior operational characteristics, Alternative 4 was eliminated from further study.

D. Preferred Alternative

(The Commission will select the preferred alternative after the close of the public comment period on the Final AED and determination of its adequacy in April 1995.)

III. ISSUES AND IMPACTS

As stated on p. I-1, the purpose of this AED is to present the social, economic and environmental impacts that are different between Alternatives 1, 2 and 3.

The issues and impact areas addressed in this section were identified in the Scoping Decision Document as having potentially substantive differences between the alternatives. Issues and impact areas that were identified as either not significant or the same for each alternative are:

Airport Financing
Electrical Energy
Energy Supply and Natural Resources
Glycol Deicing Treatment and Discharge
Induced Development
Mineral Resources
Off-airport impacts due to major roadway improvements and transmission line relocation
On-airport Construction Impacts
Public Parks, Recreation Land and Refuges
Regional Air Quality
Regional Transportation
Solid and Hazardous Waste Disposal
Visual Impacts
Wastewater Treatment
Water Supply
Wild and Scenic Rivers

The above impacts, where applicable, will be addressed in the EIS for the selected alternative.

A. Air Quality

A.1 Concepts and Definitions

Pollutants Considered

Criteria pollutants considered in this study are those for which ambient air quality standards have been established and which have been identified by the FAA as potentially critical pollutants.[1]

Carbon Monoxide (CO) is a common pollutant generated primarily from the incomplete combustion of fuels such as gasoline, coal, and wood. It is a colorless, odorless and tasteless gas that is slightly lighter than air.

Hydrocarbons (HC) otherwise known as Volatile Organic Compounds (VOCs) are compounds whose molecules include atoms of hydrogen and carbon. The gaseous state of these compounds that exist in the atmosphere also originate from the incomplete combustion of fuels and from volatile materials such as solvents and gasoline.

Nitrogen oxides (NOx) consist of nitric oxide (NO) and nitrogen dioxide (NO_2). NO is formed during high temperature combustion processes while NO_2 forms when NO reacts with atmospheric oxygen (O_2).

Sulfur oxides (SOx) consist primarily of sulfur dioxide (SO_2) which is a relatively stable, nonflammable, nonexplosive and colorless gas. Sulfur dioxide is generated during the combustion of any sulfur-bearing fuel and by many industrial processes that use sulfur-bearing raw materials.

Total Suspended Particulates (TSP) are any materials that exist as a solid or liquid in the atmosphere. Particulates discharged into the atmosphere may be in the form of fly ash, soot, dust, fog, fumes and the like. The most critical particulates from a health perspective are those which are less than 10 microns in size.

There are two major sources of pollutants — on-airport activity and off-airport motor vehicle traffic. The pollutant concentrations due to off-airport traffic are the same for each alternative and will not be addressed in the AED.

On-airport sources include aircraft and support equipment, motor vehicles, and stationary sources such as power plants, incinerators, and fuel storage facilities. Those aircraft operations which are the major contributors to ground level concentrations of pollutants are taxiing and queuing for takeoff although the takeoff roll also contributes a small amount. Emissions associated with aircraft support equipment are also taken into account. Emissions from motor vehicles occur on roadways as well as in parking lots and ramps on the airport. The distribution and level of activity by aircraft sources change for each of the new airport layout alternatives, although the roadway and parking sources remain the same. Aircraft operations and runway use change for each alternative.

While the location of other airport activity has been identified for each of the alternatives, the exact location and size of stationary sources including power plants, boilers, incinerators, and fuel storage facilities are not known at this time. Stationary source emissions will remain generally the same for each of the layout alternatives although some differences in pollutant concentrations at the receptor sites can be expected.

Methodology and Assumptions

On-airport sources are analyzed using the EDMS (Emission and Dispersion Modeling System) model which has been developed for use at civil airports and air force bases.[2] Model input for aircraft operations is limited to aircraft departures, with arrivals being factored into the program. For the evaluation of differential impacts between the new airport alternatives, peak-hour periods for each of the four runway operating modes (take-offs and landings based on wind direction) of the airport was assumed. The distribution of takeoffs by runway was provided by HNTB Corporation based upon a detailed operational analysis of the airport developed for use in the noise analysis. A total of 68 departures per hour were assumed for each alternative, with the number and type of aircraft varying by runway under each of the four operating modes. The taxi time for takeoffs was also specified for each runway and each alternative. An analysis of aircraft operations by type was performed to identify the primary aircraft contributing to airport emissions. Of the three major categories of aircraft (commuter, Stage 2 jet aircraft, and widebody), four prototype aircraft were selected to provide a conservative estimate of emissions and emphasize any differences among the alternatives and receptor sites. The aircraft types used in the EDMS model include the SF340 (representing commuter and general aviation turboprops), the DC9 (representing Stage 2 aircraft

and general aviation jets), the A300 (representing a major category of widebody departures) and the 757 (representing a second major category of widebody departures).

Motor vehicle traffic along the terminal roadway was taken from the Site Selection air quality study. Only the terminal roadways and terminal parking ramp were included in the analysis.

The EDMS model was used to generate total annual emissions of the five criteria pollutants (CO, HC, NOx, SOx, and TSP). Fifteen receptor sites for each alternative were identified from maps of structures and farmhouses located adjacent to each of the alternatives' layouts. Seven of these sites are the same for all three alternatives since the expected airport boundary does not change near these sites. Sites were selected to be as close as possible to the airport boundary and runways in order to identify the highest possible pollutant concentrations for each alternative. These receptor sites are shown in **Figure 7.**

For each of the operating modes, an average wind direction associated with the limiting wind directions for that mode were assumed. These are shown in **Table 1.**

TABLE 1 - Assumed Wind Directions by Operating Mode

OPERATING MODE	LIMITING WIND DIRECTION[1]	AVERAGE WIND DIRECTION[1]
A	345-065 °	25 ° (from NE)
B	245-345 °	295 ° (from NW)
C	065-165 °	115 ° (from SE)
D	165-245 °	205 ° (from SW)

[1]Measured clockwise from due north.

A.2 Affected Environment (Impacts on Air Quality)

Air Pollution Sources

Currently, the major air pollution sources in the study area are the Koch Refinery and nearby industrial sources. In addition to the potential impact by these sources, some impact from existing motor vehicles emissions in the study area can also be expected.

As part of the site selection study, carbon monoxide monitoring was carried out at two sites in the search area. One of these sites is located several miles west of the new airport site; the other, shown in **Figure 7,** is at the northeastern edge of Alternative 3.

TABLE 2 - Background CO Concentrations within the Study Area

MONITOR LOCATION	BACKGROUND	
	1-hour	8-hour
Site 1 (Coates)	1.3 ppm	1.0 ppm
Site 2 (Hastings)	1.2 ppm	0.9 ppm

1-Hour National Ambient Air Quality Standard: 35 ppm
Minnesota Ambient Air Quality Standards: 1-hour, 30 ppm; 8-hour, 9 ppm

Background concentrations from monitoring are not available for the other criteria pollutants. The background concentrations will not be estimated — since the AED is concerned with differences between the alternatives and the background concentrations are the same for each alternative.

Role of the New Airport within the State Implementation Plan

The State Implementation Plan (SIP) contains transportation control strategies to bring designated non-attainment areas into compliance with state and federal ambient air quality standards and to ensure future maintenance of ambient air quality standards. The new airport is not a part of the existing SIP. Regional roadways which will serve the new airport will be covered by the SIP insofar as they are part of local or regional transportation control measures.

A.3 Air Quality Impacts (Impacts on Air Quality)

Annual pollutant emissions for on-airport sources (aircraft, support equipment, and motor vehicle traffic) for Alternative 1, Operating Mode A from **Table 1**, are presented in **Table 3A**. These are estimated from peak-hour operations described above using simplified hourly, weekly and monthly "temporal factors". Thus, total emissions are estimated assuming a constant number of hourly operations throughout the year. While this clearly overstates total emissions, it provides the information needed to make a comparison among the alternatives. **Table 3A** is also useful in identifying the major on-airport source of each of the pollutants. **Table 3B** shows the difference in total emission of each pollutant relative to the value shown in **Table 3A**. From this table it can be seen that Operating Mode B and Mode D have slightly higher emissions than Mode A, while Mode C generally has slightly lower emissions. The most significant difference among the alternatives is the 8% decrease in NOx emissions between Alternative 1, Mode A and Alternative 2, Mode C. Because each operating mode is different, a simple comparison among the alternatives is not possible. However, with a maximum difference of 8% in total airport emissions, there is not a significant difference between the three alternatives.

TABLE 3A - Total On-Airport Emissions (2020)
Alternative 1, Mode A
(000 kilograms/year)

EMISSION SOURCE	CARBON MONOXIDE	HYDRO CARBONS	NITROGEN OXIDES	SULFUR OXIDES	PARTICULATES
ROADWAYS	1703.0	181.2	155.3	0.1	0.9
VEHICLE PARKING	47.1	5.3	1.3	0.0	0.0
GROUND SUPPORT	790.0	174.3	137.9	2.9	8.5
AIRCRAFT	3659.0	1381.5	2920.5	119.0	0.0
GRAND TOTAL	6200.0	1742.5	3215.0	122.1	9.4

TABLE 3B - On-Airport Emissions Relative to Alternative 1, Mode A (Table 3A)
(Percent difference)

	CARBON MONOXIDE	HYDRO-CARBONS	NITROGEN OXIDES	SULFUR OXIDES	PARTICULATES
ALTERNATIVE 1					
MODE A	0.0	0.0	0.0	0.0	0.0
MODE B	3.0	2.5	0.3	2.1	-0.2
MODE C	-3.1	-5.4	-0.3	-2.1	0.2
MODE D	1.7	4.8	1.9	2.3	1.2
ALTERNATIVE 2					
MODE A	0.0	0.0	0.0	0.0	0.0
MODE B	3.0	4.3	0.4	1.9	-0.2
MODE C	-3.0	-1.5	-8.0	-7.1	-5.4
MODE D	2.5	3.6	0.4	1.6	0.0
ALTERNATIVE 3					
MODE A	-0.8	-1.1	-0.1	-0.5	0.0
MODE B	2.1	3.0	0.2	-7.0	-0.2
MODE C	-0.9	-1.3	-0.1	-0.6	0.0
MODE D	1.8	2.5	0.3	1.1	0.0

Peak-hour pollutant concentrations from on-airport sources are presented for each of the four operating modes in **Table 4** through **Table 8**. The appropriate state and federal ambient air quality standards for each of the pollutants are also included in the tables. Background CO pollutant concentrations are included; no background concentrations are included for the other pollutants.

Carbon Monoxide

The 1-hour CO background concentrations at the receptor sites around the airport in the year 2020 can be estimated from the monitored CO concentrations by adjusting for areawide increases in traffic volumes and appropriate changes in vehicle emissions. The estimated 1-hour concentration with these adjustments is 4.2 ppm (4.7 mg/m^3). The corresponding 8-hour background concentration for these sites is 3.2 ppm(3.6 mg/m^3).

From **Table 4** the highest projected CO concentration of 6.4 mg/m^3 occurs at Receptor Site 5 **(Figure 7)** for Alternative 3. The next highest concentration (6.2 mg/m^3) occurs at Receptor Site 19 for all alternatives. All of the 1-hour concentrations shown in **Table 4** are well below the 1-hour standard of 35 mg/m^3.

TABLE 4 - 2020 Carbon Monoxide (CO) Concentrations[1]
1-Hour Average (mg/m^3)

Receptor Site	Alt. 1	Alt. 2	Alt. 3
1	4.7	4.7	4.7
2	4.9	4.9	4.9
3	4.8	*	*
4	5.1	*	*
5	*	4.8	5.7
6	*	*	4.7
7	4.7	5.0	*
8	*	4.8	*
9	*	*	6.4
10	5.1	4.7	4.7
11	4.8	4.8	4.8
12	5.7	5.6	5.6
13	5.1	5.1	5.1
14	5.2	5.6	*
15	*	*	5.8
16	4.7	4.7	4.7
17	4.7	4.8	*
18	*	*	4.7
19	6.2	6.2	6.2
20	5.1	5.1	*
21	*	*	5.6
22	*	*	5.1
23	4.9	4.9	*

[1] Includes background CO concentration of 4.7 mg/m^3

* Receptor removed by this alternative.

1-Hour National Ambient Air Quality Standard: 40 mg/m^3
1-Hour Minnesota Ambient Air Quality Standard: 35 mg/m^3
(mg/m^3 = milligrams per cubic meter)

Hydrocarbons

From **Table 5**, it can be seen that the highest Hydrocarbon concentrations are at Receptor Sites 9 and 15 from Alternative 3. These high Hydrocarbon concentrations are clearly due to aircraft operations on the runway close to these receptor sites.

A comparison with 1-hour Hydrocarbon standards is not appropriate, since none exist for this pollutant.

TABLE 5 - 2020 Hydrocarbon (HC) Concentrations
1-Hour Average ($\mu g/m^3$)

Receptor Site	Alt. 1	Alt. 2	Alt. 3
1	0	0	0
2	28.5	28.5	28.3
3	15.4	*	*
4	53.1	*	*
5	*	15.4	237.0
6	*	*	7.9
7	5.6	53.1	*
8	*	58.9	*
9	*	*	682.0
10	139.0	0	0
11	34.8	34.8	32.5
12	103.0	103.0	103.0
13	45.1	45.1	45.1
14	215.0	366.0	*
15	*	*	418.0
16	0	1.9	1.8
17	16.1	32.8	*
18	*	*	7.7
19	179.0	179.0	179.0
20	173.0	172.0	*
21	*	*	131.0
22	*	*	61.4
23	54.5	54.5	*

* Receptor removed by this alternative.

1-Hour National Ambient Air Quality Standard: none
($\mu g/m^3$ = micrograms per cubic meter)

Nitrogen Oxides

From **Table 6**, it can be seen that NOx concentrations are a maximum at Receptor Sites 9 and 15 due to Alternative 3. This pollutant exhibits similar patterns as shown for Hydrocarbons in **Table 5.**

Since NO_2 concentrations are normally approximately one-fourth of total NOx, all of the concentrations are well below the World Health Organization 1-hour recommended limit for NO_2 of 1000 $\mu g/m^3$. The maximum expected NO_2 concentration using this ratio would be about 600 $\mu g/m^3$ at Receptor Site 9 due to Alternative 3.

TABLE 6 - 2020 Nitrogen Oxide (NOx) Concentrations
1-Hour Average ($\mu g/m^3$)

Receptor Site	Alt. 1	Alt. 2	Alt. 3
1	0.1	0.1	0
2	33.4	33.4	21.0
3	16.1	*	*
4	138.0	*	*
5	*	16.1	351.0
6	*	*	19.1
7	15.0	138.0	*
8	*	154.0	*
9	*	*	2,380.0
10	379.0	0.1	0
11	115.0	115.0	109.0
12	67.0	67.0	62.7
13	32.9	32.9	32.9
14	1,020.0	1,220.0	*
15	*	*	1,730.0
16	1.2	6.2	5.0
17	40.0	56.4	*
18	*	*	29.0
19	199.0	199.0	203.0
20	370.0	361.0	*
21	*	*	123.0
22	*	*	124.0
23	143.0	143.0	*

* Receptor removed by this alternative.

1-Hour National Ambient Air Quality Standard: none
($\mu g/m^3$ = micrograms per cubic meter)

Sulfur Oxides

From **Table 7**, it can be seen that the highest concentrations of SOx are projected again for Receptor Site 9 and Receptor Site 15 due to Alternative 3.

However, all of the projected 1-hour concentrations of total SOx are well below the 3-hour SO_2 standard of 1300 $\mu g/m^3$, so there is little likelihood that the 3-hour standard could be exceeded.

TABLE 7 - 2020 Sulfur Oxide (SO_x) Concentrations
1-Hour Average ($\mu g/m^3$)

Receptor Site	Alt. 1	Alt. 2	Alt. 3
1	0	0	0
2	0.3	0.3	0
3	0.1	*	*
4	2.7	*	*
5	*	0.1	10.7
6	*	*	0.6
7	0.4	2.7	*
8	*	4.6	*
9	*	*	65.2
10	12.0	0	0
11	3.2	3.2	3.0
12	0.1	0.1	0
13	0	0.1	0.1
14	25.8	34.0	*
15	*	*	45.3
16	0	0.2	0.1
17	1.2	2.0	*
18	*	*	0.8
19	4.1	4.1	4.2
20	12.0	11.8	*
21	*	*	1.9
22	*	*	2.8
23	4.2	4.2	*

* Receptor removed by this alternative.

1-Hour National Ambient Air Quality Standard: none
3-Hour National Ambient Air Quality Standard for *Sulfur dioxide (SO_2):* 1300 $\mu g/m^3$
($\mu g/m^3$ = micrograms per cubic meter)

Particulates

In **Table 8**, it can be seen that particulate concentrations at all of the receptor sites are estimated to be small and well below the 24-hour standard of 150 $\mu g/m^3$. Therefore, particulates provide little useful information for making comparisons among the alternatives.

TABLE 8 - 2020 Particulate Concentrations
1-Hour Average ($\mu g/m^3$)

Receptor Site	Alt. 1	Alt. 2	Alt. 3
1	0	0	0
2	0.1	0.1	0.1
3	0.1	*	*
4	0.1	*	*
5	*	0.1	0.2
6	*	*	0
7	0	0.1	*
8	*	0	*
9	*	*	0
10	0	0	0
11	0	0	0
12	0.3	0.3	0.3
13	0.2	0.2	0.2
14	0	0	*
15	*	*	0
16	0	0	0
17	0	0	*
18	*	*	0
19	0.6	0.6	0.6
20	0	0	*
21	*	*	0.3
22	*	*	0.1
23	0	0	*

* Receptor removed by this alternative.

1-Hour National Ambient Air Quality Standard: none
24-Hour National Ambient Air Quality Standard: 150 $\mu g/m^3$
($\mu g/m^3$ = micrograms per cubic meter)

B. Archaeological Resources

The National Register of Historic Places, established in accordance with the National Historic Preservation Act of 1966, lists "districts, sites, buildings, structures and objects significant in American history, architecture, archaeology, engineering and culture". Administered by the National Park Service in the U.S. Department of the Interior, it extends federal recognition also to properties of local and State significance. Eligible properties must:

A. be associated with events important to broad patterns of history;

B. be associated with the life of an important person;

C. represent a type, period, or method of construction; or be the work of a master; or express high artistic values; or

D. yield, or be likely to yield, information important in prehistory or history.

Such properties should also retain considerable physical integrity; i.e., in the case of archaeological sites, an intact soil matrix that ensures reasonable preservation of spatial and temporal relationships within the cultural deposit.

Archaeological properties are usually considered under Criterion D. Criterion A and, in exceptional cases, Criterion B, may be applied to certain archaeological properties dating from the 17th to early 20th centuries. In addition, specific localities — often distinctive geographic features — can be considered significant under Criterion A if they are of traditional cultural importance because of the role they play/have played in "a community's historically rooted beliefs, customs, and practices". Such a traditional cultural property may have an archaeological component but may also derive its significance primarily from the cognitive values associated with its landscape features.

National Register properties are also classified as Section 4(f) lands. Section 4(f) of the Department of Transportation Act of 1966 prohibits the Secretary of Transportation from approving a project which requires the use of any publicly-owned land at a public park, recreation area, or wildlife and waterfowl refuge, or any land at an historic site of national, state or local significance unless there is no feasible and prudent alternative. The determination of significance for such land is made by the officials having jurisdiction over the property. Furthermore, the determination of significance must consider the entire property and not simply the portion of the property being used for the proposed project.

B.1 Affected Environment; Impacts on Archaeological Resources

Archaeological Properties

Adverse impact to archaeological properties is caused primarily by ground disturbing activity. Consequently, the Area of Potential Effect (APE) includes all lands to be acquired for the new airport as well as lands affected by the construction of utilities and airport access roads and by concomitant improvements to the surrounding roadway system. The present study has focused on the lands contained within the projected acquisition boundaries for each of the three alternatives (**Figures 2, 3 and 4**). Inventory survey of future alignment changes in the surrounding roadways and utilities will need to be completed when such plans have become more definite.

Section 106 of the National Historic Preservation Act charges federal agencies with the responsibility of identifying and protecting all significant historic properties that would be adversely impacted by federally funded or licensed projects. A 1993 reconnaissance survey within Site 3 identified eight archaeological sites that appeared to need further assessment for National Register eligibility.[3] Subsequently, Site 3 boundaries were somewhat modified in order to accommodate appropriate siting of the three airport alternatives. As a result, additional land had to be subjected to reconnaissance survey in 1994, with negative results. Changes to the APE boundary also added one potentially eligible National Register archaeological property to Site 3 (originally identified in adjacent Site 2), while one of the original eight properties, recorded in 1993, is no longer within Site 3.

As the purpose of this document is to compare the differential impacts of the three alternatives, the discussion will focus on cultural resources that exist only within one or two of the three alternatives. Four of the above-mentioned eight archaeological properties are located only within Alternatives 1 and 2, and therefore are evaluated in this AED. For ease of reference to the technical report prepared for the 1993 investigation[3], they are identified by their original field numbers which refer to their location by township and section. All have now been evaluated for National Register eligibility.

> 114-18-11:1 — a small Native American use area on a wooded ridge east of the Vermillion River and northeast of the city of Vermillion, within Alternatives 1 and 2. Reconnaissance testing yielded a few lithic flakes in 1993. Intensive testing in 1994 proved largely negative and the site has been classified as a very sparse lithic scatter which has minimal research potential and therefore fails to meet National Register criteria of eligibility.
>
> 114-18-11:2 — a farmstead shown on late 19th century plat maps on a ridge east/southeast of the Vermillion River, within Alternatives 1 and 2. Only the depression left by the main house is still somewhat visible but has been severely impacted by landscaping for a new residence. The lack of physical integrity has rendered the site ineligible.
>
> 114-18-12:1 — a small Native American use area on a terrace north of the Vermillion River, in Alternatives 1 and 2. Evaluative survey has indicated that the site is too sparse and too disturbed by cultivation and soil erosion to offer further research potential. It therefore fails to meet National Register criteria.
>
> 114-18-12:2 — an 1890s homestead built on a terrace north of the Vermillion River, in Alternatives 1 and 2. Abandoned for several decades, it lacks above-surface remains; the main home site has been filled in and its foundations disturbed in the process. Evaluative testing failed to retrieve any significant subsurface evidence connected with the occupation of the property. Consequently, the property lacks the integrity and research potential necessary to meet National Register criteria.

The remaining four properties, common to all three alternatives as shown in **Figure 8**, will be evaluated during 1995 and discussed in the EIS.

Chimney Rock

As a natural feature, this rock formation was recognized as a significant landmark by early Euro-American explorers and settlers as well as by later residents-of/visitors-to Dakota County. It also appears to have been of more long-standing significance to Native Americans of the region, both as a landmark for travel, as a lookout, and as a source of red pigment (vermillion) found in the seams of the sandstone. One of a small number of such formations -- and one of the best preserved -- it should be considered eligible for the National Register as a geographic feature of historic and cultural significance.

There is no written or oral information to support the notion that Chimney Rock has-been/continues-to-be a feature of spiritual significance to the Native Americans of the area. Such

a function had been suggested by several concerned Dakota County residents during the initial airport site selection process (though not by any members of the Native American community). Consequently, this property could not be considered eligible for the National Register in the category of Traditional Cultural Property, i.e., in this case, "a location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world" and/or "a location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice" (U.S. Department of the Interior, National Park Service, National Register Bulletin #38).

B.2 Impacts

Archaeological Properties

Four of eight affected archaeological properties have been found ineligible for the National Register. The remaining four, common to all three alternatives **(Figure 8)**, will be evaluated in 1995.

Chimney Rock

Located approximately 500 meters south of Alternatives 1 and 2 and 800 meters south of Alternative 3, the rock formation would not suffer direct physical impact from either. Visual and noise intrusion could still be considerable. In all three cases, there will be a runway and flight corridor approximately a mile to the east/northeast. In the case of Alternatives 1 and 2, there will be another runway and flight corridor approximately half-a-mile to the north; for Alternative 3, the corresponding distance is approximately three-quarters of a mile.

As a geographic landmark of historic and cultural significance, Chimney Rock has been and continues to be of interest primarily because of its distinctive physical characteristics as an eroded, rocky extension of a larger, limestone-capped plateau to the northwest, surrounded by several acres of former prairie that now supports fairly young oak forest. No doubt, it would also have served as a lookout point. However, while it still offers a view of the surrounding landscape, the latter has already been irrevocably altered from open prairie to intensively used farmland which, in turn, is being impacted to the north and east by incipient suburban development. In view of the above, it can be argued that the larger visual context of Chimney Rock has lost its integrity but that the feature itself, along with its immediate setting which could be restored to a more open grassland environment, constitutes a property that meets National Register criteria in the category under discussion. As such, however, it is located outside the area of potential effect that has been delineated for each of the three airport plan alternatives.

Visual and noise intrusions would have been of definite concern if Chimney Rock had proven itself to be eligible for the National Register as a traditional cultural property. As mentioned, however, neither written records, nor interviews with representatives of the Prairie Island Dakota Community have indicated such a role for the rock formation. When traced to their source, references made by some local, Euro-American residents to the traditional spiritual significance of this site proved to be cases of mistaken identity -- mistakes caused by a tendency to confuse Chimney Rock (as well as Lone Rock further west in the original study area) with more widely known Castle Rock in southern Dakota County. The latter is a locality which <u>has</u> played an important role in Dakota history under the name of In-Yan Bo-sda-ta or Standing Rock.

Dakota County contains over 20 percent of the known statewide loggerhead shrike breeding territories with about one-third being within the Search Area. Two known shrike breeding territories are located within the alternatives. The MCBS recommended that: (1) shrike breeding territories be avoided if possible in the selection of the new airport site (2) that territories be avoided if possible in the internal design (comprehensive plan) of the selected site and (3) that MAC acquire and manage alternative breeding territories for shrikes elsewhere in Dakota County to offset any unavoidable impacts to shrike territories. The MCBS also suggested the long-term monitoring of loggerhead shrike populations in Dakota County.

The MCBS also recommended that the AED include an investigation of the potential impact of future air traffic upon bald eagles (Haliaeetus leucocephalus) and colonial waterbirds along the Mississippi River. The Mississippi River in the Spring Lake-Hastings-Red Wing area has long been recognized as an important migration corridor and winter feeding/night roosting area for bald eagles. However, since the mid-1980s this area has also become recognized as an important eagle nesting area. Colony-nesting birds, such as herons, egrets, and cormorants have also established traditional nesting rookeries in a number of locations along the Mississippi River between St. Paul and Red Wing.

The Northern States Bald Eagle Recovery Plan was prepared in 1983 and identifies as "essential habitat":

(1) Breeding habitat, including all potential and occupied breeding areas;

(2) Locations perennially used by adult or immature non-breeding eagles during the breeding or post-breeding period;

(3) Wintering areas used annually by 15 or more eagles for two weeks or longer along the Mississippi River; and

(4) Locations used by wintering bald eagles during periods of extremely harsh weather, when suitable feeding and night roost sites are limited in number.

Based on coordination with the U.S. Fish and Wildlife Service (USFWS) and Minnesota Department of Natural Resources (MDNR), no essential habitat for bald eagles exists within the alternative. However, a number of areas have been identified as possible essential habitat along the Mississippi River corridor adjacent to the Search Area. Over the last 10-12 years, bald eagle activity appears to have increased significantly in the Mississippi River corridor between St. Paul and Red Wing. While the river corridor proper lies entirely outside the alternatives and Search Area, it is in close-enough proximity to analyze the potential for aircraft noise and disturbance impacts upon eagles.

In analyzing the potential for aircraft noise and disturbance impacts to essential bald eagle habitat, nest locations and traditional winter night roosts have been given priority because: (1) eagles are most traditional about these sites, (2) these sites have the most narrowly defined characteristics and (3) these sites are most critical to the ongoing recovery and maintenance of bald eagle populations. Winter feeding concentration areas have also been identified and analyzed, though the use of these areas is highly transitory and depends largely on changing ice conditions.

The MDNR Non-game Wildlife Program staff maintains up-to-date information on the locations and status of bald eagle nests, winter night roosts and winter feeding concentration areas. As of the winter of 1992-93, there were 6 bald eagle nests between St. Paul and Red Wing, 4 of which are in relatively close proximity to the Search Area. One new nest was built in the fall of 1992 at River Mile 822.5 in Spring Lake; a pair of eagles were incubating eggs in this nest during the spring of 1993. A second nest exists on Lake Rebecca immediately below the Hastings dam. This nest has existed for several years and was also active during the 1993 breeding season. Two nests also exist along the Dakota-Goodhue County border near Mud Hen Lake in the Gores Pool Wildlife Management Area. The potentially affected nests are shown on **Figure 11.**

The only traditional winter night-roosting sites located near enough to the Airport Search Area to be potentially affected are located in the Eagle Point and Big River Coulees on the Wisconsin side of the Mississippi River about five miles southeast of the Search Area. These coulees provide mature roosting trees and are topographically sheltered from northwest winds. The entire stretch of the Mississippi River that circumscribes the north and east sides of the Search Area receives feeding use by wintering eagles when ice conditions permit. However there are several known areas where feeding eagles consistently congregate during the winter due to favorable ice conditions and food availability. These locations are; (1) the tailwater area immediately downstream of the Hastings dam, (2) the confluence of the St. Croix and Mississippi Rivers at Prescott, Wisconsin, (3) Trumpeter Valley and (4) the eastern shorelines of North and Sturgeon Lakes between Hastings and Prairie Island.

None of the information obtained from the MDNR (see New Airport Site Selection Study, Final AED, Appendix A), indicated any bald eagle nests, night roosts or winter feeding concentration areas to exist within 10,000 feet of a runway end for any of the three alternatives for the selected site. The nest closest to a runway end under any alternative is about 23,000 feet (about 4.4 miles) away. Known night-roosting locations are even more distant from the nearest runway end, ranging approximately from 34,000 to 42,500 feet (6.4 to 8.0 miles) away, depending on the alternative. Winter feeding concentration areas are all at least as far from the runway ends for the three alternatives as the nearest nest.

C.2 Impacts and Mitigation Measures (Biotic Communities)

C.2.1 Threatened and Endangered Wildlife Species

Loggerhead shrikes (state threatened/federal candidate) are the only rare, threatened or endangered wildlife species known to exist within the boundaries of the 3 alternatives for the selected site. The breeding habitat characteristics of loggerhead shrikes are not well known but appear to consist mainly of open grassland with scattered clusters of small trees and shrubs for nesting sites. Given the current state of knowledge regarding loggerhead shrikes, it is only possible to state whether a given alternative would directly affect a location where breeding shrikes have been observed. The size and precise character of loggerhead shrike breeding territories is not currently known.

At the end of the 1992 field season, the MCBS reported a total of 8 known loggerhead shrike breeding territories within the Search Area. In order to improve upon pre-existing information on loggerhead shrikes in the Search Area, the MDNR Nongame Wildlife Program has undertaken

additional field investigations during the summer of 1993 to monitor and map loggerhead shrike breeding territories. The preliminary results of this field investigation have added one additional known shrike territory to the Search Area for a total of nine territories (Steve Kittleson, MDNR, pers. comm.). Sixteen other territories were found within Dakota County but outside the Airport Search Area.

Each alternative encompasses two locations where breeding loggerhead shrikes have been observed. One territory is centered in a location where grading is likely to be minimal while the other will be directly affected by construction of the terminal building. While one territory may not be directly affected by grading, there is some question as to whether it will remain viable since it would lie between two active runways and will be subject to considerable human activity and aircraft noise. All three alternatives would have identical impacts on these two breeding territories.

Given their locations, there is little that could be done to avoid direct impacts to the two identified shrike territories within the selected alternative. It appears that all mitigation measures would need to occur along the fringes of the airport property or off-site. Mitigation for unavoidable impacts may be available in the form of acquisition of nesting territories which lie on nearby lands. Other potential mitigation options include easements for habitat management in known off-site breeding territories, and landowner education programs.

C.2.2 Bald Eagles

The distances between runway ends and essential bald eagle habitat components are considerable. However, a more detailed analysis has been carried out to evaluate the potential for noise and disturbance impacts to bald eagles. The relative potential for adverse aircraft noise and disturbance impacts upon eagles has been analyzed for each of the three alternatives based on: (1) the distance and heading of the nearest runway for each alternative versus the eagle habitat component being analyzed, (2) the approximate altitude of various common aircraft types as they would pass nearest the eagle habitat component being analyzed and (3) approximate disturbance thresholds for nesting, feeding and night-roosting eagles based on the scientific literature.

The scientific literature on bald eagles does not provide any firm, research-based distance thresholds, which, if transgressed by aircraft, would necessarily result in adverse reproductive or bioenergetic impacts to nesting or night-roosting eagles. The distance thresholds used in the following analysis are based on research on observable disturbance responses (i.e., flight from perches/nests, visible agitation, etc.) and are used only for comparing the potential for impacts between the various alternatives. For purposes of this analysis, a 1,875-foot aircraft-exclusion threshold described in research conducted on riparian eagle nests in Arizona has been used. The basis for this distance threshold and the significance of altitude and distance in relation to essential bald eagle habitat is discussed in Appendix A.

In addition to this threshold, both the U.S. Fish and Wildlife Service and the National Park Service have Memoranda of Agreement with the FAA setting forth a guideline that flights over national wildlife refuges and lands administered by the National Park Service be limited to 2,000 feet above ground level (AGL) or higher. This 2,000-foot altitude does not appear to represent a definitive wildlife impact threshold; rather it appears to be a negotiated threshold above which all the signatory agencies agree that the potential for wildlife disturbance impacts is acceptable.

No eagle nests lie on U.S. Fish and Wildlife Service or National Park Service lands in near enough proximity to the Search Area for this threshold to be exceeded.

Tables 9, 10 and 11 describe the proximity of runways and flight tracks for Alternatives 1, 2 and 3 in relation to essential bald eagle habitat components. All of the bald eagle nests and winter night roosting sites lie in excess of 22,400 feet (4.2 miles) from the nearest runway end. None of the aircraft operations projected for any alternative would occur within 1,875 feet (straight-line distance) from essential bald eagle habitat along the Mississippi River. Under any of the 3 alternatives, all departing aircraft will be in excess of 3,975 feet from the nearest bald eagle nest or winter night roosting area. Approach flight tracks flying over Spring Lake and Gores Pool Wildlife Management Area will pass closer to such areas; however, none of these tracks will pass closer than about 1,923 feet from the nearest bald eagle nest or winter night roosting area. As mentioned above, distance estimates for approach flight tracks should be relatively accurate since straight-in approaches are required for all arrivals.

Under all 3 alternatives, the nest located on Spring Lake lies equidistant from, and about 2,000 horizontal feet from, the approach flight tracks of the nearest runway. Aircraft approaching on these tracks will be about 1,750 and 1,875 feet above ground level, respectively, when flying past the nest. Thus, the straight-line distance between aircraft on these approach tracks and the nest will be approximately between 2,660 and 2,740 feet. Between 5,500 and 5,610 approaches per month would occur on these two tracks together, depending on alternative. The approach flight track for the eastern cross-wind runway passes above the eagle winter night roost at a straight-line distance of between about 1,923 and 2,060 feet. Depending on the alternative, between 2,260 and 2,270 monthly approaches would occur on this flight track.

TABLE 9 - Alternative 1: Relationship of Aircraft Movements to Essential Bald Eagle Habitat

		Relationship to Nearest Approach Flight Track		Relationship to Nearest Departure Flight Track	
Habitat Feature[a]	Dist. to Nearest Runway End	Horizontal Distance (ft)	Altitude (feet AGL)	Horizontal Distance (ft)	Altitude (feet AGL)
Nest 1	33,600	2,000[b]	1,750[c] 1,875[d]	2,000	4,500
Nest 2	22,400	10,400	1,310	6,400	4,250
Nests 3&4	30,000	4,000	1,580	4,000	4,000
Nest 5	38,400	5,600	2,790	6,400	5,400
Night Roosts	38,000	1,000	1,800	1,000	4,875

[a] Nest 1 - Spring Lake; Nest 2 - Lake Rebecca; Nests 3 and 4 - Gores Pool Wildlife Management Area; Nest 5 - Clear Lake; Night Roosts - Eagle Point and Big River Coulees.
[b] Nest 1 is approximately equidistant to and between two parallel approach flight tracks.
[c] Runway 16L/33R north approach.
[d] Runway 15L/33R north approach.

TABLE 10 - Alternative 2: Relationship of Aircraft Movements to Essential Bald Eagle Habitat

		Relationship to Nearest Approach Flight Track		Relationship to Nearest Departure Flight Track	
Habitat Feature[a]	Dist. to Nearest Runway End	Horizontal Distance (ft)	Altitude (feet AGL)	Horizontal Distance (ft)	Altitude (feet AGL)
Nest 1	33,600	2,000[b]	1,750[c] 1,875[d]	2,000	4,500
Nest 2	23,415	2,025	1,350	6,400	4,250
Nests 3&4	38,175	1,020	1,620	2,040	4,110
Nest 5	38,400	5,600	2,790	6,400	5,400
Night Roosts	38,000	1,000	1,800	1,000	4,875

[a] Nest 1 - Spring Lake; Nest 2 - Lake Rebecca; Nests 3 and 4 - Gores Pool Wildlife Management Area; Nest 5 - Clear Lake; Night Roosts - Eagle Point and Big River Coulees.
[b] Nest 1 is approximately equidistant to and between two parallel approach flight tracks.
[c] Runway 16L/33R north approach.
[d] Runway 15L/33R north approach.

TABLE 11 - Alternative 3: Relationship of Aircraft Movements to Essential Bald Eagle Habitat

		Relationship to Nearest Approach Flight Track		Relationship to Nearest Departure Flight Track	
Habitat Feature[a]	Dist. to Nearest Runway End	Horizontal Distance (ft)	Altitude (feet AGL)	Horizontal Distance (ft)	Altitude (feet AGL)
Nest 1	33,600	2,000[b]	1,750[c] 1,875[d]	2,000	4,500
Nest 2	26,470	11,710	1,380	11,707	1,750
Nests 3&4	38,175	2,040	1,620	2,040	4,110
Nest 5	45,525	8,150	1,620	9,170	4,110
Night Roosts	45,125	1,020	1,630	0	3,975

[a] Nest 1 - Spring Lake; Nest 2 - Lake Rebecca; Nests 3 and 4 - Gores Pool Wildlife Management Area; Nest 5 - Clear Lake; Night Roosts - Eagle Point and Big River Coulees.
[b] Nest 1 is approximately equidistant to and between two parallel approach flight tracks.
[c] Runway 16L/33R north approach.
[d] Runway 15L/33R north approach.

None of the approach or departure flight tracks for any of the alternatives being considered involve operations closer than 1,923 feet from the nearest bald eagle nest or winter night roost. Thus, none of the operations associated with the 3 alternatives for Site 3 would occur below the 1,875-foot aircraft exclusion threshold discussed earlier in this section and in Appendix A. Also, all three alternatives have essentially identical characteristics with regard to the proximity of flight tracks to essential bald eagle habitat components and the numbers of operations on those

tracks. Thus, none of the alternatives have significant potential for causing adverse noise and disturbance impacts to bald eagles.

Under all alternatives, several of the approach tracks pass within approximately 2,000 feet of either a bald eagle nests or winter night roosting areas. There is little that can be done to alter these flight tracks, since a straight-in approach is required and altering the runway headings would redirect air traffic over or near the Koch Refinery and/or the cities of Hastings, Farmington or Lakeville.

In each of the alternatives, refinements have already been made to the distribution of aircraft operations as compared to those originally projected for Site 3 (see Section IV, J.3 of the Final AED for New Airport Site Selection Study). These refinements serve to reduce further the potential for impacts to bald eagles by reducing the number of operations passing in proximity to the nests located in Spring Lake and the Gores Pool Wildlife Management Area. Thus, some of the mitigation measures outlined in the Site Selection AED have already been incorporated into the three alternatives under consideration. While seasonal shifts in runway usage might still be considered to reduce further the potential for disturbance impacts, the operational characteristics of all three alternatives appear to have little potential for adverse impacts requiring mitigation.

If seasonal operational shifts are undertaken, some air traffic could be shifted from the westernmost north-south parallel runways to the easternmost north-south parallel runways during periods when the Spring Lake nest is active. Ongoing coordination with the MDNR Non-game Wildlife program would ensure that adjustments would be made to such mitigation measures in the event that new nests are constructed or existing nests are abandoned or destroyed.

D. Bird-Aircraft Hazards

D.1 Affected Environment

There are a number of habitat features in and around the alternatives which represent attractions to birds which could ultimately conflict with future airport operations. An inventory of habitat components and bird travel corridors which could generate future problems was developed early in the New Airport Site Selection process. This inventory identified land uses and landforms likely to attract concentrations of birds within 26,400 feet (5 miles) of the Airport Search Area; this inventory included large wetland complexes, wildlife management areas, active landfills, and areas where migrating waterfowl and geese were known to stage and feed. Previously identified bird concentration areas that are associated with dismissed candidate sites have not been discussed in this analysis. These areas include the northwest corner of Empire Township and the Empire wetland complex immediately east of Farmington.

Since the development of this inventory, additional field data have been collected to assess degree of bird use in locations potentially affecting the selected alternative. Field observations were obtained during the 1994 spring and fall migration periods when numbers of migratory waterfowl and gulls would be highest (see **Appendix A**). Data were also collected on flight patterns to the degree such patterns could be identified. Based on these investigations, the following habitat features or land uses have been investigated as potential attractants for concentrations of birds:

Spring Lake and Spring Lake Park Reserve District:

The Spring Lake area has been identified as a major Canada Goose wintering area along the Mississippi River corridor adjacent to the Airport Search Area. Wintering geese move between Spring Lake, the Shiely Gravel Mine pits on Grey Cloud Islands and Lake Rebecca Park. The Spring Lake area also receives substantial waterfowl use during migration periods. There is a pending Corps of Engineers proposal to improve waterfowl habitat within Spring Lake by disposing of dredge spoil in locations that would improve the distribution of waterfowl habitat within Spring Lake. This status of this proposal remains uncertain. Spring Lake receives a considerable amount of use by ring-billed gulls during migration periods. Over 350 gulls were observed on the lake on October 15, 1994; it was evident that these birds were habitually trading between Spring Lake and Pine Bend Landfill.

Shiely Gravel Pits on Grey Cloud Island:

Roughly 3,000 geese over-winter in the Sheily Gravel Mine pits on Grey Cloud Island. During November and December this area also receives heavy use by several thousand migrating ducks. Due to the relative inaccessibility of this area, field observations were not obtained during 1994.

Lake Rebecca Park:

Lake Rebecca and Lake Rebecca Park are used by the geese wintering in the Spring Lake area as well as a variety of other waterfowl species during migration periods. About 166 waterbirds were observed on Lake Rebecca on April 9/10, 1994 including 42 mallards and over 50 double-crested cormorants.

Gores Pool Wildlife Management Area:

Gores Pool Wildlife Management Area is a 2,679-acre area of Mississippi River bottoms extending from 3 miles south of Hastings to just north of Red Wing. Gores Pool lies at the upstream end of North Lake, which is a reservoir created by Lock and Dam No. 3 at the south end of Prairie Island. This area contains little upland and encompasses a very diverse complex of riverine and palustrine emergent, forested, scrub shrub and unconsolidated bottom wetlands. Because of its extensive wetland resources and position along a major migration flyway, the management of Gores Pool Wildlife Management Area emphasizes waterfowl.

Vermillion River Heronry:

The Vermillion River heronry is located at the northern mouth of the Vermillion River approximately 3 miles northeast of the Airport Search Area. This great blue heron and great egret (Casmerodius albus) colonial nesting area was first identified in 1955 when it had 255 nests. A total of 816 nests were observed during a 1992 winter nest count (**Appendix A**) This area is under private ownership but public acquisition of this area is currently being explored. No detailed study has been performed on the feeding movements of birds using this rookery; however, on the Minnesota side of Mississippi River, the relative scarcity of undrained emergent wetlands suggests that the daily feeding movements of these birds would be concentrated around the river corridor. The Gores Pool Wildlife Management Area is one area that is likely to receive a substantial amount of feeding use because of its very extensive and diverse complex wetlands and backwater areas. The Spring Lake area also appears to be an important feeding area due to its numerous islands and backwaters.

State Protected Wetland 341W:

State Protected Wetland 341W has been identified as a possible bird-aircraft hazard due to its close proximity to runways associated with the alternatives. Based on NWI data, this wetland complex totals approximately 21.72 acres in size and is composed of ditched seasonally to semi-permanently flooded emergent and scrub shrub wetlands (PEMCd, PEMFd, and PSS1C; Circular 39 Types 3, 4 and 6 shallow marsh, deep marsh and shrub swamp). Protected Wetland 341W receives heavy feeding use by geese and ducks during spring migration periods. Several hundred tundra swans (Cygnus columbianus) have been observed feeding in this wetland complex during the spring. About 245 ducks, geese and gulls were observed on protected wetland 341W on April 9/10, 1994.

State-Protected Wetland 340W:

State-protected wetland 340W lies about 1 mile north of Vermillion and was not identified as a major bird attractor during earlier phases of the New Airport Site Selection process. However, field observations during 1994 indicate that this wetland receives considerable waterfowl use during migration periods. About 231 ducks, geese and gulls were observed on protected wetland 340W on April 9/10, 1994.

Pine Bend Landfill:

The Pine Bend Landfill was not identified as a major bird concentration area by any of the agencies contacted. It was originally analyzed because active landfills commonly attract concentrations of herring gulls (Larus argentatus) and ring-billed gulls (Larus delawarensis) when earthen cover either does not fully cover refuse or the placement of such cover does occur with sufficient frequency. Field investigations during the fall 1994 migration period confirmed that Pine Bend Landfill attracts large numbers of ring-billed gulls. On October 14, 1994 over 1,000 ring-billed gulls were observed at the landfill, indicating that the gulls have established a habitual flight path between their feeding area at the landfill and their staging/resting area on Spring Lake.

Lake Byllesby:

Lake Byllesby in Randolph Township has been identified as a major migration staging area for waterfowl. While this lake lies too far from the alternatives to represent a bird-aircraft hazard in itself, waterfowl are known to travel between Lake Byllesby and the Spring Lake-Grey Cloud-Rebecca Lake area during migration. On April 4, 1993, the study team observed about 169 ducks and 300 tundra swans on Lake Byllesby.

D.2 Impacts of Bird-Aircraft Hazards

Bird strikes pose the greatest hazard to aircraft at altitudes less than 500 feet above ground level (AGL). According to FAA data, 90% of all known bird-strike incidents occur below 500 feet AGL, and nearly all of the remaining 10% occur between 500 and 3,000 feet AGL, with most below 2,000 feet AGL (based on a conversation with Gene LeBoef, FAA Office of Airport Safety and Standards, August 17, 1993).

Integrated Noise Model (INM) data was used to obtain typical departure flight profiles for the various flight tracks associated with each runway (see **Figures 18, 19 and 20**). The standard

instrument glide path has been used to develop approach profiles. The INM output estimates an aircraft's altitude at various distances from the airport both on arrival and during departure. This output has been used to estimate altitudes over areas that have been identified as potential attractants for concentrations of birds. The INM model is the standard FAA aircraft noise model and has been subjected to substantial field verification.

Because the distribution of bird concentration areas is essentially identical for all three alternatives for Site 3, the relative potential for bird-aircraft hazards has been analyzed for each alternative based on the numbers and altitudes of aircraft operations overflying identified bird concentration areas within 26,400 feet (5 miles) of the nearest runway end. The potential for bird strikes is generally highest when conditions that are conducive to bird concentrations lie in close proximity to the airport. This is primarily due to the high density of aircraft, both in time and space, as well as the higher number of aircraft flying at low altitudes where birds are more likely to be concentrated.

Spring Lake Area:

Alternative 1 will generate 7,820 monthly overflights of Spring Lake — 5,840 will be over 500 feet but under 2,000 feet and 1,980 will be well in excess of 2,000 feet.

Alternative 2 will generate 7,940 monthly overflights of Spring Lake — 5,960 will be over 500 feet but under 2,000 feet and 1,980 will be well in excess of 2,000 feet.

Alternative 3 will generate 7,990 monthly overflights of Spring Lake — 6,060 will be over 500 feet but under 2,000 feet and 1,930 will be well in excess of 2,000 feet.

Gores Pool Wildlife Management Area:

Alternative 1 will generate 5,150 monthly overflights of Gores Pool — 2,270 will be over 500 feet but under 2,000 feet and 2,880 will be well in excess of 2,000 feet.

Alternative 2 will generate 4,250 monthly overflights of Gores Pool — 2,260 will be over 500 feet but under 2,000 feet and 1,990 will be well in excess of 2,000 feet.

Alternative 3 will generate 4,250 monthly overflights of Gores Pool — 2,270 will be over 500 feet but under 2,000 feet and 1,990 will be well in excess of 2,000 feet.

Protected Wetland 341W:

Alternative 1 will generate 4,080 monthly flights about 750 to 1,000 feet south of protected wetland 341W — 1,800 will be under 500 feet and 2,280 will be over 500 but under 2,000 feet.

Alternative 2 will generate 1,130 monthly overflights over 500 feet but less than 2,000 feet. This alternative will also generate 2,840 monthly flights about 2,000 feet south of the wetland at altitudes over 500 but less than 2,000 feet. None will be less than 500 feet.

Alternative 3 will generate 1,130 monthly overflights over 500 feet but less than 2,000 feet. This alternative will also generate 2,840 monthly flights about 1,500 feet south of the wetland at altitudes over 500 but less than 2,000 feet. None will be less than 500 feet.

Protected Wetland 340W:

No alternative will involve direct overflights of protected wetland 340W. All three alternatives will involve flights between 1,500 and 2,000 feet north of this wetland at altitudes over 500 feet but less than 2,000 feet. None will be less than 500 feet.

Pine Bend Landfill:

No alternative will involve direct overflights of Pine Bend Landfill. All three alternatives will involve 910 to 930 flights within 2,500 feet of the landfill at altitudes well in excess of 2,000 feet.

Lake Rebecca, Vermillion River Heronry, and Lake Byllesby:

None of the alternatives will involve overflights of Lake Rebecca, Vermillion River Heronry, or Lake Byllesby.

Conclusions Regarding Bird-Aircraft Hazard Potential:

All three alternatives have very similar characteristics with regard to bird-strike potential. Alternatives 1 and 2 are virtually identical, except that Alternative 1 will have aircraft over protected wetland 341W at altitudes less than 500 feet. The various runway shifts associated with Alternative 3 will result in overflights of bird concentration areas generally being at slightly higher altitudes than either of the other two alternatives. For this reason, Alternative 3 appears to represent the best alternative with respect to minimizing bird-aircraft hazards, and Alternative 1 is the worst.

D.3 Mitigation Measures (Bird-Aircraft Hazards)

The construction of a major new airport is likely to result in unforeseeable changes in bird movements in the surrounding area. For this reason, mitigation measures oriented toward avoiding, minimizing or correcting specific bird-aircraft hazards are best developed after a new airport is completed and post-construction bird movements can be analyzed. Departure flight tracks do not appear to pose much potential for major bird-aircraft conflicts. With the exception of protected wetlands 340W and 341W, all departures should be well in excess of 2,000 feet altitude before passing over major bird concentration areas. Should post-construction bird movements in these areas pose problems, minor modifications to aircraft-departure procedures could be made during migration periods. Such a procedure would call for no turns in the direction of either wetland until the aircraft is well past the water body.

Regardless of alternative, the approach flight tracks will result in a substantial proportion of the monthly aircraft arrivals passing over the Spring Lake-Grey Cloud Island area and Gores Pool Wildlife Management Area at altitudes between 500 and 2,000 feet. There is little that can be done to alter the horizontal and vertical locations of these tracks in relation to these areas. It does not appear that seasonal shifts in runway usage would substantially reduce bird-aircraft hazards since all such shifts would result in overflights of other bird concentration areas. The potential for further reducing bird-aircraft hazards through seasonal shifts in runway usage could be better explored after new airport facilities are in place and post-construction bird flight patterns become known.

E. Farmland

Farmland impacts include the acreage taken by each of the alternatives, including remnants of farmland remaining when portions of farmsteads are within airport boundaries.

E.1 Affected Environment

Marshan and Vermillion Townships are rural areas southwesterly of the city of Hastings and east of the city of Vermillion. Farmland is the predominant land used, with typical crops including corn and soybeans. Additional crops, from year to year, include alfalfa, oats, wheat and a variety of vegetables. Feedlots, for both dairy cattle and hog production, also are found on farms in the area. There are also several commercial nursery operations and a vineyard in the area. Most farming operations in both townships are family farms, some having been in existence for more than 100 years.

There are three classifications of farmland in Dakota County, each defined by the federal Soil Conservation Service according to such characteristics as soil quality, growing season and moisture supply to produce crops.

Prime farmland. Prime farmland has the best combination of physical and chemical characteristics necessary to produce high crop yields over time.

Farmland of statewide importance. This farmland, while similar to prime farmland, has soil limitations that require more intense management to produce high crop yields.

Other farmland. Land which has severe limitations, such as being undrained or with steep slopes, that make it virtually unusable for farmland.

Figures 12 and 13 depict the location of prime farmland and farmland of statewide importance in Marshan and Vermillion Townships.

Farmland in Marshan and Vermillion Townships can be viewed from another perspective. The Metropolitan Agricultural Preserves Act was approved in 1980 with the intention of retaining agricultural uses on farmland, thus protecting it from potential redevelopment with urban and suburban uses. Such land is designated for long-term agricultural use in the comprehensive plans of the townships and cities. Under the legislation, a farm owner can agree to continued agricultural use of the land for a specific period of time, excluding such urban and suburban uses as higher density housing and commercial businesses, in exchange for such benefits as a lower assessed value of the farmland and, therefore, lower property taxes. This agreement, or covenant, establishes the farmland as an "agricultural preserve." Agricultural preserve lands in the area are depicted in **Figure 14**.

Because a new airport in Marshan and Vermillion Townships would involve the expenditure of federal funds, it is covered by the Farmland Protection Policy Act. The legislation requires the U. S. Department of Agriculture to identify prime farmland and farmland of statewide importance that is permanently taken out of production by either federal projects or projects involving federal funds. While the legislation permits federal agencies to consider alternatives to a proposed project, it does not require it.

E.2 Farmland Impacts

The development of a new airport in Marshan and Vermillion Townships would eliminate farming operations within the airport boundary.

Table 12 depicts the number of farmsteads within the airport boundary of each alternative, as well as the acreage of prime farmland, farmland of statewide importance and covenanted agricultural preserves.

TABLE 12 - Farmland Within Boundary of Alternatives

	Alternative 1	Alternative 2	Alternative 3
Number of farmsteads	44	43	35
Total acres within boundary	9,660	9,447	8,645
Acres of prime farmland	6,368	6,247	5,870
Acres of farmland of statewide importance	1,632	1,547	1,497
Acres of covenanted agricultural preserve	3,963	3,895	3,392

Of the total number of farmsteads within the airport boundary of each of the alternatives, some are whole farms and others are remnants of farming operations remaining once land is acquired for the airport. Farming these remnants may, from a practical standpoint, be difficult. There may be problems of getting to the field and, once there, problems of maneuvering farm equipment on the field. Also, smaller fields that are oddly shaped may be less valuable than farms of typical dimension and size.

These remnants are defined as follows:

Isolated farmlands. Farmland that is not accessible because the road leading to it is within the airport boundary, and therefore removed.

Triangulated farmlands. Farmland with one or more property lines at an angle. This could make farming on the field difficult. While, there is no minimum acreage for triangulated farmland, a smaller triangular field also would be difficult to farm.

Severed farmlands. Farmlands under one ownership that are separated from each other by the airport project. For example, a large farm may be bisected by a roadway leading to the new airport or the farmstead could be separated from the fields themselves.

Table 13 depicts the number of isolated, triangulated and severed farmlands within the airport boundary of each of the alternatives.

TABLE 13 - Isolated, Triangulated and Severed Farmlands

	Alternative 1	Alternative 2	Alternative 3
Isolated			
Number of farms	30	27	22
Acreage	941	691	512
Triangulated			
Number of farms	34	30	37
Acreage	1,848	1,674	1,813
Severed			
Number of farms	0	0	0
Acreage	0	0	0

E.3 Mitigation Measures (Farmland)

On farmland remnants adjacent to the airport boundary, farming would be difficult and, consequently, less financially feasible. There are no measures to mitigate the permanent loss of farmland in the area; however, some farmland within the airport boundary could be leased for continued farming operations. Relocating farming operations within Dakota County, or adjacent rural counties, would not be feasible for all those whose farms were acquired for airport development; existing farming operations may not be available to all those who wish to relocate in the vicinity.

To retain farming operations in the rural area surrounding the airport would require the adoption of comprehensive plan, and zoning provisions to achieve that end. Development compatible with a new airport, necessarily, would have to be specified for certain sites if the essential agricultural nature of central and southern Dakota County is to be retained.

F. Floodplains

F.1 Affected Environment

Floodplains around the alternatives are concentrated near the watercourses of the Vermillion River. The alternatives include 100-year floodplain areas and areas managed by Dakota County. The Federal Flood Insurance Program has identified the Vermillion River watershed's floodplains, delineating the floodway and flood fringe areas that would be inundated as a result of a 100-year flood. **Figure 15** illustrates the floodplains (floodway and floodway fringe areas) in and around the alternatives.

F.2 Impacts on Floodplains

Each of the alternatives contain floodplains of the Vermillion River within their boundary. A portion of floodplain in each alternative would need to be eliminated in order to construct necessary airport facilities such as runways, taxiways, buildings, and roads. Fill would be placed in the affected areas of the floodplains, to raise the airport facilities above the floodplain elevation.

Loss of floodplain storage is serious if it leads to an increase in peak flood elevations beyond that accepted by statute or local watershed management requirements. In Minnesota, a 0.5 feet total increase in the maximum flood elevation is generally permitted; however, Dakota County does not allow any increase. The amount of floodplain that would be filled in each alternative, combined with other anticipated floodway fill in the area, will raise the peak flood elevation. However, there is adequate space within each alternative for re-creation of the floodplain storage that would be lost due to airport facilities.

Access roadways for the proposed airport appear to be the only off-site, airport-related facilities that would directly impact the floodway within the floodplain. Such roadways are allowable uses only so long as there is no resulting increase in flood damages in the affected reaches of the river. Outfalls from a wastewater treatment facility and stormwater detention facilities may project into the floodway. However, locational decisions regarding such structures have not been made at this stage.

Table 14 shows the acres within each alternative which are available for re-creation of floodplains, and the acres of floodplain which need to be recreated.

TABLE 14 - Floodplain Impacts (Acres)

	Alternative 1	Alternative 2	Alternative 3
Total Area within Airport Boundary	10,000	9,900	9,000
Total Graded, Paved Building Area	3,100	2,800	3,000
Floodplains within Boundary, but Outside Graded, Paved, Building Area *	560	680	440
Net Area Available for Floodplain Re-creation, Detention Ponds, Etc.	6,440	6,920	5,560
Floodplains Lost to Graded, Paved, Building Area that Need Re-creation**	230	160	320

* Area includes impacts to floodway and floodway fringe
** Area includes impacts to floodway fringe only.

G. Historic/Architectural Resources

The National Historic Preservation Act of 1966 authorized the Secretary of the Interior to maintain a National Register of Historic Places consisting of properties "significant in American history, architecture, archaeology, engineering, and culture." To be considered significant, a property must satisfy one of the following criteria:

A. be associated with events important to broad patterns of history;
B. be associated with the life of an important person;

C. represent a type, period, or method of construction; or be the work of a master; or express high artistic values; or

D. yield, or be likely to yield, information important in prehistory or history.

Typically, above-ground properties merit National Register designation based on the first three criteria; Criterion D is usually applied to archaeological sites. Properties can achieve significance on a local, state, or national level. A property may be individually eligible for listing in the National Register, or eligible as a contributing component of an historic district. In addition to significance, a property must maintain physical integrity to be considered for the National Register. Properties less than fifty years old must display exceptional significance to qualify. Properties and districts afforded National Register status are also Section 4(f) lands as described in Section III.B of the AED.

G.1 Affected Environment

The known Area of Potential Effect (APE) is illustrated in **Figure 9**. It consists of all land that would be acquired for the new airport, as well as property falling within the projected DNL 65 noise contour for the year 2005 for each runway. The APE will also include land affected by construction of airport access roadways, related interchanges and relocated utilities, and by improvements to the regional highway and transit systems required by the airport's relocation; the nature and extent of this construction, however, have not been determined at this time. Since the present study focuses on differential impacts between the three alternatives, and since off-site transportation and utility development will be the same for any of the three alternatives, the following discussion considers only land to be acquired for airport construction and the associated DNL 65 noise contours.

Six properties in the Site 3 APE were identified as possibly eligible for the National Register of Historic Places by a 1993 reconnaissance survey[4]: Chimney Rock, 16143 Hogan Avenue, 12005 E. 205th Street (a.k.a. 20477 Kirby Avenue), 22005 Lewiston Boulevard, 17945 Northfield Boulevard, and 8030 - 180th Street. Archival research and intensive-level field survey were subsequently completed on these properties. In addition, more archival research was undertaken to gain a greater understanding of the nineteenth- and twentieth-century evolution of the area, and of the built environment produced during this period. This information was consolidated with archaeological data and research to expand the historic context for evaluating National Register eligibility of vernacular farmsteads in the area. With this information, all surveyed properties in Site 3 were reevaluated for National Register potential. No additional properties appeared to merit further consideration.

Conclusions from the study are being submitted as a technical report to the State Historic Preservation Office (SHPO). Two properties were determined eligible for the National Register of Historic Places: Chimney Rock, and 22005 Lewiston Boulevard. The location of the two properties is shown in **Figure 9**. Although National Register boundaries have not been determined for these properties, the land currently associated with 22005 Lewiston Boulevard is assumed to comprise the boundaries for this analysis: the southern half of the southeast quarter of Section 34 west of Lewiston Boulevard in Vermillion Township. Determining a tenable boundary for Chimney Rock is more problematic. For a discussion of this problem, refer to Section B.1. Using these boundaries, the properties that would be affected by the alternatives are shown in **Table 15**.

TABLE 15 - Historic/Architectural Properties Eligible for the National Register Affected by the Alternatives

	Alternative 1	Alternative 2	Alternative 3
National Register Properties Affected:			
Within Site Boundary	0	0	0
Within DNL 65 Contour	22005 Lewiston Blvd.	0	0

G.2 Impacts on Historic/Architectural Resources

Section 106 of the National Historic Preservation Act of 1966 provides some protection for designated historic resources. For projects involving federal funds or licensing, the responsible federal agency must consider any effects of a project on National Register properties. Since the nature and extent of potentially significant resources in a project area is rarely known, the area must be surveyed to identify National Register-eligible properties. Next, the nature of the project's effect on these properties is evaluated. If the project adversely affects historic resources, other alternatives are examined. If no other alternative appears reasonable, an appropriate form of mitigation is negotiated between the responsible federal agency and the SHPO. On occasion, the Advisory Council on Historic Preservation, an independent federal oversight office, also becomes involved.

The responsible federal agency for the New Airport project is the Federal Aviation Administration. The FAA is working with the SHPO to ensure that impacts to historic resources are considered in the evaluation of alternatives for the airport's development.

As shown in **Table 15**, Alternative 1 would affect portions of one property and Alternatives 2 and 3 would affect no properties. In general, the impact of the alternatives on National Register properties appears to be minor. The farmstead at 22005 Lewiston Blvd. does not fall within the boundaries of any of the alternatives; only farm fields, not the farmhouse and other buildings, are actually within the DNL 65 noise contours. Although not in the known APE of Alternatives 2 and 3, the stone house at 22005 Lewiston Blvd. is a sensitive structure and could be adversely affected by the construction or operation of the airport (e.g., vibration).

G.3 Mitigation Measures (Historic/Architectural Resources)

Mitigation of damage to architecturally and historically significant properties typically involves documenting the properties for the Historic American Buildings Survey (HABS) or the Historic American Engineering Record (HAER). HABS/HAER documentation, which is archived in the Library of Congress, includes an historic narrative, large-format photographs and, in some cases, measured drawings. Additional or alternative mitigation measures are sometimes appropriate, such as developing interpretive materials (displays, booklets, etc.) or relocating structures. Specific mitigation measures are negotiated after an alternative is selected and plans are made to implement the project. These measures are outlined in a Memorandum of Agreement (MOA), signed by some, or all, of the following parties: the SHPO; Federal Aviation Administration, as

the responsible federal agency; the Metropolitan Airports Commission, as the project sponsor; affected local governments; the Advisory Council on Historic Preservation; and other interested persons.

Since the primary impact to properties will be from noise, vibration, or other environmental modifications, mitigation must be tailored to address these potential threats. Such mitigation for the farm buildings might include noise reduction measures, such as window replacement and insulation, if these measures could be accomplished without damaging the historic integrity of the properties. During and after the airport's construction, the affected properties should be carefully monitored to detect and abate physical deterioration from construction or airplane noise, vibration, pollution, or other factors. On-going monitoring is particularly important for Chimney Rock and the stone house at 22005 Lewiston Boulevard.

H. Land Use

Land uses of the surrounding communities will experience several types of impacts. This section addresses the impacts on the land use and comprehensive plans of the affected municipalities.

H.1 Affected Environment

Local comprehensive plans were used as a facsimile for current land use. Most of the land within and adjacent to the alternatives is currently in agricultural use. See **Table 16** and **Figure 16**. **Table 16** gives the land uses within the site selected by MAC in the Final AED of the New Airport Site Selection Study (Site 3). Alternatives 1, 2 and 3 are predominantly within Site 3 and therefore the land uses in **Table 16** are representative of the land uses in the alternatives. In addition, most of the land adjacent to the new airport site has been designated for agricultural use in the affected communities' comprehensive plans. This designation makes individual properties eligible to be established as an "agricultural preserve" under the Metropolitan Agricultural Preserves, Minnesota Statute 473H. Thus, a property owner may sign a covenant establishing his/her farm as an agricultural preserve; in exchange, the property owner receives such benefits as a lower assessed valuation and real estate tax credits. Although the current long term planning horizon for local communities extends only through the year 2000, the Metropolitan Council has reviewed regional forecasts for 2020 with all local governments in the region. These forecasts reflect a continuation of agriculture in this portion of the region.

The other major use of land within and adjacent to the alternatives is conservation. This use is also forecast to remain the same.

There are several small, commercial sites within the boundaries of the alternatives. There are both residences associated with farms and non-farm residences within the alternatives. However, there are roughly 300 acres of land around the alternatives designated for rural residential development.

Communities near the alternatives include the City of Hastings and the following rural centers — Miesville, New Trier, Hampton and Vermillion. Because very little growth is expected in the four rural centers, in the absence of a new major airport, current land uses (primarily residential with some commercial and public uses) would not be expected to change significantly in the future.

The City of Hastings is a freestanding growth center that has sustained modest growth over the past 20 years. The city completed all of its approved orderly annexations. Recent annexations have occurred south (in Marshan Township) and west (in Nininger Township) of the city. Although the city has no approved plans for additional annexations, the location of the Mississippi River and other natural environmental features suggest that any future annexations would continue both south and west of the current city limits.

The development of a new major airport will not be compatible with some existing land use, notably existing residential development

TABLE 16 - Land Use - Site 3[1]

Land Use	Within Site 3	
	Acres	Percent of Site Area
Agriculture	9,400	91.7%
Conservation/Floodplain/ Marsh/Wetland	842	8.2%
Commercial	9	0.1%
Industrial	0	0.0%
Single Family Residential	0	0.0%
Rural Residential	0	0.0%
Public Open Space	0	0.0%
Public/Quasi-Public Facilities	0	0.0%
Total	10,251	100.0%

[1] From Final AED, New Airport Site Selection Study. The boundaries of Alternatives 1, 2 and 3 lie predominantly within Site 3.

None of the comprehensive plans for local governments affected by the alternatives and adjacent areas provide for a new major airport. Some areas covered by these plans will be significantly impacted by the introduction of an airport.

H.2 Land Use Impacts

The compatibility of existing and currently proposed land use adjacent to the airport site is discussed below. The following criteria were used to estimate local development impacts for each of the alternatives:

- Continuation of agriculture in currently designated areas.

- Restriction of single-family housing and commercial/industrial uses, except gravel mining, to the Metropolitan Urban Service Area and designated rural centers. Rural residential development is permissible provided that it is consistent with regional density policies.

- Restriction of housing in areas affected by the DNL 60 noise contours and state safety zones.

- Land use consistent with local comprehensive plans will not be restricted.

Most of the area adjacent to the alternatives meets the compatibility criteria. However, slightly more than 300 acres of planned residential land use fall within the DNL 60 noise contour and the state safety zones. Since most of the existing vacant land is in agricultural uses, these uses could continue and the affected local governments could direct the small levels of expected residential growth to areas outside the noise contours and safety zones.

H.3 Mitigation Measures (Land Use)

For existing housing, impacts could be mitigated with acoustic treatment to limit indoor noise levels. If the Minnesota Legislature decides that a new major airport is to be built, the affected local governments (within the airport development area) would need to amend their comprehensive plans to reflect the development of an airport and to address the requirements of the Airport Development Act. Such amendments would address land use control measures consistent with criteria and guidelines established by the Metropolitan Council to ensure compatible land uses within the airport development area. An established process is already in place for processing local plan amendments.

The airport development area may consist of all or a portion of the land extending three miles from the proposed boundaries of the new airport site. The airport development area may extend five miles in any direction from the airport site if the Metropolitan Council determines the extension is necessary to protect natural resources of the metropolitan area.

I. Noise

Aircraft noise can affect residents, businesses and certain land uses in the vicinity of an airport. The criteria for determining compatibility with aircraft noise are given in **Table 17**, and are based on FAA criteria. Descriptions of the Federal noise metric, DNL, the state noise metric, L_{10}, and Peak Sound Exposure Level (SEL), and discussions of community annoyance due to aircraft noise are presented in **Appendix A**.

I.1 Affected Environment

The Area of Potential Effect (APE) of aircraft noise is the area within the DNL 60, 65, 70 and 75+ contours for each runway of the airport. There are no base case DNL contours for the potential new airport; however, ambient noise levels in the vicinity of the airport are available from a survey conducted by the MAC in 1992. The survey values are shown in **Figure 17**. The measured values range from a high of approximately DNL 61 in Hastings and Farmington to a

low of approximately DNL 52 in Rosemount. These ambient noise levels include sound from *all* sources, including aircraft operations at MSP and other nearby airports, cars and trucks along nearby roads, lawn mowers, animals, as well as other sources.

I.2 Noise Impacts

Methodology and Assumptions

Before modeling noise impacts, forecast years of population and aircraft activity were selected. These assumptions were reviewed by the New Airport Technical Committee and the Dual Track Task Force. Following is a description of the assumptions and methodology used for noise impact analysis purposes.

Population

The State Legislature will probably not make a decision on how to accommodate the region's future commercial aviation needs until 1997. Should the new airport alternative be chosen, the site would not likely be open for traffic until after the year 2000. Recognizing that the population of Dakota County has been increasing since the 1990 Census, Year 2000 population forecasts were developed to assess noise impacts. The population forecasts are based on the latest available estimates from the Metropolitan Council, and were reviewed by local communities.

A later forecast year was not used for population because it was assumed that once a decision was made to build a new airport, land use measures and community awareness of the new airport would presumably discourage residential development in areas that would be subjected to high aircraft noise.

Aircraft Activity

Year 2005 aircraft activity was modeled for this study for several reasons. First, it is assumed that the new airport would open around that year. Second, the 2005 aircraft fleet mix is anticipated to include stage 2 aircraft "hush-kitted" to meet stage 3 requirements. These aircraft typically are noisier than "true" stage 3 of the same size, and it was desirable to measure their impact. Finally, it is the same year used to analyze noise impacts for MSP.

The aircraft operations forecasts and fleet mix are based primarily on the MSP Long-Term Comprehensive Plan (LTCP) Volume 6: Revised Activity Forecasts (December 1993). The LTCP forecast fleet mix was modified for the new airport AED to reflect the August 1994 announcement by Northwest Airlines that it would refurbish and hush kit its fleet of DC-9-30 aircraft, rather than acquire new aircraft as previously planned. **Tables 18 and 19** list the average daily arrivals and departures by aircraft type for 2005, respectively.

TABLE 17 - Land Use Compatibility Criteria

(1 of 2)

Land Use	DNL 65-70	DNL 70-75	DNL 75+
Residential			
Residential, other than hotels[1]	N	N	N
Hotels	R(25)	R(30)	R(30)
Nursing homes[1]	N	N	N
Public Use			
Schools (public and private)	R(30)	N	N
Child care centers	R(25)	R(30)	N
Churches	R(25)	R(30)	N
Auditoriums, concert halls	R(30)	R(35)	N
Parking	Y	Y	Y
Hospitals	R(30)	R(35)	N
Commercial Use			
Offices: business, professional, government	Y	R(25)	R(30)
Retail trade	Y	R(25)	R(30)
Wholesale trade and retail of building materials, hardware and farm equipment[2]	Y	Y	Y
Utilities[2]	Y	Y	Y
Manufacturing and Production			
Manufacturing, general[2]	Y	Y	Y
Research and laboratory uses sensitive to vibration	Y	N	N
Agriculture and forestry[3]	Y	Y	Y
Mining, fishing, resource production and extraction	Y	Y	Y
Recreational			
Outdoor sports arenas and spectator sports	Y	Y	N
Outdoor amphitheaters, music shells	N	N	N
Nature exhibits and zoos	Y	N	N
Parks, golf courses, riding stables and other active recreation areas	Y	Y	N

KEY

Y-Land use and related structures are compatible without restrictions.

N-Land use and related structures are not compatible and should be prohibited.

R(25),(30) or (35)-Land use and related structures are generally compatible; measures to achieve Noise Level Reduction of at least 25, 30, or 35 dBA must be incorporated into design and construction of structures. Normal construction can be expected to provide an NLR of 20 dBA; thus, the reduction requirements are often stated as 5, 10, or 15 dBA over standard construction. These requirements assume mechanical ventilation and closed windows year round. The use of NLR criteria will not eliminate outdoor noise problems.

---

[1] Where the city determines that residential uses must be allowed, measures to achieve sufficient outdoor to indoor Noise Level Reduction (NLR) should be incorporated into building and/or zoning codes and be considered in individual approvals. Federal guidelines recommend NLR of at least 25 dBA in DNL 65-70, and 30 dBA in DNL 70-75. Adjustments to these recommendations may be necessary in considering specific local conditions. In addition to acoustical treatment, potential residents in noise zones should be notified of the noise environment.

[2] Appropriate Noise Level Reduction (as specified in Footnote 1) must be incorporated into the design and construction of portions of these buildings where the public is received, office areas or noise sensitive areas.

[3] Noise Level Reduction specified in Footnote 1 required for residential buildings.

Source: MSP FAR Part 150 Study Update, March 1992

Takeoff and landing profiles (the vertical path aircraft follow when departing from and arriving at an airport) were based on airline operating procedures, the aircraft type and its operating weight. Air carrier aircraft were assumed to fly standard three-degree descent angle approach profiles. The INM data base includes typical takeoff and landing profiles for each aircraft.

Runway use is based on weather conditions (both wind and visibility), direction of flight, noise impacts, and operational efficiency. Preferential runway use during nighttime hours was also considered. As with the aircraft fleet mix, modelled runway use reflects an average daily use based on the entire year.

Flight tracks (the routes aircraft follow into and out of the airport) were based on the *Minnesota State Airspace Study, Phase A, Relocated Minneapolis/St. Paul International airport, Final Report* (1994). These tracks were refined to fit the three alternatives and to avoid noise-sensitive land use.

Noise Metrics

The noise analysis conducted for this study includes use of DNL contours, State $L_{10}65$ contours, aircraft overflight patterns, and peak sound exposure levels (SEL). The DNL analysis includes the development of noise contours and identification of population and dwelling units for the DNL 60-65 area, and identification of population, dwellings and other noise sensitive uses within the DNL 65 and greater noise contours as per Federal criteria for assessing aircraft noise impacts. The $L_{10}65$ noise contours are shown and population within the contours are stated. Analysis of aircraft overflights was undertaken to show the average monthly flights on each takeoff and landing track out to a point where single-event noise levels generally fall below 70 dBA (not 70 DNL). This is typically seven or eight miles from the end of the runway. Aircraft noise levels (DNL and SEL) at select noise sensitive receptors for year 2005 are also provided.

TABLE 18 - 2005 Projected Fleet Mix and Average Daily Arrivals

Aircraft Type		Day	Night	Total
Air Carrier Jets:				
DC8		1.1	1.7	2.8
DC9-30 (HUSHKIT)		97.7	7.3	105.0
MD80		32.8	2.7	35.5
MD90		6.6	0.4	7.0
DC10		10.0	1.4	11.4
MD11		3.9	0.7	4.6
B727 (HUSHKIT)		11.6	3.2	14.8
B737 300/400/500		27.2	1.8	29.0
B737 200 (HUSHKIT)		0.2	0.1	0.3
B747 200/300/400		7.5	0.9	8.4
B757		81.0	7.9	88.9
B767 200/300		3.7	0.3	4.0
B777		1.4	0.1	1.5
A300		0.5	0.7	1.2
A320/321		68.5	6.4	74.7
A330		4.7	0.3	5.0
A340		0.4	0.1	0.5
L1011		0.6	0.5	1.1
BAe 146/RJ/F-70		0.9	0.1	1.0
F-100		8.0	2.0	10.0
EM145/CanRJ		7.1	0.9	8.0
	Subtotal	375.4	39.5	414.7
Air Carrier Turboprops:				
CNA/PAG/BEC		3.0	3.4	6.4
SWM/J31/BE1/BE9		29.2	8.6	37.8
SF340/DH8/J41		61.8	8.2	70.0
S2000		27.2	3.7	30.9
L188/CVR/F27/ATP/ATR		15.7	5.6	21.3
	Subtotal	136.9	29.5	166.4
General Aviation:				
GA Jet		32.8	4.2	37.1
GA Turboprop		15.4	2.0	17.4
GA Piston		21.7	2.8	24.5
	Subtotal	69.9	9.0	79.0
Military		4.0	0.1	4.1
	Total	586.2	78.1	664.2

Source: HNTB analysis, based on MSP LTCP Volume 6, Revised Activity Forecasts (December, 1993).

TABLE 19 - 2005 Projected Fleet Mix and Average Daily Departures

Aircraft Type		Day	Night	Total
Air Carrier Jets:				
DC8		1.0	1.8	2.8
DC9-30 (HUSHKIT)		96.8	8.2	105.0
MD80		32.9	2.6	35.5
MD90		6.6	0.4	7.0
DC10		10.1	1.3	11.4
MD11		4.0	0.6	4.6
B727 (HUSHKIT)		11.8	3.0	14.8
B737 300/400/500		27.2	1.8	29.0
B737 200 (HUSHKIT)		0.2	0.1	0.3
B747 200/300/400		7.5	0.9	8.4
B757		81.0	7.9	88.9
B767 200/300		3.7	0.3	4.0
B777		1.4	0.1	1.5
A300		0.5	0.7	1.2
A320/321		68.4	6.3	74.7
A330		4.7	0.3	5.0
A340		0.4	0.1	0.5
L1011		0.7	0.4	1.1
BAe 146/RJ/F-70		1.0	0.0	1.0
F-100		8.9	1.1	10.0
EM145/CanRJ		7.6	0.4	8.0
	Subtotal	376.4	38.3	414.7
Air Carrier Turboprops:				
CNA/PAG/BEC		2.9	3.5	6.4
SWM/J31/BE1/BE9		30.9	6.9	37.8
SF340/DH8/J41		66.6	3.4	70.0
S2000		29.3	1.6	30.9
L188/CVR/F27/ATP/ATR		16.7	4.6	21.3
	Subtotal	146.4	20.0	166.4
General Aviation:				
GA Jet		31.4	5.7	37.1
GA Turboprop		14.7	2.7	17.4
GA Piston		20.7	3.8	24.5
	Subtotal	66.8	12.2	79.0
Military		3.8	0.3	4.1
	Total	593.4	70.8	664.2

Source: HNTB analysis, based on MSP LTCP Volume 6, Revised Activity Forecasts (December, 1993).

Overflights

Figures 18, 19, and 20 show the major arrival and departure flight tracks for Alternatives 1, 2 and 3, respectively. The monthly number of overflights on these tracks is also depicted. The flight tracks radiate from the six runways. Most operations are concentrated to the northwest, east, southeast, and southwest. Relatively few operations occur to the northeast.

The location of flight tracks and the number of overflights on these tracks vary little among the alternatives.

Population Impacts--DNL 70, 65 and 60

Figures 21, 22, and 23 show the DNL noise contours for Alternatives 1, 2 and 3, respectively. **Tables 20 and 21** present the forecast number of residents and dwelling units within the DNL contours for the three alternatives in the year 2005, respectively. Residents and dwelling units within the DNL noise contours and within the airport boundary were not counted, because it was assumed they would be relocated (see Section J).

Alternative 1

The DNL 70 noise contour encompasses approximately 280 acres, excluding the area within the site boundary. Approximately five people (less than five households) would reside within the DNL 70 contour. The area between the DNL 65 and DNL 70 noise contours encompasses approximately 2,500 acres, excluding the area within the airport boundary. The year 2000 population exposed to noise levels between DNL 65 and DNL 70 is about 125 (approximately 35 households). The area between the DNL 60 and DNL 65 noise contours encompasses approximately 7,100 acres, excluding the area within the airport boundary. The year 2000 population exposed to noise levels between DNL 60 and DNL 65 is approximately 655 (about 190 households).

The total acreage within all three noise contours (i.e., DNL 60 and above) is about 9,800 acres, excluding the area within the site boundary, and contains approximately 675 people (approximately 230 households).

Alternative 2

The DNL 70 noise contour encompasses approximately 200 acres, excluding the area within the site boundary. Approximately 10 people (less than five households) would reside within the DNL 70 contour. The area between the DNL 65 and DNL 70 noise contours encompasses approximately 2,200 acres, excluding the area within the airport boundary. The year 2000 population exposed to noise levels between DNL 65 and DNL 70 is about 105 (approximately 30 households). The area between the DNL 60 and DNL 65 noise contours encompasses approximately 7,300 acres, excluding the area within the airport boundary. The year 2000 population exposed to noise levels between DNL 60 and DNL 65 is approximately 660 (about 195 households).

The total acreage within all three noise contours (i.e., DNL 60 and above) is about 9,600 acres, excluding the area within the site boundary, and contains approximately 775 people (approximately 225 households).

Alternative 3

The DNL 70 noise contour encompasses approximately 300 acres, excluding the area within the site boundary. Approximately 20 people (about five households) would reside within the DNL 70 contour. The area between the DNL 65 and DNL 70 noise contours encompasses approximately 2,700 acres, excluding the area within the airport boundary. The year 2000 population exposed to noise levels between DNL 65 and DNL 70 is about 175 (approximately 50 households). The area between the DNL 60 and DNL 65 noise contours encompasses approximately 7,400 acres, excluding the area within the airport boundary. The year 2000 population exposed to noise levels between DNL 60 and DNL 65 is approximately 670 (about 195 households).

The total acreage within all three noise contours (i.e., DNL 60 and above) is about 10,400 acres, excluding the area within the site boundary, and contains approximately 865 people (approximately 255 households).

Alternatives Comparison

For DNL 70 and above, the range of population impacted varies from approximately 5 for Alternative 1 to about 20 for Alternative 3. For DNL 65-70, the range is from a low of 125 residents (Alternative 1) to a high of 175 residents (Alternative 3). For DNL 60-65, the range is 655 residents (Alternative 2) to a high of 679 residents (Alternative 3). Alternative 3 has the greatest noise overall DNL impacts among the three alternatives.

TABLE 20 - Year 2000 Population Within Year 2005 DNL Noise Contours

Jurisdiction	Alternative 1				Alternative 2				Alternative 3			
	DNL 70	DNL 65	DNL 60	Total	DNL 70	DNL 65	DNL 60	Total	DNL 70	DNL 65	DNL 60	Total
Douglas Twp.	0	5	115	125	0	15	105	120	0	5	11 0	115
Hampton Twp.	0	0	15	15	0	0	10	10	0	0	0	0
Marshan Twp.	0	70	270	340	0	60	275	340	5	100	265	375
Nininger Twp.	0	<5	80	80	0	<5	75	80	0	<5	90	95
Ravenna Twp.	0	0	15	15	0	0	15	15	0	0	10	10
Vermillion Twp.	5	40	165	210	10	25	175	215	15	60	190	265
Total	5	125	655	675	10	105	660	775	20	175	670	865
Note: Totals may not add due to rounding.												

Source: HNTB analysis based on year 2005 fleet mix.

TABLE 21 - Year 2000 Dwelling Units Within Year 2005 DNL Noise Contours

Jurisdiction	Alternative 1				Alternative 2				Alternative 3			
	DNL 70	DNL 65	DNL 60	Total	DNL 70	DNL 65	DNL 60	Total	DNL 70	DNL 65	DNL 60	Total
Douglas Twp.	0	<5	35	35	0	<5	30	35	0	<5	30	35
Hampton Twp.	0	0	<5	<5	0	0	<5	<5	0	0	0	0
Marshan Twp.	0	20	80	100	0	20	80	100	<5	30	80	110
Nininger Twp.	0	<5	25	25	0	<5	20	25	0	<5	25	30
Ravenna Twp.	0	0	<5	<5	0	0	<5	<5	0	0	<5	<5
Vermillion Twp.	<5	10	50	60	<5	10	50	65	<5	20	55	75
Total	<5	35	190	230	<5	30	195	225	5	50	195	255
Note: Totals may not add due to rounding.												

Source: HNTB analysis based on year 2005 fleet mix.

Noise Sensitive Land Uses in DNL 65 and DNL 60 Contours, Alternatives 1, 2 and 3

Besides residential dwellings, there is only one noise sensitive land use for all three alternatives within the DNL 65 noise contour: the Bellwood Game Preserve. The Preserve is also within the DNL 60. The Bellwood Golf Course is within the DNL 60 for Alternatives 1 and 2, but not 3. The location of noise sensitive land uses is shown in **Figures 21, 22 and 23** and presented in tabular form in **Table 22.**

TABLE 22 - Noise Sensitive Uses Within Year 2005 DNL 65 and DNL 60 Noise Contours

Use Type	Alternative 1		Alternative 2		Alternative 3	
	DNL 65	DNL 60	DNL 65	DNL 60	DNL65	DNL60
Historic Sites	0	0	0	0	0	0
Schools/Day Care	0	0	0	0	0	0
Churches/Synagogues	0	0	0	0	0	0
Hospitals/Nursing Homes	0	0	0	0	0	0
Parks/Recreation	0	1 (Bellwood Golf Course)	0	1 (Bellwood Golf Course)	0	0
Outdoor Amphitheaters/Music Shells	0	0	0	0	0	0
Nature Exhibits/Zoos	0	0	0	0	0	0
Game Refuges	1 (Bellwood Game Refuge)	1 (Bellwood Game Refuge)	1 (Bellwood Game Refuge)	1 (Bellwood Game Refuge)	1 (Bellwood Game Refuge)	1 (Bellwood Game Refuge)
Totals	1	2	1	2	1	1

Source: HNTB analysis.

$L_{10}65$ Impacts and Runway Use

Figures 24-26 show the $L_{10}65$ contours for the three new airport alternatives. Arrival contours typically are long and narrow, while departure contours are wider. The $L_{10}65$ contours for the three alternatives are very similar. The greatest differences among the sites are the contours generated by the southern crosswind runway. Under Alternative 1, the contour generated by the southern crosswind runway extends farther west (by approximately 1 mile) and farther south (by approximately 1/2 mile) compared to Alternatives 2 and 3.

The forecast number of persons and dwelling units within the $L_{10}65$ contours are presented in **Tables 23 and 24**. The total number of residents within the $L_{10}65$ contour is similar for the three alternatives: 2,380 for Alternative 1, 2,260 for Alternative 2, and 2,240 for Alternative 3.

Select Noise Sensitive Uses Outside of DNL 65 Contours

It is recognized that noise impacts associated with aircraft operations can affect people beyond the DNL 65 noise contour. For this reason, 25 noise sensitive land use points outside the contour were identified to estimate the differential noise impacts that may result under the three alternatives (**Figure 27**). **Tables 25-27** compare DNL, peak sound exposure levels (SEL) and time above (TA) 85 dBA, respectively, for the three alternatives.

TABLE 23 - Year 2000 Population Within Year 2005 $L_{10}65$ Noise Contour

Jurisdiction	Alternative 1	Alternative 2	Alternative 3
Douglas	240	240	200
Hampton	125	50	15
Marshan	940	945	925
Nininger	415	415	450
Ravenna	60	60	60
Rosemount	0	0	5
Vermillion	40	40	40
Vermillion Twp	550	510	550
Total	2,375	2,265	2,245

Note: Totals may not add due to rounding.
Source: HNTB analysis based on year 2005 fleet mix.

TABLE 24 - Year 2000 Dwelling Units Within Year 2005 $L_{10}65$ Noise Contour

Jurisdiction	Alternative 1	Alternative 2	Alternative 3
Douglas	70	70	60
Hampton	35	15	5
Marshan	275	275	270
Nininger	120	120	130
Ravenna	20	20	20
Rosemount	0	0	0
Vermillion	10	10	10
Vermillion Twp	160	150	160
Total	695	665	660

Note: Totals may not add due to rounding.
Source: HNTB analysis based on year 2005 fleet mix.

TABLE 26 - Sound Exposure Level Impacts at Selected Noise Sensitive Land Uses

Jurisdiction	Location	Year 2005 SEL Due to Aircraft from New Airport			Notes
		Alternative 1	Alternative 2	Alternative 3	
1. City of Vermillion	Saint John's Church & School	82	82	81	1.
2. City of Coates	Saint Agatha's Church	82	82	81	1.
3. City of Hastings	Lions Park	75	75	76	1.
4. City of Hastings	Cooper Elem. School	72	72	73	1.
5. City of Farmington	Farmington Elem. School	82	81	81	1.
6. City of Castle Rock	United Methodist Church	79	80	79	1.
7. City of Hampton	Saint Mathias School & Church	90	93	91	Alt. 2 greater than Alts. 1 and 3.
8. City of New Trair	Saint Mary's School & Church	92	92	91	1.
9. City of Miesville	Saint Joseph's Church	93	93	93	1.
10. City of Prescott, WI	Saint Joseph's Church & School	73	73	74	1.
11. City of Prescott, WI	Prescott Senior High School	71	71	71	1.
12. City of Cottage Grove	Pine Hill School	81	81	86	Alt. 3 greater than Alts. 1 and 2.
13. City of Cannon Falls	Cannon Falls Senior High School	87	87	86	1.
14. City of Rosemount	Saint John's Lutheran Church	85	85	84	1.
15. City of Rosemount	Elementary/Middle School	69	69	68	1.
16. Pierce Co. WI	Kinnickinnic State Park, WI	75	75	76	1.
17. Afton	Afton State Park	79	79	77	1.
18. New Scandia	William O'Brien State Park	-	-	-	Not measured; too far from airport.
19. Goodhue County	Gores State Wildlife Management Area	82	82	82	1.
20. Goodhue County	Gores Pool	87	87	85	1.
21. Washington County	Grey Cloud Island	87	87	87	1.
22. Dakota County	Spring Lake Park (East)	88	88	89	1.
23. Dakota County	Spring Lake Park (West)	93	93	89	Alts. 1 and 2 greater than Alt. 3.
24. Goodhue County	Prairie Island Indian Reservation	64	64	64	1.
25. Goodhue County	Cannon River @ U.S. 61	70	70	70	1.

Source: HNTB analysis based on year 2005 fleet mix.

Notes: 1. No discernible difference among alternatives.

TABLE 27 - Time Above 85 dBA (Minutes) at Selected Noise Sensitive Land Uses

Jurisdiction	Location	Year 2005 TA 85 dBA Due to Aircraft from New Airport			Notes
		Alternative 1	Alternative 2	Alternative 3	
1. City of Vermillion	Saint John's Church & School	0	0	0	1.
2. City of Coates	Saint Agatha's Church	0	0	0	1.
3. City of Hastings	Lions Park	0	0	0	1.
4. City of Hastings	Cooper Elem. School	0	0	0	1.
5. City of Farmington	Farmington Elem. School	0	0	0	1.
6. City of Castle Rock	United Methodist Church	0	0	0	1.
7. City of Hampton	Saint Mathias School & Church	0	0	0	1.
8. City of New Treir	Saint Mary's School & Church	0	0	0	1.
9. City of Miesville	Saint Joseph's Church	0	0	0	1.
10. City of Prescott, WI	Saint Joseph's Church & School	0	0	0	1.
11. City of Prescott, WI	Prescott Senior High School	0	0	0	1.
12. City of Cottage Grove	Pine Hill School	0	0	0	1.
13. City of Cannon Falls	Cannon Falls Senior High School	0	0	0	1.
14. City of Rosemount	Saint John's Lutheran Church	0	0	0	1.
15. City of Rosemount	Elementary/Middle School	0	0	0	1.
16. Pierce Co. WI	Kinnickinnic State Park, WI	0	0	0	1.
17. Afton	Afton State Park	0	0	0	1.
18. New Scandia	William O'Brien State Park	-	-	-	1.
19. Goodhue County	Gores State Wildlife Management Area	0	0	0	1.
20. Goodhue County	Gores Pool	0	0	0	1.
21. Washington County	Grey Cloud Island	0	0	0	1.
22. Dakota County	Spring Lake Park (East)	0	0	0	1.
23. Dakota County	Spring Lake Park (West)	0	0	0	1.
24. Goodhue County	Prairie Island Indian Reservation	0	0	0	1.
25. Goodhue County	Cannon River @ U.S. 61	0	0	0	1.

Source: HNTB analysis based on year 2005 fleet mix.

1. No discernible difference among alternatives.

The results should be interpreted with caution for these points for several reasons.

First, although the INM is generally accurate for noise levels above DNL 65 or 60, results are less reliable for lower levels (see **Appendix A**). Second, the farther aircraft are from an airport, the more variable their location relative to modelled flight tracks. Finally, the quieter the perceived sound from an aircraft, the harder it is to discern it from other existing ambient noise levels. Other sources of noise (such as automobiles, voices, wind, etc.) may actually be louder than the aircraft at the listener's location.

While these constraints reduce the level of confidence that can be placed on the *specific* modelled noise values, the results can be used to determine with some level of confidence the *differential* noise impacts among the three alternatives for these noise sensitive points.

Table 25 lists the 25 noise-sensitive locations, their estimated ambient DNL level and the DNL noise impacts due to aircraft operations at the three alternatives sites. The ambient DNL levels were estimated using the survey information in **Figure 17**, where available; for locations outside the survey, EPA estimates were used.[5] For most points, DNL noise levels produced by aircraft overflights are anticipated to be at or below existing ambient noise levels. Most acousticians consider a difference of less than 3 dB to be indistinguishable for the average listener. This means there is also very little *differential* impact among the three alternatives for DNL.

Two points would likely experience DNL noise levels above existing ambient levels, Grey Cloud Island and the western portion of Spring Lake Park. Alternatives 1 and 2 would create a greater noise impact at Spring Lake Park than Alternative 3.

Table 26 shows Sound Exposure Levels (SEL's) for the three alternatives. The SEL metric is designed to compare single noise events of differing duration and intensity by compressing or expanding the duration of a single event to a period of one second. This means that the decibel levels shown in **Table 26** reflect how loud an aircraft overflight would be if its entire sound energy from the event were compressed into the duration of one second. Since in reality the noise energy produced from an aircraft overflight lasts many seconds, SEL values cannot be compared to DNL or standard decibel readings (for example, SEL values of aircraft overflights are typically 5 to 10 dB higher than maximum decibel levels). FAA and EPA typically require use of both DNL and single event metrics (like SEL) to address noise impacts in an EIS. For a more detailed discussion of the SEL metric, see Appendix A.

Table 27 shows the Time Above 85 dBA for a typical day. None of the 25 noise sensitive points would experience aircraft generated noise levels above 85 dBA on a typical day.

TABLE 25 - DNL Impacts at Selected Noise Sensitive Land Uses

Jurisdiction	Location	Estimated Ambient DNL	Year 2005 DNL Due to Aircraft from New Airport			Notes
			Alternative 1	Alternative 2	Alternative 3	
1. City of Vermillion	Saint John's Church & School	48-52	46	46	46	1., 4.
2. City of Coates	Saint Agatha's Church	48-52	41	41	41	1., 4.
3. City of Hastings	Lions Park	58-62	35	35	36	1., 4.
4. City of Hastings	Cooper Elem. School	58-62	38	38	39	1., 4.
5. City of Farmington	Farmington Elem. School	58-62	46	44	45	1., 4.
6. City of Castle Rock	United Methodist Church	48-52	40	40	40	1., 4.
7. City of Hampton	Saint Mathias School & Church	53-57	50	51	50	1., 4.
8. City of New Trelr	Saint Mary's School & Church	53-57	50	50	50	1., 4.
9. City of Miesville	Saint Joseph's Church	53-57	54	55	54	2., 4.
10. City of Prescott, WI	Saint Joseph's Church & School	53-57	36	36	37	1., 4.
11. City of Prescott, WI	Prescott Senior High School	53-57	34	34	35	1., 4.
12. City of Cottage Grove	Pine Hill School	53-57	44	45	44	1., 4.
13. City of Cannon Falls	Cannon Falls Senior High School	53-57	40	40	40	1., 4.
14. City of Rosemount	Saint John's Lutheran Church	58-62	42	42	41	1., 4.
15. City of Rosemount	Rosemount Elementary/Junior High		30	30	30	1., 4.
16. Pierce Co. WI	Kinnickinnic State Park, WI	30-52	33	33	34	2., 4.
17. Afton	Afton State Park	30-52	39	39	38	2., 4.
18. New Scandia	William O'Brien State Park	30-52	-	-	-	Not measured; too far from airport location.
19. Goodhue County	Gores State Wildlife Mgmt Area	30-52	43	43	42	2., 4.
20. Goodhue County	Gores Pool	30-52	50	50	48	2., 4.
21. Washington County	Grey Cloud Island	30-52	53	53	52	3., 4.
22. Dakota County	Spring Lake Park (East)	30-52	45	46	47	2., 4.
23. Dakota County	Spring Lake Park (West)	30-52	57	57	54	3., Alts. 1 and 2 higher DNL than Alt. 3.
24. Goodhue County	Prairie Island Indian Reservation	48-52	29	29	29	1., 4.
25. Goodhue County	Cannon River @ U.S. 61	30-52	32	32	32	2., 4.

Source: HNTB Analysis based on year 2005 fleet mix.

Notes: 1. Below range of estimated ambient noise levels; 2. Within range of estimated ambient noise levels; 3. Above range of estimated ambient noise levels; 4. No discernible difference among alternatives.

I.3 Mitigation Measures (Noise)

Mitigation measures for each of the alternatives would include a combination of noise abatement procedures and land use measures as described below. They are based on the measures identified in the MSP FAR Part 150 Study Update (revised December 1993). Should the Legislature chose the new airport option, an FAR Part 150 study would be undertaken to formulate a unique noise abatement/mitigation program for the new airport.

Noise Abatement Measures

·Noise abatement operating procedures. These procedures include:

–Noise abatement takeoff procedures,
–Minimum flap settings when landing to reduce power settings,

·Modified standard arrival and departure flight tracks. Arrival and departure flight tracks could be modified to direct aircraft away from residential areas.

·Preferential runway use system. The use of certain runways may create less noise impacts than others. Depending on traffic levels and weather, a preferential runway use system could be implemented which would direct aircraft to the least noise-sensitive runways.

·Noise monitoring system. Continue to use the noise monitoring system for the collection of accurate runway use counts by aircraft type, aircraft flight path information, and 24-hour noise monitoring data at selected sites within adjacent communities. The system is used to archive data for future airport decisions, validate complaint information, track effects of air traffic routing procedures, and validate computer-generated noise models.

·Engine run-up field rule. Aircraft would be required to conduct maintenance run-ups at designated areas, and with aircraft heading in a specific direction to minimize noise impacts.

·Noise abatement sensitivity training. This activity is designed to increase awareness among airport users and Air Traffic Control regarding noise issues and to help increase compliance with noise abatement procedures.

·Public information program. The airport would strive to increase public awareness by developing and distributing pertinent information concerning aircraft noise abatement activity.

Land Use Measures

·Amendments of local land use plans and modified zoning. This measure is designed to increase the amount of compatible land around the new airport by discouraging development of noise-sensitive land uses under flight paths.

·Sound insulation program. This program is intended to retain "residential" status of land use. It is a voluntary program for homeowners residing within a specified DNL noise contour. The airport would pay for sound insulation necessary to reduce noise to more acceptable levels.

·Purchase guarantee program. Like the sound insulation program, the purchase guarantee program is intended to retain "residential" status of land use by guaranteeing the homeowner fair market value reimbursement when selling his or her home. If, after a specified period of time the house does not sell, the airport would pay the seller fair market value, insulate the home, and return it to the market.

·Land acquisition program. This program is intended to change existing residential land use to either airport or non-residential land use. The state would have the right to condemn the property if necessary. The program requires the airport to pay for moving/relocation expenses in addition to fair market value of the house.

J. Socioeconomic

Socioeconomic impacts include the costs to develop each alternative and the numbers of residents and businesses which would be displaced by the development of a new airport in Marshan and Vermillion Townships. Specifically, the numbers include those living and working within the airport boundary, which includes the Runway Protection Zones (RPZs). The FAA mandates the RPZ, a trapezoid extending 2,500 feet from both ends of each runway, with the recommendation that the airport operator retain control over the RPZ to eliminate anything that could be hazardous to aircraft and to protect the safety of people on the ground.

The numbers **do not** include residents and businesses which might be displaced for construction of roadways and powerlines serving the new airport. There will not be differential impacts between the three alternatives for roadway and powerline construction. These impacts will be detailed in the Environmental Impact Statement.

J.1 Affected Environment

The site of a new airport, in Marshan and Vermillion Townships of Dakota County, is southwesterly of the city of Hastings and east of the city of Vermillion. It is located in a rural setting, with agriculture as the predominant land use. (Farmland impacts are discussed separately in Section E.) In addition, there are some residences which are not connected to either farming operations or businesses.

J.2 Socioeconomic Impacts

J.2.1 Displacement Impacts

Residential Displacement

The residential displacements which would occur with the development of each alternative is presented in **Table 28**. Alternative 1 would displace the greatest number of persons, while Alternative 3 would displace the least.

TABLE 28 - Population/Households Displaced

	Alternative 1	Alternative 2	Alternative 3
Total persons displaced	590	556	467
Differential	123	89	0
Total households displaced	173	163	137
Avg. persons/unit displaced	3.41	3.41	3.41

Source: Estimates, based on 1990 U.S. Census adjusted to reflect estimated growth by year 2000.

Business Displacement

The number of businesses and employees displaced under the development of each alternative is presented in **Table 29.**

TABLE 29 - Businesses/Employees Displaced[1]

	Alternative 1	Alternative 2	Alternative 3
Businesses	11	11	11
Employees	242	242	242

Source: HNTB Survey

[1] Includes commercial nursery operations and one vineyard. Figures include both regular and seasonal employees, both full-time and part-time.

Unique Populations

The numbers of specific groups of persons who would be displaced under the development of each alternative are presented in **Table 30.**

TABLE 30 - Unique Population Displacement

	Alternative 1	Alternative 2	Alternative 3
Children 18 and younger	420	462	374
Adults 65 and older	51	49	50
Non-white persons	15	14	10
Group housing facilities	0	0	0

Source: 1990 U.S. Census

J.2.2 Relocation Impacts

Residential and Business Relocation

The number of housing units which would be displaced as a result of development of each alternative is included in **Table 31.** This number includes properties which are both residences and businesses, such as family farms and farm-dependent businesses. Also presented are the average assessed valuation of owner occupied units and the average rent of renter occupied units.

TABLE 31 - Residential and Business Relocation[1]

	Alternative 1	Alternative 2	Alternative 3
Owner occupied units	292	286	255
Renter occupied units	22	20	11
Average assessed valuation (1994 $)	$89,951	$87,160	$87,041
Average rent (1990 $)	$381	$381	$389
Total vacant units	3	4	2

Source: 1990 U.S. Census; Dakota County Assessor

[1] Figures include both residential housing and businesses, as both are located on most properties in Marshan and Vermillion Townships.

J.2.3 Tax Capacity Impacts

The development of a new airport will require the acquisition of taxable property within three jurisdictions, Marshan and Vermillion Townships and School District 200. The acquisition of taxable property will reduce the property tax capacity for these jurisdictions. **Tables 32 and 33** detail the property tax capacity of each jurisdiction, the amount of tax capacity reduced by each of the three Alternatives and the percentage of tax capacity reduction resulting from the acquisition of property for a new airport.

Note: The boundaries of the townships and the school districts are not identical with each other; consequently, the tax capacity of these jurisdictions are analyzed separately. In addition, property tax capacity is not the equivalent of property tax revenues each jurisdiction would receive.

TABLE 32 - Tax Capacity Impacts - Townships

	Alternative 1	Alternative 2	Alternative 3
Total tax capacity Marshan & Vermillion Townships	$1,606,333	$1,606,333	$1,606,333
Total tax capacity reduction	$412,820	$370,679	$334,546
Percentage of total tax capacity reduction for airport development	25.7	23.1	20.8
Tax capacity Marshan Township	$874,760	$874,760	$874,760
Tax capacity reduction Marshan Township	$278,318	$248,209	$178,885
Percentage of tax capacity reduction for airport development Marshan Township	31.8	28.4	20.4
Tax capacity Vermillion Township	$731,573	$731,573	$731,573
Tax capacity reduction Vermillion Township	$134,502	$122,470	$155,661
Percentage of tax capacity reduction for airport development Vermillion Township	18.4	16.7	21.3

Source: Dakota County Assessor's Office (1993 payable in 1994)

TABLE 33 - Tax Capacity Impacts - School District 200

	Alternative 1	Alternative 2	Alternative 3
Total tax capacity School District 200	$12,537,365	$12,537,365	$12,537,365
Total tax capacity reduction School District 200	$412,820	$370,679	$334,546
Percentage of tax capacity reduction for airport development	3.29	2.95	2.66

Source: Dakota County Assessor's Office (1993 payable in 1994)

J.2.4 New Airport Development Costs

The total cost of developing each alternative includes construction, acquisition, relocation and mitigation costs. The difference in costs between the alternatives are presented in **Table 34**. **Table 34** does not include the difference in costs for mitigation of aircraft noise — which are expected to be similar for each alternative. A noise mitigation plan will be prepared for the selected alternative. Alternatives 1 and 2 would cost about $30 million and $20 million, respectively, more than Alternative 3.

TABLE 34 - Difference in Development Costs

Cost	Alt. 1	Alt. 2	Alt. 3
Acquisition, Demolition, Relocation, Grading and Excavation	$9,215,000	$7,093,000	0
Terminal, Runways, Taxiways, Aprons and Parking	$18,779,000	$11,805,000	0
Ground Access	0	0	0
Support Facilities, Air Cargo, Military	0	0	0
Major Utilities	$1,839,000	$1,294,000	0
Total Difference	$29,833,000	$20,192,000	

J.3 Mitigation Measures (Socioeconomic)

Replacement housing for residents displaced by a new airport would be difficult to find in rural areas elsewhere in Dakota County or in adjacent counties. Most of these residents live on family farms, and it is unlikely there will be similar farmland available in the near vicinity. According to the 1990 U. S. Census, vacant housing is available within the census tracts that also encompass the airport sites; however, those housing units are closer to such urban settings as the town of Hastings and are not in the rural areas of Dakota County.

Similarly, many businesses within the boundary of a new airport are dependent upon farming for their clientele. These include, for example, a grain elevator east of the city of Vermillion, engine repair shops, several commercial nursery operations and a vineyard. Without the farmlands and the farming community on which they depend, replicating these business establishments will be difficult.

K. Transportation Access

The impacts of the comprehensive plan alternatives on the regional highway system (as they differ between the alternatives) is addressed in this section. All three alternatives access the regional highway system at the same points.

K.1 Affected Environment

The existing 1992 average daily traffic (ADT) is shown on **Figure 28**. **Figure 29** shows the forecast 2020 daily travel demand for the No Action alternative — i.e., if the airport remains at its current site (MSP) in Hennepin County.

Information from the 1990 Travel Behavior Inventory (TBI) indicates that the area of the New Airport alternatives has ties to the greater portion of the region. On a daily basis trips were made to virtually every part of the region. Some of the strongest ties (outside of central Dakota County) were to the Shakopee-Prior Lake-Burnsville area, the Bloomington-Richfield-Edina area, southwestern Washington County, and the Inver Grove Heights-South St. Paul-West St. Paul area. However, some trips did travel as far as Carver County and northern Anoka County. Also, MSP International Airport has ties to western Wisconsin, which would be transferred to the New Airport.

K.2 Impacts of Transportation Access

The impacts of Alternative 1, 2 and 3 due to new access roads and changes in existing roads are the same. These impacts will be addressed in the EIS and will be compared with the impacts of the MSP expansion alternative and the No-Action Alternative.

Impacts and issues to be addressed in the EIS include the following:

More in-depth analysis of local and regional roadway requirements to provide access to site;
Impacts of induced development assumptions (in Minnesota and Wisconsin);
Analysis of environmental impacts and costs of additional roadways, new alignments, and expansion of existing roadways;
Express transit routes between the two central business districts of Minneapolis and St. Paul and the airport site, and the impacts of such routes;
Travel demand management;
Necessary river crossing improvements, costs and impacts;
Interconnectivity of regions within and between states and areas within the regions;
Impacts of new roadway system on adjoining communities; and
Analysis of impacts on principal arterials providing access to site.

L. Water Resources

L.1 Affected Environment

Surface Water Quality

The two potential receiving waters for (treated) stormwater or wastewater discharges from the airport site are the Vermillion and the Mississippi Rivers. Waters within the Vermillion River watershed near and downstream of the site and waters of the Mississippi River, from the Rock Island Railroad Bridge to Lock and Dam 2, have an MPCA classification of "2B." which means waters suitable for cool or warm water fish propagation and recreational activities including swimming. With limited exceptions, those sections of the Vermillion and Mississippi Rivers potentially affected by the proposed airport currently meet water quality standards. However, the Vermillion River has been identified as being negatively affected by agricultural nonpoint source runoff, which contributes substantial loads of phosphorous and total suspended solids.

The level of treatment that will be required for both point and nonpoint source discharges from the new airport is assumed to be based on the application of the MPCA's nondegradation policy (Minnesota Rules 7050.0185) for significant new discharges (greater than 200,000 gallons per day). At a minimum, existing water quality standards will have to be met, and the project may be subject to further discharge limits beyond those required to meet water quality in order to minimize impacts on the receiving waters. The same basic standards would apply to the Vermillion and the Mississippi Rivers.

Surface Water Quantity

The New Airport site is within the Vermillion River watershed. The entire watershed is the subject of a watershed management plan, prepared under the auspices of the Vermillion River Watershed Management Organization. The plan has been found to meet the purposes of the Surface Water Management Act. Revisions to the plan, expected to occur within the next few years, will need to follow guidelines promulgated by the Board of Water and Soil Resources (BWSR) in accordance with Chapter 601 of the Laws of Minnesota. Such revisions are not expected to significantly affect the peak discharge and storage requirements identified in **Table 35.**

Stormwater Runoff

Landside areas of the airport include facilities devoted to passenger and employee access, including roads, parking lots, and terminal access facilities. Airside areas of the airport include facilities devoted to airline operations including runways, taxiways, tarmac areas, and maintenance facilities. Contaminants of concern in runoff from both landside and airside facilities include those typically found in urban stormwater runoff, including suspended solids, oil and grease, biochemical oxygen demand (BOD), chemical oxygen demand (COD), nitrogen, phosphorus and trace metals. In addition, airside pollutants include urea application to runways and taxiways for ice control, and spray of deicing agents (ethylene glycol) off aircraft during takeoff.

TABLE 35 - Allowable Peak Runoff Rate and Associated Storage Requirement for Vermillion Watershed

Watershed Management Sector	Allowable Peak Flow, cfs[1]	100 Yr Storm Storage Requirements, acre-ft
11	1,250	3,080
12	570	770
13	100	60
14	980	1,760
15	680	260
16	250	150
17	380	390
18	1,220	1,860

[1] Allowable peak flow from runoff management sector into Vermillion River.

Water Related Land Use

Dakota County's Shoreland and Floodplain Management Ordinance applies to the shorelands of public water bodies. Setback requirements require structure setbacks of 200 feet from rivers and setbacks of 100 feet from tributaries. However, the ordinance requires screening or a setback of double the required distance for uses without water-oriented needs.

L.2 Impacts on Water Resources

The potential pollutant sources and parameters considered with regard to future surface water quality at and near the New Airport alternative and sources of these substances associated with airport operations are described below.

L.2.1 Surface Water Quality

Wastewater

Wastewater from the New Airport would come from two major sources: sanitary wastewater flows from airport personnel and passengers, and pretreated glycol contaminated runoff. For the purposes of this analysis, a range of 20 to 40 gallons of sanitary sewage per enplanement has been assumed for the New Airport alternative. Projected enplanements for the year 2020 are approximately 19.6 million. This results in an estimated 2020 sanitary sewage flow range of 1.1 to 2.1 mgd.

During winter months, airports in cold climates such as Minnesota experience icing conditions which necessitate deicing of aircraft for safety purposes. Currently used deicing fluids typically contain ethylene or propylene glycol. Runways also require use of deicing agents which may also include glycols with other additives such as urea. Deicing fluids containing ethylene glycol are typically a 58% glycol, 42% water solution. Deicing fluid usage at the existing airport is on the order of 1/2 to 1 million gallons per year with peak-day usage on the order of 50,000 gallons (MAC, 1993).

The projected annual use of glycol deicing agents is 802,900 gallons for the MSP airport by the year 2020. The same value has been used for the New Airport alternative. This constitutes a "typical" usage. Actual usage may be greater or less from year to year.

Deicing areas for the alternatives include remote deicing pads only. These are facilities devoted to deicing aircraft prior to takeoff through the application of ethylene glycol and other deicing agents.

A number of assumptions have been made regarding the future of glycol use at the proposed airport, including:

1. Deicing agents will only be applied at deicing facilities away from the terminal areas.

2. Deicing areas will be equipped with glycol recovery and recycling systems. These systems are assumed to capture 50 percent of applied glycol. For the captured

material, recovery is assumed to be 80 percent efficient, with a remaining 20 percent disposed as a waste material.

3. The uncaptured 50 percent of applied glycol will volatilize or drip off taxiing aircraft and be deposited on runways during takeoff.

4. When deicing is not occurring, stormwater runoff from deicing areas will be directed to a pretreatment system separate from the SWMS (stormwater management system).

5. BOD (biochemical oxygen demand) removal efficiency during pretreatment is assumed to be 90 percent. After pretreatment, glycol contaminated runoff can be discharged:

   - to a wastewater treatment facility for final treatment;or
   - to the SWMS; or
   - to receiving waters if sufficient COD reduction has been achieved.

Properties of glycol relative to water quality issues include a high chemical oxygen demand (COD) on the order of 750,000 mg/l in the typical diluted solution (Union Carbide, 1985.) Glycol toxicity tests have indicated an LC50 on the order of 10,000 mg/l which is equivalent to 1% solution of pure glycol or about a 2% solution of deicing fluid. An LC50 is a concentration which is lethal to 50% of the exposed test organisms (Daphnia Magna and fathead minnows were test species). Ethylene glycol has a fairly rapid biodegradation rate in soil ranging from 30 to 65 hours for concentrations of 1000 to 5000 mg/kg, respectively, at 20°C (Union Carbide, 1985). Ethylene glycol can have a herbicidal effect on some plants at a concentration of 1% or more (EPA, 1979).

Wastewater Contaminants of Concern

Assuming a mean sanitary sewage BOD concentration of 220 mg/l, the estimated BOD load resulting from airport operations in the year 2020 would be 2,020 to 3,860 pounds per day. Glycol contaminated runoff on deicing pads will be collected in drains and routed to storage tanks during deicing events involving small amounts of precipitation (i.e., less than ½ inch). If deicing is occurring during periods when precipitation is heavier (½ inch or more) the dilution of the fluid may reach a level where recycling is impractical. Solutions below 10-15% are not usually practical for recycling. More dilute glycol solutions will be routed to the pretreatment basin. Volumes and glycol concentrations of runoff will be highly variable depending on application rate, meteorological conditions, length of deicing event and quantity of precipitation. Allowance has been made to treat 2-3 mgd of glycol contaminated runoff in the wastewater treatment plant.

Impacts on Surface Water Quality

Based on the stormwater modeling results, and the MPCA's nondegradation standard, it appears questionable whether stormwater discharges to the Vermillion River, even after the application of structural best management practices (BMPs), would be permitable. Although further pollutant load reduction could be achieved through the use of nonstructural BMPs (operations and management practices) and/or the use of constructed wetlands, the use of such

measures still may not result in full attainment of water quality standards. Consequently, it is possible stormwater discharges associated with the proposed airport may have to be diverted to the Mississippi River in order to meet water quality standards in the Vermillion River. However, diverting such stormwater directly to the Mississippi River may constitute an "interbasin" water transfer requiring approval from the MDNR. It is unknown at this time under what conditions, if at all, MDNR would allow such a transfer.

The same types of issues that affect the potential for additional stormwater discharges also apply to potential discharges from a wastewater treatment facility. Even with high levels of treatment (greater than secondary), it may not be possible to meet water quality standards and discharge to the Vermillion River.

L.2.2 Surface Water Quantity

Stormwater Runoff Flows

The airport site's natural drainage is to the Vermillion River. The Vermillion River Watershed Management Organization (VRWMO) is the local unit of government responsible for the management of water within the new airport site. The VRWMO has established standards for allowable runoff peak flow rates by Watershed Management Sector (WMS). The sectors are shown in **Figure 30.**

The greatest area of the proposed site lies within WMS 14. However, it is important to note that the proposed airport site is situated in 4 different sectors (14, 15, 16 and 18). Because of this it becomes difficult to evaluate runoff areas by the previously established system. It may be of greater importance to evaluate the group of WMSs collectively.

Water Quantity Impacts

The runoff controls, ponding and storage proposed for the New Airport alternatives (described further in Section L.3 and shown on **Figure 31** - Stormwater Management Facilities) provide sufficient storage volume to detain all site-generated runoff for a sufficient amount of time so as to eliminate the airport's contribution to any local flooding. This storage volume, although great enough to reduce the area's peak storm runoff flows by 25%, is not sufficient in itself to satisfy the VRWMO requirements for peak flow reduction based upon individual Watershed Management Sectors. (See subsequent **Tables 39 and 40.**) This is because runoff originating outside of the airport boundary is not being controlled by the stormwater management system (SWMS) inside of the boundary. Even though sufficient storage volume has been provided to contain all 100-year runoff flows within the site, the remaining portions of the WMS's outside the site boundary still contribute sufficient flow to exceed allowable flow limits. No increase in flood elevations should occur as a result of the potential development of a New Airport within its boundary. Due to the large storage volume provided for airport site runoff, some reduction in flooding impacts can be expected even though the VRWMO peak flow limits are not all met.

To the extent some runoff can be diverted to a discharge point below Hastings, additional flood control benefits may be achieved.

Off-Site Run-On

The New Airport alternatives would change the current drainage patterns through the area. Runoff from portions of Watershed Management Sectors 14, 15, and 18 will be diverted around the airport and will not be allowed to run-on to the site. This will be accomplished by the construction of berms at points where run-on may occur. Impacts of these diversions can be evaluated at the time Vermillion River flood effects are analyzed.

L.3 Mitigation Measures (Surface Water Quality)

Surface Water Quality

Structural Best Management Practices
Stormwater Management System (SWMS)

The SWMS serves a dual purpose by integrating stormwater pollution reduction BMPs with flood control facilities. This integrated approach is described in the flow diagram shown on the following page..

The following list of stormwater structural BMP's were evaluated for use in the SWMS.

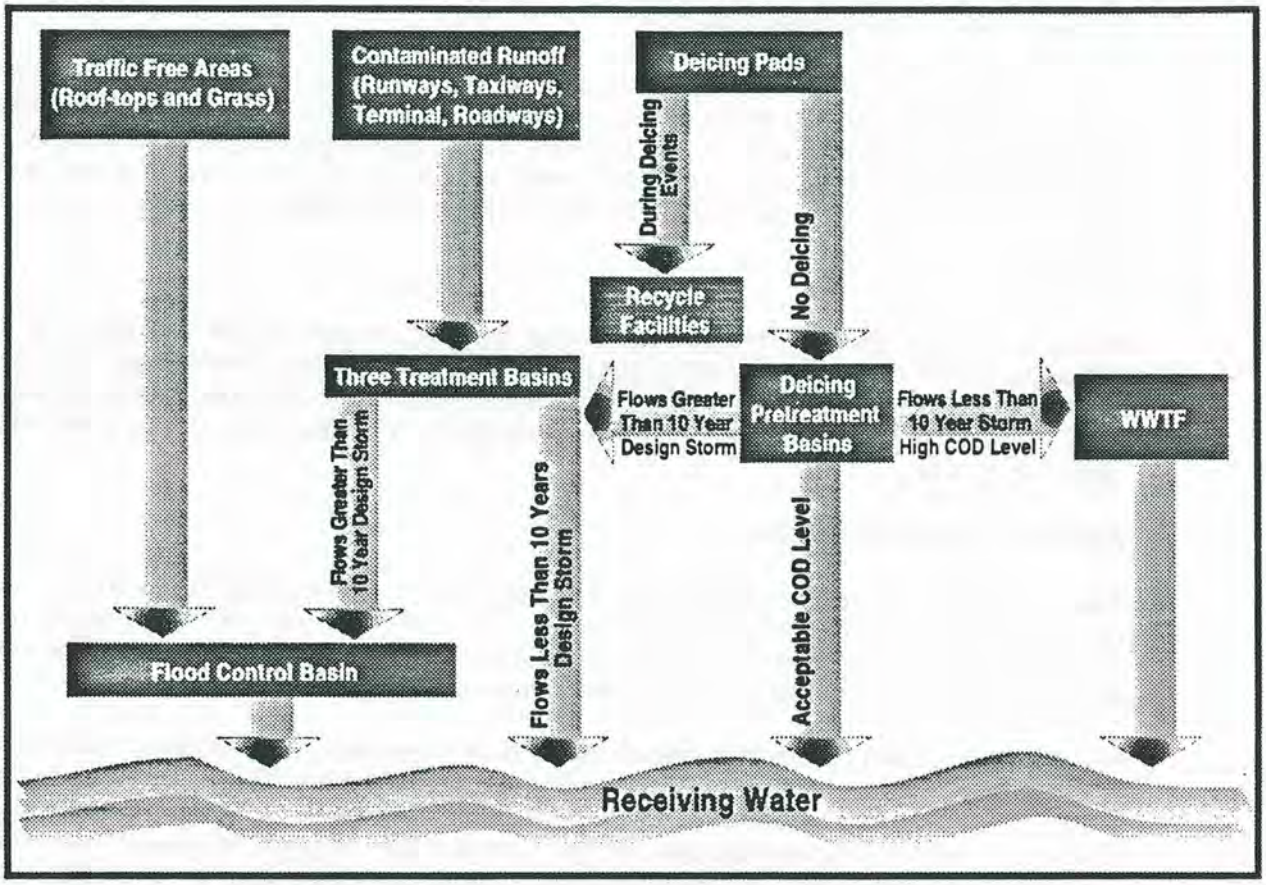
1. Filter Strips
2. Grassed Swales
3. Extended Detention Wet Ponds
4. Extended Detention Dry Ponds
5. Retention Ponds

Performance expectations for these BMP's were developed on the basis of available literature. Only BMP's which focus on the detention of surface water were used in developing the SWMS. BMP's which depend on the use of infiltration or percolation as a treatment mechanism have not been included in the SWMS at this time. This results in a conservative sizing of the SWMS. Some runoff flows, especially those from traffic-free areas such as building roofs and open grassy areas, would likely be suitable for infiltration BMP's. Infiltration BMP's which have not been included in the SWMS at this time are:

1. Infiltration Basins
2. Infiltration Trenches
3. Porous Pavement
4. Concrete Grid Pavement
5. Filtration Basins

The use of some of these BMP's may be incorporated into the final design of the SWMS once groundwater impacts have been quantified.

Stormwater Management System Flow Diagram



Conveyance Systems

Conveyance systems include both principal and auxiliary facility systems. The principal system includes the main channels and trunk sewers, as well as collection facilities in areas of the airport where interruption of service is not acceptable. The auxiliary facility system includes most collection facilities in the proposed airport from areas where temporary flooding could be tolerated.

Principal Conveyance System

The principal conveyance system consists of the trunk pipelines, conduits, and open channels necessary to convey stormwater runoff away from vital airport areas such as runways, taxiways, and terminal areas. The principal conveyance system shall be designed to handle the peak flow rate from the 100-year, 24-hour storm without surcharging or flowing out of banks.

Auxiliary Facility Conveyance Systems

The auxiliary facility conveyance system consists of catch basins, collector pipes, culverts and storm sewers necessary to convey stormwater away from areas such as parking lots, storage areas, and maintenance facilities. The auxiliary facility system discharges into the principal conveyance system. The auxiliary facility conveyance system shall be designed to handle the peak flow rate from the 10-year, 24-hour storm without surcharging.

Traffic-free Areas

Traffic-free areas consist of areas within the proposed airport where the potential for contamination of stormwater runoff is minimal. These include open grassy areas away from airport facilities and building roof drains. Clean water from Traffic-free areas will be conveyed to the flood control basins to control discharge rates to the Vermillion River via the stormwater detention facility.

Discussion of SWMS Treatment

Extended dry detention basins were initially selected as the primary BMP for the treatment of stormwater runoff. Wet detention within the airport site boundary was eliminated from consideration because of bird hazard concerns. Additional BMPs for treatment of stormwater runoff may need to be "linked" to these basins during more detailed design.

The SWMS has been designed to ensure treatment of potentially contaminated runoff for the frequent storm events. Frequent is defined as the 2-year storm event. Previous studies indicate that pollutant removal efficiencies for frequent events are similar to long-term (annual) averages. Stormwater runoff from potentially contaminated areas — like the gates, taxiways, and runways — will flow to the these dry detention basins. Using a 2-year design ensures treatment of the "first flush" by the proposed BMPs.

As residence time within dry detention basins decreases because of larger storms, the efficiency of the treatment basin also potentially declines. Use of a 10-year design storm to evaluate pollutant removal efficiency and confirm basin performance, addressed this concern. Water quality detention basins were designed to ensure a 40-hour detention time for the 10-year storm event.

Little additional pollutant removal can be expected for storm events exceeding the 10-year event. Therefore, runoff exceeding the 10-year storm event overflows from the water quality detention basins, to the flood control detention facility. This ensures attenuation of flood flows, prior to discharge to the receiving water.

Tables 36-38 describe runoff flows and volumes for 2-year, 10-year and 100-year events for Alternative 1. Alternatives 2 and 3 would have similar flows and volumes.

Runoff flows, volumes and contaminant loadings were modeled using the EPA's Stormwater Management Model (XPSWMM). This model simulates stormwater events, using SCS Type II precipitation distribution. A more detailed discussion of the analysis is presented in the technical memorandum on stormwater facility design listed in **Appendix A.**

TABLE 36 - Runoff in WMS 14 (prior to detention)
2-year Storm

	Contaminant Exposed[1]	Clean Water[2]	Run-On[3]
Peak Flow	3,103 cfs	1,397 cfs	122 cfs
Total Runoff Volume	567 acre-ft	510 acre-ft	210 acre-ft
Surface Area	3,897 acres	5,924 acres	4,920 acres
Inches of Runoff	1.754 in	1.031 in	0.516 in

TABLE 37 - Runoff in WMS 14 (prior to detention)
10-year Storm

	Contaminant Exposed[1]	Clean Water[2]	Run-On[3]
Peak Flow	5,452 cfs	3,254 cfs	311 cfs
Total Runoff Volume	964 acre-ft	1,035 acre-ft	530 acre-ft
Surface Area	3,897 acres	5,924 acres	4,920 acres
Inches of Runoff	2.97 in	2.10 in	1.30 in

(1) Contaminant Exposed is runoff from the landside and airside areas of the airport when there is potential for contaminant loadings.

(2) Clean Water is runoff from traffic-free areas of the airport.

(3) Run-On is water from WMS 14 upstream of the New Airport (see **Figure 30**).

TABLE 38 - Runoff in WMS 14 (prior to detention)
100-year Storm

	Contaminant Exposed	Clean Water	Run-On[1]
Peak Flow	8,608 cfs	5,847 cfs	616 cfs
Total Runoff Volume	1,499 acre-ft	1,338 acre-ft	1,040 acre-ft
Surface Area	3,897 acres	5,924 acres	4,920 acres
Inches of Runoff	4.63 in	2.73 in	2.54 in

[1] Run-on is water from WMS 14 upstream of the New Airport (see **Figure 30**).

Table 39 describes area and volume of stormwater basins relative to the storm flow which they were designed for.

TABLE 39 - Estimated Areas and Volumes for Stormwater Detention Facilities - Alternatives 1, 2, 3

Basin	Design Storm	Area[1]	Volume[2]
WQ Basin 1	2-year	20.2	163
	10-year	33.1	284
WQ Basin 2	2-year	18.8	151
	10-year	27.1	245
WQ Basin 3	2-year	31.6	257
	10-year	53.4	434
Flood Control 1	100-year	100	1,100
Flood Control 2	100-year	140	1,540
Deicing Pretreat 1	10-year	3.0	12
Deicing Pretreat 2	10-year	3.0	12
	TOTAL	359.6	3,627

[1] Area in acres.
[2] Volume in acre-feet.

Table 40 describes flows under 100-year storm conditions relative to existing conditions and VRWMO flow requirements.

TABLE 40 - Projected Peak Flow Discharges[1] for 100-Year Storm Event

Watershed Management Sector	Allowable Flow[2]	Present Conditions	New Airport w/o SWMS	New Airport w/ SWMS	Net[4] Change
14	980	3,190	15,855	2200	-31%
15[3]	680	828	680	680	-18%
16[3]	250	820	515	515	-37%
18[3]	1,220	1,445	1,290	1,290	-11%
TOTAL[5]	3,130	6,283	18,340	4,685	-25%

(1) All flows in cubic feet per second (cfs).

(2) Allowable peak flow rates as established by the Vermillion River Watershed Management Organization.

(3) Reductions in runoff from these Watershed Management Sectors (WMS) is anticipated if the proposed airport is constructed. These WMS (outside the airport boundary) will decrease in area with a corresponding increase in WMS 14.

(4) Net Change is the difference between present conditions and Alternative 1 with the stormwater management system.

(5) Total shown is for comparative purposes only. Peak flows may not be coincident, and therefore the total peak flow at any given time may be less than the sum of the peak flow from individual Runoff Management Sectors. Additional hydrologic modelling of the Vermillion River would be required to determine impacts on flood stage levels in different reaches of the river.

Alternatives 1, 2, 3

The alternative site layouts differ somewhat in how stormwater and wastewater management facilities would be located on the site; however, this does not give rise to significant distinctions between the sites. Alternative 1 has the largest area and was used to develop the conceptual design features. Alternative 2 is only slightly smaller than Alternative 1 and the stormwater facilities and layout would be essentially the same. Alternative 3 is the smallest area but it has sufficient space for the stormwater and wastewater facilities on suitable portions of the site. The small differences in site area among the alternatives does not result in any significant differences in flows or loads to the stormwater and wastewater facilities.

Projected Changes in Pollutant Loadings

Runoff quality for the 2-year, and 10-year storm events were predicted using the XPSWMM computer model for present conditions, airport w/o SWMS, and airport w/ SWMS scenarios. Results of this effort are summarized in **Table 41 and 42.**

TABLE 41 - Projected Changes in Pollutant Loadings[1] for the 2-year Storm Event

Pollutant	Present Conditions	New Airport w/o SWMS	New Airport w/ SWMS	Net[3] Change
COD	140,000	329,000	175,000	+ 35,000
Oil & Grease	NA	32,700	5,254	---
Total Nitrogen	136,000	304,500	198,000	+ 62,000
Total Phosphorus	1,160	1,463	832	-328
Total Solids	256,000	178,000	54,700	-201,300
BOD-N[2]	NA	1,340,000	630,000	---

(1) Pollutant loadings in pounds per event.

(2) BOD-N is additional biological oxygen demand associated with urea.

(3) Net change shown is the difference in pollutant loadings between present conditions and Alternative 1 with the stormwater management system.

As can be seen in the tables, loadings of some contaminants may increase as compared to present conditions due to the additional impervious surface of the airport facilities and the activities at the airport. The storm-event results are conservative in that they include a substantial amount of residual glycol and urea which would not always be present. These storm-event results are most representative of springtime conditions. Flows and contaminant loadings were modeled for existing conditions (primarily agricultural land use), airport facilities without any stormwater management facilities, and with stormwater management facilities. Storm-event results indicate that the airport would increase flows and contaminant loadings of all contaminants if no stormwater management facilities were used. With the dry detention/treatment basin approach, contaminant loadings can be reduced for total solids and phosphorus in the 2-year event scenario. Under 10-year event conditions, reductions can be achieved over existing conditions for most contaminants except those for which existing condition data is not available. The reason the net change for COD and nitrogen is positive for a 2-year event, but negative for a 10-year event, is because these contaminants wash off of the impervious surface during the "first flush" of a storm, but in the existing conditions scenario they continue to be contributed by the agricultural soils throughout an event.

On an annual basis, contaminants are projected to decrease except for oil and grease and nitrogenous biochemical oxygen demand (N-BOD), where no reliable data is available on existing conditions and it is conservatively treated as starting from zero. This is due to the fact that over the course of a year the stormwater management facilities will remove contaminants on a consistent basis under a variety of precipitation event conditions, which will not all take place under the conservative loading conditions used in the event modeling scenarios.

TABLE 42 - Projected Changes in Pollutant Loadings[1] for the 10-year Storm Event

Pollutant	Present Conditions	New Airport w/o SWMS	New Airport w/ SWMS	Net[3] Change
COD	425,000	465,000	258,000	-167,000
Oil & Grease	NA	65,500	10,500	---
Total Nitrogen	326,000	354,000	231,000	-95,000
Total Phosphorus	3,040	2,810	1,686	-1,354
Total Solids	642,000	282,000	95,400	-546,600
BOD-N[2]	NA	1,550,000	730,000	---

(1) Pollutant loadings in pounds per event.

(2) BOD-N is additional oxygen demand associated with urea.

(3) Net change shown is the difference in pollutant loadings by between present conditions and Alternative 1 with the stormwater management system.

Annual Loadings

Annual pollutant loadings for present conditions were projected from USGS stream gauging data and XPSWMM modeling results. Annual pollutant loadings for the proposed airport were based on projected use of glycol and urea at MSP, XPSWMM modeling results, and anticipated performance of stormwater BMP's incorporated into the SWMS. Annual loadings are summarized in **Table 43**.

TABLE 43 - Projected Annual Pollutant Loadings[1]

Net[2] Pollutant	Present Conditions	New Airport w/o SWMS	New Airport w/ SWMS	Change
COD	900	1,500	750	-150
Oil & Grease	NA	135	20	---
Total Nitrogen	900	1,300	845	-55
Total Phosphorus	2.65	3.50	1.82	-0.83
Total Solids	1,650	2,000	300	-1,350
BOD-N[3]	NA	3,950	1,975	---

(1) Pollutant loadings in tons per year.

(2) Net change shown is the difference in pollutant loadings between present conditions and Alternative 1 with the stormwater management system.

(3) BOD-N is additional biochemical oxygen demand associated with urea.

Process Water and other Wastewater Controls

Wastewater from the proposed airport facility would come from two major sources: sanitary wastewater flows from airport operations, personnel and passengers, and pretreated glycol contaminated runoff.

Sanitary Wastewater

For the purposes of evaluating site layout alternatives, an on-site wastewater treatment facility has been assumed. Preliminary sizing estimates are based on the use of biological treatment processes to provide at least tertiary treatment plus phosphorous removal accommodating the flow equivalent of 5 million gallons per day of sanitary wastewater plus pretreated glycol that was too dilute to be recycled. The total wastewater flows are approximately equivalent to a population of 35,000.

A conventional lagoon-based system would require 250 acres. There is insufficient space within the alternative, at a suitable location, to accommodate a lagoon-based system. Consequently, a mechanical plant requiring only 50 acres is the concept used for the proposed airport site.

Additional Mitigation Measures

Because it appears that direct discharge(s) of stormwater and treated wastewater to the Vermillion River may not be permitted based on nondegradation standards and requirements to

attain water quality standards, further mitigation may be required. Such mitigation for storm-water discharges could potentially be achieved by eliminating such discharges from the Vermillion River watershed and diverting them to the Mississippi River.

Mitigation for wastewater discharges could be achieved by completing a new waste load allocation for the river, taking into account both existing and future discharge loads from the Empire WWTF and the additional load from the airport WWTF. Another alternative would be to divert all wastewater (sanitary and unrecycled process flows) to the Metropolitan Disposal System (location undetermined) for treatment.

Other options, such as use of a land application system, constructed wetlands, or infiltration BMP's may be feasible, Constructed wetlands may not be able to be accommodated within the proposed boundaries, regardless of the configuration of the other airport facilities.

M. Wetlands

M.1 Affected Environment

The affected wetlands are shown in **Figure 32.** They were determined initially from U.S. Fish and Wildlife Service National Wetland Inventory (NWI) maps. NWI maps are subject to some error since they are based on interpretation of 1980 color infrared aerial photography and may overlook wetlands that were under cultivation at that time. In order to increase the accuracy of the wetland impact analysis, NWI maps were cross-referenced with the distribution of hydric soils shown on SCS Soil Survey maps and with FSA/FACTA wetland determinations done by the SCS. The SCS Soil Survey maps for the three alternatives do not indicate hydric soils in any locations where wetlands are not shown on the NWI maps. However, apparently due to past agricultural drainage, hydric soils in some areas extend beyond the wetland boundaries shown on NWI maps. This is particularly true along the Vermillion River where agricultural drainage has eliminated wetland hydrology in many areas of the original river floodplain.

Similarly, SCS FSA/FACTA wetland determinations yielded no previously unidentified wetlands and, where NWI wetlands were shown, were generally consistent with the wetland boundaries shown on the NWI maps. The wetland boundaries shown in these determinations tended to confirm that agricultural drainage had eliminated wetland hydrology in some areas having hydric soils. Based on the cross-referencing of the above described data sources, the distribution and boundaries of wetlands shown on the NWI maps still appear to be sufficiently accurate for comparing the relative wetland impacts of the alternatives being considered.

Wetland resources within the boundaries of all three alternatives are very limited — consisting of several extremely small isolated basins, as shown in **Figure 32.**

M.2 Impacts on Wetlands

Based on the airport layouts for each alternative, only Alternative 3 would require any fill of wetlands — about 0.2 acres of a Type 1 Wetland.

M.3 Mitigation Measures (Wetlands)

Assuming the present wetland regulatory framework remains in place at the time the selected alternative is constructed, all wetlands eliminated by the selected alternative will be subject to regulation under Section 404 of the Clean Water Act and the Wetland Conservation Act of 1991 (WCA). None of the alternatives involve impacts to state-protected wetlands. The WCA has the strictest mitigation provisions, requiring lost wetland acreage to be replaced at a minimum 2-to-1 acreage ratio and in a form which replaces the functions and values ascribed to the lost wetlands. Therefore, Alternative 3 would require a minimum of 0.4 acres of replacement wetland, and Alternatives 1 and 2 would not require any replacement. Sufficient wetland replacement area is available on-site. Only temporary emergent, forested and scrub shrub wetland types should be created within the airport to avoid creating potential bird-aircraft hazards.

IV. ADVERSE IMPACTS WHICH CANNOT BE AVOIDED, SHORT-TERM USES AND LONG-TERM PRODUCTIVITY AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

IV.1 Adverse Impacts Which Cannot Be Avoided

Each alternative for the New Airport Comprehensive Plan adversely impacts elements of the social, economic and natural environments within the airport boundary and its environs. Measurements of the degree of adverse impacts are the magnitude of impact and the virtual elimination of an element of the environment without adequate mitigation to compensate for the loss. There are no significant adverse impacts unique to each alternative (those that are not common between the alternatives) that appear to have little chance for adequate mitigation.

IV.2 Short-Term Uses and Long-Term Productivity

Short-term impacts generally would include construction impacts, which are expected to be minor (and the same) for each alternative. The long-term productivity of a new airport would include the regional social and economic benefits that would be derived from a new facility.

The EIS will include a discussion of the details of short-term environmental gains related to the expense of long-term losses, as well as of the long-term gains and short-term losses, and the extent to which the development of the preferred Alternative forecloses or broadens future options.

IV.3 Irreversible and Irretrievable Commitments of Resources

Irreversible and irretrievable commitments of resources for the expansion of MSP include use of limited natural, physical, human and fiscal resources. Common impacts between the alternatives include the use of land for a new airport during the period of time that the land is used for aviation purposes. It is possible, although unlikely, that the land would revert from a major airport to its original or other land use once a new facility is constructed.

Considerable amounts of fossil fuels, labor and construction materials for runways and buildings would be used with the development of any one of the alternatives. In addition, large amounts of labor and natural resources would be used in the fabrication and preparation of construction materials. These materials are not retrievable; however, they are not in short supply and will not have an adverse effect on the continued availability of these resources. Any construction project will also require a substantial one-time expenditure of local, metropolitan, state and federal funds, which would not be retrievable.

V. LIST OF PREPARERS

The following individuals assisted in the preparation of this document. Their qualifications are presented in the following matrix:

Preparer	Title/Firm	Education/Registration	Years Exp.	AED Responsibility
Gregory Albjerg	Aviation Department Head, HNTB	B.S. Civil Engineering, Registered P.E.	20	Floodplain Impacts, Cost Estimates, Flight Tracks
David Braslau	President, David Braslau Associates	B.S., M.S., Ph.D. Civil Engineering; Registered P.E.	23	Air Quality, Energy and Natural Resources
Lawrence Dallam	Principal Transportation Planner, HNTB	B.S., M.S., Ph.D. Civil Engineering; Registered P.E.	39	AED Format, Executive Summary Impacts Table, Purpose and Need, Alternatives, Quality Control
Mark Deutschman	Environmental Scientist, HDR	B.S. Zoology, M.S. Zoology	9	Water Quality and Quantity
Mark Filipi	Transportation Forecast Analyst, Metropolitan Council	B.A. Geology, MCRP City & Regional Planning, AICP	11	Ground Access Impacts, Land Use
Evan Futterman	Director of Aviation, HNTB	B.S. Air Commerce Transportation; A.S. Air Commerce and Flight Technology; AICP	15	Project Manager, Noise Impacts, Quality Control
John Harrington	Vice President, Lynne Bly Associates	B.A. English	26	Water Quality Impacts
Christina Harrison	Director, Archaeological Research Services	M. Philosophy, Archaeology	31	Archaeological Resources
Greg Johnson	Planner, HNTB Alexandria	B.S. Aviation Management; M.B.A. Business Administration	4	Noise Impacts
Joseph Navarrete	Planner, HNTB Alexandria	B.A. Geography	9	Noise Impacts, Graphics

Preparer	Title/Firm	Education/Registration	Years Exp.	AED Responsibility
Ronald Peterson	President, Peterson Environmental Consulting, Inc.	B.S. Wildlife Management, M.S. Natural Resources, J.D. Law	14	Wetlands, Endangered/ Threatened Species, Biotic Communities, Bird Aircraft Hazards, Refuge
Charlene Roise	Principal, Hess, Roise and Company	B.A. History, American Studies, German; M.A. Historic Preservation	15	Historic/Architectural Resources
Jill Schultz	President, JMS Communications & Research	B.A. Journalism	7	Executive Summary
Penelope Simison	Senior Planner, HNTB	B.A. English, M.A. History, AICP	8	Farmland Impacts, Socioeconomic Impacts
James Suehiro	Professional Associate, TRA	B.A. Environmental Design, Master in Architecture, AIA	18	Terminal Area Plan
Robert Varani	Planner, HNTB	B.A. Airport Administration	2	GIS Analysis, Community/Social Impacts, Wetland Impacts, Floodplains
Audrey Wald	Planner, HNTB	B.S. Airway Science Management	6	GIS Analysis, Community/Social Impacts, Wetland Impacts, Floodplains
Ralph White	President, Ralph White Associates	B.S. Interdisciplinary Science (Civil Engineering and Urban Planning)	37	Airport Support Facilities Planning
Mark Wollschlager	Vice-President, HDR	B.S. Biology, J.D. Law	15	Water Quality, Contaminated Waste

VI. LIST OF AGENCIES, ORGANIZATIONS AND PERSONS TO WHOM DRAFT AED WAS SENT

State Advisory Council on Metropolitan Airport Planning

Rep. Bernie Lieder, Co-Chair

Sen. Keith Langseth, Co-Chair

Sen. William Belanger

Rep. Dennis Ozment

John T. Richter

Eve Webster

Sen. Carol Flynn

Patrick O'Neill

Rep. Jean Wagenius

Gloria Pinke

Suzanne Sandahl

Dave Danielson

Al Loehr

Wayne Popham, Chair
Metropolitan Airports Commission

Commissioner James Denn
Minnesota Dept of Transportation

Commissioner Linda Kohl
Minnesota Planning

Curt Johnson, Chair
Metropolitan Council

Frank Benson, Manager
Mpls./FAA Airports District Office

Commissioner Charles Williams
Minnesota Pollution Control Agency

Mike Wright
Delta Airlines

Kathleen Gaylord, Northwest Airlines

Ms. Elaine Kienitz
Congressional Delegation Appointee

Dual Track Task Force

Patrick O'Neill, Chair, O'Neill, Burke, Leonard & O'Brien
Andrew Lindberg, Honeywell, Inc.
Sally Evert, Contingency Planning Committee
Joseph M. Finley, Leonard, Street & Deinard
Don Groen, Bloomington Chamber of Commerce
Michael Werner, Mayor, City of Hastings
Senator Alice Clausing, State of Wisconsin
Chuck Wiger, St. Paul Area Chamber of Commerce
Kathleen Gaylord, Northwest Airlines
Edward G. Gutzmann, Southview Bank
Lyle Wray, Citizens League
Dick Anfang, MN State Building Trades Council
Mary Hill Smith,Metropolitan Council
Tom Crowley, Heitman Financial Services Ltd.
Tim Hoffman, 3M
Myra Peterson, Washington Co. Commissioners
Frank Romero, City of Minneapolis, Office of the Mayor
Gregory A. Boyle, Green Tree Financial Corp.
Gloria Pinke
Commissioner Joe Harris
Ray Rought, Mn/DOT - Office of Aeronautics
John Kahler
Bud Erickson
Karl Nolanberger, City of Duluth
Paul Farmer, City of Minneapolis

Libraries

Environmental Conservation Library

Legislative Reference Library

Red Wing Library

Prescott, WI Library

Farmington Library

Pleasant Hills Library, Hastings

Wescott Library, Eagan

New Airport Technical Committee

Mayor Tim Bland, City of Hampton
Stephan Jilk, City of Rosemount
Mayor Karen Mogen, City of Coates
Bruce G. Aslesen, City of Vermillion
Milo Anderson, US EPA, Region 5
Paul Burke, US Fish & Wildlife Service
Eugene Dohman, Chair-Hampton Township
Mayor Wilbert Schaffer, City of Miesville
Mayor Al Nauer, City of New Trier
Robert Rotty, Chair - Nininger Township Board
Robert Acker, Aircraft Owners & Pilots Assoc.
Frank Benson, Mgr. FAA Airports District Office
Nacho Diaz, Metropolitan Council
Gregg Downing, EQB
Tony Foster, General Mills
Paul Chapla, Northwest Airlines, Inc.
Jack Huber, FAA Air Route Traffic Control Center
Lou Kowalski, US Army Corps of Engineers
Tom Majeski, Vermillion Township
Paul McGraw, Air Transport Association
Henry Piene, Jr., Chair-Douglas Township
Roger Fox, Chair-Marshan Town Board
Dennis Gimmestad, State Historic Preservation Office
Kathryn Kramer, MN Pollution Control Agency
Commissioner Harold Craig, C&C Machine, Inc.
Lawrence McCabe, Mesaba Airlines
Dave Osberg, City of Hastings
Tom Rheineck, Federal Express
Eugene Rotty, Chair-Vermillion Town Board
Colonel Mike Gjede, US Air Force Reserves
David Tincher, Airline Pilots Association
Henry Tressel, Chair-Ravenna Township
Cindy Greene, FAA - MSP ATCT
Colonel Larry Burda, MN Air National Guard
John Berendt, Chair-Randolph Township Board
Richard Theisen, MnDOT-Office of Aeronautics
Don Wisniewski, Washington Co. Public Works
John Tocho, Dakota County Planning Office
Tom Peterson, FAA - MSP ATCT
Bob Patton, MN Dept. of Agriculture
Rebecca Wooden, MN Department of Natural Resources
Paul Irrthum, Castle Rock Township
Gerald Stelzel, Chair-Empire Township Board
Lowell Peterson, Goodhue Co. Commissioner
Wade Sundin, Cannon Falls Township
Dennis Hanna, Town Board Chair
Gordon Falkofske, Pierce Co. Bd. of Supervisors
Dallas Eggers, City of Prescott
Glen Orcutt, FAA Airports District Office
John McCool, City of Cottage Grove
Jim Fitzpatrick, Denmark Township
George W. Larson, Welch Township
Robert Kunkel, Wisc. Dept. of Transportation
Tom Lovejoy, Wisc. Dept. of Natural Resources
Paul Thomas, MN Business Aircraft Assoc.
Gordon Nelson, FAA Airports District Office
Steve Christensen, Grey Cloud Island
R. Nicholas Rowse, US Fish & Wildlife Service
Richard Mallan, Goodhue Co. Commission
Bruce Wagoner, FAA-MSP ATCT
Jeff Connell, Resource Strategies
Major Skip Johnson, 133rd OSF/DOXT
Marty Beekman, WiscDOT - Div. of Highways

Other Federal, State & Metropolitan Agencies

Floyd Marita, U.S. Forest Service
Area Director, Minneapolis Area Office, Bureau of Indian Affairs
Sheila Huff, Office of Environmental Affairs
James C. Gritman, Regional Director, U.S. Fish & Wildlife Service
Craig Johnson, Endangered Species Branch, U.S. Fish & Wildlife Service
Michael Weberg, Chief, Permit Eval. Section, U.S. Corps of Engineers
Gary D. Bauer, Bureau of Land Management
Alan M. Hutchings, National Park Service
William D. Franz, US Environmental Protection Agency
Gary Nordstrom, Soil Conservation Service
Eugene Goldfarb, US Housing & Urban Dev.
Dan Waloga, US Housing & Urban Dev.
Arlyn F. Brower, Federal Emergency Mgmt Agency
Chief, Intermountain Field Center, Bureau of Mines, US Dept. of Interior

County Administrators

Dakota County

Cities and Townships

City of Eagan
City of Mendota
City of Mendota Heights
City of Inver Grove Heights
City of Burnsville
City of Hastings
City of Rosemount
City of Cottage Grove
City of Coates
City of Apple Valley
City of Farmington
City of Lakeville
City of Vermillion
Nininger Township
Marshan Township
Vermillion Township
Empire Township

Interested Parties

Kathleen Foley, Legislative Ass't

Ms. Deborah Dyson
Legislative Analyst - House Research

Ms. Amy Vennewitz
Legislature Analyst - Senate Research

Jan Del Calzo
Jill Berke
Greg Erickson, Erickson's Diversified Corp.
Jeff Connell, Resource Strategies Corp.
Craig Robinson, Mn/DOT - Metro Division
Don Stevens, Mn/DOT - Metro Division
Ken Buckeye, Office of Railroads & Waterways
Dale Maul, Office of Transit
Frank Pafko, Environmental Services, Mn/DOT
Tim Werke, Intermodal Policy Section, Mn/DOT
Walter Rockenstein, Faegre & Benson

Minnesota Environmental Quality Board

Robert Dunn, Chair
Elton Redalen, Com., Dept. of Agriculture
Mary Jo O'Brien, Com., Dept. of Health
Rod Sando, Com., Mn Dept. of Nat'l Resources
Kris Sanda, Com., Dept. of Public Service
James Denn, Com., Mn/DOT
D. James Nielsen, Chair, BWSR
Linda Kohl, Director, MN Planning Office
John Chell, Director, Office of Waste Mgmt.
Charles Williams, Com., MPCA
Bruce Bomier
Carolyn Engebretson
Deanna Fairbanks
Douglas Magnus
Paul Toren

VII. PUBLIC AND AGENCY INVOLVEMENT

A. Public and Agency Involvement

The two advisory committees — Dual Track Airport Planning Process Task Force and New Airport Technical Committee — formed during the scoping process continued to function during the preparation of the AED. The New Airport Technical Committee is comprised of staff representatives of the affected cities, county and regional, state and federal agencies, and representatives of airport users and local interest groups. The Technical Committee reviews the technical approach and products of the process. The Task Force is comprised of elected officials or representatives of the affected cities, townships, county, regional, state and federal agencies, airport users and local interest groups. The Task Force reviews the process and products and provides policy advice to MAC.

The State Advisory Council established by the legislature has been informed of the progress of the study. The general public continues to be informed through a series of public information meetings, newsletters, informational brochures, press conferences and news releases, as appropriate. They have had opportunities to comment both informally and formally. Formal input was solicited at the AED public hearing. Informal input from the public has been provided at meetings of the advisory groups.

B. AED Public Hearing

A public hearing was held on January 18, 1995 at 7:00 p.m. at Hastings High School in Hastings, Minnesota to present the Draft AED and receive comments. Approximately 170 persons attended, of which 28 made public comments. A transcript of the meeting is available for review at MAC offices.

The comment period began on December 5, 1994 and ended on February 3, 1995, and 43 comments were received. The comments and responses are presented in **Appendix B.**

VIII. LIST OF REFERENCES

1. Air Quality Procedures for Civilian Airports and Air Force Bases, U.S. Department of Transportation, Federal Aviation Administration, Report FAA-EE-82-21, December 1982

2. "The Emissions and Dispersion Modeling System (EDMS): Its Development and Application at Airports and Airbases", M. T. Moss and H. M. Segal, J. Air & Waste Management Assoc., 44, June 1994, 787-790.

3. Harrison, Christina, "Cultural Resources Survey, Dakota County Airport Study Area, 1993. Volume I: The Archeological Resources." Archaeological Research Services, Minneapolis, Minnesota.

4. Roise, Charlene K. and Deanne Fibell Weber, "Cultural Resources Survey, Dakota County Airport Sites 2, 3 and 6, Volume II: The Built Environment." Hess, Roise and Company, Minneapolis, Minnesota, August 1993.

5. "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," U.S. Environmental Protection Agency, Publication 550/9-74-004, Office of Noise Abatement and Control, Washington, DC, Mar. 1974, pg. B-7, Table B-3.

IX. LIST OF ACRONYMS AND GLOSSARY

acre-ft -- measurement of water storage, equivalent to amount of water needed to cover 1 acre with water 1 foot deep

ADT -- Average Daily Traffic

AED -- Alternative Environmental Document. The AED is a document that includes the analysis of environmental impacts and issues in sufficient detail to select the "best" of the alternatives under consideration. It is similar to an EIS, but differs in that the "no action" alternative and reasonable alternatives other than those for the Long-Term Comprehensive Plan for Minneapolis-St. Paul International Airport are not considered (at this time). That is, the AED will only address the site alternatives and impacts included in the SDD for the Long-Term Comprehensive Plan for a potential new airport in Dakota County.

AGL -- Above Ground Level

Agriculture preserve -- Farmland designated by covenant for long term agricultural use, for which the property owner receives such benefits as lower assessed valuations and, therefore, lower taxes.

ANOMS -- Airport Noise and Operations Monitoring System, the noise monitoring system in use at MSP

APE -- Area of Potential Effect, or the affected environment of each of the alternatives under consideration for the Long-Term Comprehensive Plan

BOD -- Biochemical Oxygen Demand

Biotic Communities -- Fish, wildlife and ecologically sensitive resources, including rare, threatened and endangered species

BMP -- Best Management Practices

CAL 3QHC -- Carbon Monoxide dispersion model used to estimate CO concentrations

cfs -- cubic feet per second

CO -- Carbon Monoxide

COD -- Chemical Oxygen Demand

COE -- U.S. Army Corps of Engineers

dB -- decibels, used to measure sound levels

dBA -- "A"-weighted decibel scale used to measure aircraft and other sound levels

DNL -- Day Night Level metric that describes aircraft noise. It is the logarithmic average sound level measured in decibels weighted to closely approximate the sensitivity of the human ear. DNL is based on the annual average of 24-hour Equivalent Sound Level, (Leq), which is weighted to account for increased noise sensitivity during nighttime hours (10:00 p.m. to 7:00 a.m.). DNL 65 dBA is the Day Night Level of 65 decibels on the A-weighted scale, for example.

EAW -- Environmental Assessment Worksheet. The EAW is the standard form of the MEQB for describing a proposed project and its impacts.

EDMS -- Emissions and Dispersion Modeling System, used to calculate pollutant emissions and concentrations due to on-airport sources, including aircraft and motor vehicles.

EIS -- Environmental Impact Statement. This is a document required by federal (if federal funds or properties are involved) and state law for proposed projects that could have potentially significant adverse impacts on the social, economic and natural environments. The EIS must address the environmental impacts of all reasonable alternatives, including the "no action" alternative, and commit to measures that would mitigate those adverse impacts that cannot be avoided.

EPA -- Environmental Protection Agency (of the United States government)

ESA -- Minnesota Endangered Species Act

FAA -- Federal Aviation Administration (of the United States Department of Transportation)

FAR Part 150 -- The procedures, standards, and methodology governing the development, submission, and review of the airport noise exposure maps and airport noise compatibility programs, including the process for evaluating and approving or disapproving those programs, required by FAA to be eligible for federal funds.

Farmland remnants -- Portions of farms remaining after land is acquired for the airport. There are three types of farmland remnants, defined as follows:

> Isolated farmlands. Farmland that is not accessible because the road leading to it is within the airport boundary.
>
> Triangulated farmlands. Farmland with one or more property lines at an angle. This factor could make farming on the field difficult. While there is no minimum acreage for triangulated farmland, a smaller triangulated field also would be difficult to farm.
>
> Severed farmlands. Farmlands under one ownership that are separated from each other by the airport project. For example, a large farm may be bisected by a roadway leading to the new airport or the farmstead could be separated from the fields themselves.

FICON -- Federal Interagency Committee on Noise

Footprint -- Area within the boundary of the proposed airport site

FEMA -- Federal Emergency Management Agency

GIS -- Geographic Information System

GISW -- Glycol-Impacted Stormwater

HABS -- Historic American Buildings Survey

HAER -- Historic American Engineering Record

HC -- Hydrocarbons

HNTB - HNTB Corporation, lead consultant for MAC

INM -- Integrated Noise Model, which estimates an aircraft's altitude at various distances from point of departure.

IPG -- Interactive Planning Group, a 1991 group formed to study potential long-term comprehensive planning options for MSP, including the cities of Bloomington, Burnsville, Eagan, Mendota Heights, Minneapolis, Richfield and St. Paul.

LTCP -- Long-Term Comprehensive Plan for MSP

MAC -- Metropolitan Airports Commission (of the Twin Cities Metropolitan Area)

MC -- Metropolitan Council (of the Twin Cities Metropolitan Area)

MCBS -- Minnesota County Biological Survey

MDNR -- Minnesota Department of Natural Resources

MDS -- Metropolitan Disposal System

MEQB -- Minnesota Environmental Quality Board

$\mu g/m^3$ -- micrograms per cubic meter

mg/l -- milligrams per liter

mgd -- million gallons per day

mg/m^3 -- Milligrams per cubic meter

Mn/DOT -- Minnesota Department of Transportation

MOBILE 5.0 -- Carbon monoxide emission model developed by EPA

MPCA -- Minnesota Pollution Control Agency

MSP -- Minneapolis-St. Paul International Airport

MSW -- Metropolitan Solid Waste

MRAP -- Minnesota River Assessment Project

MWCC -- Metropolitan Waste Control Commission

MWWTP -- Metropolitan Wastewater Treatment Plant

NLR -- Noise Level Reduction

NO_x -- Nitrogen Oxide

NO_2 -- Nitrogen Dioxide

NPDES -- National Pollution Discharge Elimination System (permit governing discharge of pollutants into storm sewer systems and outfalls)

NRHP -- National Register of Historic Places

NSBERT -- Northern States Bald Eagle Recovery Team

NWI -- National Wetland Inventory, referring to maps prepared by the U.S. Fish and Wildlife Service

O_2 -- Oxygen

ppm -- parts per million

RPZ -- Runway Protection Zone. This is a trapezoidal area at the end of a runway that must be acquired to afford a safety zone for aircraft landings and take-offs. The FAA requires that RPZ's be a part of airport property.

SD -- Scoping Document. A report that describes the purpose of the project, identifies feasible alternatives, and describes the affected social, economic and natural environment and potential impacts of the alternatives.

SDD -- Scoping Decision Document. The SDD presents the alternatives, issues and impacts that the Responsible Governmental Unit (RGU) has decided to study in the EIS or AED. The SDD is adopted by the RGU after receiving comments on the Draft SDD from the public and affected agencies.

Site 3 -- The area within Dakota County for a potential new airport. The location was selected at the end of a site selection process. It is in Marshan and Vermillion Townships.

SEL -- Sound Exposure Level (level of sound by individual aircraft at specified location)

Section 4(f) Land -- This is land afforded protection under Section 4(f) of the 1966 US Department of Transportation Act of Congress. All publicly-owned park and recreation land, wildlife and waterfowl refuges and historic lands of national, state or local significance are included in Section 4(f). These lands cannot be adversely impacted unless there is no feasible and prudent alternative to the use of the lands.

SHPO -- State Historic Preservation Office (of the Minnesota Historical Society)

SIP -- State Implementation Plan (for federal air quality standards)

SO_x -- Sulfur Oxide

SPCCP -- Spill Prevention Control and Countermeasure Plans used to track equipment and methods to deal with spills

State Safety Zones -- These are trapezoidal areas beyond the ends of the runways, labeled "A" and "B" that can be regulated to prevent the use of the included land for purposes which can be hazardous to aircraft operations. Minnesota Statute 360.063 provides authority for the establishment of a joint airport zoning board consisting of the directly affected municipalities. The board regulates zoning within the safety zones. The established zoning regulations cannot be retroactive (i.e., affecting existing land use and structures are maintained).

SWMF -- Stormwater Management Facility

SWMS -- Stormwater Management System

SWPPP -- Stormwater Pollution Prevention Plans, designed to meet NPDES permit requirements

APPENDIX A -- LIST OF TECHNICAL REPORTS AND OTHER DATA

Technical Reports

A.1 SURFACE WATER QUALITY ANALYSIS (separate report)

Other Data

A.2 Noise characteristics, metrics, compatible land use criteria

A.3 Effect of aircraft overflights on bald eagles

A.2 NOISE CHARACTERISTICS, METRICS, COMPATIBLE LAND USE CRITERIA

Aircraft Noise[1]

Every noise event has certain characteristics. At any instant, a sound may be loud or quiet (depending upon the amplitude of the wave), high or low pitched (depending on its frequency), sudden or continuous, or build to a peak and fade away. A sound may have identifiable pure tones in an otherwise broad spectrum of undifferentiated sound. This complexity makes it difficult to describe a noise event with a single number that can fully convey all of the characteristics of that event.

The major source of noise associated with aircraft operations is aircraft power plants (typically jet engines). As an engine's fan blades and turbo-machinery rotate, they produce turbulence that generates high frequency noise (e.g., the familiar compressor whine). Also, as hot jet exhaust is mixed at high velocity with the cooler ambient air, a loud low frequency roar is produced. These sounds are more prominent on older technology engines (such as those used on the McDonnell Douglas DC-9 and the Boeing 727).

In newer technology engines (such as those used on the Boeing 757[2] and McDonnell Douglas MD11), the ratio of the air passing by the combustion chamber to the air flowing through the combustion chamber (known as an engine's bypass ratio) is significantly increased. Fan noise is minimized by eliminating inlet guide vanes, modifying geometrical relationships between the fan blades and the outlet guide vanes, slowing blade tip speed and lining the nacelle ducts with acoustically absorbent material. High-bypass engines generate lower frequency fan noise and less jet exhaust noise and are typically much less annoying than low-bypass ratio engines.

A less obvious source of noise is the sound of the airframe traveling through the air. As aircraft engines become quieter, airframe noise may contribute more to the overall noise generated by aircraft. **Figure A1** shows the relative loudness of the more popular aircraft types.

Description of Noise Metrics

The following sections discuss three noise metrics: A-weighted decibel (dBA), Day-Night Average Sound Level (DNL), and L_{10}.

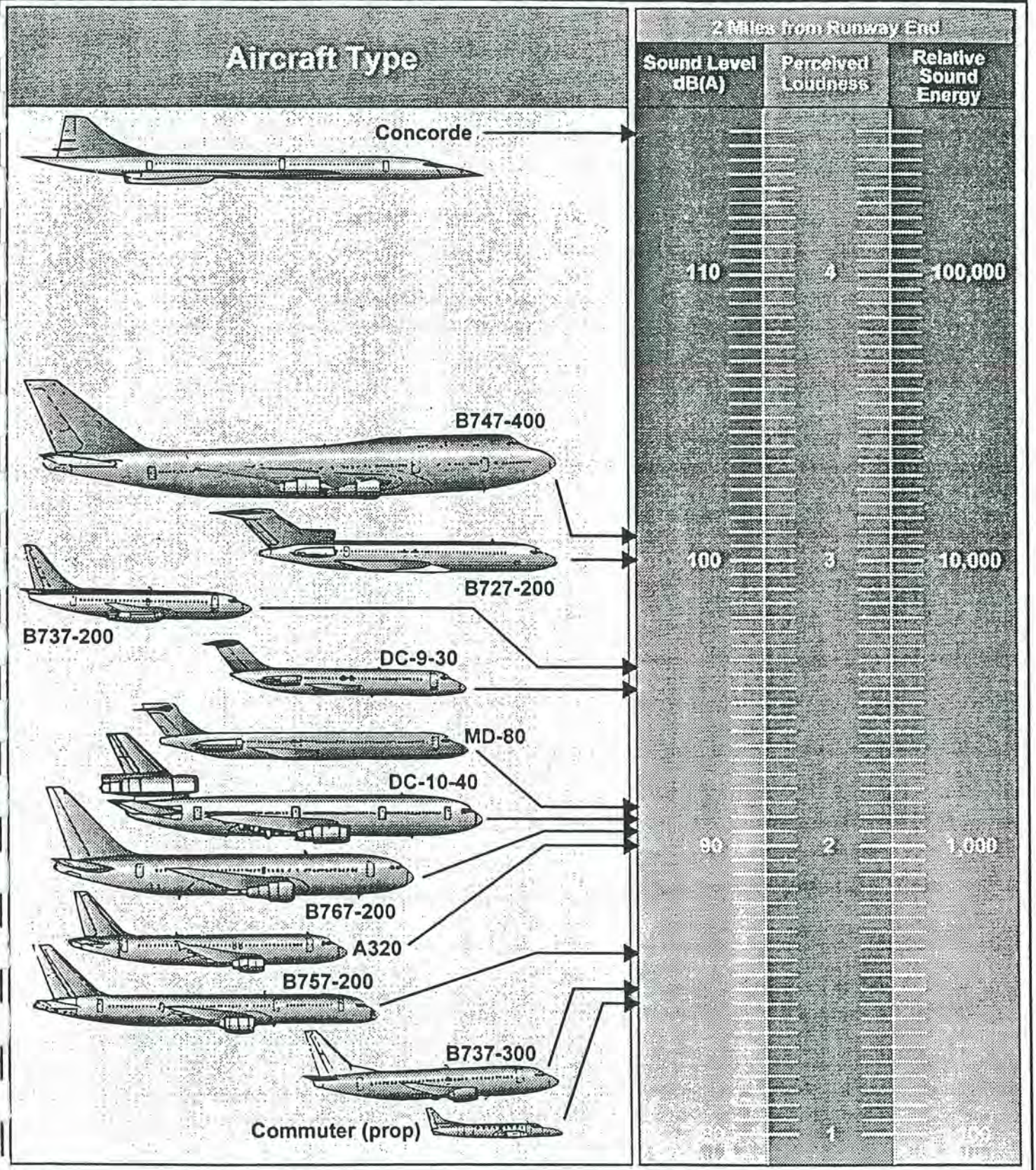
A-Weighted Decibel (dBA)

The characteristic most commonly used to describe noise is its loudness, measured in decibels (dB). Since the sound pressure that causes physical pain to most humans is approximately one million times greater than the threshold of hearing, decibels are measured on a logarithmic scale that "compresses" the resulting values to a range of 0 to about 120 dB. A 10 dB increase in the sound pressure level is perceived by humans as approximately twice the volume of sound. Also, most people cannot readily detect changes in sound pressure levels of less than about 3 dB except in a laboratory environment. Since decibels are measured on a logarithmic scale, normal addition does not apply when determining

---

1 The report, "Aircraft Noise Impact - Planning Guidelines for Local Agencies," United States Department of Housing and Urban Development, 1972, has been drawn upon in the preparation of this section.

2 According to MAC ANOMS data, approximately 4 percent of Stage 3 Boeing 757's experience activation of engine bleed valves during landings which results in greater than normal noise levels. Boeing, Pratt & Whitney (the engine manufacturer) and Northwest Airlines are taking measures to reduce the occurrence of the valves' activation.



HNTB

MAC Minneapolis Saint Paul Metropolitan Airports Commission

Figure A1

Common Aircraft Noise Levels on the Decibel Scale

the impact of multiple noise sources. For example, the total level produced by two 100 dB noise sources is 103 dB, not 200 dB. The level of 10 such sources is 110 dB, and the level of 100 sources is 120 dB. The human ear is more sensitive to higher frequency sounds; therefore, the A-weighted decibel scale (dBA) was developed to take into account this greater sensitivity. The dBA scale is most frequently used in aircraft and other environmental noise analysis. Typical dBA levels of some common sounds are shown in **Table A1.**

TABLE A1 - Common Sounds on the DBA Scale

Sound	Sound Level (dBA)	Relative Loudness (Approximate)	Relative Sound Energy
Military jet fighter takeoff at 500 feet	130	128	10,000,000
Rock music with amplifier (uncomfortably loud)	120	64	1,000,000
Loud motorcycle at 20 feet	110	32	100,000
Jet plane takeoff (B727) at 1000 feet	100	16	10,000
Orchestral crescendo at 25 feet; Motorcycle at 25 feet; Diesel locomotive (20-30 mph) at 50 feet	90	8	1,000
Busy street; Diesel truck (moderately loud) 40 mph at 50 feet	80	4	100
Interior of department store; Vacuum cleaner at 10 feet	70	2	10
Ordinary conversation at 3 feet; Air conditioner at 20 feet	60	1	1
Quiet urban daytime; Dishwasher next room	50	1/2	0.1
Average office	40	1/4	0.01
City residence (very quiet)	30	1/8	0.001
Quiet country residence	20	1/16	0.0001
Rustle of leaves (just audible)	10	1/32	0.00001
Threshold of human hearing	0	1/64	0.000001

Source: HNTB analysis from multiple sources.

According to the FAA Advisory Circular Noise Control and Compatibility Planning for Airports (AC 150/5020-1), the "A-Weighted Sound Level has been found to correlate well with people's subjective judgement. Its simplicity and superiority over unweighted sound pressure level in predicting people's response to noise have made it the most widely used metric for assessing the impact of aircraft noise and for comparing that noise with other community noise sources." The FAA has determined that A-weighted levels should be used when measuring and describing instantaneous noise levels. The maximum A-weighted level reached during an aircraft noise event is perhaps the most common and simplest way of describing the noise of the event.

In general, the noise level associated with aircraft sound decreases by 6 dB for each doubling of the distance from the noise source; however, certain factors affect noise attenuation and transmission, including ground cover and the incidence of barriers, vegetation and buildings. These factors become less important when the noise source is airborne. Meteorological conditions also affect noise transmission. Temperature gradients, wind speed and direction, humidity, and atmospheric pressure can combine to cause a 10-15 dB change in the noise heard on the ground for similar overflights of the same aircraft.

Day-Night Sound Level (DNL)

While it is important to measure the noise of a single event, the long-range impact of prolonged exposure to noise can best be described with cumulative metrics. The Day-Night Sound Level (DNL) was developed under the auspices of the U.S. Environmental Protection Agency (EPA) to measure the cumulative impact of multiple noise events in an average day. It is the logarithmic average of sound levels in dBA and is based on a 24-hour Equivalent Sound Level (Leq). DNL values incorporate a 10 dBA penalty to noise events occurring between 10:00 PM and 7:00 AM to account for people's increased noise sensitivity at night. DNL 65 is typically the level used assessing noise impacts and for land use planning, although for this report a lower noise level of DNL 60 is also analyzed.

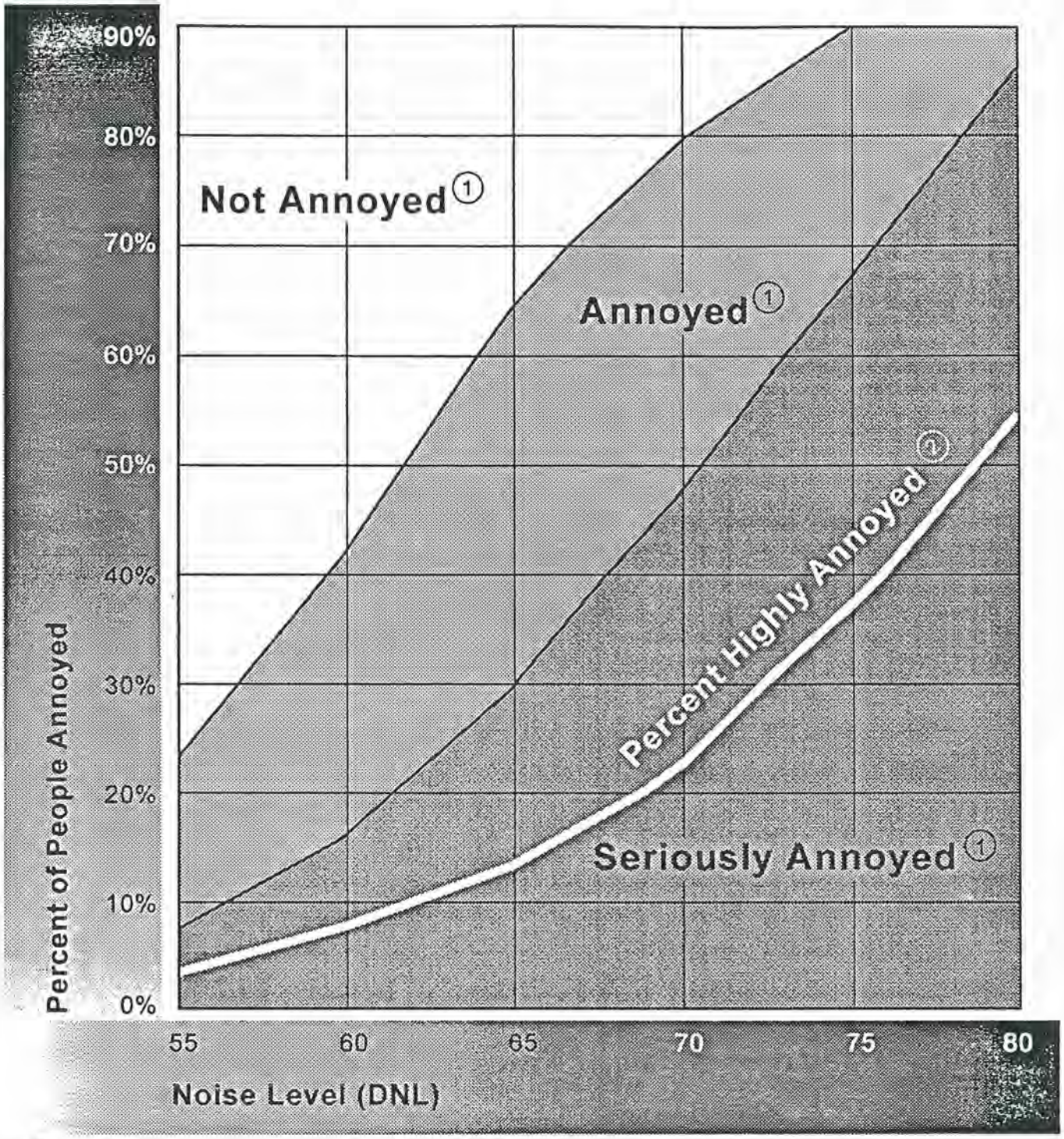
DNL (also known as Ldn) has been equated, through social surveys, with public reactions to different noise levels. The DNL metric is recognized by the U.S. Department of Housing and Urban Development and the Department of Defense as a proper basis for land use planning around airports.

The Federal Interagency Committee on Noise (FICON) recently evaluated DNL as a noise measurement tool. Their August 1992 report noted that there "are no new descriptors or metrics of sufficient scientific standing to substitute for the present DNL cumulative noise exposure metric," and that DNL methodology "is considered the proper one for civil and military aviation scenarios in the general vicinity of airports." The FICON report noted that "aircraft noise predictions below DNL 65 ... can be less accurate and should be interpreted with caution." **Figure A2** illustrates typical community annoyance to various DNL levels in the form of a graph.

DNL is the index preferred by the FAA, which has developed the Integrated Noise Model (INM) for DNL calculation. The INM model takes into account flight paths, number of operations, and the flyover noise associated with a specific aircraft types on a given flight path corrected for the duration of the sound. Contours of equal DNL value are then developed and mapped, reflecting the average noise of takeoffs and landings over a year's time. DNL may also be used for quantifying other noise sources such as auto traffic, and for comparing them to airport-generated noise.

In the past, the shape and size of the DNL noise contour for an airport was largely determined by departing aircraft. But as airlines change over to a Stage 3 fleet, noise contours have been increasingly influenced by the noise generated by arriving aircraft. There are several reasons for this. Since Stage 3 engines are more powerful than Stage 2 engines, aircraft can climb more quickly. This means that during departure, Stage 3 aircraft will pass a fixed point on the ground at a higher altitude than a Stage 2 aircraft, reducing noise on the ground.

However, during landing, Stage 2 and Stage 3 aircraft tend to be at same low altitude as they follow the final approach course to their assigned runway. While Stage 3 engines are much quieter than Stage 2 engines during takeoff, this difference is less noticeable during landing because aircraft are at lower power settings. At these lower power settings, the noise generated by the airframe traveling through the air is more apparent than during takeoff. This airframe noise is similar for both Stage 2 and Stage 3 aircraft. Finally, while departing aircraft tend to spread out toward their destinations, arriving aircraft are concentrated along the final approach course to their assigned runway.



Sources:

① Percentage of Residents Annoyed. Richard,E.J. and J.B. Ollerhead; reproduced in "Aviation Noise Effects", FAA Office of Environment and Energy, March 1985.

② Schultz T. J. "Synthesis of Social Surveys on Noise Annoyance", Journal of Acoustical Society of America, 1978.

HNTB

Figure A-2

Community Reaction to Noise Levels

As shown in **Figure A1**, noise exposure of DNL 65 or greater is characterized as significant and leads to a number of complaints. The FAA has set guidelines for land use within the DNL 65 contour (i.e., DNL 65 or greater). It is acknowledged that the noise impact does not end at the DNL 65 contour. For areas within the DNL 60 contour (i.e., DNL 60 to DNL 65), noise may be characterized as moderate to slight.

L_{10}

This noise metric measures the point at which a specified sound level is exceeded at least 10 percent of a specified time period (e.g. one-hour). This Minnesota standard states that the sound level should not exceed $L_{10}65$ in the worst daytime hour (between 7:00 a.m. and 10:00 p.m.); this is the acceptable noise level limit for land uses in Noise Area Classification 1, which includes residential land uses. The $L_{10}65$ analysis produces a contour which depicts points around the airport that experience noise levels of 65 dBA or greater for 10 percent of the hour (6 minutes) with the airport operating in a specific configuration. It is calculated for the worst hourly noise condition which could occur off each runway end. Although the L_{10} metric does not consider how often the condition actually occurs, it does indicate what short duration "worst case" conditions could be in these areas.

Peak Sound Exposure Level (SEL)

This noise metric is designed to compare the sound energy dosage of single noise events of varying duration and intensity, for example an automobile idling for 30 seconds versus a gunshot. To do this, acousticians compress (as in the case of the idling automobile) or expand (as in the case of the gunshot) the duration of the noise event to a common one-second period. The resulting noise level is expressed in decibels, SEL. If both noise events have the same SEL value, that would mean both events produced the same amount of sound energy. Noise events lasting longer than one second, as with the idling automobile, typically have SEL values higher than a standard dB reading of the same event, because all its sound energy would have been compressed into a one-second period. Conversely, a noise event lasting less than one second, as with the gunshot, would typically have an SEL value lower than a standard dB reading of the same event. For these reasons SEL values cannot be compared to standard dB readings or other metrics (e.g., DNL, L_{10}, etc.). Since an aircraft overflight lasts much longer than one second, its SEL value is typically higher than its maximum dB reading (usually on the order of 5 to 10 dB).

Noise-Sensitive Uses

Aircraft noise, through the various psychological and physiological effects it has on people, can be a source of community annoyance and conflict with various human activities. The FAA has identified acceptable noise levels for certain categories of use, explaining the rationale for the criteria. **Table 17** in Section I of the AED outlines the recommended land use compatibility criteria (from FAR Part 150, Table 1) used in this study. The Metropolitan Council is in the process of updating the Guidelines for Land Use Compatibility with Aircraft Noise in the Metropolitan Aviation Development Guide Chapter, and the guidelines were therefore not used in this study.

The following is a discussion of land uses and their compatibility with the compatibility criteria in **Table 17.**

Residences (other than hotels)
In areas where noise levels are DNL 75 or greater, all residential development should be considered non-compatible. In the DNL 65-75 zones, new residential development should be considered non-compatible and should be permitted only where the infilling of existing residential neighborhoods is the only reasonable use. For new development or substantial redevelopment in the DNL 65-75 noise zones, insulation should be required to achieve interior noise level reductions (NLR) of 20-30 dBA, resulting in an interior level of DNL 45, as recommended by the EPA. In addition to acoustical treatment of structures, potential new residents should be made aware of the noise environment.

Transient Lodgings
Construction of hotels and motels is generally of a standard that results in interior sound attenuation higher than that of single family homes. The nature of their use justifies minimal restrictions, provided that an indoor noise level of no more than DNL 45 is attained. It is recommended that hotels be permitted in all noise zones provided that interior NLR measures sufficient to achieve acceptable interior noise levels are required.

Schools
It is recommended that schools be considered compatible in the DNL 65-70 noise zone provided that they have an interior NLR of at least 30 dBA. They should be considered incompatible in all higher noise zones. The special sensitivity of classroom teaching to periodic aircraft noise events justifies the NLR level more stringent than that applied to residences. These criteria would be applied to both public and private schools.

Hospitals
Hospitals are usually well-constructed, air conditioned, and kept closed, resulting in high levels of interior noise attenuation. It is recommended that hospitals be considered compatible in the noise zone DNL 65-70 with an NLR of at least 30 dBA, and in DNL 70-75 with an NLR of at least 35 dBA. They should be considered incompatible in noise zones above DNL 75.

Nursing Homes
Nursing homes are basically residential in character and should be addressed in the same way as multi-family homes. It is recommended that they be considered incompatible in noise zones above DNL 70, and permitted in DNL 65-70 only with an NLR of at least 25 dBA.

Child Care Centers
Since classroom instruction is not the primary function of child care center as it is in a school, it is recommended that criteria for child care centers be less stringent than those for schools. It is recommended that these facilities be considered compatible in zone DNL 65-70 with an NLR of at least 25 dBA and in zone DNL 70-75 with an NLR of at least 30 dBA, and incompatible in zone DNL 75+.

Churches
Given the small amount of time per week that a church is used for quiet activities and given that the proportion of time spent by an individual in a church is also small, the justification for adopting more stringent compatibility standards is less strong than for schools. It is recommended that the criteria proposed in the FAA's table of criteria in FAR Part 150 be applied. For schools, child care centers, or other types of facilities that are part of a church complex, the criteria for these secondary types of facilities would be applied.

In addition to structures specifically dedicated to church use, numerous small churches are often established in portions of commercial buildings. These "storefront churches" are frequently located in commercial areas which are otherwise compatible with aircraft noise levels. Due to their locational characteristics and sometimes transient nature, it is recommended that storefront churches be treated as other uses in commercial districts.

Commercial, Industrial and Recreational Uses
Most uses in these categories are not as noise sensitive as the uses described previously. It is recommended that the FAA-suggested criteria in **Table 17** be applied.

A.3 EFFECT OF AIRCRAFT OVERFLIGHTS ON BALD EAGLES

There is little research on the effect of aircraft overflights on bald eagles — and what there is, is not definitive.

A Bald Eagle Biological Assessment was done in 1990 relating to the potential impacts on nesting bald eagles that might result from an extension of MSP Runway 4-22, which was proposed at that time. This proposed runway extension is an element of all four alternatives under consideration in this AED. Further, this Biological Assessment involved the same nesting territory being analyzed in this AED and was done to analyze the potential for impacts that might result from approximately 3,330 monthly departures over a nest at altitudes between 1,500 and 2,000 feet. All of the alternatives being analyzed here involve substantially less potential for disturbance than the 4-22 project analyzed in 1990. Alternatives 1 and 2 involve no overflights of this nest while Alternatives 5 and 6 involve far fewer than were analyzed in 1990 (i.e., 630 monthly overflights compared to 3,330).

At the time of the 1990 Biological Assessment, no studies had been undertaken specifically to investigate the impact of commercial jet aircraft operations upon bald eagle nesting. The literature available at that time addressed other types of disturbance, including ordnance and jet fighter disturbance on military facilities as well as low-level overflights by helicopters and small fixed wing aircraft. Due to the lack of directly applicable research in 1990, it could not be stated unequivocally that impacts to eagle reproductive success would not occur. However, it was concluded that it was unlikely that the reproductive success of the nesting eagles would be adversely affected by commercial aircraft due to: (1) the propensity for bald eagles to readily habituate to regular, frequent disturbances of a mechanical nature, and (2) the fact that eagles tolerated louder and more confrontational disturbances than aircraft noise without a notable loss of reproductive success.

Experts from the USFWS Patuxent Wildlife Research Center and the USFWS National Ecology Research Center were contacted in 1990 for their opinions on the potential for adverse impacts resulting from the aircraft operations. Dr. David Ellis of Patuxent indicated that he would not expect commercial jet overflights at altitudes around 2,000 feet to adversely affect nesting eagles. He cited the successful nesting of bald eagles on the Aberdeen Proving Grounds as an example of the level of disturbance bald eagles are likely to tolerate. Dr. Douglas Gladwin of the National Ecology Research Center indicated that it was unknown whether bald eagles would incur any adverse impacts from commercial overflights at such altitudes but that such impacts were possible. The U.S. Fish and Wildlife Service issued a "no jeopardy" Biological Opinion for the Runway 4-22 extension at the Minneapolis-St. Paul International Airport.

Since 1990, some additional research has since been conducted on breeding bald eagle responses to various kinds of disturbance. Grubb and King (1991) studied 4,188 responses of nesting bald eagles to various types of human activities in riparian areas in Arizona. Of the five disturbance categories studied (i.e., pedestrian approaches, watercraft, land vehicles, aircraft overflights and loud noises such as sonic booms and gunshots), aircraft overflights were found to be the least disturbing even though this was the most common type of disturbance. These researchers concluded that; (1) breeding bald eagles in Arizona have become tolerant or habituated to air traffic and (2) that exclusion of aircraft within 625 meters (approximately 1,875 feet) of nests and permitting only short duration flights within 1,100 meters (about 3,300 feet) would minimize disturbance of breeding eagles. The authors stressed, however, that they were not presenting ..."a disturbance threshold for detrimental impacts on reproductive performance."

APPENDIX B -- COMMENTS ON THE DRAFT AED AND RESPONSES

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Milwaukee District Office
P.O. Box 631
Milwaukee, Wisconsin 53201-0631

IN REPLY REFER TO
030:TS
1790

DEC 0 9 1994

Mr. Nigel D. Finney
Deputy Executive Director
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, Minnesota 55450-2799

Dear Mr. Finney:

This acknowledges receipt of your memorandum of December 2, 1994, transmitting the Draft Alternative Environmental Document for the development of a comprehensive plan for a possible new major airport in Dakota County, Minnesota. This office has reviewed the proposal and find that this action will have no effect on Federal lands under our administration. Therefore, we see no further involvement with this project.

Thank you for the opportunity to comment on this action. If you have any questions, please feel free to contact Terry Saarela at 414-297-4437.

Sincerely,

Jaime T. Provencio

Jaime T. Provencio
Assistant District Manager
Lands and Renewable Resources

United States Department of the Interior

BUREAU OF MINES
Intermountain Field Operations Center
P.O. Box 25086
Building 20, Denver Federal Center
Denver, Colorado 80225

December 7, 1994

Ms. Jenn Unruh
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, Minnesota, 55450-2799

Dear Ms. Unruh:

Subject: Draft Alternative Environmental Document (AED)
New Airport Comprehensive Plan
Dual Tract Airport Planning Process

Personnel of the Intermountain Field Operations Center, Bureau of Mines, reviewed the subject Draft Alternative Environmental Document (AED) for conflict with mineral resources and mineral-production facilities, as requested. As we understand it, the proposed project involves the construction of a new airport south of Hastings, Dakota County, Minnesota.

The U.S. Bureau of Mines reviewed a scoping document in May 1994 (copy enclosed) and noted that clay, limestone-dolomite, and sand and gravel had been mined on or near the proposed airport site and at least two active limestone-dolomite quarry operations are within 2 miles of the proposed airport. Furthermore, we suggested that the final environmental report include a description of mineral resources and production facilities and a discussion of potential impacts, either adverse or beneficial, on mineral production and development. The AED failed to address mineral resources and project impacts on mineral resources and therefore, is inadequate with reguard to minerals. We suggest that future drafts of the AED address mineral resources.

A.

We appreciate this opportunity to provide comments on the subject document. Our comments are drawn from available information, are provided on a technical assistance basis only, and may not reflect the position of the Department of the Interior.

If you have any questions, please contact Robert Wood at (303) 236-0428, ext. 294.

Sincerely,

Mark H. Hibpshman
Supervisory Physical Scientist

A. As noted on page III-1, "mineral resources" is listed as being impacted the same by each alternative plan, and therefore not addressed in the AED. Impacts, if any, of the selected alternative on mineral resources will be addressed in the EIS process.

DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
ARMY CORPS OF ENGINEERS CENTRE
190 FIFTH STREET EAST
ST. PAUL, MN 55101-1638

January 27, 1995

Management and Evaluation Branch
Engineering and Planning Division

Mr. Nigel D. Finney
Deputy Executive Director
Planning and Environment
Metropolitan Airports Commission
Minneapolis-Saint Paul International Airport
6040 28th Avenue South
Minneapolis, Minnesota 55450-2799

Dear Mr. Finney:

This is in response to your memorandum of December 5, 1994, requesting comments on the Draft Alternative Environmental Document for the development of a comprehensive plan for a possible new major airport in Dakota County, Minnesota.

No St. Paul District real estate or current projects would be affected by the alternatives proposed.

The discussion of Archaeological Properties on page III-12 should include all the cultural resources in the three alternatives area, not just those that exist within only one or two of the alternatives. Otherwise, the text presents a false picture of cultural resources to be affected by airport construction regardless of which alternative is selected as the preferred one. Potential impacts to significant cultural resources sites cannot be evaluated without complete data. The discussion should indicate whether the Minnesota State Historic Preservation Officer (SHPO) concurs with the reconnaissance survey findings on the ineligibility of the four sites for the National Register of Historic Places. An example is the Chimney Rock traditional cultural site and the noise and visual impacts if the airport is built. The discussion should state whether the Minnesota SHPO concurs with the statement on page III-13 that "the larger visual context of Chimney Rock already has lost its integrity, effectively making it redundant to any assessment of National Register eligibility and adverse impact caused by the proposed undertaking."

A.

A. See Minnesota Historical Society Response B.

The Corps of Engineers is responsible for granting permits for the placement of fill materials in wetlands or waterbodies of the United States (Section 404(b)(1) permits). If the proposed work will involve the placement of such materials, Department of the Army permits may be required. The Draft Alternative Environmental Document indicates that wetlands may be affected and that mitigation of wetland losses may be required. You should coordinate with the Regulatory Branch, St. Paul District, Corps of Engineers, 190 Fifth Street East, St. Paul, Minnesota 55101-1638, concerning permit requirements.

Sincerely,

Charles E. Crist

Charles E. Crist
Chief, Management and Evaluation Branch
Engineering and Planning Division

Minnesota Department of Agriculture

February 3, 1995

Nigel D. Finney, Deputy Executive Director
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, MN 55450-2799

RE: Comments on the New Airport Comprehensive Plan Draft Alternative Environmental Document (Draft AED)

Dear Mr. Finney:

The Minnesota Department of Agriculture (MDA) has reviewed the Draft Alternative Environmental Document (Draft AED) for the New Airport Comprehensive Plan. As has been pointed out at New Airport Technical Committee meetings, the New Airport Comprehensive Plan AED analyzes differences between alternative airport configurations. Most impacts of direct and induced farmland conversion that are of major concern to MDA are the results of choices between airport locations, rather than choices between alternative airport configurations. As we understand the Dual Track Airport Planning Process, these impacts of primary concern to MDA will be addressed in the environmental impact statement on alternatives to meet long term transportation needs in the Metropolitan Area (*Future Actions* 14 through 16 as outlined on pages I-3 of the Draft AED). From the information in the Draft AED, there do not appear to be major differences in farmland impact between alternative airport configurations; therefore, we have only the following comments:

1. Farmland affected environment and impacts (pp. III-26 through III-28) are addressed very well. We particularly appreciate that you have discussed and quantified the differences between alternatives in terms of isolated, triangulated, and severed farmlands.

2. The Agricultural Preserves Map (Figure 14) is very helpful in showing the extent of commitment to agriculture in the vicinity of the proposal.

3. We recommend some changes to Section H, Land Use, on pages III-32 through III-34 to reduce confusion and improve accuracy:

   a. Local comprehensive plan designations probably do not accurately reflect existing or foreseeable land uses. For example, areas designated for long-term agriculture apparently contain rural residential development that predated the comprehensive plans—a condition not reflected in the text or in Table 16. If at

A.

A. Local land use can be used to describe the affected land uses, and will be in the Draft EIS.

• 90 West Plato Boulevard • Saint Paul, Minnesota 55107-2094 • (612) 297-2200 • TDD (612) 297-5353/1-800-627-3529 •

all possible, actual data on current land use should be used for this section, rather than approximating land use through comprehensive plan designation.

b. Confusion may exist for the reader by use of the term "agricultural preserve" for both a type of comprehensive plan designation (as used in paragraph 1 of section H.1) and a covenant that a property owner may voluntarily place on his or her property in exchange for a property tax credit and other benefits (as used on the Agricultural Preserves Map). We suggest the following wording to replace sentence 5 of paragraph 1, section H.1:

"In addition, most of the land adjacent to the site has been designated for long-term agricultural use in affected communities' comprehensive plans. The designation makes individual properties within the designated areas eligible for establishment of "agricultural preserves". An "agricultural preserve" is a type of covenant which may be established by a property owner in accordance with Minnesota Statute 473H, *Metropolitan Agricultural Preserves*. In exchange for establishing the covenant, a property owner is eligible to receive a property tax credit and other benefits."

B. The first paragraph of Section H.1 has been revised to distinguish between the agriculture designation in community comprehensive plans and the covenant signed by a property owner enrolling a farm in the Metropolitan Agricultural Preserves program.

c. Additionally, Table 16 should be revised to delete the classification "agricultural preserve", so that the land use of "agriculture" is shown to encompass 9,400 acres of land.

C. Table 16 has been revised accordingly.

Thank you for the opportunity to comment on this document. If you have any questions or need additional information, please call me at 296-5226.

Sincerely,

Robert Patton, AICP
Principal Planner

/rp

Enclosures

cc: Elton R. Redalen
Paul Burns

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

500 LAFAYETTE ROAD • ST. PAUL, MINNESOTA • 55155-40 10

DNR INFORMATION
(612) 296-6157

February 3, 1995

Jenn Unruh
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, MN 55450

RE: Dual-Track Airport Planning Process
New Airport Comprehensive Plan
Draft Alternative Environmental Document (AED)

Dear Ms. Unruh:

The Department of Natural Resources (DNR) has reviewed the Draft Alternative Environmental Document (AED) for the New Airport Comprehensive Plan portion of the Dual-Track Airport Planning Process.

We agree with the MAC's conclusion that the three alternatives have very similar potential environmental impacts. We note the AED did not analyze the differential impacts to snowmobile trails. However, referring to the analysis in the Site Selection AED, it appears development at this site would affect between 7 and 8 miles of trail, varying little among alternatives.

Recognizing that they are more appropriately addressed in the upcoming Environmental Impact Statement (EIS), we offer the following additional comments. We will resubmit these issues during the EIS scoping process.

Loggerhead Shrikes
The Draft AED includes very limited text on potential mitigation for loss of shrike habitat. We assume you will discuss this subject in greater detail in the EIS.

A.

Chimney Rock
The new airport boundary has been changed to exclude the Chimney Rock site. Although you have included discussion of the site's archaeological value, you have dropped any discussion of potential impacts to the site's biotic resources. We had hoped that inclusion within the airport boundary would afford this area some measure of protection and management. Its proximity to the airport perimeter may result in further degradation from peripheral, induced development. Consequently, we believe impacts to this area continue to merit attention in the EIS.

B.

Vermillion River
The Department manages some portions of the Vermillion River for recreational angling. The EIS should address expected stormwater discharge impacts to Vermillion River fisheries resources. We also hope you plan to assess the potential for additional flooding due to increased impervious surface or within-floodplain development.

C.

Thank you for the opportunity to review this document. We commend you on the overall quality of the natural resources impact analysis completed to date. Please don't hesitate to contact me with any questions regarding these comments.

Sincerely,

Rebecca Wooden

Rebecca A. Wooden
Environmental Planner
Office of Planning
(612)297-3355

Copy List

Rod Sando
Kathleen Wallace
Steve Colvin
Carmen Converse
Jon Nelson

Bill Johnson, Region V
Brian McCann
Maryanna Harstad
Steve Johnson

Bill Weir
Pete Otterson
Jan Shaw Wolff
Gregg Downing, EQB

AN EQUAL OPPORTUNITY EMPLOYER

A. Potential mitigation measures for loggerhead shrikes will be explored in more detail in the EIS (see also SOAR, Response K.).

B. The potential for impacts to biotic communities at Chimney Rock will be analyzed further in the EIS.

C. The focus of analysis of stormwater impacts is on water quality and flooding issues. If there are fisheries resources managed by the DNR which are not protected by existing water quality standards, please provide information on their nature, location and areas of concern. The Vermillion River Watershed Management Plan requires the provision of adequate storm water storage to prevent the exacerbation of existing conditions in the watershed. The airport comprehensive plan provides for more than 2,600 acre feet of flood control storage capacity. Presumably, any other development occurring in the watershed would also provide appropriate storage capacity for flood control.

Minnesota
Department of Transportation
Transportation Building
395 John Ireland Boulevard
Saint Paul, Minnesota 55155

January 31, 1995

Nigel Finney
Deputy Executive Director
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, Minnesota 55450

SUBJECT: DRAFT ALTERNATIVE ENVIRONMENTAL DOCUMENT -- NEW AIRPORT COMPREHENSIVE PLAN; DUAL TRACK AIRPORT PLANNING PROCESS

The present document is to provide the basis for a decision on which of three development alternatives currently under consideration should be selected as the preferred alternative. Later, in the EIS, that alternative is to be compared with a preferred development plan at MSP.

Mn/DOT has a continuing vital interest in the airport decision process. In our comments on this process and documents over the past several years, we have been concerned that impacts to the Twin Cities metropolitan area ground transportation system have not received adequate analysis. Of major concern is the overall impact associated with the surface transportation system a new airport will require. We feel strongly that transportation corridor-level studies are needed prior to the EIS comparing MSP and the new site. These studies need to document the social, environmental, and economic impacts; cost estimates; impacts to the inplace system, and the modal options and implications of alternative ways of reaching a new airport at each of the three sites still under consideration. These studies must produce data comparable to those being generated for MSP, so valid comparisions can be made

A.

The three alternative sites are similar in layout and location within the search area. The terminal location and major surface access to the sites are the same among all alternatives. This may imply that no differential impacts are associated with any one or another of the sites; impacts from the sites are so similar that differences do not provide a meaningful basis for the decision.

We are less certain about this. The ground transportation analysis in the AED does not seem adequate given the magnitude of the decision at hand. Each of the terminal locations places the major access on the northwest side of the new airport site. This implies a fixed terminus for surface transportation. Yet, in the absence of a thorough

B.

A. Corridor-level studies will be performed, and provide data comparable to MSP, as soon as the forecast issues are resolved. MAC will coordinate with Mn/DOT on the selection of the corridor(s) to be evaluated.

B. The New Airport Comprehensive Plan AED identifies three alternative layouts within the site selected by MAC to test the operational and environmental impacts of various layout options. The diversity of the layouts was limited because the general conceptual layout of the runways and terminal had been established in the site selection process.

There is strong logic for connecting the airport terminal with existing Highway 55 to the north. First, the airport layout requires a centrally located terminal. Second, wind coverage requires that the main runways be aligned in a northwest-southeast orientation. Third, the great majority of passengers and cargo will be coming from (and destined to) the Twin Cities area to the north-northwest. While the general location for a right-of-way for the airport access road has been identified, a specific location must still be chosen. MAC will work with Mn/DOT to identify the best access route to the airport for analysis.

analysis – which has not yet been completed – we cannot know that this would be the best access point, or even an acceptable point to bring traffic to a new site.

We understand the terminal location is dictated by operational considerations within the airport boundaries. However, we see a need to be more open and inclusive about how we get people to a new airport. It may be more feasible to bring people to the airport site itself from some other route. For instance, since construction at a new airport does not present the operational constraints which would be present at an operating airport, it may be practical to locate the main access point elsewhere than at the point depicted and convey traffic to the terminal via a cut and cover tunnel beneath the runways and taxiways. This consideration and other options should be explored.

Which of the three sites is selected is not a Mn/DOT decision, nor is the placement of the terminal. However, the manner of bringing people to the airport, to the terminal, and to other major traffic generators within the airport needs to remain open. If the route is fixed at this stage, it later may be found to be unworkable, too expensive, have too many adverse environmental impacts, or have some other unforeseen problem. If alternative route locations are not then available, we will have needlessly painted ourselves into a corner. As indicated above, we feel strongly that this information should be available prior to identifying a preferred site for a new airport. A much less preferrable option is an EIS which would examine a site with one terminal location, but include a number of access route alternatives. We also see a need for considering multiple major access points.

We believe these issues will be substantially illuminated by a thorough traffic study, which will provide both the numbers of people/vehicles, and also the areas of origin and destination of those vehicles. We see this traffic study as crucial. At a minimum it should include the following elements:

- Extend traffic counts and analysis to include the river crossings into Wisconsin, and access from Southeastern Minnesota.
- Provide 2020 build-alternative traffic demand data, including that generated by secondary development.
- Include source of traffic data and assumptions.
- Provide information on points or areas of origin and destination, and likely routes to the site.
- Assess improvements needed to the transportation system, including costs and alternatives to reduce traffic demand, such as multiple access points, TSM, TDM, etc.
- Impacts on local access and safety should be studied and understood.

In addition to Mn/DOT, the Wisconsin DOT and Federal Highway Administration should be involved in the analysis, as partners in the process.

These issues must be fully addressed for Minnesotans to be assured that the choice is the most reasonable, prudent and feasible decision. Staff from Mn/DOT and MAC have had a number of meetings in recent weeks, and we look forward to working together to insure the best overall transportation system is provided for the people of the region.

Yours truly,

James N. Denn
Commissioner

cc: Jenn Unruh

C. c. A thorough traffic study will be conducted for the draft EIS and will include Wisconsin and all major roads serving the sites. Build alternatives will be provided for both the preferred alternative at the current site and at the Dakota County site, as well as for a "no-build" alternative. Ground counts for 1992 were obtained from the Minnesota Department of Transportation's 1992 Traffic Volume maps. As no new modeling was performed, information on assumptions may be found in the technical report which was distributed along with the site selection AED. The travel demand forecasts for the draft EIS will provide information on trip origin-destination linkages and airport-related trip patterns. Much of this data may also be found in the site selection AED for Site 3. The draft EIS will include consideration of TSM, TDM and multiple access points.

Meetings have been and will be held with the Minnesota Department of Transportation and the Wisconsin Department of Transportation regarding travel forecasting for the airport alternatives.

MINNESOTA HISTORICAL SOCIETY

February 3, 1995

Mr. Nigel D. Finney
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, Minnesota 55450

Dear Mr. Finney:

Re: Dual Track Airport Planning Process,
New Airport Comprehensive Plan, Dakota County
SHPO Number: 94-2883

Thank you for the opportunity to review and comment on the Draft Alternative Environmental Document for the New Airport Comprehensive Plan. We have the following comments:

1. The information on the National Register eligibility of archaeological sites needs clarification. The individual site evaluations discussed on page III-12 indicate that all four archaeological properties do not meet National Register eligibility. However, figure 8 indicates that the four sites are potentially eligible. The discussion under B.2 (impacts) and B.3 (mitigation) includes all four sites, which implies that the sites are eligible, since the criteria of effect and mitigation are only applied to eligible sites.

2. The information on the eligibility of Chimney Rock needs clarification. The evaluation on page III-12 indicates that the property is eligible due to its associations with early Euro-Americans and with Native Americans, while the discussion on page III-13 indicates that the associations with Native Americans have not been documented, and that property may not be eligible due to changes in the larger visual context. Page III-30 indicates that Chimney Rock is eligible. We have detailed some concerns about the evaluation of this property in our comments on the Survey Report. In short, we believe that the process of evaluation (taking into account the guidelines for evaluating traditional cultural properties) and the specific significant qualities of the property need further documentation. Until this has been completed, we cannot concur with the determination that the proposed undertaking has no effect on the Chimney Rock. However, it does not appear that there is a significant difference in the level of impact on the rock among the three final alternatives in the AED.

3. We have previously recommended that the Area of Potential Effect (APE) for the project be submitted to the Advisory Council for an early review. Because the APE for this project is unusually complex, we continue to believe that this review by the Council is important.

4. Implementation of this plan will not occur for a considerable length of time. Because evaluation of the historic significance of properties takes into account changing perceptions of significance, provisions need to be developed for updating the cultural resource review as part of the overall project schedule.

If you have any questions regarding our comments, please contact Dennis Gimmestad in our Review and Compliance Section at 612-296-5462. We look forward to working with you to address cultural resource concerns through the Section 106 review process for this project.

Sincerely,

Britta L. Bloomberg
Deputy State Historic Preservation Officer

BLB:dmb

A. A. As stated in the second paragraph of Section III, B.1 in the AED, there are eight archaeological sites within the boundaries of Site 3. The third paragraph then explains that the AED discussion, which concerns the differential impacts of three development plans located within Site 3, only focusses on the four archaeological properties that could constitute such differential impact. The remaining four, common to all three alternatives and therefore irrelevant to the comparison between them, will be evaluated during 1995 and discussed in the EIS process.

Changes made in Section B.2 of the Final AED should prevent further misunderstanding of this issue.

B. B. ARS has concluded that Chimney Rock meets National Register criteria of eligibility as a geographic landmark of known cultural significance to early Euro-American explorers and settlers as well as to later residents of and visitors to Dakota County. As such, it also appears to have been of significance to Native Americans of the region.

ARS has not found any evidence to support the notion that Chimney Rock has-been/continues-to-be a feature of spiritual significance to the Native Americans of the area. Such a function had been suggested by several concerned Dakota County residents during the new airport site selection process — not, however, by any members of the Native American community. Consequently, this property should not be considered eligible for the National Register as a traditional cultural property, i.e, , in this case, "a location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world" and/or "a location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice" (U.S. Department of the Interior, National Park Service, National Register Bulletin #38).

As a geographic landmark, Chimney Rock has been and continues to be of interest primarily because of its unusual physical characteristics and its immediate surroundings. Were it to be nominated to the National Register in this capacity, the site area would only encompass the fairly immediate surroundings of the rock formation, i.e., those areas that have escaped cultivation and now support woodlands and grassy openings. The site would, in other words, be located well outside the area of potential effect of all three new airport alternatives.

The situation would have been different, had Chimney Rock proven eligible for the National Register as a traditional cultural property, i.e., as a site of past and continued spiritual significance and a location where the visual and noise impacts of any of the three airport alternatives would have constituted significant intrusions.

In view of the above, it is concluded that Chimney Rock does meet National Register criteria but is located too far from any of the three airport alternatives to be adversely impacted by their implementation. These issues are discussed, at greater length, in the technical report prepared by Hess Roise and ARS (Section VII). They have also been clarified through revisions made in the Final AED.

C. C. MAC will continue to request the FAA to seek this review.

D. D. The SHPO must be consulted before the plans for a new airport are finalized to ensure that no additional properties in the APE have gained historic significance in the intervening years. This is particularly true for properties less than fifty years old which were included, in part, to acknowledge that the APE for above-ground properties is largely defined by projected DNL 65 noise contours for the year 2005. While it is impossible to fully anticipate what properties might be considered historically significant a decade from now, the more recent properties that were surveyed represent possible candidates. They must now meet the test of "exceptional significance" to qualify for the National Register, but some will have passed that threshold, or be close to it, before construction begins. The SHPO may also request assessment of additional properties that have become of interest since the present survey was completed.

Minnesota Pollution Control Agency

February 2, 1995

Mr. Nigel Finney, Deputy Executive Director
Planning and Environment
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, Minnesota 55450

Dear Mr. Finney:

RE: New Airport Comprehensive Plan Draft Alternative Environmental Document

Thank you for the opportunity to comment on the Draft Alternative Environmental Document (AED) for the new airport site. The document appears to include most of what the Minnesota Pollution Control Agency (MPCA) staff asked to be included in the scope of the analysis. The MPCA staff has several comments for your consideration.

First, the portion of the document pertaining to water quality was well written and to the point. Thank you for the effort necessary to produce a readable document.

Second, the report correctly states that it may not be possible to discharge storm water from the site to the Vermillion River. In addition to storm water, there would be a discharge from the mechanical treatment plant which would be treating an estimated five million gallons per day of sanitary wastewater and pretreated glycol. Please be advised that it is quite unlikely that a new airport would be permitted to discharge storm water or treatment plant effluent to the Vermillion River. It would be wise to proceed with the environmental study under the assumption that a Mississippi River discharge point would be necessary. **A.**

The location of the Mississippi River discharge should be discussed in future documents. While the most favorable discharge location may be immediately down stream of the Hastings dam, the consultant should discuss, with the Metropolitan Council Wastewater Services, the long term fate of the Hastings wastewater treatment plant. Advanced treatment may be required, depending on the discharge point selected.

Third, the AED mentions that extended dry detention basins would be selected as the best management practices for treatment of storm water runoff. Dry detention basins are not effective in removing solids, such as from winter sanding operations. They have a tendency to flush the solids, along with pollutants attached to the particle, through the system. If a dry detention pond is needed, it should be demonstrated that the pond could be affixed with a floating weir or some other mechanism which assures that settling velocities are not exceeded through the outlet. **B.**

520 Lafayette Rd. N.; St. Paul, MN 55155-4194; (612) 296-6300 (voice); (612) 282-5332 (TTY)
Regional Offices: Duluth • Brainerd • Detroit Lakes • Marshall • Rochester

A. From the comment, it is unclear if the reference to "advanced treatment" applies to the Hastings WWTF, to the potential discharge from the airport, or to both. Since the airport discharge would be governed by the "anti-degradation" provisions of Minnesota's water quality standards, a requirement for advanced treatment is likely. Assessing the potential interrelationship between the Hastings WWTF discharge and a potential airport WWTF discharge would appear to require the establishment of either a Total Maximum Daily Load (TMDL) or a Waste Load Allocation (WLA) for the potentially affected river reach. The establishment of either WLAs or TMDLs is the responsibility of the Minnesota Pollution Control Agency.

B. As stated in the AED, the detention basins are sized to provide 40 hours of retention for a 10-year storm. This provides sufficient time for most of the settling which can occur to take place. The outlet for the dry basins will be designed to minimize sediment flushing through use of slotted standpipes or other acceptable methods; therefore, dry basins can remove and retain substantial quantities of suspended solids. This will require periodic maintenance (cleaning) to remove accumulated sediment.

Fourth, the receiving water on the System Flow Diagram would need a Total Maximum Daily Load (TMDL) established for the pollutants of concern. The collective loading from all sources must be less than the TMDL in order to meet water quality standards. It may be necessary for the three treatment basins to be modified to include aeration equipment. If so, it may also then be necessary to modify the basins from "dry" to "wet" basins so that aeration can be provided.

Fifth, relating to the noise analyses, is there a difference between the three alternative layouts in the frequency of sound exposure levels at the selected sensitive receptors? Also, is there a difference between the three alternatives in the estimated noise mitigation costs? Finally, we suggest that the number of people residing in the L10 65 dBA noise contour be included in the Summary of Impacts section of the AED.

And finally, the executive summary of the AED states that ground water is classified as highly sensitive to very highly sensitive to contamination at the new airport site. Yet there is no mention of ground water anywhere in the body of the AED. If that is a conclusion of the environmental study then there should be a discussion on potential ground water impacts in the Water Resources section of the AED. As with surface water issues and impacts, ground water should be discussed in the Affected Environment section, the Impacts on Water Resources section, and the Mitigation Measures section of the AED.

We appreciate the opportunity to participate in the dual track airport site selection process and look forward to receiving responses to our comments. If you have any questions regarding our comments, please contact Kathryn Kramer of my staff at (612) 297-8604.

Sincerely,

Paul Hoff

Paul Hoff, Director
Environmental Planning and Review Office
Administrative Services Division

PH:jr

C. C. The establishment of TMDLs would be beneficial to being able to determine and compare in the EIS the potential water quality impacts from both the proposed new airport site and the existing airport. If the Agency can provide a listing of both specific pollutants of concern, and corresponding TMDL information for the potentially affected river segments (lower Minnesota River, lower Pool 2 in the Mississippi River, and upper Pool 3 in the Mississippi River), the EIS will utilize that information in the water quality impacts assessment.

D. D. As noted in the text, there would be no noticeable difference in noise levels among the three alternatives for the great majority of locations (see text and tables in Section I.2). Since the difference in noise impacts is so small among the three alternatives, differential noise mitigation costs would also be negligible.

$L_{10}65$ population and household counts are shown in Tables 23 and 24 in the Final AED. Population counts have been added to the Summary of Impacts table of the Executive Summary.

E. E. The focus of the AED was to identify, to the extent possible, the differential impacts of each of three airport development plans on the same site. Comparative evaluations of the potential impacts on groundwater were done prior to undertaking this AED, as part of the Site Selection process. Additional assessments of groundwater impacts will be conducted as part of the EIS scheduled for completion during 1995. Because it was deemed unlikely that there would be significant differences in groundwater impacts arising from the differences in airport configurations on, essentially, the same site, analysis of such impacts was specifically deferred in the June, 1994 "Scoping Decision Document".

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

WISCONSIN DEPT. OF NATURAL RESOURCES
George E. Meyer
Secretary

101 S. Webster Street
P.O. Box 7921
Madison, Wisconsin 53707-7921
TELEPHONE 608-266-2621
TELEFAX 608-267-3579

February 3, 1995

Ms. Jenn Unruh
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, MN 55450

Dear Ms. Unruh:

Thank you for sending me the Surface Water Quality Analysis technical report for the New Airport Comprehensive Plan.

The Department recognizes it may be premature at this stage of the Dual Track planning process to rigorously examine alternatives and select a preferred wastewater treatment system(s) for the new airport scenario. We would expect, however, that the project EIS should examine costs and benefits of wastewater treatment options. Accordingly, we offer the following advance comments and questions in the same order as presented in the Surface Water Quality Analysis.

1. Page 30, Constructed Wetlands

   These systems may not provide adequate treatment of ammonia nitrogen and BOD during the winter months. High flows through wetlands can contribute to serious dissolved oxygen problems in receiving streams, especially if these wetlands receive high strength BOD wasteloads.

2. Page 41, Peak Runoff Rates

   There appears to be a discrepancy between peak runoff rates calculated by the US COE and the Vermillion River Watershed Management Commission (VWMC). This should be resolved.

3. Page 49, Sanitary Wastewater

   An assessment is needed to estimate off-site wastewater treatment needs resulting from new airport induced development in areas and communities surrounding the new airport site. How would the airport and its induced development impact the capacity at wastewater treatment plants in these communities?

A.

B.

C.

A. The potential limitations of constructed wetlands are known and acknowledged. Consequently, the AED only lists them under Additional Mitigation Measures as "other options".

B. There is definitely a discrepancy between the peak runoff rates mentioned. Potential flooding impacts will be evaluated further in the EIS. It is anticipated that this will need to be done using the US COE data since that data was used to set 100-year flood elevations. The analysis will focus on the incremental effect of the airport facilities. Resolving the conflict between the data sets available on the Vermillion River Watershed is not feasible within the constraints of this EIS process.

C. An evaluation of the airport's estimated wastewater flows on existing wastewater treatment facilities was conducted and described as part of the Site Selection AED. Assessment of the potential impact of induced development on the capacity of existing wastewater treatment plants that are part of the Metropolitan Disposal System will need to be conducted by the Metropolitan Council as part of its regional wastewater management planning responsibilities. Such an assessment would require resolution of the extent to which the Council can or cannot control potential induced development through its regional growth management process.

4. Page 50, Wastewater Treatment at Proposed Airport

What is the basis of the apparent MPCA policy that requires advanced treatment for "significant" discharges in the lower end of Pool 2? What is significant?

5. Page 51, Discharge below L/D 2.

What is the basis of the conclusion that only secondary treatment would be required if wastewater from the airport was discharged below L/D 2? Also, does this evaluation consider the plans for a new metro area SE regional treatment plant that would be located just upstream of LD/2?

The section of Mississippi River upstream of L/D 2 may not be oxygen limited during low flow conditions, but it is a reach where toxic water quality standards are being exceeded (i.e., PCBs and Hg). This implies that this river reach is water quality limited. Further, there may be a problem with other metals as future waste flows increase from the Twin Cities area and from planned developments in the Hastings area. As a result, there is a need for a thorough evaluation of toxic discharges and the need to meet both Minnesota's and Wisconsin's water quality standards for toxic substances in the Mississippi River. This evaluation may indicate that total maximum daily loads (TMDLs) for some toxic substances may be necessary to maintain and protect receiving water quality standards.

6. Page 51, Probable Level of Treatment Required

We concur with the need to remove phosphorus and ammonia nitrogen at any new wastewater treatment facility in the river reach below L/D 2. Again, some consideration should be made to account for other wastewater flows associated with secondary development that will be inevitable. Further, it may be appropriate to consider a new regional plant that would include the City of Hastings along with the airport and associated developments.

7. Page 51, Space Requirements for Wastewater Treatment Facility

What is the basis of the statement that a 5 mgd mechanical treatment facility would require 50 acres of land? This would imply that the existing Metro Plant in St. Paul would require 2,500 acres of land (about 4 square miles) if it were to be designed today.

Please add these as supplemental comments to my letter of January 13, 1995, for the Draft Alternative Environmental Document for the New Airport Comprehensive Plan. Feel free to address any questions on the above to me at (715) 839-3747.

Sincerely,

Tom Lovejoy

Tom Lovejoy
Environmental Impact Coordinator
EI/TL378.sz

D. D. Please refer to Minnesota Rules, Chapter 7050 for a full discussion of the subject. However, Section 7050.0185 NONDEGRADATION FOR ALL WATERS. Subp. 2. Definitions, contains the following: "Significant discharge means:

(1) a new discharge of sewage, industrial, or other wastes greater than 200,000 gallons per day to any water other than a class 7, limited resource value water; or

(2) an expanded discharge of sewage, industrial, or other wastes that expands by more than 200,000 gallons per day and that discharges to any water other than a class 7, limited resource value water;"

The AED identifies the Mississippi River from the Rock Island Bridge to Lock and Dam 2 and below Lock and Dam 2 as having an MPCA classification of "2B", which makes it other than a class 7 water.

E. E. The basis for the conclusion is contained in Minnesota Rules, 7050.0210 GENERAL STANDARDS FOR DISCHARGES TO WATERS OF THE STATE. and 7050.0211 FACILITY STANDARDS. The former, at Subp.9. Water quality based effluent limitations., states "Any effluent limitation determined to be necessary under this section shall only be required of a discharger after the discharger has been given notice of the specific effluent limitations and an opportunity for public hearing..." 7050.0211 establishes a minimum of secondary treatment for municipal point source and other point source dischargers of sewage.

The evaluation does not consider the plans for a new metro area SE regional treatment plant. Decisions regarding whether or when such a plant may be constructed are not available. The Site Selection AED did discuss another possibility, a regional plant, located downstream of Hastings.

The establishment of total maximum daily loads for toxics may be necessary to maintain and protect receiving water quality standards in certain river reaches or segments. To the extent that such loads are established for river segments potentially affected by discharges associated with the proposed airport site, and are available for use in the EIS, they will be used in the assessment of water quality impacts. However, establishment of such TMDLs is not something which can be accomplished within this environmental review process. We are not aware of any data which would indicate that a new airport facility would result in any detectable increase in PCB or Hg loadings.

F. F. See Responses E. and C. above.

G. G. Initial concepts for the wastewater treatment facility involve a variety of conservative assumptions. While it is possible to design a 5 mgd plant to occupy a smaller space, it is not prudent to unduly constrain the potential space required at this stage.

WISCONSIN
DEPT. OF NATURAL RESOURCES
George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

404 S. Barstow Street
P.O. Box 4001
Eau Claire, Wisconsin 54702-4001
TELEPHONE 715-839-3700
TELEFAX 715-839-6076

February 3, 1995

Ms. Jean Unruh
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, MN 55450

Dear Ms. Unruh:

Thank you for sending me the Surface Water Quality Analysis technical report for the New Airport Comprehensive Plan.

The Department recognizes it may be premature at this stage of the Dual Track planning process to rigorously examine alternatives and select a preferred wastewater treatment system(s) for the new airport scenario. We would expect, however, that the project EIS should examine costs and benefits of wastewater treatment options. Accordingly, we offer the following advance comments and questions in the same order as presented in the Surface Water Quality Analysis.

1. Page 30, Constructed Wetlands

   These systems may not provide adequate treatment of ammonia nitrogen and BOD during the winter months. High flows through wetlands can contribute to serious dissolved oxygen problems in receiving streams, especially if these wetlands receive high strength BOD wasteloads.

2. Page 41, Peak Runoff Rates

   There appears to be a discrepancy between peak runoff rates calculated by the US COE and the Vermillion River Watershed Management Commission (VWMC). This should be resolved.

3. Page 49, Sanitary Wastewater

   An assessment is needed to estimate off-site wastewater treatment needs resulting from new airport induced development in areas and communities surrounding the new airport site. How would the airport and its induced development impact the capacity at wastewater treatment plants in these communities?

4. Page 50, Wastewater Treatment at Proposed Airport

What is the basis of the apparent MPCA policy that requires advanced treatment for "significant" discharges in the lower end of Pool 2? What is significant?

5. Page 51, Discharge below L/D 2.

What is the basis of the conclusion that only secondary treatment would be required if wastewater from the airport was discharged below L/D 2? Also, does this evaluation consider the plans for a new metro area SE regional treatment plant that would be located just upstream of LD/2?

The section of Mississippi River upstream of L/D 2 may not be oxygen limited during low flow conditions, but it is a reach where toxic water quality standards are being exceeded (i.e., PCBs and Hg). This implies that this river reach is water quality limited. Further, there may be a problem with other metals as future waste flows increase from the Twin Cities area and from planned developments in the Hastings area. As a result, there is a need for a thorough evaluation of toxic discharges and the need to meet both Minnesota's and Wisconsin's water quality standards for toxic substances in the Mississippi River. This evaluation may indicate that total maximum daily loads (TMDLs) for some toxic substances may be necessary to maintain and protect receiving water quality standards.

6. Page 51, Probable Level of Treatment Required

We concur with the need to remove phosphorus and ammonia nitrogen at any new wastewater treatment facility in the river reach below L/D 2. Again, some consideration should be made to account for other wastewater flows associated with secondary development that will be inevitable. Further, it may be appropriate to consider a new regional plant that would include the City of Hastings along with the airport and associated developments.

7. Page 51, Space Requirements for Wastewater Treatment Facility

What is the basis of the statement that a 5 mgd mechanical treatment facility would require 50 acres of land? This would imply that the existing Metro Plant in St. Paul would require 2,500 acres of land (about 4 square miles) if it were to be designed today.

Please add these as supplemental comments to my letter of January 13, 1995, for the Draft Alternative Environmental Document for the New Airport Comprehensive Plan. Feel free to address any questions on the above to me at (715) 839-3747.

Sincerely,

Tom Lovejoy

Tom Lovejoy
Environmental Impact Coordinator
EI/TL378.sz

Wisconsin Department of Transportation

Division of Transportation Assistance
DTI2

BUREAU OF AERONAUTICS
4802 Sheboygan Avenue
P.O. Box 7914
Madison, WI 53707-7914

Telephone: (608) 266-3351
FAX: (608) 267-0748
TTY: (608) 266-3351

February 2, 1995

Ms. Jenn Unruh
Metropolitan Airports Commission
6040 - 28th Avenue South
Minneapolis, MN 55450

Dual Track Planning Process
New Airport Comprehensive Plan
Draft Alternative Environmental Document

Dear Ms. Unruh:

We have reviewed the Draft Alternative Environmental Document (AED) and find it complete in scope and sufficient in depth to reach reasonable conclusions regarding each of the alternatives addressed. Two outstanding issues for Wisconsin that will need to be discussed in the future EIS include:

1) induced land-use changes for the Wisconsin side of the Mississippi River, and;

2) the induced transportation impacts for Wisconsin, ie. infrastructure improvements to state and local bridges and highways.

Aircraft noise will also be an additional issue for Wisconsin, and should be addressed in the final EIS.

We would like to offer the following specific comments on the Draft AED:

Page i, paragraph 5 - we suggest rewording the end of the 3rd sentence to read "*...as the preferred site for a potential new airport*".

Page ii, paragraph 2 under Environmental Evaluation - the scoping process evaluation for "transportation access" was limited to within the sites.

Page iii, paragraph 8 under "Transportation" - add the sentence "These regional travel demands and associated impacts will be addressed in the EIS". Without this sentence the statement is too vague and misleading.

Page 1-1 and Page 1-3 - we suggest using "New Airport *Site* Comprehensive Plan" to enhance clarity.

Page 111-1 - we suggest deleting "... as either not significant or..." in the last sentence of the second paragraph.

A.

A. Most of the comments have been incorporated. The scoping process for transportation access was limited to the differences between the alternatives. Impacts on mineral resources and solid waste disposal, for example, are not significant.

Page 111-32 - the discussion under the heading H.1 "Affected Environment" is confusing with the mix of "on site", and "in and around or adjacent".

B. The text in H.1 has been modified slightly. The main point is that the affected land use is predominantly agricultural.

Page 111-33 - The conclusions developed in H.1 regarding existing land use that will not be compatible with a new major airport and areas that will be significantly impacted are
issues that are not clarified in the next sections.

C. Land use impacts will be further evaluated in the draft EIS.

Page 111-53 - the first sentence under Section K is misleading, additional wording would clarify the statement. "The *highway access* impact of the Long Term Comprehensive Plan alternatives to the regional system (as they differ between the *site* alternatives) is addressed in this section."

D. We have avoided the use of the term "site" in order to not confuse the comprehensive plan alternatives with the ***site*** alternatives in the site selection process.

Page 111-54 - the impacts and issues listed should be reworded as suggested to add clarity. The purpose of this phase of the environmental process is to address the impact on regional highways (including Wisconsin) and is of considerable interest to the Department of Transportation.

E. The analysis will address both local and regional roadways.

#1 "...analysis of *regional* roadway requirements..."
#3 "...expansion of existing *regional* roadways....."
#7 "...within *and between states*..."

These comments on the draft Alternative Environmental Document are provided for your consideration. If we can be of further assistance in this review process, please let me know.

Sincerely,

Robert W. Kunkel, P.E.
Director

RWK:jls/33287b

cc: Representative Sheila Harsdorf
Senator Alice Clausing
Marlin Beekman, WisDOT
Glen Orcutt, FAA
Tom Lovejoy, WisDNR

MINNESOTA-WISCONSIN BOUNDARY AREA COMMISSION
619 SECOND STREET, HUDSON, WISCONSIN 54016-1576
Serving Our Sponsor States on the St. Croix and Mississippi Rivers since 1965

Commissioners, Metropolitan Airports Commission January 18, 1995

As a current member of the Minnesota Wisconsin Boundary Area Commission, I wish to remind you there has been significant interest by this commission in both the lay-out of the Dual Track Planning Process and the eventual decision this process presents. To that end the Commission sent Governor Carlson a letter dated June 24, 1994 with a copy to Chairman Braun (copy attached) expressing a number of different questions. Briefly these include:

- the level of involvement and influence afforded the interests of the State of Wisconsin.
- The lack of consideration of impacts on boundary rivers between Minnesota and Wisconsin from wastewater and stormwater runoff and air pollution.
- the lack of consideration of induced development which would occur in both states as a result of a Dakota County Build decision
- the lack of consideration of a no-build alternatives including the continued use of the existing airport coupled with outlying existing regional airports and high speed rail.
- not mentioned in the letter but mentioned at subsequent meetings is the level of over-flights over communities in Wisconsin, over the river valleys themselves, over the USFWS and NPS designated areas and the impact of these low level flights to the Lower St. Croix National Scenic Riverway.

This letter laid out a thirty year history of cooperation between Minnesota and Wisconsin, facilitated in the last 25 years by the MN-WI BAC. "As recently as May 16, 1994 the MWBAC held a planners forum with representatives of the Metropolitan Council, the West Central Wisconsin Regional Planning Commission, MNDNR, WIDNR, MNDoT, WIDoT, and several local governmental planners to look at how surface transportation system plans, decisions and actions in each state are affecting their neighboring state."

"These are just a few examples of ways in which our two states have cooperated rather than competed, in the past, to address mutual concerns. It appears that we are seeing that the Mississippi and St. Croix Rivers are rivers that join our two states, not divide us."

As a MWBAC Commissioner I have been asked to appraise you of the fact that the Commission has not received any formal response either from Governor Carlson's office or the MAC regarding the concerns mentioned above; that the Boundary Commissioners continue to be concerned regarding resolution of the inadequacies of the current planning process and the shortcomings of the current environmental reviews. We trust, as a response to this testimony and our written comments, the MAC will be addressing questions we feel have been inadequately attended to, those herein addressed, as well as the many others which have been or will be raised through this public hearing and comment process.

A.

Sincerely,

James M. Fitzpatrick

James M. Fitzpatrick
Commissioner, Minnesota - Wisconsin Boundary Area Commission

A. The above-mentioned concerns regarding impacts and alternatives will be addressed in the Scoping Report for the EIS (May 1995) and evaluated as appropriate in the Draft EIS (December 1995).

MINNESOTA-WISCONSIN BOUNDARY AREA COMMISSION
619 SECOND STREET, HUDSON, WISCONSIN 54016-1576
Serving Our Sponsor States on the St. Croix and Mississippi Rivers since 1965

June 24, 1994

Honorable Arne H. Carlson, Governor
State of Minnesota
130 State Capitol
St.Paul, Minnesota 55155

Re: Twin Cities, Minnesota International Airport Expansion
Dual Track Planning Process

Dear Governor Carlson:

The Minnesota-Wisconsin Boundary Area Commission, in response to information provided to us by a number of legislators, local government officials and citizens in both Minnesota and Wisconsin, would like to request your support in seeking resolution to a number of issues related to the studies currently being done to consider relocation of the Twin Cities International Airport to a site in Dakota County, Minnesota, within five miles of the Minnesota-Wisconsin Border.

1. Boundary Area Commission Involvement and Issues to Date

In response to a February, 1993, letter of invitation from the Metropolitan Airports Commission (MAC), the Minnesota-Wisconsin Boundary Area Commission (MWBAC) designated Eric Macbeth of its staff, to serve as a member of the MAC Site Selection Technical Advisory Committee for the Dual Track Planning Process. Mr. Macbeth served on that task force as a liaison with the MWBAC and prepared formal comments on the draft Alternative Environmental Document (AED) in November and December, 1993. This committee, during its process, narrowed the choice of possible sites for a new airport to seven, then to three, then to a preferred site (now called site 3).

In February, 1994, the MAC again extended an invitation for the MWBAC to participate in the process by inviting the MWBAC to be represented on a Technical Committee to develop a New Airport Long Term Comprehensive Plan, within the context of the ongoing Dual Track Planning Process. The MWBAC designated Commissioner Harold Craig to serve on this committee. This committee developed a document entitled "Scoping Environmental Assessment Worksheet and Draft Scoping Decision Document" released in April, 1994. That document describes alternatives for the design of a new airport at Site 3 in Dakota County, Minnesota, should a new airport, build alternative, be eventually selected by the Minnesota Legislature

Since the release of the two documents referenced above, our Commission has heard, both formally and informally, from a number of groups and individuals, with a variety of concerns about:

(1) The Dual Track Planning Process itself, (particularly the level of involvement and influence afforded interests in the State of Wisconsin);

(2) The lack of consideration of impacts on the boundary rivers between Minnesota and Wisconsin from wastewater and stormwater runoff and air pollution;

(3) The lack of consideration of induced development which could occur in both Minnesota and Wisconsin as a result of a Dakota County build decision; and,

(4) The lack of adequate consideration of no-build alternatives, including the continued use of the existing airport, coupled with the use of outlying regional airports and high-speed rail transportation links.

These concerns were most recently addressed at a public meeting of the MWBAC's Mississippi River Regional Committee on May 18, 1994 in Red Wing, Minnesota, and amplified and augmented in discussions of this topic at the regular public meeting of the full Commission on June 9, 1994, in Hudson, Wisconsin.

During discussion of this issue at our June 9, 1994 meeting, our Commission was personally informed by Wisconsin Senator Alice Clausing and Wisconsin Representative Sheila Harsdorf, that they, along with Representatives Al Baldus and Harvey Stower, had, two days prior to the meeting, formally requested the assistance of the Wisconsin Attorney General, James Doyle, to obtain "an injunction enjoining Minnesota, through the Metropolitan Airport Commission, from continuing the Metropolitan Airport Dual Track Planning Process until Wisconsin has been granted enfranchisement in the process."

3. Historic Precedent for Partnership Planning, Decision-making and Management

The fact that people and resources in Pierce, St. Croix and Polk Counties, in Wisconsin, can often be significantly affected by planning processes implemented, decisions made, and permits granted in Minnesota, is not new. One can go back to a similar concern which arose in the early 1960s when the Allen S. King Power Plant was proposed in Oak Park Heights, Minnesota, with the final decision being made by Minnesota Authorities without, many felt, adequate involvement and influence by the people of the State of Wisconsin. In response to that concern, the legislatures of both states, by mutual compact, created the Minnesota-Wisconsin Boundary Area Commission.

In the 1973, having learned some valuable lessons, the States, with the help of the Minnesota-Wisconsin Boundary Area Commission, signed a Cooperative Agreement with the National Park Service for joint management of the Lower St. Croix River as a federally-designated, jointly-administered, National Scenic Riverway.

More recently, the Departments of Natural Resources of both states, the Minnesota Pollution Control Agency, and the National Park Service, again with the assistance of the Minnesota-Wisconsin Boundary Area Commission, signed a cooperative agreement for joint research and planning to protect the waters of the entire 7,650 square mile St. Croix Watershed, one that lies primarily in Wisconsin, but affects the interstate waters of both states.

As recently as May 16, 1994, the Minnesota-Wisconsin Boundary Area Commission held a planners forum with representatives of the Metropolitan Council, the West Central Wisconsin Regional Planning Commission, the Minnesota and Wisconsin Departments of Natural Resources, the Minnesota and Wisconsin Departments of Transportation, and several local government planners - to look at how the surface transportation system plans, decisions and actions in each state are affecting their neighboring state across our boundary rivers.

The above are just a few examples of ways in which our two states have cooperated, rather than competed, in the past, to address mutual concerns. It appears that, increasingly, we are seeing that the Mississippi and St. Croix Rivers are rivers that join our two states, not divide us.

4. The Need for Similar Cooperation on Air Transportation Issues

The planning process being implemented in Minnesota, which could result in a major new airport within five miles of the Minnesota-Wisconsin border, could be well-served by full enfranchisement of interests in the State of Wisconsin. There is strong precedent for such joint planning and decision-making. As we see the growth of the Twin Cities reach out extend its tentacles into the Wisconsin countryside, is even more critical now, than ever before, to work as partners in planning and progress.

The Commissioners of the Minnesota-Wisconsin Boundary Area Commission, in acknowledgement of the concerns expressed in preceding paragraphs of this letter, on June 9, 1994, formally approved, by unanimous vote, the transmittal of this letter of concern, asking the Governors and Legislators of each state to take whatever steps necessary to resolve the inadequacies of the current planning process, the shortcomings of the current environmental reviews, and to expand the horizon of options to include, at a minimum, the alternatives of the use of high speed rail and satellite airport support which could enable continued use of the existing airport as an alternative to construction of a new airport in Dakota County, Minnesota.

We hope that the called-for injunction by the Wisconsin Attorney General would not be necessary to resolve this issue. However, should other alternatives for conflict-resolution fail, the Commission would support such an action in the interest of including Wisconsin as full partners in this process. Your support and assistance in this matter would be greatly appreciated. As always, our Commission stands ready to join with its agencies in both states, to seek efficient and effective solutions to our mutual concerns.

Sincerely,

Suzanne Blue, Chair
Minnesota-Wisconsin Boundary Area Commission

Harold Craig, Vice-Chair
Minnesota-Wisconsin Boundary Area Commission

cc: Wisconsin Legislative Advisors (see attached roster)
Minnesota Legislative Advisors (see attached roster)
James P. Doyle, Attorney General Office, Wisconsin
Hubert H. Humphrey, III, Attorney General, Minnesota
Rod Sando, Commissioner, Minnesota Dept. of Natural Resources
George Meyer, Secretary, Wisconsin Dept. of Natural Resoruces
Richard Braun, Chair, Metropolitan Airports Commission

Metropolitan Council

Advocating regional economic, societal and environmental issues and solutions

February 14, 1995

Jeffrey W. Hamiel
Executive Director
Metropolitan Airports Commission
6040 - 28th Avenue South
Minneapolis, MN 55450-2799

RE: Metropolitan Airports Commission
New Airport Comprehensive Plan Draft
Alternative Environmental Document
Metropolitan Council Referral File No. 16041-4

Dear Mr. Hamiel:

At its meeting on February 9, 1995, the Metropolitan Council considered the New Airport Comprehensive Plan Draft Alternative Environmental Document. This consideration was based on a report of the Transportation Committee, Referral Report No. 95-6. A copy of this report is attached.

The Metropolitan Council adopted the staff report with the following recommendations:

1. That the Metropolitan Council approve the findings listed below and transmit them to the Metropolitan Airports Commission as its' comments on the New Airport Comprehensive Plan Draft Alternative Environmental Document.

Findings

1. The Final Alternative Environmental Document (AED) should clearly state the assumptions used in air quality modelling related to off-site impacts. The draft AED does not assess air quality impacts on a regional scale, as would be appropriate for a regional facility such as an international airport.

2. The Final AED should be consistent in the definitions used for the analysis of noise impacts.

3. The Final AED should consider a broader range of measures to mitigate the loss of tax capacity by communities within the airport site.

Metro Park Centre 230 East Fifth Street St. Paul, Minnesota 55101-1634 612 291 6359 Fax 291 6550 TDD 291-0904
An Equal Opportunity Employer

A. No off-site air quality impact analysis was included in the AED since no difference in off-airport traffic would occur. The assumptions will be clearly identified as part of the region-wide air quality analysis that will be prepared for the EIS.

B. This comment refers to (new) Table 26. The Draft AED specified that for the City of Hampton (line 7) there would be no discernable difference among the alternatives. Earlier in the text, it was stated that a difference of less than 3 dB is indistinguishable for the average listener. Since Alternatives 1 and 2 vary by 3 dB, Table 26 has been corrected to note that there is a difference among the alternatives for SEL values at the City of Hampton.

C. The purpose of the AED is to evaluate the differences between the three proposed alternatives for the new airport comprehensive plan. The loss of tax capacity and potential measures to mitigate this loss are issues which will be evaluated in the EIS, comparing the impacts of an expansion of Minneapolis-St. Paul International Airport and development of a new airport.

4. The Final AED should include the level of treatment necessary for any significant new discharge to either the Vermillion or Mississippi Rivers and provide information on the level of treatment for any new point or nonpoint source discharges.

5. The Final AED should correctly identify the Vermillion River Watershed Management Organization.

6. The text in the Final AED should correctly identify BOD as biochemical oxygen demand.

7. The final AED should obtain from the Vermillion River Watershed Management Organization a specific determination of the adequacy of the proposed runoff ponding and storage facilities in meeting the Organization's established peak flow rate standards.

8. The final AED must acknowledge that the Council's *Interim Strategy* guidelines or their successor will be complied with in design of the chosen alternative's stormwater management system.

9. The final AED should preclude the use of dry ponds, infiltration basins, infiltration trenches, porous pavement, filtration basins, filter strips, and grassed swales in areas determined to be very sensitive or very highly sensitive to groundwater contamination.

10. The final AED should present an itemization of all projected sanitary wastewater components and their respective flows and concentrations.

11. The Final AED should include discussion of and/or specific references to the *Regional Blueprint* policies and actions regarding regional infrastructure, aviation, the rural service area, and the Commercial Agricultural Area.

Attached is a copy of a letter from Emil Brandt, Transportation Advisory Board Coordinator, commenting on the document.

Sincerely,

Curt Johnson
Chair

CJ:lv
Attachments
cc: Mark Filipi, Metropolitan Council Staff

D.

E.

F.

G.

H.

I.

D. To the extent that it is possible to obtain current information on waste load allocations and/or total maximum daily loads for river segments potentially affected by discharges associated with the proposed airport site, they will be used in the assessment of water quality impacts. Minnesota Rules (7050.0210 GENERAL STANDARDS FOR DISCHARGES TO WATERS OF THE STATE and 7050.0211 FACILITY STANDARDS) will be assumed to govern discharge requirements in the absence of either current waste load allocations or TMDLs.

The appropriate changes regarding the VRWMO and BOD will be made.

E. Please see above, and Dakota County Response C.

F. If design of a stormwater management system for a new airport in Dakota County is ever undertaken, it will be governed by numerous regulatory requirements and guidelines, no doubt including those referenced in the comment. It is unclear how the AED could be improved by singling out any one of the factors that will have to be taken into account by the designers.

G. The AED discusses BMPs considered and those on which the stormwater system concepts are based. Infiltration approaches have mostly been avoided. It is not the function of an AED to preclude alternatives.

H. The AED discusses current estimates of wastewater discharges and contaminants of concern. Additional information will be developed for the EIS; however, the wastewater treatment facilities have not been and will not be fully designed in the course of this EIS process.

I. The Regional Blueprint, approved by the Metropolitan Council in September 1994, includes policies and actions that mesh with the dual track airport planning process, of which the AED is a part. Specifically, the Regional Blueprint states that the Metropolitan Council "will actively promote development of a regional economic strategy to strengthen the area's ability to compete. . . ." (Policy #1) To that end, the Blueprint calls for identifying the need for new infrastructure, including either expanding MSP or developing a new airport, and continuing the Council's work on the dual track airport planning process. Additionally, the Blueprint states that the Council "will ensure that regional services and facilities under its jurisdiction are provided cost-effectively to support development and revitalization of the region." (Policy #5) One of the action steps identified to implement that policy is the support of commercial agriculture, including the Agriculture Preserve program and farmlands classified by the Soil Conservation Service as prime farmland and farmland of statewide importance.

Metropolitan Council

Advocating regional economic, social and environmental issues and solutions

TRANSPORTATION ADVISORY BOARD

January 23, 1995

James Solem, Regional Administrator
Metropolitan Council
Mears Park Centre
230 E. Fifth Street
St. Paul, MN 55101

RE: Review of "New Airport Comprehensive Plan Draft Alternative Environmental Document" (95-2)

Dear Mr. Solem:

At the January 18, 1995 meeting of the Transportation Advisory Board, the Board approved the following comments of its Aviation Committee and of the TAC concerning the "New Airport Comprehensive Plan Draft Alternative Environmental Document."

TAB Aviation Committee:

1. Endorse the comments of the Technical Advisory Committee. The TAB, in particular, wants to reinforce the need to provide all relevant traffic data in a timely manner for the decision-making process.
2. Access from the site to the regional highway system needs to have the necessary locational flexibility to accommodate any changes made necessary as a result of the final EIS.
3. The impact of alternative #1 on the regional park at Grey Cloud needs to be recognized.

TAC Comments:

- See attachment.

These comments are forwarded to the Metropolitan Council for consideration in preparing its review of the Draft AED.

Sincerely,

Emil Brandt
Transportation Coordinator

EB:jlm
Attachment
cc: Robert Owens, Chair, TAB
Nacho Diaz, Manager, Office of Transportation and Transit Development

Mears Park Centre 230 East Fifth Street St. Paul, Minnesota 55101-1634 612 291-6359 Fax 291-6550 TDD 291-0904

TRANSPORTATION ADVISORY BOARD
Mears Park Centre, 230 E. Fifth St., St. Paul, MN 55101

ACTION TRANSMITAL

NO. 95- 2

DATE: January 10, 1995

TO: Transportation Advisory Board

FROM: Technical Advisory Committee

MOTION: That the TAB adopt the comments prepared by the Technical Advisory Committee on the New Airport Long-Term Comprehensive Plan Draft Alternative Environmental Document and forward them to the Metropolitan Council.

BACKGROUND & PURPOSE OF ACTION: The document under review contains the results of the evaluation of the impacts on the environment of three different development plans under study by the Metropolitan Airports Commission (MAC) for a potential new replacement airport in Dakota County. The MAC is required to complete a 30-year comprehensive plan for a new airport by January 1, 1996, to meet the requirements of the Legislature in the Dual-Track Airport Planning Process.

ISSUES RAISED BY COMMITTEE MEMBERS: The committee was concerned that many serious questions were still unanswered, given the point the airport planning process had reached. These issues, such as site access, should be determined before a comprehensive plan was developed for the site. The committee adopted the following comments:

1. The Final AED should include traffic counts to and including the river crossings and into Wisconsin.

2. The Final AED should include the source of traffic data and assumptions used in generating that traffic data and that some of the data on Figures 28 and 29 appear intuitively inaccurate (i.e. I-35W and Cedar Avenue south of I-494).

3. The Final AED should provide information on origins and likely routes.

4. Additionally, that prior to the release of a Draft Environmental Impact Statement, the MAC should prepare and release for public review a technical document concerning ground access impacts and the assumptions used in preparing the analysis of those impacts. This analysis should include, but not be limited to, the following:

   - Provide 2020 build alternative traffic demand, including that generated by secondary, peripheral development.
   - Provide improvements needed to the transportation system, including costs and alternatives to reduce traffic demand.
   - That this analysis should involve Wisconsin DOT, Mn/DOT and the Federal Highway Administration.

A. A. This information will be in the EIS.

B. B. A technical report on ground access will be prepared. It will address induced demand and needed capacity improvements.

ROUTING

TO	ACTION REQUESTED	DATE COMPLETED
Aviation Advisory	Review and Recommend	12/16/94
TAC	Review and Recommend	1/4/95
TAB	Approve	1/12/95
Transportation Committee of the Met Council	Approve	
Metropolitan Council	Concur	

DAKOTA COUNTY
DAKOTA COUNTY GOVERNMENT CENTER
1590 HWY 55 - HASTINGS MINNESOTA 55033 - PHONE 437-0427

JOSEPH A. HARRIS
COMMISSIONER - 1ST DISTRICT
1282 W 14TH ST
HASTINGS MN 55033
TELEPHONE
HOME 437-9299

February 2, 1995

Mr. Nigel Finney, Deputy Executive Director
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, Minnesota 55450

SUBJECT: Comments, Draft New Airport Comprehensive Plan, Alternative Environmental Document

Dear Mr. Finney:

Dakota County would like to express its appreciation to the Metropolitan Airports Commission for this opportunity to comment on the New Airport Comprehensive Plan - Draft Alternative Environmental Document (AED).

On page ii of the Executive Summary, the New Airport AED concludes that "The environmental evaluation did not reveal any critical finding that would preclude development of any of the alternatives." A similar conclusion appears on page IV-1. Dakota County believes these conclusions are not supported by the level of analysis in the New Airport AED. The analysis either leaves for future study , the EIS, or does not sufficiently address critical elements required to reach such a conclusion. Elements not sufficiently addressed which are critical to such a conclusion generally are included in the category of water resources, that is, floodplains, stormwater management, and groundwater. Other topic areas that need additional development or clarification are air quality, socioeconomic impacts, and surface transportation access. While these omissions do not by themselves lead to the conclusion that the New Airport AED is inadequate, they do not support the assertion that there is nothing from an environmental perspective that would preclude development.

A.

A. The statement on p. ii has been revised to more clearly state the intent — that the differences were not of a magnitude or significance to preclude the selection of any of the alternative plans for further development in the EIS.

On page III-28, Floodplains, the New Airport AED refers to the "Vermillion Watershed Management Commission," this should be changed to the "Vermillion River Watershed Management Organization (VRWMO)." The VRWMO is a joint powers association given authority to plan and implement projects that impact waters within the Vermillion

B.

B. The change regarding the VRWMO has been made. Dakota County's authority regarding floodplains and shorelands is described in the AED on page III-56, under "Water Related Land Use."

River Watershed. They do not, however, manage floodplains as indicated in the New Airport AED. Floodplains and shorelands in Dakota County are administered by the Dakota County Office of Planning through County Ordinance #50, Shoreland and Floodplain Management.

The New Airport AED uses water runoff data contained in the VRWMO's watershed management plan. At the January 10, 1995, meeting of the VRWMO Board, the Chair indicated that this information was incomplete and needed to be updated. Stormwater storage requirements, allowable peak flows, and other information taken from the plan may be of minimal value.

C.

The New Airport AED discusses water resources on pages III-54 through III-69. It indicates that surface water may be diverted around the proposed airport site . Diversion tends to accelerate the movement of water, which can lead to downstream flooding. Discussions on flooding should consider the potential downstream impacts caused by surface water management and diversion of water from the proposed airport site.

D.

According to the New Airport AED, detention ponds in the proposed airport site will be designed to accommodate a ten year storm event and conveyance systems designed to carry a 100 year event. Detention ponds can also behave as infiltration basins if built on sandy or coarse textured soils such as found in the proposed airport site. The use of undersized detention ponds on the site substantially increases the risk of ground water pollution if surface water is permitted to overrun the sides of these detention ponds.

E.

The New Airport AED states that "50 percent of the applied glycol will volatize or drip off taxiing aircraft." Given the significant quantities, what happens to the glycol that "drips off?" How will this glycol be collected and contained to insure sufficient ground water contamination protection in such highly sensitive areas?

F.

Dakota County believes that there should have been a more complete discussion of ground water issues in the New Airport AED, given that the proposed site is located in areas highly sensitive to ground water contamination. Contamination of the aquifer below the proposed airport site could easily contaminate the water supply for the city of Hastings and adjacent townships.

Further, metropolitan counties were given ground water protection authorities in Minnesota Statutes, Chapter 103B. In 1993, the State, Metropolitan Council, and the County approved the Dakota County Ground Water Protection Plan. This plan requires County approval of all projects in geologically sensitive areas that involve the installations of greater than one mile of impervious surface (excluding highways) outside of municipal boundaries. The implication of this plan relative to the construction of a proposed airport must be considered.

G.

C. As part of the EIS preparation, updated information will be requested from the VRWMO to update that information contained in its currently approved plan.

D. The impact of diversion of run-on flows will be part of additional analysis to be done in the EIS relative to flooding impacts on the Vermillion River. The rate of water flow is entirely dependent on how the diversion is accomplished and the path it follows. There is no basis for assuming diverted water flows faster than other water.

E. Flows greater than the 10-year event will be diverted to a flood control basin. The retention ponds are designed for water quality treatment to the 10-year event. Extended dry detention basins will likely be lined to reduce infiltration.

F. Glycol which drips off aircraft after exiting the deicing pads will be deposited on taxiways and runways. A portion will evaporate and a portion will be washed off into the stormwater management system where it will be subject to treatment. Groundwater impact issues will be discussed further in the EIS but it is not anticipated that extensive contaminant transport modeling will be conducted.

G. The focus of the AED was to identify, to the extent possible, the differential impacts of each of three airport development plans on the same site. Comparative evaluations of the potential impacts on groundwater were done prior to undertaking this AED, as part of the Site Selection process. Additional assessments of groundwater impacts will be conducted as part of the EIS scheduled for completion during 1995. Because it was deemed unlikely that there would be significant differences in groundwater impacts arising from the differences in airport configurations on, essentially, the same site, analysis of such impacts was specifically deferred in the June, 1994 "Scoping Decision Document".

If the County provides a copy of its plan, the EIS can take into account the groundwater protection measures contained therein. Unfortunately, despite prior requests for this plan, we have not been able to obtain a copy.

Dakota County believes that since the New Airport AED is addressing the potential in the Dual Track Airport Planning Process of a replacement regional airport, that the impact of vehicle CO emissions should have been evaluated on a region-wide basis, not limited to a relatively small area surrounding the airport site. Further, on page III-6, the New Airport AED states that "...CO concentrations in the year 2020 can be estimated by adjusting area-wide increases in traffic volumes..." Does the Minnesota Pollution Control Agency agree with this approach to Air Quality modeling? Where is the map/data corresponding to 2020 adjusted area-wide traffic volumes on which the III-6 New Airport AED assertion is based?

H.

A significant socioeconomic consequence discussed on pages III-51,52,53 would be the loss of tax capacity in the townships. Dakota County maintains that it is unacceptable for the New Airport AED to suggest an "increase either in assessed valuations of remaining properties within the townships and school district, or (an) increase (in) the tax rate so as to assure the same level of public services to those remaining." A more equitable approach must be found and included in the Final New Airport AED.

I.

Dakota County also notes that in Section III-K, Transportation Access, reference to Figure 29, 2020 Daily Roadway Traffic-No Action is made, but there is no comparable figure to show the 2020 Daily Roadway Traffic- Build Alternative. Further, traffic volumes in Figure 28, 1992 Daily Roadway Traffic at the intersection of Interstate 35W and Interstate 494 are more than year 2020 volumes in Figure 29. Dakota County asks for clarification of Figures 28 and 29, as well as, the inclusion of an additional figure to show 2020- Build Alternative.

J.

Finally, Dakota County restates that it most strongly urges the Metropolitan Airports Commission to address the water resource issues, if not in the Final New Airport AED, then very early in the preparation of the Environmental Impact Statement.

Sincerely,

Joseph A. Harris, Chair
DAKOTA COUNTY BOARD OF COMMISSSIONERS

cc: Dakota County Board of Commissioners
Brandt Richardson, Administrator, Dakota County
Louis J. Breimhurst, Director, Physical Development Division
Cindy Jepsen, Chair, Minnesota Environmental Quality Board
Michael Sullivan, Executive Director, Minnesota Environmental Quality Board

H. A region-wide air quality analysis will be included in the EIS that will compare the No-Action and recommended comprehensive plans for MSP and a New Airport. This analysis was specifically not addressed in the New Airport AED since it by necessity must address the other Dual-Track airport alternatives as well.

The CO background concentrations were based upon a conservative 2% increase in VMT (vehicle miles traveled) which is higher than the 1.15% average computed by the Metropolitan Council. Future background is estimated by adjusting measured CO background by the increase in VMT and the expected decrease in fleetwide emissions. This is a standard procedure that has been accepted by the MPCA for transportation air quality studies.

Since the background did not play a major role in the differential comprehensive plan air quality analysis, the use of regional VMT growth rates was deemed to be sufficient. However, the region-wide study to be performed for the EIS will provide a distribution of traffic density growth that will permit more refined estimates of future background levels.

I. This language has been deleted.

J. As the document was to evaluate differences between the three on-site layouts with no difference between the three regarding off-site ground access, no additional travel demand modeling was performed for this evaluation. Travel demand forecasts for Site 3 (the site under consideration) may be found in the site selection AED. Figure 28 contained a typographical error which has been corrected.

WASHINGTON COUNTY
BOARD OF COMMISSIONERS
GOVERNMENT CENTER
14900 61ST STREET NORTH • STILLWATER, MINNESOTA 55082-0006
612-430-6000 Facsimile Machine 612-430-6017

Dennis C. Hegberg
District 1
Mary Hauser
District 2
Wally Abrahamson
District 3/Chairman
Myra Peterson
District 4
Dave Esperson
District 5

January 26, 1995

Mr. Richard Braun, Chair
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, MN 55450-2799

RE: Draft Alternative Environmental Document for
The New Airport Comprehensive Plan

Dear Mr. Braun,

Thank you for giving Washington County the opportunity to review the Draft Alternative Environmental Document for the New Airport Comprehensive Plan. As providers of recreation and open space for the residents of Washington County and the metro area, we are concerned about any activity that might detract from visitor's experiences in our parks. We are most concerned about the potential for negative impacts on Grey Cloud Island, which has recently been approved for a new regional park. After reviewing the draft document, some of those concerns have been allayed. There remain, however, some concerns as follow:

1. Social Impacts - In Table 23, page 111-45, Grey Cloud Island is expected to experience an ambient DNL of 30-52. Alternative #1 shows a projected DNL high of 53. According to Table 17, Land Use Compatibility, the DNL caused by flights over Grey Cloud Island Regional Park would be well below the DNL 75+, which is the level the FAA recognizes as unacceptable for recreational use areas. However, even though the projected level of DNL 53 is deemed an acceptable level by the FAA, the fact that most activities in this regional parks take place outdoors makes the noise from overhead aircraft a real concern. We are concerned about how users of this park will be affected by the day and night overflights. Flights below 5,000 feet will range from 7,480 monthly flights in alternative #1, to 7530 in Alternative #2. The recreation research on airplane overflights supports the fact that noise from airplanes detracts from visitor experiences, and it also shows that even the sight of airplanes or vapor trails can contribute to negative recreation experiences.

2. Wildlife and Habitat - Another very real concern we have is the potential conflicts between aircraft and birds. Grey Cloud Island is on the Mississippi flyway for migratory waterfowl and provides both nesting and staging areas for migrating birds. Also, there is not a lot of research concerning the impacts of airplane overflights on resident and/or migrating birds in this area. Since a body of empirical evidence is lacking, planning must move ahead cautiously to avoid creating problems.

A. The ambient DNL noise levels listed in (new)Table 25, are estimates of existing noise levels (i.e., without the new airport). Some of the estimated ambient noise levels are taken from a MAC survey while others, including the estimate for Grey Cloud Island, are taken from studies of average levels for similar land uses. The estimated ambient noise levels include sounds from many sources (e.g., aircraft, automobiles, lawn mowers, human voices and animal noises). An ambient DNL value below 53 is considered by EPA to be similar to the DNL value experienced in a quiet residential suburb (ref. EPA, "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," 1974).

The Year 2005 DNL values reflect average noise levels that would be attributable solely to aircraft from the new airport. For Grey Cloud Island, the estimated Year 2005 DNL value of 53 is considered similar to the levels associated in "normal" residential suburbs and is less than half the perceived loudness of the FAA maximum DNL for recreational land uses.

In terms of visual impacts, Grey Cloud Island currently experiences relatively low-altitude aircraft overflights from MSP International Airport (13 miles to the northwest) and South Saint Paul Airport (6 miles north). Contrails, produced by high-altitude aircraft not using any of the Twin Cities airports, are usually visible for many miles and are currently visible from Grey Cloud Island. Should the new airport be built, it is expected that large commercial aircraft would overfly Grey Cloud Island at lower altitudes than they do for MSP. Visual impacts associated with contrails from high-altitude aircraft overflights would not be significantly changed if the new airport were built, since these aircraft are typically overflying the Twin Cities region enroute from one city to another.

Pages iii, V, 111-21, 111-23 address bird strike potential for the Grey Cloud Island area and it appears this issue would not be a major concern.

Alternative #1 provides the least overflights of the Grey Cloud Island Regional Park and the Washington County Board supports that alternative. The Board and park personnel are still concerned about the overflight impacts on both wildlife populations and visitors to the park. However, we hope that developing technologies in noise abatement would make overflights more acceptable, but until that technology is in place we remain concerned about the potential for negative impacts from noise and also about the sight of planes and/or vapor trails and their impact on park visitors.

In addition to the impact of overflights on birds and visitors in the Grey Cloud Island area, the Board remains concerned about the issues that were raised in the May 19, 1994 letter to you from Mary Hauser of the Washington County Board of Commissioners. The County is very concerned about the potential economic and physical impacts on roads, bridges and general land use in the southern portion of Washington County. Relocation of the airport would require new and/or better roads and bridge crossings and would, if these improvements were made, substantially increase the growth rates in southern Washington County. Increased growth would then require additional services such as sewers, police protection and schools. We ask that these issues be addressed during the planning process.

B.

B. These potential impacts will be addressed in the EIS.

Thank you again for the opportunity to comment on the draft document.

Sincerely,

Wally Abrahamson

Wally Abrahamson, Chair
Washington County Board of Commissioners

cc: Washington County Commissioners
Jim Schug, County Administrator
Don Wisniewski, Public Works Director

City of Hastings

HASTINGS
ON THE
MISSISSIPPI

101 4th Street E. • Hastings, Minnesota 55033-1955
612 • 437 • 4127 • Fax: 612 • 437 • 7082

February 7, 1994

Nigel Finney
MAC
6040 28 Ave South
Minneapolis, MN 55450

SUBJECT: COMMENTS ON NEW AIRPORT COMPREHENSIVE PLAN "DRAFT ALTERNATIVE ENVIRONMENTAL DOCUMENT"

Dear Mr. Finney:

The following comments on the New Airport Comprehensive Plan "Draft Alternative Environmental Document" are being submitted on behalf of the City of Hastings as a follow-up to comments made by City Council Member Paul Hicks at the January public hearing on the AED held in Hastings. It is requested that these comments be made part of the record of public comments on the AED and that they be considered as a final version of the AED is completed.

GENERAL COMMENTS:

The City of Hastings recognizes the step by step, incremental procedures being followed to complete the Dual Track Airport Planning Process, however, the fact that so many significant questions remain unanswered at this point in the process is extremely frustrating. For example, questions pertaining to storm water and sanitary sewer management and impacts of required off-site transportation improvements have not been satisfactorily addressed as of yet. In a most rudimentary fashion the AED suggests that these issues will be addressed in the EIS for the preferred new airport site. However, since the storm water, sanitary sewer and off-site transportation needs will not vary significantly between the 3 possible airport sites, it seems inappropriate and unnecessary to delay making basic infrastructure design assumptions and evaluating environmental impacts.

COMMENTS ON SPECIFIC AED PROVISIONS:

Page i.: The third paragraph reads as follows: "The MAC will use the environmental evaluation found in this document, along with operational and cost data developed for the new airport comprehensive plan, to select a preferred development plan for a new airport. That decision will occur in April 1995. That plan, along with the development plan for the Minneapolis-St. Paul International Airport, a no-action option and other feasible alternatives will be compared in an Environmental Impact Statement (FIS) and in the 1996 report to the Legislature. **The City of Hastings would like clarification on what is meant by "other feasible alternatives".**

A. A. These are alternatives, other than expanding MSP and a new replacement airport in Dakota County, that could satisfy the air transportation needs of the region through the year 2020.

Page I-3: In Item 18., on this page reads as follows: "The Minnesota legislature will select the appropriate alternative (proposed action). (1997?). **Does the question mark after 1997 imply that Legislative action will be delayed. The City of Hastings has and will continue to express opposition to any delays in Legislative action regarding completion of the Dual Track Airport Planning Process.**

B. B. The question mark indicates that the Dual Track legislation does not include a date for the legislature to make a decision.

Page III-4: The second paragraph on this page references the role of the new airport within the State Implementation Plan in respect to air quality concerns. The paragraph reads as follows: "The State Implementation Plan contains transportation control strategies to bring designated non-attainment areas into compliance with state and federal ambient quality standards and to ensure future maintenance of ambient air quality standards. The new airport is not a part of the existing SIP. Regional roadways which will serve the new airport will be covered by the SIP insofar as they are part of local or regional transportation control measures." **The City of Hastings requests clarification on the significance of Regional Roadways being included in the SIP. Will this propose appropriate measures to address automobile exhaust air quality concerns?**

C. C. Major road construction included in the region's Transportation Improvement Program or proposed by region's Transportation Policy Plan must be shown to conform to federal air quality criteria before the program or plan can be implemented and the projects funded.

Page III-3: The first sentence of the second paragraph of this page reads as follows: "The development of a new airport will not be compatible with some existing land use, notably existing residential development." **The City of Hastings requests clarification on what "existing development" is being referred to in this statement. Specifically does this statement refer to any existing development within the Hastings City Limits?**

D. D. The residential development referred to on page III-33 is scattered residential development in agricultural areas within and adjoining the site.

Page III-34: In respect to the reference on this page to "Mitigation Measures" (2nd to the last paragraph), where it says "For existing housing, impacts could be mitigated with acoustic treatment to limit indoor noise levels." **For which existing housing areas will acoustic treatment to limit indoor noise levels be necessary or highly desirable. What will the cost of such noise mitigation be?**

E. E. The MAC is conducting analysis to determine appropriate land use and mitigation strategies for MSP and the new airport. The specific land area that would be acquired for the new airport, identification of neighborhoods and houses eligible for noise mitigation, as well as mitigation costs, will be identified after a final new airport layout has been approved and will be described more fully in the EIS.

Page III-52: On this page, Tables 30 and 31 illustrate Tax Capacity Impacts on the affected Townships and ISD 200. There is no mention of exploring methods of sharing in tax revenues from Airport Induced Development to help mitigate negative impacts of property tax losses to the respective Townships. Should a type of "fiscal disparities program" be explored in the EIS or in a separate study?

F. The Metropolitan Council has been conducting a study with the City of Hastings, Dakota County and the rural townships regarding community and site protection issues. One of the topics of discussion has been a revenue sharing from induced development. The results of this study will be provided for inclusion in the draft EIS.

Page III-54: Under Section K.2. (Impacts of Transportation Access), it is referenced that numerous issues associated with Transportation Access will be addressed in the EIS. Impact of Airport Induced Development should warrant special consideration and not be lumped together with other Transportation concerns. Implications on design improvements to off-site highways and bridges is a crucial concern to the City of Hastings. It is troubling that these issues have not been addressed in more detail at this point in the process. The City of Hastings requests that it be kept informed of research and policy-setting discussions regarding transportation improvements which would be required to serve the "new" airport. It is the City's desire to participate and contribute to formulating assumptions on area transportation needs and funding mechanisms.

G. The City of Hastings, Dakota County, and the transportations departments of Minnesota and Wisconsin will be kept apprised of the modeling process.

Pages III 56-57: Under "Impacts on Surface Water Quality (p. III-57), the following statement is made: "Based on the storm water modeling results, and the MPCA's nondegradation standard, it appears questionable whether storm water discharges to the Vermillion River, even after the application of structural best management practices (BMPs), would be permitable." Additional sentences in this section suggest it may be necessary to divert storm water discharges to the Mississippi River and that it is unclear whether or under what conditions the MDNR might permit such an "interbasin" transfer. The City of Hastings has significant concerns regarding the implications of storm water management for a "new" airport. Questions which arise include: What corridor will be utilized to pipe storm water discharge to the Mississippi River if that is required? The costs and environmental impacts of constructing and maintaining a storm water discharge to the Mississippi River may be substantial. Will this be adequately addressed in the EIS?

H. There will be additional information developed for the EIS on a potential corridor for wastewater/stormwater conveyance facilities. This will be described in more detail in the Scoping Report for the EIS.

III-67: "Sanitary Wastewater". This section of the AED indicates that a Wastewater Treatment Facility to perform at least tertiary treatment and phosphorous removal, of 5 million gallon per day capacity would have to be constructed to meet the needs of a new airport. The total wastewater flows are approximately equivalent to a population of 35,000. Comparatively, the MWCC Hastings Treatment Plant has a plant capacity of 2.34 million gallons per day. The 5 mgd plant capacity does not include sanitary sewer requirements for airport induced development. It could be argued that it would be irresponsible to fail to accommodate sanitary sewer demands of off-site development which will be generated by the new airport. It should be noted that should the decision be made to build a new airport it is extremely likely that area communities in need of sanitary sewer capacity will likely request that any treatment plant built be sized to provide them additional capacity. This is a significant regional infrastructure issued and must be appropriately addressed.

I. Assessment of the potential impact of induced development on the capacity of existing wastewater treatment plants that are part of the Metropolitan Disposal System will need to be conducted by the Metropolitan Council as part of its regional wastewater management planning responsibilities. Such an assessment would require resolution of the extent to which the Council can or cannot control potential induced development through its regional growth management process. A new regional treatment facility serving the new airport and nearby communities is one possible scenario. However, the decision of how to provide for such needs rests with the Metropolitan Council.

The Sanitary Sewer section on pages III-67 and III-68 includes a statement that indicates that it is unlikely that sanitary outfall from a new treatment plant will be permitted to enter the Vermillion River. If treated sanitary wastewater outfall will have to be directed to the Mississippi River, similar issues to those associated with storm water discharge will have to be addressed. What corridor will the wastewater outfall be located within? What will be the cost and environmental impact of construction and maintenance of such a sanitary sewer outfall. Will these issues be addressed in the EIS?

J. As to the corridor, see Response H. Additional information will also be developed relative to potential costs and impacts of this scenario. These issues will be addressed in more detail in the Scoping document for the EIS.

If MAC staff or consultants have any questions regarding the comments, questions or issues brought forth in this letter please do not hesitate to contact me for clarification.

Sincerely

Michael A. Wozniak

Michael A. Wozniak,
Community Development Director

RESOLUTION NO. 5-95

RESOLUTION - DUAL TRACK AIRPORT PLANNING PROCESS

WHEREAS, the 1989 Dual Track Airport Planning Legislation clearly defined a generous seven year period within which the Metropolitan Airports Commission and Metropolitan Council could study and recommend how to best meet Minnesota's Aviation needs, specifically requiring a recommendation by July 19, 1996, and;

WHEREAS, the agencies and their numerous consultants managed an elaborate process involving hundreds of citizens in the selection of the final designated site in the Southern Dakota County Townships of Empire, Vermillion, Nininger and Marshan, and a portion of the City of Hastings, and;

WHEREAS, the design of the Dual Track Airport Planning process was democratic and well known to all affected units of government under the governance of the agencies involved since the beginning, and;

WHEREAS, the ultimate legislative decision will always be based upon the uncertainty of forecast projections and the volatility of the aviation industry, therefore invalidating any argument for delay, and;

WHEREAS, the City of Hastings and its residents have participated in the process in good faith and deserve a reasonable and timely conclusion to this process which supercedes its own ability to plan and govern, therefore;

THE CITY OF HASTINGS, HEREBY RESOLVES that the Minnesota Legislature and its State Advisory Council on Airport Planning require the Metropolitan Airports Commission and Metropolitan Council definitively recommend one of the three options described in Statute and thereby conclude the Dual Track Airport Planning Process on time in 1996. The City of Hastings also resolves that the recommendation be considered and a final decision rendered, by the 1997 State Legislature.

ADOPTED BY THE HASTINGS CITY COUNCIL THIS 3RD DAY OF JANUARY, 1995.

Ayes: Councilmember Riveness, Warner, Johnson, Simacek, Hicks, Moratzka and Mayor Werner

Nays: None

Michael D. Werner, Mayor

ATTEST:

Barbara C. Thompson, City Clerk

RESOURCE
STRATEGIES
CORPORATION

6600 CITY WEST PARKWAY
SUITE 340
MINNEAPOLIS, MN
55344
612/942-8010
FAX 612/942-7464

January 27, 1995

Nigel Finey
Metropolitan Airports Commission
6040 - 28th Avenue South
Minneapolis, MN 55450

Dear Nigel:

Enclosed are the Comments of the Southern Dakota County Townships and Cities Airport Planning Group on the Draft Alternative Environmental Document.

The comments were summarized at the public hearing on January 18. The attached comments are more detailed than those presented at the hearing, and were formally approved by the Townships and Cities Airport Planning Group at their January 26 meeting.

Sincerely,

Jeffrey J. Connell
Partner

Enclosure

COMMENTS OF THE SOUTHERN DAKOTA COUNTY TOWNSHIPS AND CITIES AIRPORT PLANNING GROUP ON DRAFT ALTERNATIVE ENVIRONMENTAL DOCUMENT:

New Airport Comprehensive Plan
January 26, 1995

The Southern Dakota County Townships and Cities Airport Planning Group consists of representatives from each of the thirteen townships and six rural cities located in southern Dakota County. The Group was formed in April, 1994 to monitor and provide input to the many studies that are being conducted, and decisions being made, related to the regional airport dual track planning process. The general and specific comments provided here are on behalf of the Airport Planning Group. Each of the townships and cities may also be prepared to make separate, additional comments.

General Comments

- The AED provides a considerable amount of documented information and data, but does not offer any answers to the important issues that the local governments and residents are most interested in, such as transportation, economic and social impacts of a potential airport. The stated purpose of the AED is to compare the differential impacts of each of the three alternative configurations for the proposed airport. In fact, it is very obvious that there is very little difference among the three alternative configurations. Therefore, this is really not the significant issue with the townships and cities. It seems there was a considerable amount of time and money spent on merely stating the obvious; that being, the three alternatives are very similar.

- The primary concern of the townships and cities is that a lot of valuable time has been spent in this process to address the obvious, while there now remains a relatively short period of time to address the very important issues to which residents, cities, townships, counties and the Legislature are seeking answers to regarding the actual feasibility of building a new airport in Dakota County. There are still some very major decisions that will need to be made related to extensive capital expenditures that we feel

are going to be difficult to address in the relatively short timeframe remaining prior to submitting a recommendation to the Legislature in June, 1996. For example, the AED states on Page III-54 that river crossing improvements, cost and impacts, as well as analysis of environmental impacts and costs of additional roadways, new alignments, and expansion of existing roadways need to be addressed in the final EIS. It is not likely that the Legislature will be willing to make a decision of this magnitude without knowing if a major road project will survive the EIS process. It is likely that decisions of this type will require a fairly lengthy EIS process that could easily extend beyond the current deadline. These are issues that are going to require a considerable amount of public input, discussion and debate in order to prepare a recommendation that the Legislature will feel comfortable with in making a decision in a timely manner.

It appears there has been little, if any, collection of data to address these issues in a comprehensive and thorough manner. The townships and cities are concerned that one of two situations may occur:

1) there will be a last minute rush to complete the recommendation on time to go to the Legislature, resulting in incomplete analysis and review of the facts, and not permitting the concerns of the impacted cities, townships, residents and county to be discussed and debated as part of a logical public policy process;

2) or there will be an effort to extend the process and delay a recommendation to the Legislature.

In the first case, the result will likely be a recommendation that is not based on all the facts, nor a thorough analysis and public discussion of the issues that is needed for the Legislature to make an informed decision. In the second case, residents of the airport search area remain in a state of uncertainty regarding their future. Neither of these options is acceptable to the townships and cities. A resolution has previously been approved by the Airport Planning Group that strongly encourages the Legislature to make a firm decision, pro or con, on the airport by the end of 1997. The townships and cities are concerned that either situation will result in further delays to a decision by the Legislature, and would like to know what steps the MAC and the Metropolitan Council are going to take to insure that neither of these situations occurs.

A.

A. MAC has committed the resources necessary to complete the process in the timeframe specified in the legislation.

Specific Comments

Page III-1: The townships and cities concerns regarding the delays in addressing issues such as induced development, off-airport impacts, regional transportation and wastewater have been mentioned previously. These are very critical issues that require extensive discussion and review, but have not yet been addressed to any significant degree.

Page III-13: The discussion related to Chimney Rock states that it is being impacted by urban development to the north and east. This is not the case and, at best, is a large overstatement. This is a rural, agricultural area with only scattered residential development on large lots. It should not be characterized as "urban development".

Page III-23: Lake Byllesby is actually in Randolph Township, on the border between Dakota and Goodhue Counties. Cannon Falls is a couple miles east of the lake.

Page III-26, fourth paragraph of E.1 Affected Environment states that agricultural designations are found in the comprehensive plans of the county. It should be correctly stated the townships and rural cities have the responsibility for planning and zoning and have designated these areas in their individual comprehensive plans.

Page III-32, first paragraph of H.1 Affected Environment states that regional population forecasts reflect a continuation of agriculture in this portion of the region. These forecasts were not developed under any assumptions regarding the possibility of a regional airport being built in the area. These forecasts will need to be significantly revised if the decision is made to build a new airport.

This also presents another related concern of the cities and townships. The Metropolitan Council's policy regarding expansion of the MUSA line will also need to be addressed in the context of potential induced development resulting from construction of a new airport in Dakota County. This issue must also be addressed as part of the final EIS. The townships and cities are currently working with the Metropolitan Council, MAC, the City of Hastings and Dakota County to address the matter of allocation of induced

B. B. ARS did not suggest that Chimney Rock "is being impacted by urban development to the north and east" in a direct sense. As stated, ARS is referring to the view-shed from the crest of the rock formation – a view that extends for miles. From this vantage point, it is quite clear that the areas to the north and east are changing, although "suburban development" might have been a more appropriate choice of words. The breaking-up of farmlands into smaller lots – limited as it may be (so far) to the vicinity of existing roads – and the sprouting of contemporary residences, with landscaped yards, are visual intrusions that have already impacted the traditional rural landscape.

C. C. This has been changed.

D. D. This has been changed.

E. E. Metropolitan Council forecasts would have to be amended to reflect a change in assumptions if the Legislature decides to build a new airport in Dakota County. MUSA expansions will be addressed in the draft EIS.

development. It will also be important that the Metropolitan Council deal with the MUSA expansion issue very soon, in order to completely address the economic, social and political impacts of siting a new airport at the proposed site.

Page III-32, H.1 Affected Environment, third paragraph states that there are no residences other than those associated with farms in the site area. This is not accurate, as there are a number of non-farm single family residences scattered throughout the site area.

F. F. The text has been amended to reflect the presence of non-farm single family residences.

Page III-32, H.1 Affected Environment, fifth paragraph states that Hastings has completed all of its approved orderly annexations. There still remains a portion in southeastern Nininger Township that is yet to be annexed under agreement with the City.

G. G. The status of orderly annexations by the City of Hastings will be clarified in the draft EIS.

Page III-33, first paragraph after Table 16. It should also be recognized that significant changes in direction will occur in the townships and cities affected if a new airport is built, requiring them to make major revisions to their comprehensive plans and land use regulations. There is also a cost associated with this that needs to be considered in the analysis in the final EIS.

H. H. The impact of an airport and related induced development on plans of the jurisdictions in the area will be assessed in the draft EIS.

Page III-34, first bullet. This raises again the issue of the MUSA line in the event an airport is built. The Metropolitan Council needs to address this along with potential allocation of induced development in order that development impacts can accurately be addressed in the final EIS.

I. I. See response E.

Page III-34, H.3 Mitigation Measures (Land Use) refers to an "airport development area." This is a significant issue to the townships and cities and we will continue to work with the Metropolitan Council and MAC toward addressing this specific area of impact, as well as how it will be managed from the standpoint of land use regulatory authority. The townships and cities feel strongly that local control over planning and land use regulation is the most appropriate approach to insure that the surrounding area is developed in a sound manner.

Page III-56, L.2.1 Surface Water Quality. The wastewater discussion addresses sanitary wastewater flows for passengers and airport personnel, as well as glycol contaminated runoff from deicing operations. The discussion is not conclusive as to how the sanitary waste from the facility will be treated and handled. Will a sanitary treatment plant be located on the site of the airport, therefore owned by the MAC, or will a treatment facility be constructed as part of a more complete regional system that could also be used to support the induced development from a new airport? Figure 31 identifies a "wastewater treatment facility" in the northeast part of the airport site. Has this been basically decided as the most feasible approach? The current treatment facilities at Hastings, Rosemount and Empire Township are not capable of handling waste from the airport, nor from the anticipated development that will most likely occur around the airport. The Metropolitan Council and MAC need to address this matter, in cooperation with all affected parties, and include the analysis in the final EIS.

J. J. Since metropolitan wastewater planning efforts have not addressed the issue of how to deal with wastewater treatment facility needs if a new airport is built in eastern Dakota County, the EIS analysis will proceed on the assumption that airport wastewater flows will be treated at an airport only treatment facility. Such an approach does not, nor need it, address the question of ownership or operation of such a facility. Assessment of the potential impact of induced development on the capacity of existing wastewater treatment plants that are part of the Metropolitan Disposal System will need to be conducted by the Metropolitan Council as part of its regional wastewater management planning responsibilities. Such an assessment would require resolution of the extent to which the Council can or cannot control potential induced development through its regional growth management process.

It is also indicated that stormwater from the airport may not be able to be discharged into the Vermillion River. If, in fact, the stormwater is required to be diverted to the Mississippi River, how will it get there? How large of an easement or outright purchase for a corridor will be required for this purpose? What will this cost be? Again, this is another significant unanswered question that needs to be addressed to the satisfaction of the townships and cities as part of the final EIS.

K. K. See City of Hastings Responses H. and J.

The Southern Dakota County Townships and Cities will continue to monitor the activities related to siting a new regional airport in southern Dakota County, and will work with the MAC and Metropolitan Council to insure that all issues of concern to the residents of the impacted area will be addressed in a complete manner. We look forward to continue being an active participant in the process.

From:
Dallas Eggers
Representative of the City of Prescott

To the Commissioners:

The City of Prescott would like to thank the MAC for including Western Wisconsin to a greater degree in your studies. The impact of a potential airport in Dakota county will have far reaching implications for the people of our area. What these impacts may be are the facts that the City of Prescott needs to be able to prepare adequately for the future of our City. We anxiously await your findings in regard to induced development in our area.

One area that is on the present agenda is the impact of noise on our area. Noise is recognized as a negative factor in the lives of humans, this has been known for ages. Noise was even used as torture by Nazi Germany during WWII, it has destabilizing influences on human thought processes.

With this in mind we would like to request the arrangement of another of your seemingly unending meetings. The purpose of this meeting would be to present a factual, scientific example of what the noise limits mentioned in the document in question mean to an average citizen of Dakota County and Western Wisconsin. We as ordinary, but concerned citizens, do not have the wherewithal to put such a presentation together.

A.

A. The City of Prescott should contact MAC to arrange a meeting.

The technology needed, a decimeter, which is available from most law enforcement agencies or the EPA, and sound generation equipment of adequate size are easily acquired. You have the financial resources to make this happen. Far beyond what we could scrape up.

In order for all parties concerned to make a sound decision, we need facts in an understandable form. To the common person a DNL 60 or 40 decibels mean little or nothing. What will the 74 decibels by St. Joseph's Church sound like. We need to have a graphic demonstration of what it is that we may be subjected to, otherwise we base our decisions on conjecture and hearsay, a poor way to make a decision.

B.

B. Appendix A-2 of the AED contains a description of aircraft noise characteristics, noise metrics, and compatible land use criteria. Section I (Noise) and Appendix A.2 have been expanded to provide more background on evaluating noise impacts.

The "74 decibels" referred to in (new) Table 26 is expressed in Sound Exposure Level (SEL). The purpose of the SEL metric is to allow comparison of the noise energy dosage from different single noise events of varying duration and intensity.

SEL values cannot be directly compared to DNL, even though they are on a common dB scale, because SEL measures only single events, while DNL describes the annual average impact of many noise events, including periods of no aircraft operations.

We would like you to consider this proposal and to let us know of your decision. If you feel it is not constructive, we would like a list of the specific reasons why not. could you address your answer to the City of Prescott. If you can accommodate us, please inform us as to when and where.

Thank you, Dallas Eggers

are listed. This ignores the tremendous impact of building multi-lane highways south from the Twin Cities to the new airport site. Let's be honest about the impacts of roadway improvements due to a new airport, such as cost of construction and the resultant urban sprawl that always accompanies highways.

For example, no difference between sites in the number of times that concentrations of carbon monoxide, hydrocarbons, nitrogen oxides, sulfur oxides, and particulates would exceed standards. What about the tons of emissions produced by longer transit times to the new proposed airport?

B. B. These impacts will be addressed in the EIS for the selected alternative.

Two: The documents fails to seriously address the socioeconomic impacts of building a new airport. After years a research and millions of tax money spent in compiling this document, where is the list of residents, households, businesses, and employees who will be displaced by the construction of a new airport? Generalized statistics cover up the personal costs of this proposed new airport.

C. C. See Response B. above.

Three: One of the more absurd details of this document occurs in Section H.3 Mitigation Measures. Here we learn the airport development area may extend five miles in any direction from the airport site if the Metropolitan Council determines the extension is necessary to protect natural resources of the metropolitan area. Huh? We are discussing the construction of a multi-billion dollar airport that will wipe out over 7,367 acres of prime farmland - is not farmland a natural resource of the metropolitan area?

D. D. The removal of farmland in the region will be considered as a cost of an airport in Dakota County. The protection of natural resources around a new airport is based on language found in Minnesota state statutes.

Four: The discussion in Section F Floodplains completely avoids a very serious problem afflicting the United States. Consider the recent floods in Georgia, Texas, California, and along the Mississippi River. More concrete covering open land translates directly into more flooding. The 100 year floodplain becomes the 75 year flood plain. Where is an analysis of the impacts of the accompanying highway construction and urban sprawl (both responsible for square miles of concrete) on the floodplains of the Vermillion River? Where is an analysis of the flooding risks to current residential and business property as open land in the area is covered with concrete?

E. E. The Vermillion River Watershed Management Plan requires the provision of adequate storm water storage to prevent the exacerbation of existing conditions in the watershed. The airport comprehensive plan provides for more than 2,600 acre feet of flood control storage capacity. Presumably, any other development occurring in the watershed would also provide appropriate storage capacity for flood control. Additional information on potential flooding impacts will be developed for the EIS.

Five: This study continues to underestimate the urban sprawl that will be generated by the construction of a new airport in Dakota County. Construction of highways has generated urban sprawl in every city in the United States making any claim of restricted development not credible.

Land use plans and zoning practices change over time, usually as a result of powerful lobbying by development interests. A study of the construction of Houston Intercontinental Airport in Texas and the resultant explosion of urban sprawl northward from downtown Houston all the way to the new airport and then beyond to Humble is a case study of what will happen here in Dakota County.

F.

Six: It is a matter of opinion whether the benefits of building a new airport outweigh the commitment of irreversible and irretrievable commitments of resources (Section IV.3). Committing irreversible and irretrievable resources to building a new airport locks us into a dependence on air travel and reduces future options. Europe and Japan already recognize the flexibility of rail travel and are committing their irreversible and irretrievable resources to connecting their major cities with high speed rail lines. As crude oil climbs in price, air travel becomes even more inefficient whereas electricity for rail lines might be generated by natural gas, wind power, nuclear power, hydroelectric power, or solar power.

The Sierra Club views this Draft AED as a seriously flawed document. Limiting the discussion to a strict comparison between possible airport sites precludes discussion of crucial issues and failure to address the impacts of the induced urban sprawl make this document of questionable value.

Sincerely,

Mark Warhol
Sierra Club / Airport Issues

SUMMARY
OF COMMENTS ON THE

DUAL TRACK AIRPORT PLANNING PROCESS
NEW AIRPORT COMPREHENSIVE PLAN

DRAFT
ALTERNATIVE ENVIRONMENTAL DOCUMENT

prepared and submitted by
SOAR, Inc.

SOAR is a non-profit, "grassroots" organization that has been monitoring the Dual Track Airport Planning Process since its inception in 1989. This publication summarizes SOAR's comments and observations regarding selected portions of the Draft Alternative Environmental Document [AED] that has been prepared for the Metropolitan Airports Commission by its consultants. Page references appear to the immediate left of quotations from the AED, and SOAR's comments appear in boldface type.

I. EXECUTIVE SUMMARY

p. i

"[A preferred development plan for a new airport, a development plan for MSP, a no-action option]...and other feasible alternatives will be compared in an EIS and in the 1996 report to the Legislature."

SOAR believes that the final version of the AED should provide more specifics regarding "other feasible options." The general public may not be aware of the fact that the Metropolitan Airports Commission [MAC] has authorized further study of the "remote runways" concept, which is presumably an option that the MAC considers to be a potentially "feasible alternative." The advocates of the "remote runways" option have suggested that the runways be built on or near Site 6 -- a site that was overwhelming rejected by both of the MAC Task Forces that were involved in the Site Selection Process. The AED should therefore include (at a minimum) a summary and description of all of the potentially feasible alternatives that have been identified thus far, so that interested citizens can determine for themselves whether the credibility of the airport planning process is being undermined by seemingly endless reconsiderations of previously discarded options.

A. A. The purpose of the AED is to compare new airport comprehensive plan alternatives. The issue of feasible alternatives will be addressed in the Scoping Report for the EIS, scheduled for public review in May 1995.

p. ii

"The environmental evaluation did not reveal any critical finding that would preclude development of any of the alternatives."

vs.

p. iii

"[All three alternatives are]...comprised of areas classified as highly sensitive or very highly sensitive to ground water contamination due to the permeability of the soils and proximity to the aquifers."

SOAR believes that the AED should at least attempt to reconcile these conclusions, inasmuch as they could be considered contrary or inconsistent. SOAR believes that the possibility of irreparably harming aquifers, by building an airport in an area highly sensitive to contamination, is <u>exactly</u> the type of critical finding that <u>should</u> preclude the development of a new airport on the site in question.

B. B. The statement on p. ii has been revised to more clearly state the intent — that the differences were not of a magnitude or significance to preclude the selection of any of the alternative plans for further development in the EIS.

p. iii

SOAR believes that the "Executive Summary" should include <u>some</u> type of summary or conclusion regarding <u>each</u> of the 14 evaluation criteria. It currently omits five criteria, such as Air Quality, Land Use, Wetlands, and others. These omissions unnecessarily (and perhaps incorrectly) imply that subjective determinations have been made regarding which of the criteria are (or should be) considered the most important.

C. C. This has been added.

III. ISSUES AND IMPACTS

A. AIR QUALITY

p. ii

Isn't "Air Quality" a "key environmental concern"? If so, why is it omitted from the list of other "key environmental concerns" that appears on page iii of the Executive Summary?

D.

D. Air quality has been added.

p. III-2

"The pollutant concentrations due to off-airport traffic are the same for each alternative and will not be addressed in the AED."

SOAR believes that this issue should be addressed in the AED. "Off-airport traffic" will include the substantial amount of motor vehicle traffic going to and coming from the airport (airport and airline personnel, passengers, taxis, buses, etc.) and additional traffic generated by collateral "off-airport" businesses (hotels, restaurants, etc.). Other factors that "are the same for each alternative" have nevertheless been included in the AED; the omission of this particular factor could be perceived as an attempt to minimize the significance of the adverse air quality impacts that would result from off-airport traffic.

E.

E. For the differential analysis of the New Airport Comprehensive Plan, an identical off-site roadway access system has been assumed for both the traffic impact and air quality analysis. Therefore, no differential off-site emissions would occur. The EIS will address predicted absolute levels of emissions and concentrations and make a comparison of the alternatives.

p. III-3

"Motor vehicle traffic along the terminal roadway was taken from the Site Selection air quality study. Only the terminal roadways and terminal parking ramp were included in the analysis."

The AED should review or discuss the factors that were considered and the assumptions that were made in connection with the study in question. Are those factors and assumptions still valid, and are they equally applicable in this new context? Is the use of this particular study (which expressly excluded off-airport traffic) another attempt to minimize the off-airport air pollution factor?

F.

F. The New Airport site selection study did include an off-site traffic and air quality analysis, although for the airport study area only. However, no new traffic volumes were projected for the New Airport Comprehensive Plan since the traffic volumes would be identical for all of the comprehensive plan alternatives. Although only differential impacts were considered, on-airport emissions were included in the EDMS model for completeness. In the EIS a more detailed air quality analysis for each airport alternative will be performed.

p. III-3

"...some impact from existing motor vehicle emissions in the study area can also be expected."

In light of this acknowledgement that the air quality in the "study area" is adversely affected by motor vehicles located within the study area, it does not seem unreasonable to conclude that the air quality at the proposed new airport site would be similarly affected by increased motor vehicle traffic near (but not technically within) the new airport site. The AED should therefore elaborate upon the basis for the decision to exclude (from the AED) any analysis of air pollution resulting from increased off-airport traffic.

G.

G. See Response F.

p. III-6

"...[carbon monoxide] concentrations...around the [new] airport in the year 2020 can be estimated...by adjusting for areawide increases in traffic volumes and appropriate changes in vehicle emissions."

The AED should include more information about the projected traffic volumes in the year 2020. Who made these projections, and when? What were the assumptions upon which the projections were based? Does the phrase "changes in vehicle emissions" refer to the increased traffic volume, or to projected improvements in engine efficiency/exhaust systems, or to both, or to other or additional factors?

H.

H. Region-wide traffic projections for 2020 will be made in the EIS. The Metropolitan Council estimated in 1993 that the average annual VMT increase in the Twin Cities Metropolitan Area between 1990 and 2020 will be 1.15%. This was based upon projected land use and employment figures for each traffic assignment zone. "Changes in vehicle emissions" refer to fleetwide reductions in new vehicle emissions within Twin Cities Metropolitan Area. This does not relate to traffic volume changes which are addressed separately.

B. ARCHAEOLOGICAL RESOURCES

p. III-12

"[Chimney Rock is]...one of a small number of [rock] formations [of long-standing significance] - and one of the best preserved - it should be considered eligible for the National Register."

vs.

p. III-13

"...it can be convincingly argued that the larger visual context of Chimney Rock already has lost its integrity, effectively making it redundant to any assessment of National Register eligibility and adverse impact caused by the proposed undertaking."

This is another example of seemingly inconsistent conclusions that the final version of the AED should make a greater effort to reconcile.

I.

I. See Minnesota Historical Society Response B.

C. BIOTIC COMMUNITIES

p. III-17 "...there is some question as to whether it [a breeding location for the loggerhead shrike, a bird that is on Minnesota's list of "threatened" species] will remain viable since it would lie between two active runways..."

Some question, indeed. There is some question as to whether this statement has been phrased in a manner designed to avoid a virtually inescapable conclusion. The final version of the AED could allay this suspicion by demonstrating a greater willingness to openly acknowledge some of the more obvious of the many adverse impacts of a new airport.

J. J. It is not a foregone conclusion that loggerhead shrikes will not nest in the vicinity of airport runways if suitable habitat is present. Many wildlife species will tolerate and become habituated to substantial noise and disturbance levels. It is certainly possible that the shrike breeding territory referred to by the commenter may be abandoned if one or more runways are constructed in close proximity; however, as stated in the AED, it is currently unknown whether this will occur.

p. III-18 "Mitigation for [the destruction of loggerhead shrike breeding locations] may be available in the form of acquisition of nesting territories which lie on nearby lands."

The AED should explain in greater detail how the destruction of breeding locations would be mitigated by the acquisition [by whom?] of other nesting sites that already exist. The AED should also address the possibility that "nearby lands" would be so "nearby" the new airport that they, too, would be adversely affected by the airport's noise and activity.

K. K. The potential mitigation measure referred to in the AED would involve the Metropolitan Airports Commission acquiring either easements or fee title to lands encompassing existing territories. This was suggested as a potential mitigation measure by the Minnesota Department of Natural Resources. Any sites considered for easements or acquisition would first be reviewed to determine whether any potential for indirect impacts might exist. Potential shrike mitigation measures will be discussed in more detail in the EIS.

p. III-18 "The scientific literature on bald eagles does not provide any firm, research-based distance threshholds, which, if transgressed by aircraft, would necessarily result in adverse...impacts to...eagles."

vs.

p. III-20 "Thus, none of the [new airport] alternatives have [sic] significant potential for causing adverse noise and disturbance impacts to bald eagles."

This is yet another example of contrary or inconsistent conclusions. SOAR requests that clarification be provided in the final version of the AED.

L. L. See Carpenter St. Croix Valley Nature Center Response F.

p. III-19 The AED should make a greater effort to translate its statistics into more relevant or understandable conclusions. For example, by adding together figures that appear in several different sentences in this section, one could determine that as many as 7880 monthly approaches would occur on the three flight tracks that pass closest to the nearest bald eagle nests and night roosts. This would be about once every 5 1/2 minutes, presumably all year long. An approach of this type would make it easier for interested citizens to draw their own conclusions regarding the reasonableness or validity of the opinions expressed in the AED.

D. BIRD-AIRCRAFT HAZARDS

p. III-21 "Due to the relative inaccessibility of this area [Shiely Gravel Mine pits on Grey Cloud Island], field observations [of bird concentrations] were not obtained during 1994."

Given the fact that this area is part of a "major Canada Goose wintering area", and in light of the fact that we are now in the middle of winter, perhaps the AED's consultants could conduct some field observations from the air, or travel to the area by boat or by snowmobile, in order to obtain (and include in the final AED) more or better data regarding the extent of the aircraft hazard that this area represents.

M. M. Agreed. This is being done during the winter of 1995 and will be discussed in the EIS.

p. III-22 "Wetland 340W...was not identified as a major bird attractor during earlier phases of the New Airport Site Selection process."

vs.

p. III-22 "...field observations during 1994 indicate that this wetland [340W] receives considerable waterfowl use during migration periods."

In some parts of the AED, conclusions are based (at least in part) upon studies that were conducted as part of the Site Selection process. In other parts of the AED (such as in the quotation that appears immediately above), information that is referred to and relied upon is radically different than information that was generated during the Site Selection process. This disparity raises questions about the credibility of the entire process -- questions that should be addressed in the final AED.

N. N. Throughout the environmental review process, additional data has been collected and analyzed. The purpose of carrying out a site selection and screening process and for preparing a series of scoping documents and AED's is to; (1) reduce the number of unresolved issues, (2) incorporate new and better data, (3) provide an increasingly detailed and thorough impact analysis and (4) generally improve the quality of the information upon which decisions will ultimately be based. We would be remiss in our analysis if we did not correct or improve upon information developed early in the process when better information arises during later stages.

p. III-23 "The Pine Bend Landfill was not identified as a major bird concentration area by any of the agencies contacted."

vs.

p. III-23 "Field investigations during...1994...confirmed that Pine Bend Landfill attracts large numbers of ring-billed gulls...over 1000 were observed at the landfill...the gulls have established a habitual flight path between their feeding area at the landfill and their staging/resting area on Spring Lake."

The AED should identify the "agencies contacted" and briefly address the very different conclusions that were reached, in order to help the public determine which experts to believe. **O.**

O. See Response N. Gull numbers and movements described for Spring Lake and Pine Bend Landfill are based on new 1994 field data.

p. III-25 "...mitigation measures...are best developed after a new airport is completed..."

p. III-25 "The potential for further reducing bird-aircraft hazards...could be better explored after new airport facilities are in place..."

If this philosophy had been adopted with respect to the other environmental factors addressed in the AED, it would have been a shorter but significantly less useful document. The fact that mitigation options might be clearer in the future does not eliminate or minimize the need to explore them in the present. **P.**

P. See Phyllis Goldin Response A.

E. FARMLAND

p. III-26 "...the Farmland Protection Policy Act [requires the USDA]...to identify prime farmland and farmland of statewide importance [that would be]...permanently taken out of protection by [a new airport]..."

The very existence of this Act underscores the federal government's desire to preserve prime and important farmland -- a worthwhile goal that would be clearly undermined by the construction of a new airport on the agricultural site that is currently under consideration. The AED should therefore devote more attention to this important legislation by including more information about the Act's objectives, and the ways (if any) in which the Act's directives can be reconciled with destruction of prime farmland that would be caused by a new airport. In addition, the AED should elaborate upon the "protections" (if any) that would be provided to farm owners and operators, and to the owners and employees of the many local farming-related businesses, by the Farmland Protection Policy Act. **Q.**

Q. The purpose of the AED is to analyze the differential impacts of the three alternatives for a new comprehensive plan. The EIS will analyze the provisions of the Farmland Protection Policy Act in comparing the development of a new airport in Dakota County versus expansion of MSP.

R.

p. III-27 "The development of a new airport...would eliminate farming operations within the airport boundary."

vs.

p. III-28 "...some farmland within the airport boundary could be leased for continued farming operations."

R. Development of any large-scale capital project would displace existing land uses; thus, the statement that development of a new airport would eliminate farming operations within the airport boundary. It is possible, however, that not all land within the airport boundary will be needed for airport operations and, to the extent that future land use policies for State Safety Zones would not be violated, could be leased out for farming operations.

Again, the overall value of the AED would be enhanced by reducing the number of inconsistent or contrary conclusions (such as these). **S.**

S. The purpose of the AED is to analyze the differential impacts of the three alternatives for a new airport comprehensive plan. Consequently, the number of acres of farmland which would be within the airport boundary and the number of farm properties with a portion lying outside the airport boundary (isolated and triangulated farmlands) were included in the AED. The impacts of developing a new airport, in comparison to the impacts of expanding MSP, will be the focus of the EIS, including the adverse impacts on farming operations in the area near the new airport.

It is possible that farmlands will be severed – i.e., portions of a farm ownership separated from each other – by the development of new roads to the airport. However, the exact alignment of these roadways has yet to be determined and, consequently, it is not possible at this time to analyze impacts caused by the construction of these roadways. The alignment will be determined prior to the preparation of the EIS, so that a comparison of MSP expansion and new airport development, and the impacts of each, can be made in the EIS. Specific impacts of roadway construction will be the subject of a subsequent EIS, if it is decided to develop a new airport.

p. III-27 The phrase "within the airport boundary" appears at least five times on this page. The AED fails to give sufficient consideration to the impact that a new airport would have on farmland outside of (but near) the airport boundary. The AED does admit that "a large farm may be bisected [severed] by a roadway leading to the new airport", but Table 13 on page III-28 indicates that no farms or acreage would be severed under any of the three alternatives under consideration! A new airport would require at least "eight lanes at freeway design standards between the airport and Trunk Highway 55" and "other highway upgrades and improvements" [see page iii of the AED], and all of this new road construction would almost certainly result in substantially more lost, isolated, triangulated and severed farmland than the AED acknowledges. The AED should be revised to take these issues into consideration, based upon the projections that have already been made regarding the location and extent of the necessary roadway improvements.

p. III-28 "Development compatible with a new airport... would have to be specified for certain sites if the essential agricultural nature of central and southern Dakota County is to be retained."

Given the enormous amount of prime farmland that would be lost to the new airport site itself, and in light of the additional farmland that would be lost (immediately or eventually) to new roadways, collateral airport facilities, "spin-off" businesses and other airport-related uses, isn't it an exercise in futility to even consider any effort to retain the "essential agricultural nature" of the area in question? **T.**

T. Induced development, as well as the appropriate locations for it, will be analyzed in the EIS. It is a policy of the Metropolitan Council that airport-related development will be located at the intersection of Trunk Highway 55 and the new roadway into the airport. That, and the comprehensive plans for the area, with virtually all land designated for agricultural use, it is possible that farming operations could be retained in those areas of the townships outside the airport boundary.

p. III-28 "There are no measures to mitigate the permanent loss of farmland in the area..."

This portion of the AED should at least acknowledge the socioeconomic consequences of depriving farm operators of their chosen vocation, and this issue should be addressed at greater length in Part J ["Socioeconomic", pages III-49 to III-53] of the AED. The AED does admit (on page III-53) that "...it is unlikely that there will be similar farmland available in the near vicinity," but no mention is made of the need for vocational retraining or rehabilitation, placement assistance, job counseling, or the various other services that should be provided to enable displaced farmers to pursue new careers or obtain gainful employment. **U.**

U. The purpose of the AED is to analyze the differential impacts of the three alternatives for a new airport comprehensive plan. The EIS will analyze the economic impacts of lost farmlands and farming operations. Impacts such as vocational rehabilitation and job counseling will be included in that analysis.

F. FLOODPLAINS

p. ii The AED indicates that environmental impacts in 14 areas were examined, and that "...where necessary and possible, potential mitigation measures are discussed."

Why does the AED's section on Floodplains omit any specific reference to mitigation? Is it because discussing mitigation measures is not "neccessary", or because it is not "possible"? Or is it simply an oversight that can be corrected in the final version of the AED? **V.**

V. Mitigation of floodplain impacts is both necessary and possible. Impacts resulting from fill placed into the floodplains will be mitigated as required by Dakota County and the Minnesota DNR.

p. III-28 "Fill would be placed in the affected areas of the floodplains, to raise the airport facilities above the floodplain elevation."

Table 14 on page III-29 suggests that fill would have to be placed in 160 to 320 acres, depending upon the alternative chosen. The AED should include estimates regarding the amount or volume of fill that would be required, and the cost of this procedure. **W.**

W. The estimated amount of fill required to fill floodplains prior to constructing airport facilities across them is approximately the same for all of the alternatives. It therefore has no bearing on selection of an alternative. If this information is necessary it can be determined during the EIS process.

p. III-29 "...there is adequate space within each alternative for re-creation of the floodplain storage that would be lost due to airport facilities."

The AED implies, but does not clearly state, that this is intended to be the sole or primary mitigation technique. How does one replace a natural floodplain? The AED should provide more specific information regarding the procedure for (and projected cost of) "re-creating" 160 to 320 acres of lost floodplain storage. **X.**

X. Re-creation of floodplain is intended as the primary source of floodplain mitigation. It is expected that re-creation of floodplains will be accomplished by excavating in areas between parallel runways, and other areas that need to be kept clear of structures for airspace purposes. Areas will be excavated such that they will provide the same amount of water storage during the 100 year flood, as was originally provided by the floodplains that had to be filled for airport facilities. Most of the material excavated to create the new floodplain will probably be used to provide fill in the floodplains that need to be filled for airport facilities. Therefore most of the cost of re-creating the floodplains will be incidental to the cost of constructing facilities across the existing floodplains.

G. HISTORIC/ARCHITECTURAL RESOURCES

p. III-32 "Such mitigation for the farm buildings might include noise reduction measures, such as window replacement and insultation, if these measures could be accomplished without damaging the historic integrity of the properties."

In our view, specific recommendations and a budget for mitigation must be known before it is possible to express an opinion about this issue as it pertains to selection of a development alternative. With the number of airports in operation worldwide, a significant body of research must exist about the actual effects of "noise, vibration, pollution or other factors" on natural and manmade structures located in similar proximity to the structures of concern here. **Y.**

Y. Specific mitigation measures for historic properties adversely affected by an undertaking are outlined in a Memorandum of Agreement (MOA) between the Advisory Council on Historic Preservation, the State Historic Preservation Office, and other interested parties. The Advisory Council cannot begin to negotiate a MOA until an undertaking is initiated. Therefore, no specific mitigation measures can be established until a decision is made to develop the new airport.

J. SOCIOECONOMIC

p. III-49 The AED should include a table listing the names and addresses of all families and businesses targeted for relocation under FAA mandates. A footnote should clearly reiterate that additional residents and businesses will be displaced for roadway, utilities, and powerline construction, and state when those parcels will be identified. A note in the Executive Summary can draw readers to this table, which will be of great interest.

Finally, unless these aforementioned homeowners and business owners have a legitimate reason to worry about the negative effects of landbanking options, the AED should be amended to expressly exclude this development tool from the public discussion.

JJ. JJ. A listing of businesses, including farming operations, which would be displaced by the development of a new airport will be included the technical report that will be an appendix to the EIS. An analysis of impacts of site preservation, including landbanking, will be included in the EIS.

p. III-51 TAX CAPACITY IMPACTS

In earlier official documents, the Metropolitan Council mentioned that commercial and industrial growth associated with a new airport would be shared regionally through the use of existing fiscal disparities law. SOAR has repeatedly requested clarification of how fiscal disparities would be employed, as well as the consequences to communities contiguous to the airport site. This section must mention that fiscal disparities is intended for use in conjunction with a relocated airport. A detailed discussion must be included in the Final Report to the Legislature, with sufficient time for public comment.

KK. KK. Existing property tax laws, including provisions regarding fiscal disparities to the extent that they are applicable, would apply to properties surrounding the airport, as well as to the affected jurisdictions. A discussion of this issue will be included in the report to the Legislature.

p. III-52 Tables 30/31: Regarding the lost tax capacity issue for the townships, the central challenge is to project how the sudden loss of nearly a third of revenues will be offset for the continued viability of the townships, schools, and county. Regarding the use of these data for selection of a development alternative, it is clear that any of the three will have a devastating impact on tax capacity.

LL. LL. The comment is noted. A discussion of lost tax capacity will be included in the report to the Legislature.

p. III-53 It is unacceptable to merely "increase either assessed valuations of remaining properties with the townships and the school district, or increase the tax rate so as to assure the same level of public services to those remaining." A more equitable remedy must be addressed in concept within this document and developed to the satisfaction of the government units in the Final Report. Higher taxes or assessed valuations will be insult to the injury of living next to an airport that was developed with an "assumption that residential development will be discouraged."

MM. MM. Under existing property tax laws, the options include either increasing assessed valuations or increasing tax rates. The issue of tax capacity and lost tax revenues will be addressed in the report to the Legislature.

p. III-53 For those individuals who directly lose their livelihoods, as well as the business owners who are destroyed through a ripple-effect clearly understood through prior economic studies of farming communities, there must be an open and honest discussion about how the Metropolitan region would value their sacrifice for this project. That discussion should begin in the AED, acknowledging that fair compensation must be determined, and should continue in the Final Report.

NN. NN. Economic studies of the impacts of an airport expansion, regardless of its location will be included in the draft EIS. However, this document only addressed information that differed between the on-site layouts.

K. TRANSPORTATION ACCESS

p. III-54 This section must be rewritten to clearly state what is intended. The reader is left wondering what a "tie" is, and what relevance this has to development alternative selection. MSP International Airport's "ties" to western Wisconsin, presumably for air travellers, would obviously be transferred to the New Airport. However, this statement contributes nothing to the debate; it is of far greater consequence to consider how the western Wisconsin travellers would access a new airport across the inadequate Hwy 61 bridge. Economic impact must be the focus of this entire section, inclusive of two other impacts:

* A concise prediction of how the use of bonding authority will impact other statewide transportation projects.

* Analysis regarding how the average daily traffic forecast will change as information technology permanently alters commuting habits and business travel. Northwest Airline's own data on business travel trends should be mentioned in this section (see testimony to Governor's Task Force on Airport Planning 1993).

OO. OO. The reference to "ties" is in the context of the affected environment, which is to be a description of the existing conditions of the study area. The consideration of ground access will receive further study in the draft EIS as indicated on page III-54. Economic impacts will be addressed in the draft EIS in a separate section. The impact of the financing of the airport and related costs will be a portion of the draft EIS or the Decision Document. Data on airline business travel is relevant to airport enplanement forecasts which were recently reviewed ad updated. The evaluation of ground transportation access will consider what data is available on telecommuting and other assumptions in forecasting travel demand.

L. WATER RESOURCES

p. III-57 "...it appears questionable whether stormwater discharges to the Vermillion River, even after the application of structural best management practices (BMPs), would be permitable. Although further pollutant load reduction could be achieved through the use of ...(operations and management practices) and/or the use of constructed wetlands, the use of such measures still may not result in full attainment of water quality standards. Consequently, it is possible stormwater discharges associated with the proposed airport may have to be diverted to the Mississippi river in order to meet water quality standards in the Vermillion River.

p. III-58 "However, diverting such stormwater directly to the Mississippi River may constitute an "interbasin" water transfer requiring approval from the (Minnesota Department of Natural Resources). It is unknown at this time under what conditions, if at all, the MDNR would allow such a transfer. The same types of issues that affect the potential for additional stormwater discharges also apply to potential discharges from a wastewater treatment facility. Even with high levels of treatment (greater than secondary), it may not be possible to meet water quality standards and discharge to the Vermillion River."

The paragraphs quoted above are remarkable in their clarity and candor. It is clear that water quality standards are threatened by this project. SOAR respectfully requests that the first and last sentences of this section ("Impacts on Surface Water Quality") be reprinted in the Executive Summary, and further that the MAC staff specifically inform the commissioners of these issues prior to their vote to authorize one of these development alternatives.

PP. PP. Since these issues are essentially the same for each alternative, they do not provide a basis for distinguishing one alternative from another. This information is available to all commissioners and other decision makers.

p. III-58 "To the extent some runoff can be diverted to a discharge point below Hastings, additional flood control benefits may be achieved."

SOAR requests that this diversion point be identified for the purposes of understanding the implications for residents below Hastings and determining whether any differences exist among the three alternatives.

QQ. QQ. Additional information will be developed for the EIS addressing the nature and quantities of discharge from potential airport stormwater facilities and where they may be discharged. This will be addressed in more detail in the EIS Scoping document.

p. III-67 "Because it appears that direct discharges of stormwater and treated wastewater to the Vermillion River may not be permitted...further mitigation may be required. Such mitigation for stormwater discharges could potentially be achieved by eliminating such discharges from the Vermillion River watershed and diverting them to the Mississippi River."

Regardless of which alternative is selected, this issue is of great concern to SOAR. A Metropolitan Disposal System is mentioned, although the location is not determined in this document. Clearly it is unacceptable to further burden the Mississippi River and jeopardize this resource for the many states downriver, as well as our own. SOAR supports the Minnesota-Wisconin Boundary Commission in its request for thorough exploration of water protection measures in the EIS.

RR. RR. Stormwater and wastewater management concepts have been identified in this AED and will be developed further in the EIS within the constraints which exist for preparation of such information.

IV. ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

p. IV-1 "Irreversible and Irretrievable Commitments of Resources"

SOAR requests that the Final Report specify exact amounts of resources irretrievably lost. Particularly, the Final Report should state the estimated year that the world supply of fossil fuels is expected to be depleted.

p. IV-1 "Any construction project will also require a substantial one-time expenditure of local, metropolitan, state and federal funds, which would not be retrievable."

SOAR requests that this document include a comprehensive budget to date from both the Metropolitan Council and Metropolitan Airports Commission, inclusive of:

* An estimate of in-kind agency support for salaries, office space, technical support, materials.
* Consulting contracts, including the firm and a brief description of responsibilities.
* Activities of each of the following groups: The Contingency Planning Committee, the Task Force on Airport Planning Search Area Designation; the Policy and Technical Task Forces on Airport Siting; the State Advisory Council on Airport Planning (including out of state travel); Reuse Task Force Committee; and the current MAC Task Forces on Airport Planning.
* A line item clearly stating the remaining funds allocated for the process through the final conclusion.

SS

SS. Some of this information is not available at this time. The costs of the Dual Track process are the same for each alternative.

SOAR requests that the report either eliminate or further illuminate the last two sentences on p. IV-1:

"Commitment of irretrievable resources is based on the concept that residents of the metropolitan area and the state will benefit by the improvements made in major air travel facilities in the Twin Cities. These improvements would enhance safety and reduce air travel delay for the airport user." Comments:

1. Federal law requires that major airport construction show demonstrable benefit to an entire region, not just the state. U.S. Senators from Wisconsin and North and South Dakota have already expressed, and expect, regional cooperation in analyzing this project and its alleged benefits.

2. The first sentence states a concept without citing a source. It appears here as a statement of fact when in fact this belief is rejected by many elected officials and citizens alike.

TT

TT. The premise of the Dual Track Airport Planning Process is to investigate ways to meet the region's future air transportation needs. Forecasts of activity have been developed to identify needs through the year 2020, and airport facility requirements have been developed. The various environmental, social and economic issues related to meeting, or not meeting, these needs (including expanding MSP, building a new airport, and "no action"), are currently being studied. The EIS will clearly articulate the purpose and need of the project, incorporating local and regional needs, as required by state and federal law, and will provide the technical analysis needed to address all of the issues arising from meeting (or not meeting) these needs.

3. The first sentence quoted above also refers to "improvements in major air travel" benefitting the metro area and the state, implying that improvements are necessary, when in fact the FAA's own capacity study shows that MSP is adequate far into the next century with modest investment. Further, Northwest Airlines has stated repeatedly that there is no demonstrated need for facilities other than the ones currently maintained at MSP.

4. The second sentence quoted above perpetuates myths that were proven false by the Legislative Auditor in 1993's investigation of the Dual Track Planning Process: there is no documented safety issue at MSP; nor are delays a significant issue for airport users at MSP. Northwest Airlines continues to deliver excellence in on-time service. Moreover, the Auditors noted that the Metropolitan Council wildly exaggerated delays in its forecast, differing by as much as 40 minutes from the Metropolitan Airports Commissions' estimates.

Public confidence in the Dual Track Planning Process is tenuous at best. Reckless statements such as these should not appear in documents at this mature stage of the process, nor reappear in the Final Report to the Legislature without tangible, credible documentation to support them.

Finally, SOAR requests that the following tables be prepared for inclusion in the document:

1. A list of the adverse impacts that is more useful and complete than the table that appears on page v of the Executive Summary.

2. A list of the names of the farmers who would be permanently displaced by the process, along with their annual production output (coded if necessary to protect their identities).

UU.

UU. This paragraph has been deleted.

The question being addressed in the Dual Track Process is not whether MSP can be expanded to meet future needs, but, "What is the best way to meet the region's future aviation needs (e.g., MSP or a new airport)?" The FAA's MSP Capacity Enhancement Plan, like MAC's own work, identified ways for MSP to meet future needs. Both studies showed that there are feasible ways to do so. The Dual Track Process will compare the impacts of MSP development versus the impacts of building a new airport.

VV.

VV. The list of criteria is considered useful in determining the major difference in impacts of the three alternatives.

A list of each permanently displaced farmer or farm will be made available for the Draft EIS, upon further refinement of the selected alternative.

State Senator
Alice Clausing

January 22, 1995

RECEIVED
JAN 27 1995
DEPUTY EXEC. DIR.

Mr. Nigel D. Finney
Deputy Director
Metropolitan Airports Commission
6040 28th Ave. South
Minneapolis MN 55450-2799

Re: New Airport Comprehensive Plan - Draft AED

Dear Mr. Finney:

Enclosed is a copy of the statement I made at the public hearing on January 18, 1994 at Hastings, Minnesota. Please enclose this statement with the written comments on the Draft AED.

Thank you.

Sincerely,

Alice Clausing

Alice Clausing
State Senator
10th District

AC/sf

State Capitol, P.O. Box 7882, Madison, WI 53707-7882
800-862-1092 Toll Free
608-266-7745 Madison
715-232-1390 Menomonie

State Senator
Alice Clausing

STATEMENT
TO METROPOLITAN AIRPORTS COMMISSION
ON NEW AIRPORT COMPREHENSIVE PLAN
DRAFT ALTERNATIVE ENVIRONMENTAL DOCUMENT
JANUARY 18, 1994 PUBLIC HEARING
HASTINGS MINNESOTA

Good Evening. My name is Alice Clausing and I am from Menomonie, Wisconsin. As a Wisconsin State Senator of the 10th Senate District, four out of five counties I represent border Minnesota on the Mississippi and St. Croix Rivers. I am also the Wisconsin Representative to the Metropolitan Airport Commission Dual Track Policy Oversight Committee, a member of the Minnesota/Wisconsin Boundary Area Commission and the Mississippi River Parkway Commission.

During the past 18 months, I have been working with constituents from my Senate District concerning the possible relocation of the Minneapolis/St. Paul Airport to Hastings Minnesota. I have also worked with legislators from Minnesota and Wisconsin and personnel from Wisconsin and Minnesota Departments of Transportation and Natural Resources. Wisconsin's goal is to get the State of Minnesota and the Federal Aviation Administration (FAA) to recognize and quantify the regional impacts, including those to Wisconsin, so an informed decision will be made at the end of this study process to determine if the Minneapolis/St. Paul Regional Airport is relocated. When we first began to work together, the area east of the Mississippi River, on the maps provided by the Metropolitan Airport Commission (MAC), was blank. Our progress thus far has been to get Wisconsin on the map. Yes, there is life east of the Mississippi and St. Croix Rivers!

Placing a major international hub airport in a rural area will have environmental, social and economic impacts to the region. What these impacts will be, must be adequately studied and determined in order for local and state government to plan appropriately for growth, development and infrastructure.

I appreciate the opportunity to comment on the New Airport Comprehensive Plan, Draft Alternative Environmental Document (AED). There are several items of concern in this plan.

Evaluating the AED has been difficult because the Wisconsin impacts outside the airport will come later - we cannot discuss total impacts. It is possible, however, that impacts on the outside may be greater than inside.

State Capitol, P.O. Box 7882, Madison, WI 53707-7882
800-862-1092 Toll Free
608-266-7745 Madison
715-232-1390 Menomonie

1. Land Use -III-32.

Discussion is a mix of on-site, in and around adjacent land to the airport. The AED says it addresses impacts on land use and comprehensive plans of affected municipalities. However, it only discusses impacts to Hastings, Minnesota. It does not mention Prescott, Wisconsin which is directly across the Mississippi River from Hastings and within four miles of the end of one of the runways. Prescott is currently one of the fastest growing communities in Wisconsin. Impacts to land use in Prescott must be included as well as regional impacts.

It will be necessary to do more than number crunching on jobs, square feet of office space, hotel and motel rooms. A model must be developed to predict growth changes in Wisconsin to include population as well as service demands, land use patterns, infrastructure, etc.

A. A. The current document was to evaluate the differences between three alternative site layouts, so little work was performed to evaluate development impacts on Wisconsin. Impacts of the airport and its induced development on Wisconsin and its communities will be evaluated in the next phase. Study design of the analysis will be a part of the scoping for the draft EIS.

2. Transportation Access -III-53

The AED only addresses transportation as it relates to the three alterative sites. New access roads and changes in existing roads and bridges will be addressed in the final Environmental Impact Statement (EIS). With the final report to the Minnesota Legislature due July, 1996, I do not believe there will be time to adequately study the transportation impacts.

3. Wastewater Treatment

B. B. Please refer to pages III-56 through III-58, and III-67 and III-68 of the Draft AED for the description of the sizing and treatment issues associated with the wastewater treatment facility evaluated for the proposed airport site.

One of the comments in the New Airport Site Selection Study Final AED C-2 (5) stated, "a new wastewater treatment plant should be constructed to accommodate a new airport." The response stated, "This issue will be addressed in the comprehensive Plan AED for the selected site." The AED discusses a wastewater collection plan but does not address a wastewater treatment plant.

C. C. As part of the EIS preparation process, an effort will be made to document any specific requirements the Minnesota Department of Natural Resources may have governing interbasin water transfers. This will include an effort to determine if such requirements also govern the transfer of water among the sub-watersheds of a river basin. As an alternative to discharging to the Mississippi River, it may be possible for storm water from the proposed airport site to be discharged to the Vermillion River downstream of Hastings.

The impacts on both surface and ground water quality need to be considered. The AED indicates stormwater may have to be diverted to the Mississippi River to meet water quality standards in the Vermillion River - III-57. Since this diversion "may require approval of the MDNR" a discussion of MDNR requirements and details of plans to meet these requirements should be included. There is no information in the AED regarding the impacts on ground water. This should be included.

The focus of the AED was to identify, to the extent possible, the differential impacts of each of three airport development plans on the same site. Preliminary evaluations of the geology under each site were done prior to undertaking this AED, as part of the Site Selection process. Additional information on subsurface conditions will be provided in the EIS; however, it is not anticipated that the analysis will encompass contaminant transport modeling.

My final comment refers to noise. Noise is a form of pollution and an environmental hazard. We all know noise is what the Dual Track Process is really all about. The legislators in Minnesota are responding to their constituents who live near the present airport and are bothered by the noise.

In the section on Noise-Sensitive Uses A-7, the recommendation that schools be considered compatible in the DNL 65-70 noise zone is rather interesting. The graph on A-6 indicates 65 to 80% of the people in that noise level range are annoyed. The assumption is the interior Noise Level Reduction (NRL) be at least 30 dBA. As a former teacher, I am aware some school activities occur outside the school. Elementary schools have playgrounds and secondary schools have football and track and other sports outside. Outside activities should be considered in this study. What about cattle?

D. D. Figure A-2 shows various degrees of annoyance for residences, not schools. The activities associated with each land use are different, with sleep disturbance a primary contributor to annoyance within residences. The land use compatibility analysis on pages A-7 and A-8, which is based on FAA criteria, recommends that in order to make existing schools a compatible land use within the DNL 65-70, sound insulation measures should be applied to produce an interior noise-level-reduction of at least 30 dBA.

Activities occurring outside the school on playgrounds and sports fields are considered similar to those occurring at other recreational land uses, and are therefore considered compatible up to DNL 70. This is also based on nationally recognized FAA criteria.

Studies of dairy cattle, pigs, chickens and mink show that domesticated farm animals are generally not affected by even high-intensity aircraft noise in terms of physical health, behavior, weight, and production (ref. FAA, "Aviation Noise Effects," pp. 66-67).

Thank you very much for considering these recommendations.

30830 Woodhaven Trail
Cannon Falls MN 55009-4112

January 17, 1995

Dear M. A. Commission:

In view of the Feb. 3 deadline for comments on a new airport, here are our opinions.

We're opposed to a new airport & also opposed to spending another penny to study the issue. It's just too expensive & unnecessary.

Some points to ponder:

① Those who live near the present airport knew when they moved there that the airport was nearby.

② A new airport will cost more than estimates.

③ Money spent on this project and on research for it is taken from other regional airports. There is only so much money for transportation, and I am concerned that too much of it is being spent on this study.

④ An airport in Dakota County will be farther from the people who use it the most - Twin Citians. This will be less convenient for them and cost more in gasoline, etc.

⑤ The airport will ruin ..... a big chunk of Dakota County's rich farmland.

⑥ Many people will be displaced against their will.

⑦ Property value for homes, home-building will decline near the airport site.

⑧ The problems of noise & pollution will merely be moved from Minneapolis to Dakota County and nearby areas including western Wisconsin.

⑨ Is it needed? Corporate travel is declining due to improvements in phone and computer communication.

⑩ If expansion room is needed, why not re-locate the small reserve airport to another out-state site?

⑪ The more we spend on this airport, the less is being put into other options such as light rail transit, high speed trains, etc., that are more efficient.

⑫ Let's learn from Denver's experience that bigger is not necessarily better.

A.

A. MAC is investigating several other options to meet the region's 2020 aviation needs. Among these is relocation of cargo, military and/or other operations to other airports, such as Rochester, and linking that airport to MSP via high-speed rail.

(3) Many who have ~~been~~ (voted) will end up paying for it in taxes for the airport itself and additional roads and mass transportation facilities, for example. (people such as those of us in Goodhue County)

(4) Noise will bother us in our home. We grew up near here and appreciate the peace and quiet of the rural setting.

(5) Moving the airport will contribute to urban sprawl.

(6) What will be done with the present airport site? There's enough pollution there now that won't go away if the airport is moved. Why ruin two sites?

For these and probably more reasons, we're very opposed to the study of and building of a new airport in Dakota County!

Sincerely,

Robyn Schermetzler
and family

02/03/1995 08:42 7152623753 BROWNWOOD WB PAGE 01

WANDA BROWN
W6464 1323 STREET
PRESCOTT, WI 54021

RE: Draft Alternative Environmental Document

February 3, 1995

Dear Metropolitan Airports Commission:

Of the many questions I raised when testifying before you at the Hastings meeting, the one to which I would like a written response is: Exactly how much money has been spent to date studying the proposed Hastings airport site? Specifically, regarding the "List of Preparers" which appears on pages V-1 & 2, what are their contracts, how much have they and others been paid so far, and what is the on-going budget. Please print this for the record, and update the money question in subsequent documents. If it's public money you are spending, make it public.

A.

Sincerely,

Wanda Brown

Wanda Brown

A. The cost of studying the new airport is the same for each alternative, and therefore not relevant to the selection of the best alternative. If you want a response to this question; please call Nigel Finney at 726-8189 and clarify exactly what cost information is desired.

Jill Berke · 246 Carlson Lane · River Falls, WI 54022 · Tel/FAX 715/425-8289

Date: January 18, 1995

TO: Nigel D. Finney, Deputy Executive Director - Planning & Environment
Metropolitan Airport Commission Members

FR: Jill Berke, WISMAC Citizen Member
St. Croix County, Wisconsin

Thank you for the opportunity to address you this evening regarding the Draft Alternative Environmental Document. It attempts to address the complex impacts on the environment of the three different development plans as part of the Dual Track Airport Planning Process and the New Airport Comprehensive Plan.

I offer the following remarks and suggestions for your consideration as you progress to the final AED, EIS and other phases of your planning process.

Land Use Affecting the Environment
Page III-34
Sec. H.3 Mitigation Measures (Land Use)

The matter of land use is addressed, and more specifically the document refers to this as the *"airport development area."* Although I am happy to see reference to your neighbor to the east, there is, at best, minimal attention given to the state of Wisconsin as impacted within the defined development area.

Reference is made also to natural resource protection wherein the document states *"the airport development area may extend five miles in any direction from the airport site if the Metropolitan Council determines the extension is necessary to protect natural resources of the metropolitan area."*

1. Please comment on your efforts to date, and in the future, regarding possible land use impacts in the affected areas of Wisconsin (largely Pierce & St. Croix Counties, with some attention to Pepin County), in the case of each alternative.

2. What efforts are taking place and/or proposed, to evaluate natural resource protection in those parts of northwestern Wisconsin, including the St. Croix Riverway in St. Croix County and Pierce County, southerly along the Mississippi corridor to Lake Pepin, as well as smaller river ways (Willow River, Kinnickinnic River, Rush River, etc.) that flow directly or indirectly into the St. Croix and Mississippi along that route?

Transportation Access
Page III-54
Sec K.2 Impacts of Transportation Access

Thank you for considering the impacts of all three alternatives with respect to new access roads and changes Unfortunately, there is very little depth to your evaluation of the transportation impacts regarding induced development in the affected Wisconsin communities.

1. Reference is made to the EIS and *its* intent to look more closely at the transportation access issue.

   Will the so-called airport development area include Wisconsin communities, i.e. those municipalities in St. Croix County along the I-94 corridor, I-35 exchange, and those bordering the St. Croix Riverway southward through Pierce and Pepin Counties? How comprehensive is your proposed study of the transportation impacts to Wisconsin?

Thank you for your consideration of these critical issues. As a citizen member of Wisconsinites Interested in Studying Metropolitan Airport Changes (WISMAC), I urge you to continue developing collaborative relationships with public officials, municipal planners, administrators, WISMAC citizens, and other key opinion leaders in Wisconsin.

A. A. The current document was to evaluate the differences between three alternative site layouts, so little work was performed to evaluate development impacts on Wisconsin. Meetings have been held with the Wisconsin Department of Transportation and further meetings will be held with them and local jurisdiction in the next phase. Future study issues will be identified and presented in the scoping for the draft EIS.

B. B. The purpose of the AED is to analyze the differential impacts of the three alternatives for the new airport comprehensive plan. In comparing the three alternatives, there were no adverse impacts on these areas. If there are adverse impacts on these areas, in comparing expansion of MSP and development of a new airport in Dakota County, they will be analyzed in the EIS.

C. C. The airport development area defined by Minnesota Statute will only affect Minnesota jurisdictions. The transportation study will be further defined in the scoping for the draft EIS. It is anticipated that it will include, at a minimum, those issues identified in previous AEDs.

Julia Goldin
N6464 1383 St
Prescott, WI. 54021

1

January 21, 1995

Dear Metropolitan Airports Commission,

This letter is to amplify and add to the testimony I gave at the January 18, 1995, public meeting you held in Hastings, MN. concerning the Draft Alternative Environmental Document (hereafter called the Document).

There are times when the Document takes a cavalier tone. An example is the idea on page III-25 (D.3) that bird-aircraft accidents are better mitigated after a new airport is built. It is frightening to think about the inadequacies of the Document's predictive indicators if this is the case. Birds are infinitely more predictable in their flight patterns than are humans. How can there be reasonable projections indicating the need for a new airport into the next century, given the fickle nature of human beings, coupled with the newly emerging Information Highway? Further, why wouldn't every effort be made in advance to determine as carefully as possible every likely outcome for the birds and other species? Doesn't responsible stewardship depend on this effort at a minimum? I wonder, too, how many other mitigation measures will be put off until the airport is built? Will an attitude of letting the chips fall where they may prevail?

With regard to shifting the locus of noise to Dakota county, it is abundantly clear that, at this point in the history of MSP, most Twin Cities' residents protesting the noise were aware of the problem when they bought their homes. Perhaps some struck favorable deals because of it, or have had some mitigation extended. Those of us living in eastern Minnesota or western Wisconsin have not been afforded these options. Many of us chose this life for its quietness and proximity to Nature. I speak for outdoor people for whom addressing *indoor* noise levels doesn't make sense. In addition, since decibel levels are open to interpretation depending on whether they are externally or internally imposed, the chart on page A-4 makes some deceptive comparisons in the decibel range we are told to expect(i.e. conversation, vacuum, air conditioner, etc.). I know firsthand how disturbed the Blue Heron and other river creatures get when I quietly paddle my canoe quite far from them.

With regard to the discouragement of residential growth around a new airport, the idea of shifting the tax burden for essential services to those who remain is sadistic. Rather than look at farmers, citizens and businesses in the impact zone as dispensable, it would be helpful to view them as endangered species requiring the fullest measure of protection. It can never be forgotten that development has enormous potential to devastate lives. It saddens me that this has happened over many years to folks in south Minneapolis. It makes no sense, however, to relocate the damage.

I agree with the idea of the highest usage of land and underscore the danger of sacrificing prime farmland to an inferior and detrimental purpose. It is fantasy to believe that the rural, agricultural and historic river city charm of Hastings and environs will endure if a new airport is built (see suggestion to contrary page III-28, E.3). It takes little imagination to envision these bucolic areas replaced by urban sprawl, a generic *airport city*.

A.

A. As indicated in the AED, the construction of a major new airport is likely to result in unforeseeable changes in bird movements in the surrounding area. It is impossible to predict with precision all of the future behavioral variations birds may exhibit in response to the landscape changes and aircraft activity associated with a major new airport. We disagree that birds are more predictable in their flight patterns than humans. Throughout the site screening and selection processes, the potential for bird aircraft hazards has been evaluated and minimized by scoping out alternatives posing the most potential for conflicts with existing bird concentration areas and flight patterns. By screening out alternatives with higher bird aircraft hazard potential, a considerable amount of mitigation has already been accomplished throughout the environmental review process. Operational mitigation measures have also been identified for the various alternatives that have continued to remain under consideration.

The point has been reached where further reductions in bird aircraft hazard potential will require specific operational adjustments that can only be developed when actual conflicts have arisen. The statement in the AED regarding post-construction mitigation measures is only intended to point out that, should a new airport be built, actual post-construction bird movements should be examined to determine if unforeseen conflicts are arising and to tailor operational mitigation measures accordingly.

Much is made in the Document of the negligible sacrifice of wetlands with all site selections in Dakota county. However, the need to raise any of the sites above the Vermillion River floodplain defies the wetland advantage. It seems pure folly after the graphic misery we witnessed in the flood of 1993. That the Army Corps of Engineers permitted the many human challenges to Nature that boomeranged with such horrendous consequences - all along the Mississippi River and its tributaries - speaks plainly to faulty bureaucratic process.

Which brings me to the essence of my concern about the dual track process itself. Will it answer the question of the real need for a new airport, or function, instead, to help create that need by virtue of the expense and momentum of the study? Will it advance the economic and/or political interests of a destructively powerful few? Will this be a deplorable repetition of destruction of eminently functional or historic sites (for example, the Twin Cities Streetcars, the Metropolitan Building, etc.) and wanton development (the Target Center, Canterbury Downs, the Hudson Dog Track, etc.) which punctuate the history of this area?

Lastly, shouldn't the highly controversial question of the need for a new airport be addressed in utmost detail? As I see it, choosing between the three sites in the Document and the small decisions along the way entrap us further in a mentality that may render a new airport a self-fulfilling prophesy.

Please provide me with comprehensive information to support the projections of need for a new airport. Specifically, please include Northwest Airline's 1993 study - and add it to your next report. Also, please verify that any new site could be rendered flood proof. Are there any unexpected hazards associated with flooding nearby a new airport? Finally, what exactly has been spent so far for the dual track process, to whom has the money been paid - and what are your budget projections?

Please enter this letter into the record. Thank you in advance for your reply.

Sincerely,

Phyllis Goldin

Phyllis Goldin, M.D.
N6464 1323 Street
Prescott, WI 54021

cc: WI State Senator Alice Clausing
WI Governor Tommy Thompson
MN Governor Arnie Carlson
US Senator Paul Wellstone
US Senator Rod Grams

B.

B. The "need" for a new airport has not been established. See Section I.C, page I-1.

HARRISON H. FARLEY, M.D.

6013 Dublin Circle
Minneapolis, Minnesota 55435
(612) 941-1565

30 Jan 95

Dear Sir,

Please put my wife and I down as being against the airport locating in the Cannon Falls area. We are just building here after having to put up with the racket buildup of noise in the Eden area caused by the loud new jets

Sincerely

Harrison Merle Farley

8811 295th St. East
Cannon Falls, Minnesota 55009 921
January 31, 1995

MAC
6040 28th Avenue South
Minneapolis, Minnesota 55450-2799

Dear Sir:

I am very opposed to a new Airport coming into Dakota County. Why do you think we moved to a rural area? Because we want peace and quiet, not noise, air pollution, more traffic, taking of good farm land,(God will not make any more) , socioeconomic, air quality, agriculture affected or eliminated, more deaf people due to the noise. archaeological sites, flood plains destroyed .

For the money they are spenting at our present air port, KEEP IT THERE!

For people who live in the Metro Area, they knew the Airport was there before th moved or brought a place there.

Lock at the mess, they have at the new supposed airport in Denver. What is it costing those people?

PLEASE WE DO WANT A NEW AIRPORT IN DAKOTA COUNTY.

Sincerily,

Eleanor Mc Coy

ELEANOR MC COY

8811 · 295th. St E

Cannon Falls Mn

55009. 9219

Jan. 25, 1995

Metropolitan Airport Commission
6040 28th Ave. S.
Minneapolis, MN 55450

Metropolitan Airport Commission,

I am a concerned citizen writing to pled with you to stop the planning of the new airport site. I live in the rural community outside of Cannon Falls. My life is peaceful and I am blessed to live in such a wonderful place. I fear urban expansion and the crime, crowds, and pollution that it ultimately brings with it. The idea of a new airport scares me to death! If I had wanted to live by the noise and confusion I would have moved there, but instead I have chosen to live outside the metro area. Now my lifestyle and home are hanging by a thread. You have the ultimate control over many lives.

I have read the environmental report prepared for the MAC listing the following concerns and problems: 1) archaeological sites 2) biotic communities 3) Bird-aircraft hazards 4) farmland 5) floodplain 6) noise 7) socioeconomic 8) transportation 9) water resources. I hope you are very aware of all of these concerns and their great impact. The cost alone (5 billion dollars) should have stopped this project. I hope that the situation in Denver stays foremost in peoples' minds. How are we to fund this enormous project in this time of cutbacks and deficits? The noise is another issue that I am very concerned with. The estimated number of arrivals less then 2,000 feet in the Cannon Falls to Vasa area is 127 per day, and heavy on the Vasa end (where I live) because of proposed flight plans. And these are only two of the nine concerns that I have mentioned.

I attended a public hearing at the Hastings Sr. High on Jan. 18. We were represented by such people as Dennis Orment, Mike Osskopp, Steve Murphy, Jerry Dempsey, Gil Gutknecht and other elected officials who all spoke against the new airport relocation. Even Northwest Airlines sent a letter in opposition to the remote runways. Of all the people who spoke that night, even those from Minneapolis and St. Paul, <u>not one</u> was in favor of the new airport site! So way is this still being pursued?

I urge you to listen to the people of this state. Your decision will weigh heavily on millions of people and I truly feel there is much more to be lost with a new airport site than what could be gained. <u>PLEASE YOU MUST STOP THIS NOW!</u>

Concerned Citizen,
Jennifer Sande
Rt. 2 Box 31A
Cannon Falls, MN 55009

Jan. 25, 1995

Metropolitan Airport Commission
6040 28th Ave. S.
Minneapolis, MN 55450

Metropolitan Airport Commission,

I am a concerned citizen writing to pled with you to stop the planning of the new airport site. I live in the rural community outside of Cannon Falls. My life is peaceful and I am blessed to live in such a wonderful place. I fear urban expansion and the crime, crowds, and pollution that it ultimately brings with it. The idea of a new airport scares me to death! If I had wanted to live by the noise and confusion I would have moved there, but instead I have chosen to live outside the metro area. Now my lifestyle and home are hanging by a thread. You have the ultimate control over many lives.

I have read the environmental report prepared for the MAC listing the following concerns and problems: 1) archaeological sites 2) biotic communities 3) Bird-aircraft haxards 4) farmland 5) floodplain 6) noise 7) socioeconomic 8) transportation 9) water resources. I hope you are very aware of all of these concerns and their great impact. The cost alone (5 billion dollars) should have stopped this project. I hope that the situation in Denver stays foremost in peoples' minds. How are we to fund this enormous project in this time of cutbacks and deficits? The noise is another issue that I am very concerned with. The estimated number of arrivals less then 2,000 feet in the Cannon Falls to Vasa area is 127 per day, and heavy on the Vasa end (where I live) because of proposed flight plans. And these are only two of the nine concerns that I have mentioned.

I attended a public hearing at the Hastings Sr. High on Jan. 18. We were represented by such people as Dennis Orment, Mike Osskopp, Steve Murphy, Jerry Dempsey, Gil Gutknecht and other elected officials who all spoke against the new airport relocation. Even Northwest Airlines sent a letter in opposition to the remote runways. Of all the people who spoke that night, even those from Minneapolis and St. Paul, <u>not one</u> was in favor of the new airport site! So way is this still being pursued?

I urge you to listen to the people of this state. Your decision will weigh heavily on millions of people and I truly feel there is much more to be lost with a new airport site than what could be gained. <u>PLEASE YOU MUST STOP THIS NOW!</u>

Concerned Citizen,

Scott Sandi
Rt. 2 Box 51A
Cannon Falls, MN 55009

February 1, 1995

Metropolitan Airport Commission
6040 28th Avenue South
Minneapolis, MN 55450-2799

Re: New Dakota County Airport

Gentlemen:

I am strongly opposed to the construction of a new airport in the Dakota County area. The destruction of excellent farmland, communities, lifestyles, etc., do not warrant this type of project.

The airport cost of $5. Billion dollars do not include the needed improvements of highways, rerouting and widening, nor the replacement of the Hastings two-lane Highway 61 bridge.

Home property values will drop in the Cannon Falls-Vasa-Red Wing corridor. Agriculture will be severely affected or eliminated. Finally, urban sprawl will destroy our rural and small-town life.

I did not move to beautiful Red Wing in order to be under an airport corridor nor to become a bedroom community nor a resident of the fast food structure. If amazes me that this project is going forward in face of the extreme amount of opposition, including opposition from the Chambers of Commerce representing the current airport district who do not want the airport to move.

Leave the current airport where it is and upgrade it as necessary. As a taxpayer and as a resident of one of the most beautiful & tranquil communities in Minnesota, I do not want to finance a "white elephant" that will destroy my "our" quality of life.

Sincerely,

Joan M. Gray
520 Court Street
Prescott, WI 54021
(715) 262-5992

February 1, 1995

Metropolitan Airport Commission
6040 28th Avenue South
Minneapolis, MN 55450-2799

Re: New Dakota County Airport

Gentlemen:

I am strongly opposed to the construction of a new airport in the Dakota County area. The destruction of excellent farmland, communities, lifestyles, etc., do not warrant this type of project.

The airport cost of $5. Billion dollars do not include the needed improvements of highways, rerouting and widening, nor the replacement of the Hastings two-lane Highway 61 bridge.

Home property values will drop in the Cannon Falls-Vasa-Red Wing corridor. Agriculture will be severely affected or eliminated. Finally, urban sprawl will destroy our rural and small-town life.

I did not move to beautiful Red Wing in order to be under an airport corridor nor to become a bedroom community nor a resident of the fast food structure. If amazes me that this project is going forward in face of the extreme amount of opposition, including opposition from the Chambers of Commerce representing the current airport district who do not want the airport to move.

Leave the current airport where it is and upgrade it as necessary. As a taxpayer and as a resident of one of the most beautiful & tranquil communities in Minnesota, I do not want to finance a "white elephant" that will destroy my "our" quality of life.

Sincerely,

Kon Schiemann
1709 Woodland Drive
Red Wing, MN 55066
(612) 388-9723

Jan. 30, 1995

Metropolitan Airport Commission
6040 28th Ave. South
Minneapolis, Mn. 55450-2799

Dear Chairperson;

This letter is in regards to your recommending to the legislature a site for a new airport. We are firmly against a new airport. We do not feel there is the need or the expense of a new airport. There is continued improvements on the present one that is an expense to taxpayers now and what would happen to all these improvements with a new airport.

The present airport has the roads, the hotels, the parking plus the close park and fly areas. This would be added expense in constructing a new airport.

Our biggest concern is the construction on the prime agricultural land in Dakota County. We hate to see building, roads, and runways on productive farm land. It may be just land to you but it is potential food for the world.

We have watched and read for more than a year the cost and building of a new Denver Airport and what a fiasco that became. The airport alone is a pricey expense, then add in the cost of new highways, which we understood were left gravel as they did not have money for hard surfaced highways.

We do not want the noise, the taxes, the influx of people or more state problems. Why do we need new all the time? Can we not improve what we have? If there is a need for more space, buy the houses around present airport which would be less expensive. Minnesotans are paying enough tax now.

One final thought brings to mind a trip and tour of Houston Space Center. We attended a program where the speaker said they were trying to develop a plane that would take off like a helicopter then fly like a plane. This would save space and fuel.

Thank you for your attention

Sincerely,

Wallace and Carolyn Gardiner
13470 Hwy 19 Blvd.
Welch, Mn. 55089-4449

Dear Sirs -

We are opposed to the airport moving into our area. It would take up prime farmland not to mention the noise & air pollution. Especially I am opposed to it because our area would no longer be a rural area. Our lifestyles & our choices are being taken away.

Sincerely

Bob & Marian Beisel

Jan 27, 1995

MAC:

We are opposed to the possibility of a new airport in Southeastern Dakota County. As residents of Vasa, we feel it would lower our home value, decrease our living conditions because of noise and air pollution and would use valuable farm land.

We strongly urge you to listen to our concerns and recommend to the legislature to NOT build a new airport in southeastern Dakota county.

Sincerely-
Kim and Jean Faust
30783 City 7 Blvd - family
Welch, MN 55089

January 27, 1995

Metropolitan Airport Commission
6040 28th Av. So.
Minneapolis, MN 55450-2799

Gentlemen:

As residents of Vasa Twp. (between Cannon Falls and Red Wing)we object vehemently to even the thought of putting an airport in Southeastern Dakota County. The noise polution would be unbearable, the air pollution would be sickening and the cost would be exorbitant. It would take up thousands of acres of good, productive farmland. It would disrupt wildlife in the area, including many flights of geese in the paths of on-coming aircraft.

The cost for this airport has been put at $5 billion. That is not the bottom line when you consider having to improve highways and the possible replacement of the Highway 61 bridge in Hastings. This, of course, would be the responsibility of Minnesota taxpayers.

There really is no need for a new airport anywhere. We went through this a few years ago when someone got the idea one should be built north of the cities around the Carlos Avery Game Refuge.

Please listen to the general public and reject this plan.

Sincerely,

Gene & Billie Stinar

Gene and Billie Stinar
12545 Wild Turkey Rd.
Welch, MN 55089-4437

Cannon Falls, Mn.
Jan. 26, 1995

Metropolitan airport Commission,

We are not in favor of moving the airport, anywhere and especially not into Dakota County. Taking all that good farm land, for one thing is a big mistake. We are a rural area and want to keep it this way. Even now, in Cannon Falls, the planes are noisy for us. Why are constructions going on at the present airport now? Just moving after spending these improvements is a waste of money. Seems if more land is needed at the present airport would be cheaper than moving it.

Sincerely
Glen & Lathe Robinson
416 N Front
Cannon Falls, Mn. 55009

January 27, 1995
Hampton, Minnesota

Metropolitan Airport Commission
6040 - 28Th Avenue South
Minneapolis, Minnesota 55450-2799

Dear members of the MAC;

Where is your logic!?

If there is a justified need to construct a new airport in Minnesota, it appears to be completely unknown to the citizens and leaders who have addressed this issue. I have heard nothing *positive* about the possibility of constructing a new airport in Minnesota, which would be primarily for commercial, airline traffic. All I hear are the bad points. From this limited information, it is my opinion that the desire to construct a new airport is highly illogical!

If there is a need, and it is *valid*, then get the word out to the public!

Please consider the alternatives to the "need to expand" Minnesota's airline capacity:
(1) Make use of the room at the present MSP airport. (Look at the MSP layout plan.)
(2) Consider the fact that as technology advances, the "noisy jets" simply will not be as noisy.
(3) The purchase of the land in the "impact area" (of the noise) could be purchased at a far lower overall cost than would be involved by constructing a new airport.
(4) Consider the impact of a relocated airport on the small industries now dependent on the business generated by the present airport.
(5) Consider the impact of a relocated airport on the large industries (NWA, etc.) presently at MSP.
(6) Consider the impact on the proposed area: The destruction of the "rural setting", the destruction of the prime farm land, the impact of a new airport on the water table, wildlife, etc., etc.....

To recap, I (and all too many others) do not see the logic in the construction of a new airport in Dakota County. Please do not continue wasting our (taxpayer's) money and your efforts on this matter!

I am sorry to have to vent my anger on this matter, but until I am informed of a positive alternative viewpoint, my only *logical* alternative is to allow my viewpoint to remain as it is.

Sincerely,

Mike

Mike Schwendeman
5035 - 250Th Street East
Hampton, Minnesota 55031

(507) 263-3801 (Voice)
(507) 263-4104 (FAX)
mikeats3@aol.com (Internet)
Mike at S3 (America On Line)

June 28, 1995

Airports Commission,

I would like to comment on your plans for a new airport in Dakota County. I don't understand why you want to move instead of buying some of the houses near your present airport and expand there. If these companies keep buying valuable farm land I wonder when our food supply is going to come from, because one of these days there won't going to be enough farms to supply all the people. I believe it is time to stop and think about all of the damage that will be done.

Bernadine Francis
29659 Vasa Trail
Welch, Mn. 55089-4512

NO NEW AIRPORT !!

COME TO CANNON FALLS AND SEE & HEAR WHY !!

ROGER GESME
AREA RESIDENT

1-31-95

Metropolitan Airport Commission:
A school teacher, whom I went to school with and her husband, recently attended your public hearing at Hastings High School. She wrote an editorial in our Cannon Falls Beacon which made me feel I had to respond.
I will soon be 49 yrs. old and have lived in the area all my life. I was from south of town, the oldest daughter of a small dairy farmers. I consider myself lucky to have gone to a 1 room schoolhouse for 2 yrs. & have a team of horses with buckboard & sleigh until I was 10 yrs. old. I still feel like these were the very best years to live in the much simpler ways of life, even though we were very poor.
I apprenticed and become a legal secretary after high school. I had been a straight "A" student all through school so 1 room and consolidated schools didn't seem to effect quality of education. Five years later I married a classmate, who was also a dairy farmer's son. We raised our children on a five acre farm. Until the kids were in school, I stayed home to raise them and my husband was a logger. So I am very familiar with the "old ways." We bought my grandparents retirement (from farming) home in Cannon Falls in 1980. My grandmother lived with us 2 yrs. and lived to be over 100 yrs. so we all learned very much of the pioneer ways and how to appreciate the land the same way as our Native Americans.

For 15 yrs. I worked as a cook or janitor, usually at jobs involving children, as our next generations are very important to me. I am a full-blood Swede and heritage is extremely important to our families.
After 20 yrs. in 1990 my 1st husband left me and I was on my own with 2 grown children to try to help a son in college and a daughter and son-in-law living with me and their new baby. I am still still babysitting my 2 grandsons until this fall. My son, after 2½ yrs. college made 3rd top job at Madison, WI Public TV Ch. 12. My daughter is divorced this year after 5 yrs. and beginning a new life. She and her fiancee are cabinet builders. So with very hard work, some Welfare + Food Shelf help, we all made it through very tough times.
I feel now like I have seen all types of hardship in half my lifetime. I was very lucky to have a new husband come along a couple years ago and kind of adopt me and my whole family. He had never been married so this was quite an undertaking. We are both very interested in antiques, Native Americans, and the "old ways" of living.
His family built the very 1st sod home in the area in 1980. It is huge and very beautiful and also right in the area of your proposed new airport. However, this has nothing to do with our extreme objections to your project.

Both my husband and I firmly believe if you build this airport, you will destroy farms, families, heritages, generations, and a very quality and healthy way of life for hundreds of people. Maybe most of you have never even known about our way of life which you cannot know unless you've lived it. Besides, the people destroyed, we also believe you will destroy our water, air, land and animal balance with nature that we have - not to mention the terrible noise pollution involved even to us who live in Cannon Falls.
Please also consider where your center of travellers lies, mostly in the Twin Cities, and the extreme cost of relocating. We believe the minuses far outweigh the pluses of your moving rather than finding ways to simplify or add on to your present location.

Sincerely,
Mrs. Diane K. Oerke

Diane Oerke
221 Minnesota St E
Cannon Falls MN 55009

Dear Jenn Unruh Jan 30

I have read the document that has been prepared for the Environmental study and it is still the same old story it tells us nothing that we didn't know a long time ago. I have a stack of study documents that I can't see over any more & to me it was a waste of our tax dollars. I have attended a lot of airport meetings and after the third meeting I knew that the final site was going to be in Dakota county So. of Hastings it didn't take two years & thousands of dollars to figure that out. I would like to know how much money all these studys have cost the tax payers of Minn. you have picked the site so I was of the opinion your work was finished. Why don't the Legislators put a stop to this whole process?

It is this is where your point highlights the paradox agencies that fulfill their missions are no longer needed so in order to keep their jobs these folks never seem to finish making studies, but of course saving tax payer money is not the primary goal of a government agency. Even spending it wisely is not a primary goal although it may be secondary. the intent is to spend tax dollars for a political goal and if an agency hits that target it fulfills its mission.

The state Chamber of commerce opposes the relocation of the airport Seventy percent statewide & 77 percent in the metro area oppose the relocation. Maine twp officers oppose the relocation farmland trust & stewardship project found out preserving farm land makes economic sense. Why & the hell doesn't your people listen. There is one place we can make you people listen & that is

the ballot box people are getting pretty fed up on the whole thing. I think you should realize by this time that you cannot afford to move this airport. The idea of moving the runway has got to be the most stupid thing you could think of. The whole idea of moving the Airport contradicts the met Councils own ag preserve act and would not make good economic sense. There is one solution to the whole thing we have to start electing people that use good Common sense again. I could go on & on but you wouldn't read it anyway.

Yours truly

Greg Wellnering
10325 E 205th St
Hastings Minn 55033-5319

P.S.
Washington heard us I hope the state wakes up too

Tue - Jan 27

MAC -

Seventeen years ago my husband and I found our "dream home" - an old farmstead in Southern Dakota County. He taught our daughters the skills of rural living. They learned how to gather eggs, pluck and butcher chickens, plant gardens, shear sheep, gather goose eggs in the spring, shovel snow off a long gravel driveway, set fence posts, string wire, bring in wood in order to keep a wood fire going all winter. They learned how to fly kites, recognize poison ivy while picking wild blackberries and chokecherries. In the summer they slept outside on hot nights so they could see the stars, in winter they saw brilliant moonlight on a snow landscape. They heard pheasants crow, watched goldfinches drink out of the stock tank and heard coyotes yelping.

They learned the basics of rural living.

We didn't spend money on expensive projects - there would be plenty of time for that after the girls graduated (debt free) from University.

They went on to higher education and we started making plans. Plans that include building a greenhouse, landscaping, establishing stands of varieties of trees, raising pheasants for release, building a small business.

Seventeen years ago we had no inkling that our way of life, the lifestyle we hoped to pass on to our grandchildren would be threatened by an unknown, unseen group of people.

(the wind must be right this evening - I can hear planes flying overhead and I'm now 40 mi from the airport — it will be unbearable if the end of a runway is constructed a few miles straight north.)

It is not a good feeling waiting for three same people with the power to decide to build an new airport and destroy a way life, to determine my families future. Multiply our situation by the thousands and you have the real cost of building a new airport.

Sincerely,

Kathleen Hoffert
9890 250th St E
Hampton, MN 55031

Comment to please include in the record:

Dear Editor:

Ignorance is not bliss! Do you know of the plans by the Metropolitan Airport Commission to build a large new airport in southeastern Dakota County? The MAC will make a decision in April regarding their recommendation to the legislature in July of 1996.

Do you want to have a say in this? You can comment by letter to the MAC at 6040 28th AVE S; Minneapolis MN; 55450-2799. Your letter must reach them by Feb. 3. Beyond that date, write to your legislator!

A public hearing was held at Hastings Sr. High School on Wednesday, January 18. We were well represented by such people as Dennis Ozment, Mike Osskopp, Steve Murphy, Jerry Dempsey, Gil Gutknecht, and elected representatives of western Wisconsin who all spoke emphatically against the idea or sent a representative to speak for them. Even Northwest Airlines sent a letter in opposition to an idea called remote runways. About 20 people spoke, and not one was in favor, not even the ones from St. Paul and Minneapolis!

Why should we care? The environmental report prepared for the MAC listed these concerns/problems/impacts:

1. archeological sites
2. biotic communities
3. bird-aircraft hazards
4. farmland
5. floodplain
6. noise
7. socioeconomic
8. transportation
9. water resources

I would add air quality. Complete copies of their study are available for viewing at the Red Wing Public Library and several places in Dakota County.

Why should we care? Our tax dollars are being spent on this whole process! The impact on the Cannon Falls to Vasa area would be great; in my opinion mostly in the areas of socioeconomic, noise, and air quality.

First, socioeconomic. This airport will cost $5 billion (their figure), and we all know it will be more. Highways must be improved, rerouted, and widened. This figure does not include replacement of the Hastings 2 lane Hwy. 61 bridge, which was not mentioned in the report. Minnesota taxpayers will foot the bill! Property values for homes in the Cannon Falls to Vasa corridor will drop. Who would buy a home or build one in or near a major airport runway approach? Agriculture in southern Dakota County will be severely affected or eliminated. Commercial development would be a sure thing in the Cannon Falls area. Urban sprawl will destroy our rural and small town way of life.

Second, noise. The estimated number of arrivals less than 2,000 feet in the Cannon Falls to Vasa area is 127 per day, heavy on the Vasa end because of the proposed flight paths. Daily departures would be 64 of less than 5,000 feet. There would be 55 departures over the Welch area. Arrivals over the Vasa area would also affect nearby Welch. Cannon Falls and Vasa are 9 miles from the end of the runway. The northeast corner of Welch Township is three miles from the end of the runway. Estimates of noise levels at Cannon Falls High School are 40 DNL (vacuum cleaner noise) on the average with 87 SEL (peak sound exposure level). That's motorcycle noise, nearly 200 times a day! A level of 75 was found annoying, highly annoying, or seriously annoying by 90% of those surveyed in an FAA study. Noise is not good for humans and other living things such as wildlife and farm animals.

Third, air quality. This was not given a lot of attention in the study, but there will certainly be smell from the airplanes themselves as well as car exhaust from increased traffic to the area.

All 9 of the concerns are explained in great detail in the study, but in the interest of brevity I only comment on the above 3 in this letter. Let me just say that if you read the whole report, you would be shocked!

Let's not be apathetic about this! As long as the process (steamroller) continues, it's costing us money, and is a new airport really needed? The legislature could halt the project at any time.

Speak up! If this project becomes reality, there's no turning back. If we remain silent, someone else will make the decision for us, and we'll deserve what we get.

Sincerely,

Roslyn Hjermstad

Roslyn Hjermstad
Resident, Cannon Falls Area

30830 Woodhaven Trail
Cannon Falls MN 55009-4112
ph 612-258-4526

Dear Jenn Unruh Jan 30

I have read the document that has been prepared for the Environmental study and it is still the same old story it tells us nothing that we didn't know a long time ago. I have a stack of stu documents that I can't see over any mo & to me it was a waste of our tax dollars. I have attended a lot of airport meetings and after the third meeting I knew that the final site was going to be in Dakota county So. of Dak it didn't take two years & thousands dollars to figure that out. I would li to know how much money all these studys have cost the tax payers of Minn. you have failed the site so I was of the opinion your work wa finished. Why can't the Legislators in

put a stop to this whole process?
...t this is where your point highlights:
paradox Agencies that fulfill their miss.
are no longer needed so in order to ke
their jobs these folks never seem to
finish making studies, but of course
tax payer money is not the primary goal
of a government agency. Even spending it wis
is not a primary goal although it may be
secondary. the intent is to spend tax dol
for a political goal and if an agency h
that target it fulfills its mission.

the state Chamber of Commerce agrees
relocation of the airport Seventy percent of state
77 percent in the metro area oppose the
relocation Mine twp officers oppose the
relocation farmland trust & stewardship
project found out preserving farm land mak
economic sense. Why & the hell don't you
people listen. There is one place we
can make you people listen & that is

the ballot boy people are getting pretty fed up on the whole thing. I think you should realize by this time that you cannot afford to move this airport. The idea of moving the runways has got to be the most stupid thing you could think of. The whole idea of moving the Airport contradicts the met Councils own ag preserve act and would not mak good economic sense. There is one solution to this whole thing we have to start electing people that use good common sense again. I could go on & on but you wouldn't read it anyway.

Yours truly

Greg Wollmering
10325 E 205th St
Hastings, Minn 55033-931,

P.S.
Washington heard us I hope the state wakes up too

From John Hecimovich
N6440 1327 ST
Prescott, Wi 54021

To Metropolitan Airport Commission
6040 28th Ave S
Minneapolis, Mn 55450-2799

Dear Staff,

Over the past 10 years around the metro area the following economically viable monuments have been constructed: Canterbury Downs Race Track, Hudson Wi Greyhound Racing Track, Target Center. To maintain this trend it is therefore imparative that the construction of the new airport in Dakota Co. take place.

Proceeding with all hast would only prove P.T. Barnum correct

John Hecimovich

cc Wi Gov. Tommy Thompson.
State Capital, Madison Wi.
Wi State Senator, Alice Clausing
PO Box 7882, Madison. Wi. 53707-7882

Barbara Glidden
N6440 1323 Street
Prescott, WI 54021

January 29, 1995

Metropolitan Airport Commission
6040 28th Ave. S.
Minneapolis, MN 55450-2799

Dear MAC,

I recently attended the hearing in Hastings on January 18 and was again in tandem with all the views expressed by those who testified so eloquently. The first speaker summed up our feelings so well - we are being held hostage patiently waiting for this process to come to an end. Your commission is indeed focused on the microinspection of endless details without addressing what should be the most important issue: Is there any need for a new airport? This should take precedence over any other question yet it still appears to be unanswered.

My thoughts to you were best summed up by the elderly woman wearing bib overalls:

We don't want it. We don't need it. And we can't afford it.

I urge you all to remember the elderly farmer who stressed the value of our prime farmland - a resource you will never be able to replace once you've destroyed it.

Sincerely,

Barbara Glidden

Barbara Glidden

cc: WI Governor, Tommy Thompson,
State Capitol, Madison, WI
WI State Senator, Alice Clausing
P.O. Box 7882, Madison, WI 53707-7882

1-31-95

Metropolitan Airport Commission:
A school teacher, whom I went to school with and her husband, recently attended your pub. hearing at Hastings High School. She wrote an editorial in our Cannon Falls Beacon which m me feel I had to respond.
I will soon be 49 yrs. old and have lived i the area all my life. I was from south of tow the oldest daughter of a small dairy farmer I consider myself lucky to have gone to a 1 room schoolhouse for 2 yrs. & have a team horses with buckboard + sleigh until I was 1 old. I still feel like these were the very best ye to live in the much simpler way of life, eve though we were very poor.
I apprenticed and became a legal secretary a high school. I had been a straight "A" stude all through school so 1 room and consolidated schools didn't seem to effect quality of educa Five years later I married a classmate, who was also a dairy farmer's son. We raised our children on a five acre farm. Until the kid were in school, I stayed home to raise them and my husband was a logger. So I am ve. familiar with the "old ways." We bought m grandparents retirement (from farming) hom in Cannon Falls in 1980. My grandmother live with us 2 yrs. and lived to be over 100 yrs. so we all learned very much of the pioneer ways and how to appreciate the land the same way as our Native Americans.

For 15 yrs. I worked as a cook or janitor, usually at jobs involving children, as our next generations are very important to me. I am a full-blood Swede and heritage is extremely important to our families.

After 20 yrs. in 1990 my 1st husband left & and I was on my own with 2 grown children try to help a son in college and a daughter and son-in-law living with me and their new baby. I am still still babysitting my 2 gra sons until this fall. My son, after 2½ yrs. college made 3rd top job at Madison, WI Public TV Ch. 12. My daughter so divorced the year after 5 yrs. and beginning a new life. S and her fiancee are cabinet builders. So with very hard work, some Welfare + Food Shelf help we all made it through very tough times. I feel now like I have seen all types of hardsh in half my lifetime. I was very lucky to hav a new husband come along a couple years ag and kind of adopt me and my whole famil He had never been married so this was quite a undertaking. We are both very interested in antiques, Native Americans, and the old way of living.

His family built the very 1st sod home in the area in 1980. It is huge and very beautiful and also right in the area of your propos. new airport. However, this has nothing to do with our extreme objections to your project.

Both my husband and I firmly believe if yo build this airport, you will destroy far. families, heritages, generations, and a very quality and healthy way of life for hundred of people. Maybe most of you have never even known about our way of life which you cannot know unless you've lived it. Besides, the people destroyed, we also believe you will destroy our water, air, land and animal balance with nature that we have — not to mention the terrib noise pollution involved even to us who live in Cannon Falls.

Please also consider where your center of travellers lies, mostly in the Twin Cities, and the extreme cost of relocating. We believe the minuses far outway the pluses of your moving rather than finding ways to simplify or add on to your present location.

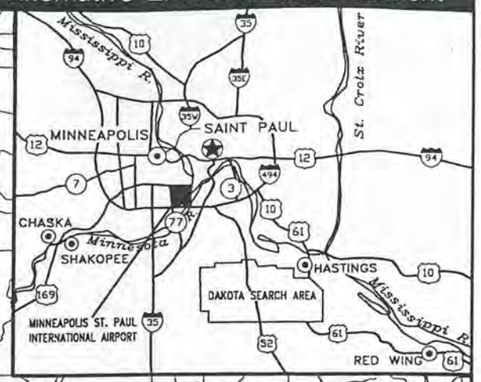
Sincerely,

Mrs. Diane K. Pierke

Diane Pierke
221 Minnesota St E
Cannon Falls MN 55009

APPENDIX C -- FIGURES 1 - 32

Figure No.	Title
1	Project Location
2	Alternatives Under Consideration - Alternative 1
3	Alternatives Under Consideration - Alternative 2
4	Alternatives Under Consideration - Alternative 3
5	Alternative Eliminated - Runway Layout Concepts
6	Alternative Eliminated - Alternative 4
7	Air Quality Receptor and Monitoring Sites
8	Archaeological Properties
9	Historic/Architectural Resources
10	Biotic Communities
11	Potential Bird-Aircraft Hazard Areas
12	Prime Farmland
13	Agricultural Preserves
14	Farmland of Statewide Importance
15	Floodway and Flooding Fringe
16	Land Use
17	Ambient DNL Noise Levels
18	2005 Flight Tracks - Alternative 1
19	2005 Flight Tracks - Alternative 2
20	2005 Flight Tracks - Alternative 3
21	2005 DNL Contours and Noise-Sensitive Land Uses - Alternative 1
22	2005 DNL Contours and Noise-Sensitive Land Uses - Alternative 2
23	2005 DNL Contours and Noise Sensitive Land Uses - Alternative 3
24	2005 L_{10} 65 Contours and Runway Use - Alternative 1
25	2005 L_{10} 65 Contours and Runway Use - Alternative 2
26	2005 L_{10} 65 Contours and Runway Use - Alternative 3
27	Noise Sensitive Points
28	1992 Daily Roadway Traffic
29	2020 Daily Roadway Traffic - No Action
30	Vermillion River Watershed Management Sectors
31	Stormwater Management Facilities
32	Wetlands



BURNSVILLE
ROSEMOUNT
APPLE VALLEY
Denmark
SPRING LAKE
Mississippi River
KOCH REFINERY
U.S.P.C.I. INDUST. WASTE FAC.
CHICAGO & NORTH WESTERN
St. Croix River
PRESCOTT
COATES
Nininger
160Th St E
DAKOTA CO. RESOURCE RECOVERY FACILITY (PROPOSED)
UNIVERSITY OF MINNESOTA
Goodwin Ave.
Vermillion River
HASTINGS
Mississippi River
Vermillion
180Th St.
Empire
Blaine Ave.
Ravenna
LAKEVILLE
FARMINGTON
CHICAGO & NORTH WESTERN
ST. PAUL & PACIFIC
Vermillion River
200Th St E
VERMI
220Th St E
Dakota Co.
Goodhue Co.
Wisconsin
Minnesota
MINNEAPOLIS NORTHFIELD & SOUTHERN
CHICAGO, MILWAUKEE
South Branch
Vermillion River
HAMPTON
MIESVILLE
NEW TRIER
Eureka
Castle Rock
SEARCH AREA BOUNDARY
Hampton
Douglas
Welch
WELCH
SWOLD
CASTLE ROCK
RANDOLPH
Randolph
CANNON FALLS
Cannon River
RED WING
Greenvale
Waterford
CHICAGO, MILWAUKEE & NORTH WESTERN TRANS. CO.
Cannon River
Vasa
Cannon Falls
Scioto

Airport Alternative 1
Airport Alternative 2
Airport Alternative 3
Airport Alternatives 1 & 2
Search Area Boundary

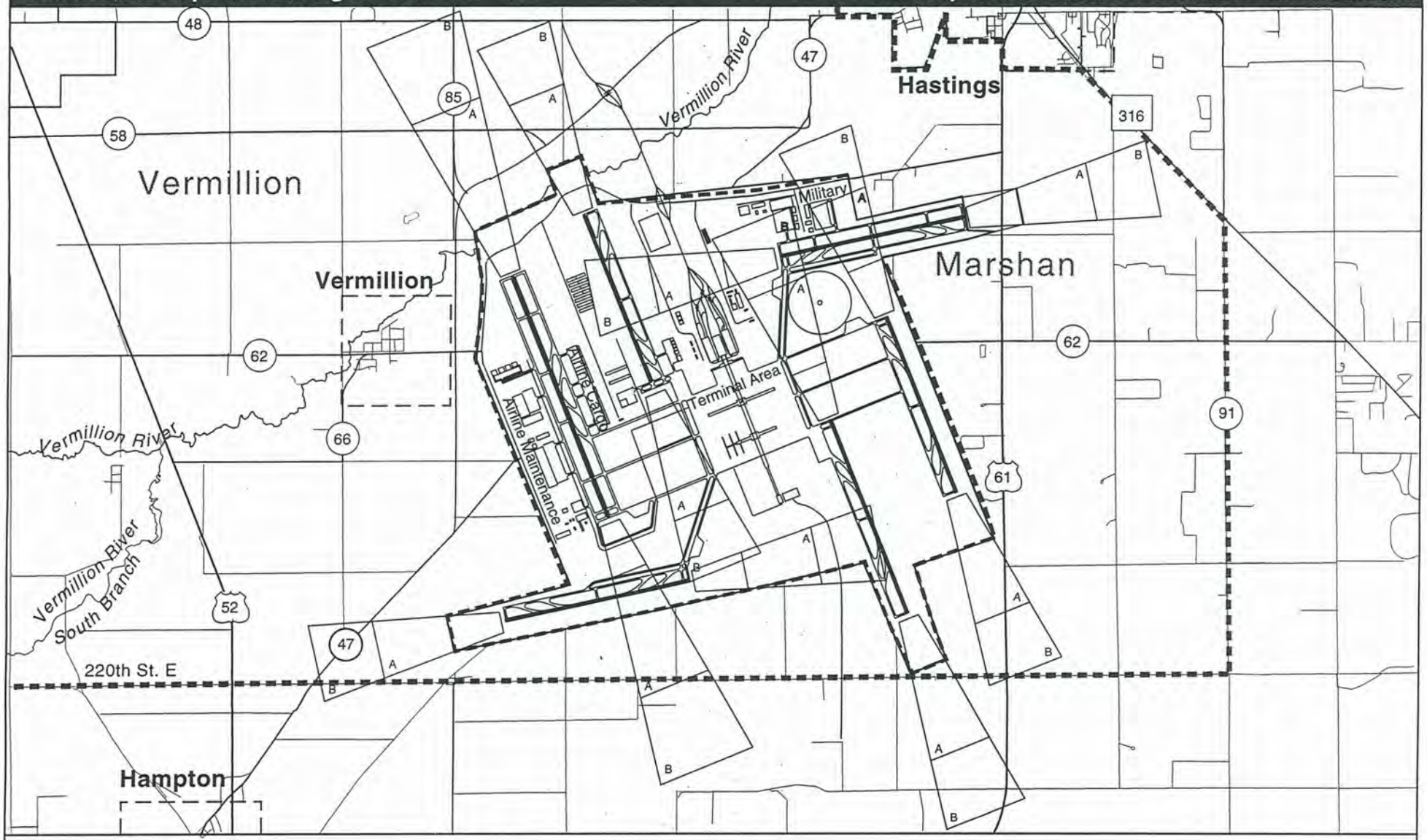
0 1 2
Scale in Miles

N

HNTB

Figure 1

Project Location



HNTB

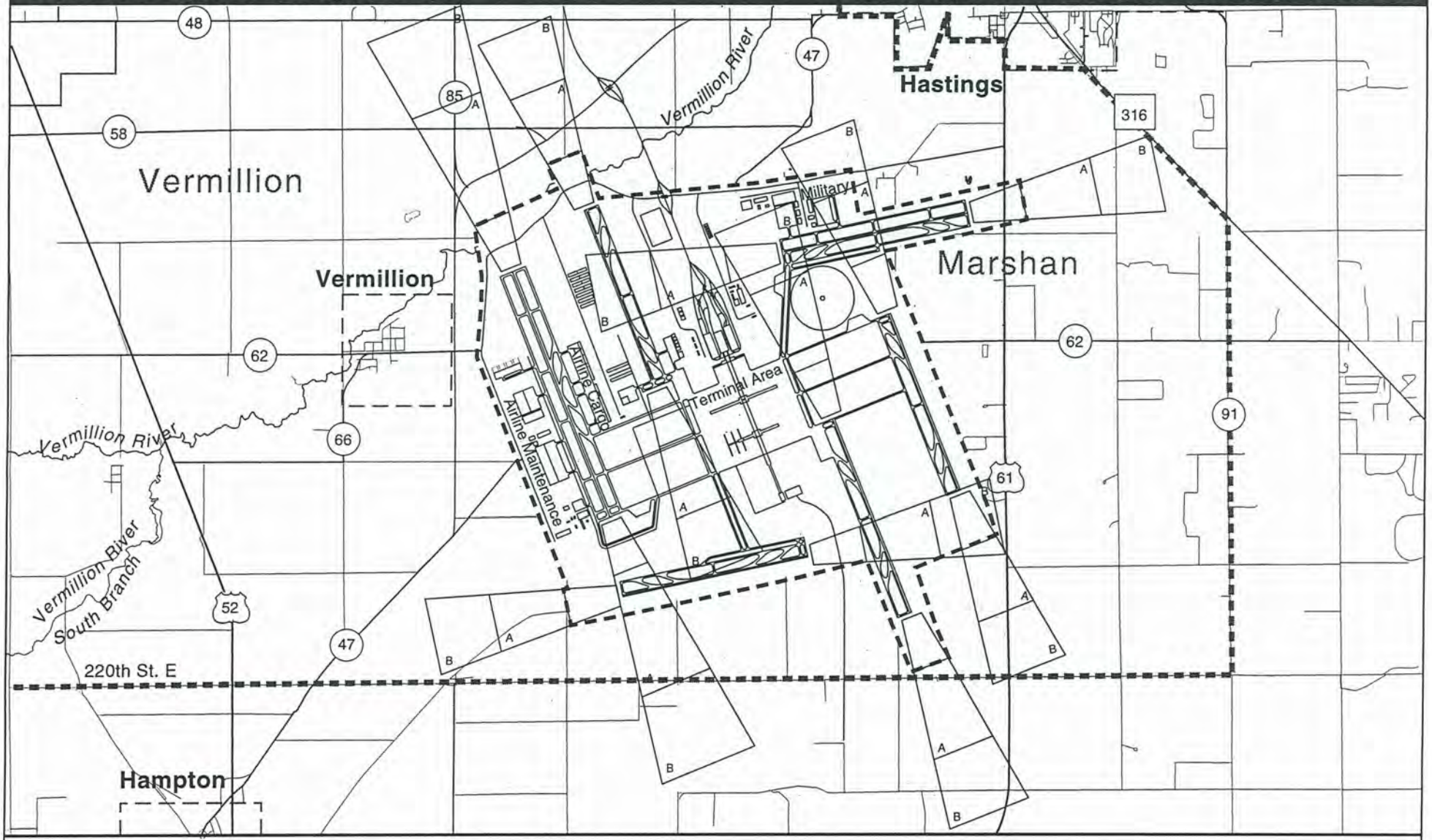
MAC Minneapolis Saint Paul Metropolitan Airports Commission

Figure 2

Alternatives Under Consideration - Alternative 1

Dual Track Airport Planning Process

New Airport Alternative Environmental Document



Search Area Boundary

0 1 2 3 4 5
Thousands of Feet

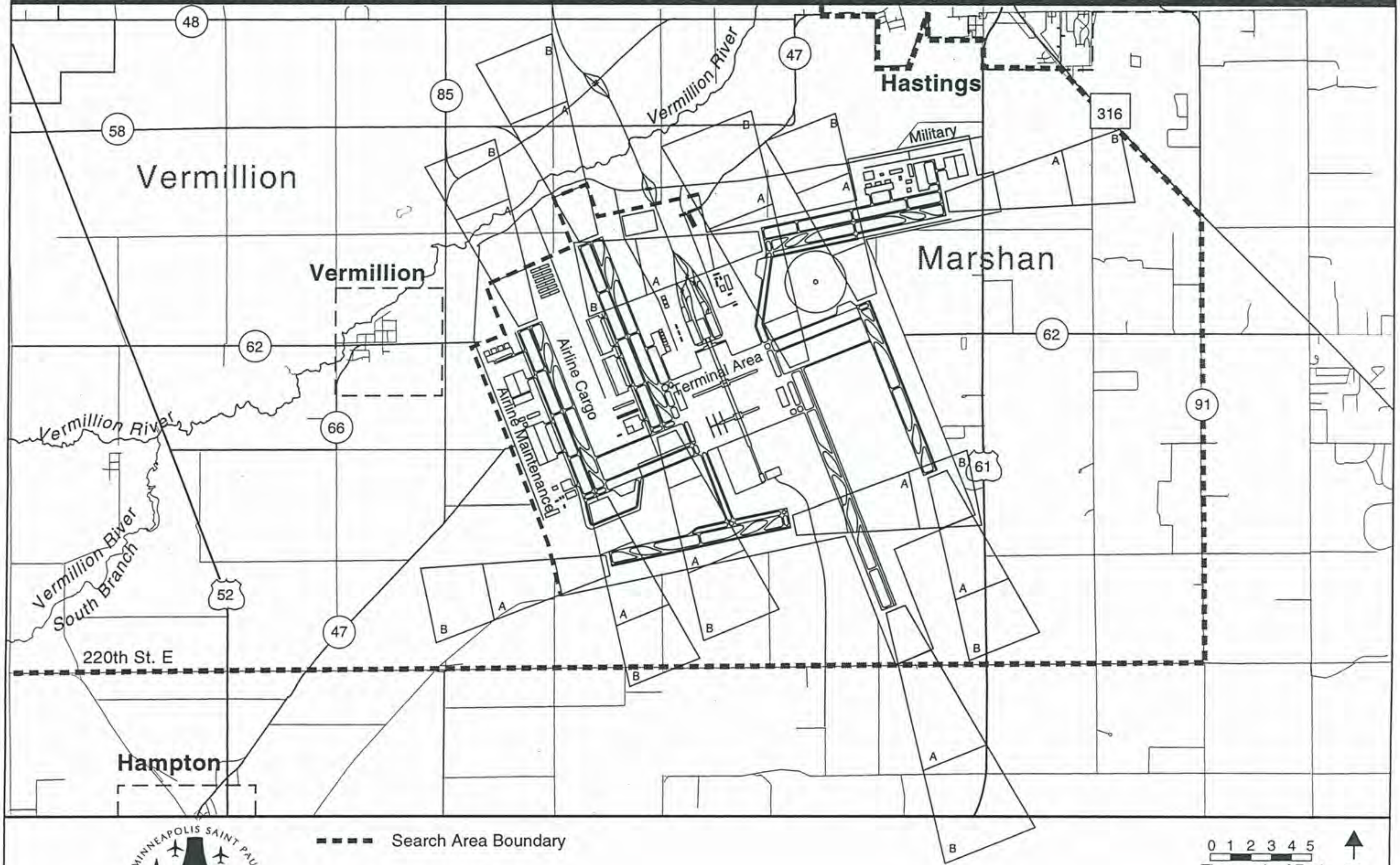
N

HNTB

MAC Minneapolis Saint Paul Metropolitan Airports Commission

Figure 3

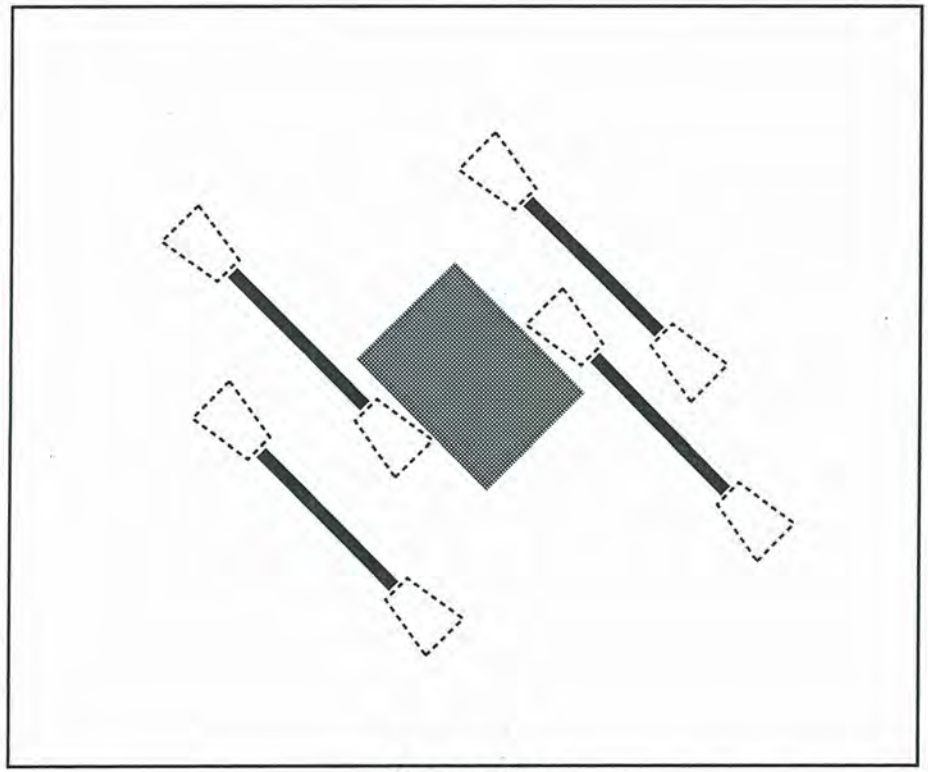
Alternatives Under Consideration - Alternative 2



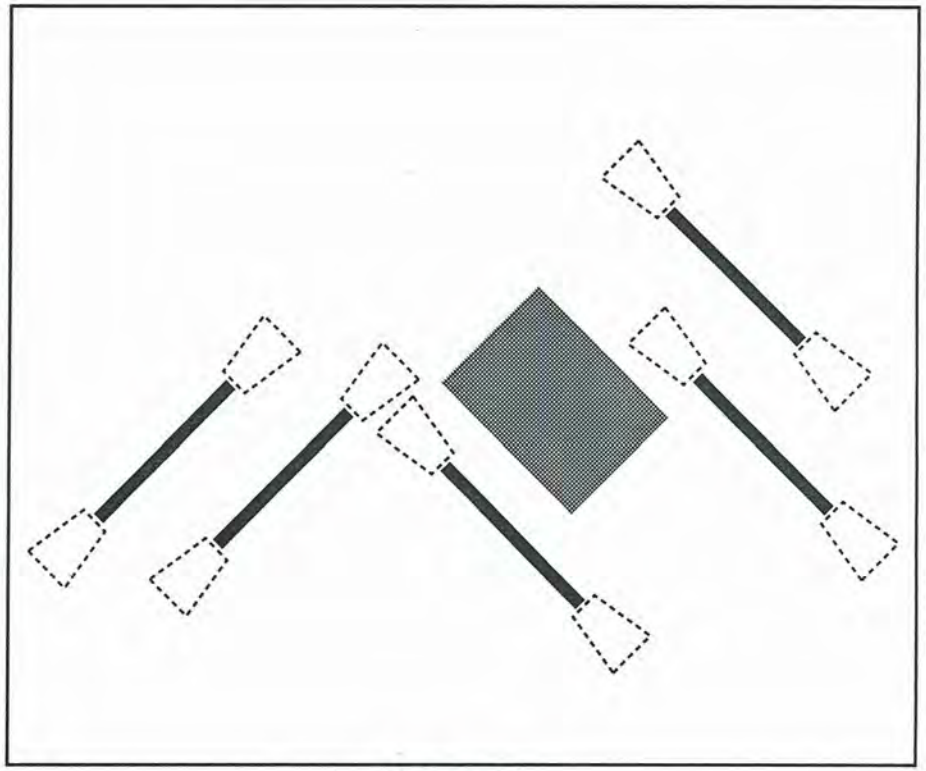
HNTB

Figure 4

Alternatives Under Consideration - Alternative 3



Concept P



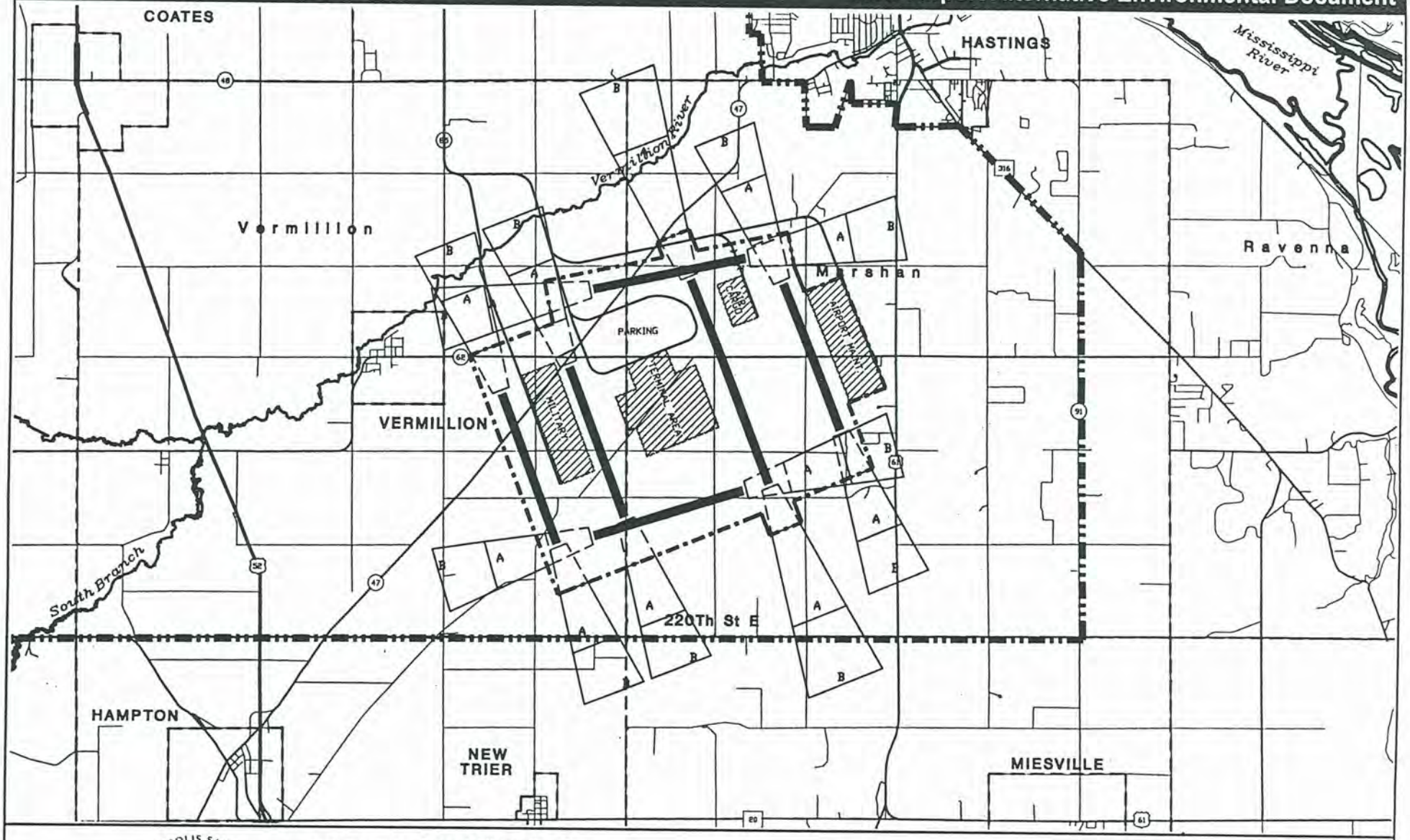
Concept L

Not to Scale

HNTB

Figure 5

Alternatives Eliminated - Runway Layout Concepts

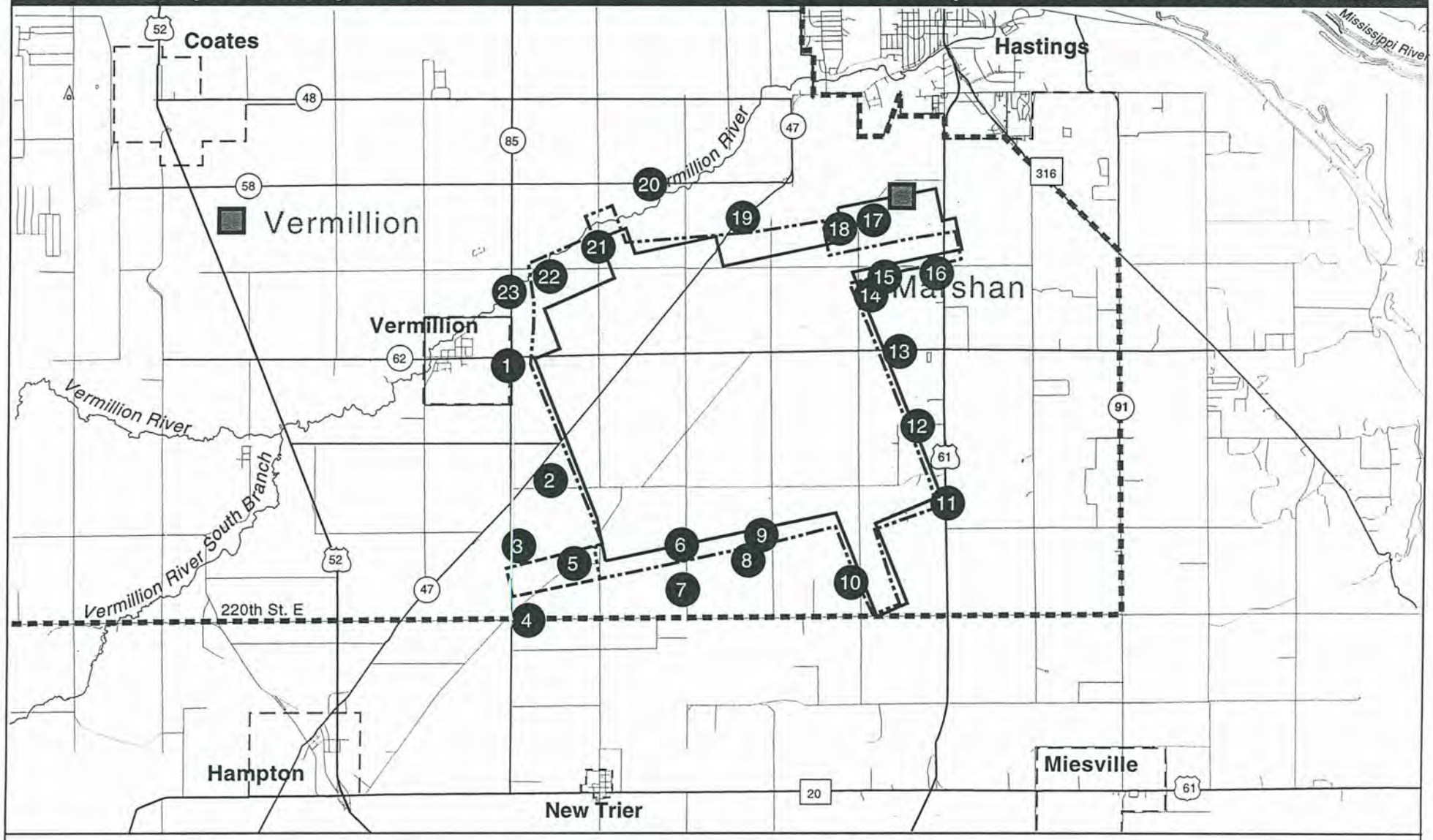


HNTB

MAC Minneapolis Saint Paul Metropolitan Airports Commission

Figure 6

Alternatives Eliminated - Alternative 4



HNTB

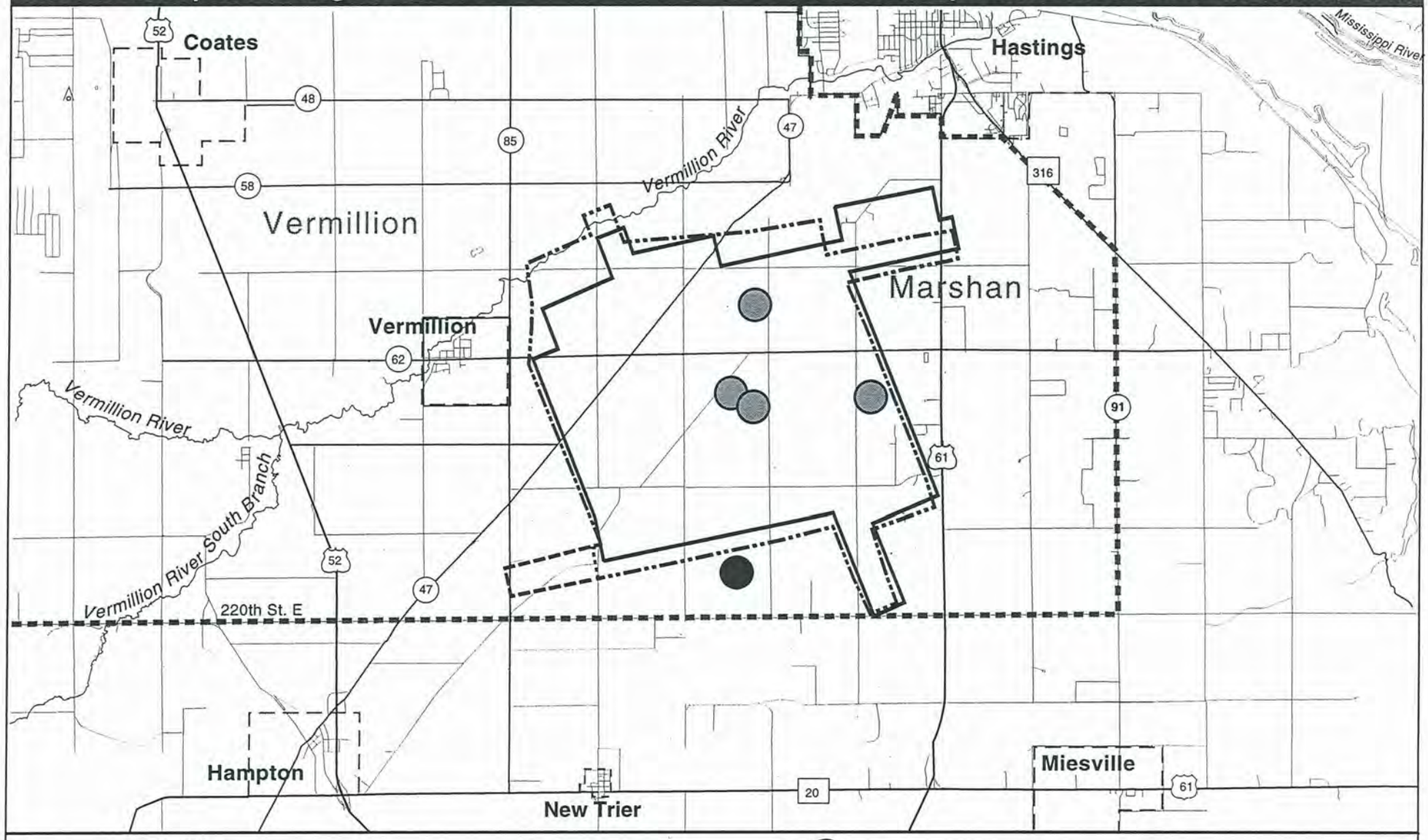
MAC Minneapolis Saint Paul Metropolitan Airports Commission

Figure 7

Air Quality Receptor and Monitoring Sites

Dual Track Airport Planning Process

New Airport Alternative Environmental Document



Airport Alternative 1

Airport Alternative 2

Airport Alternative 3

Airport Alternatives 1 & 2

Search Area Boundary

Property Eligible for the National Register

Property Potentially Eligible for the National Register

0 .5 1

Scale in Miles

N

HNTB

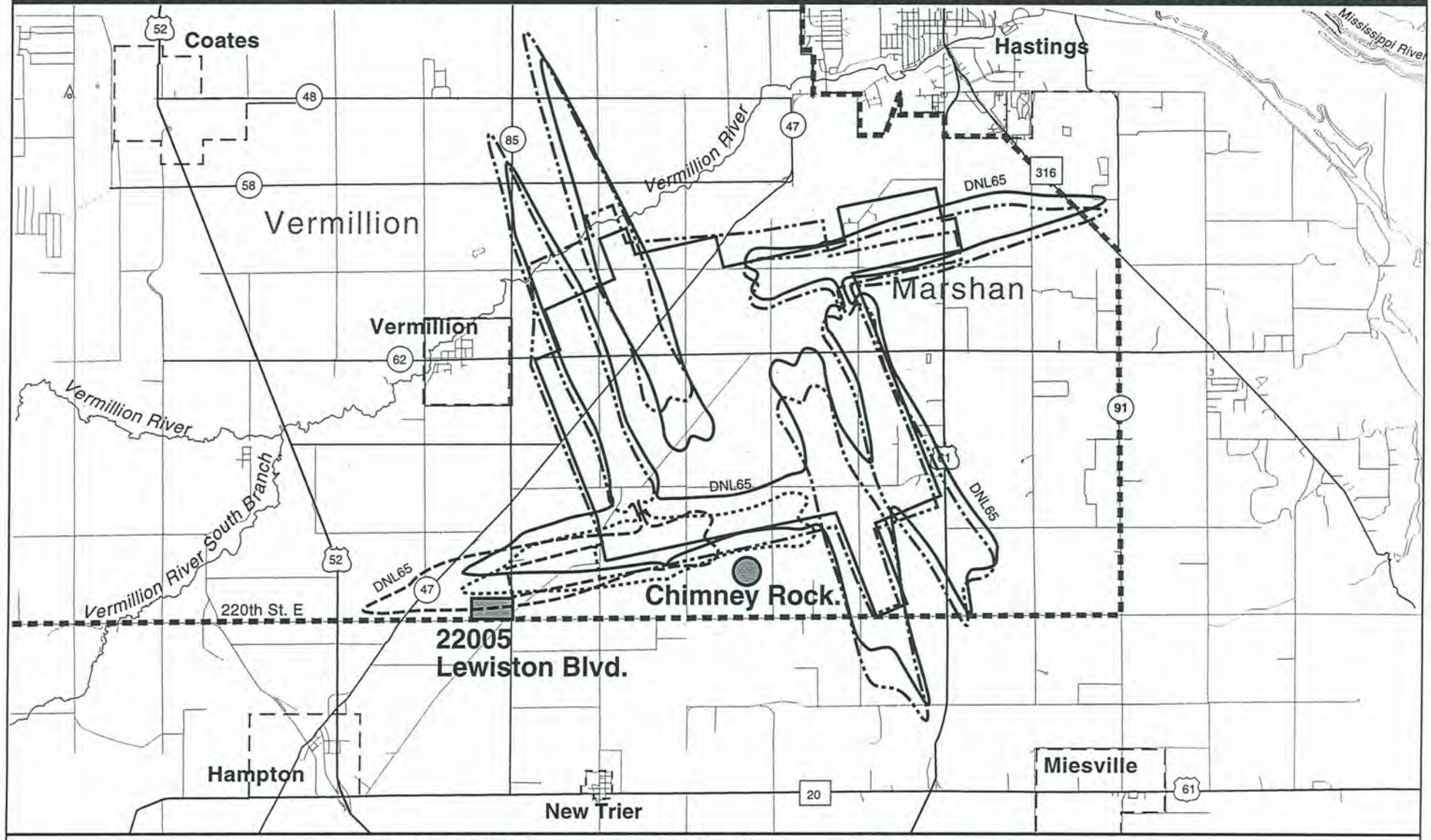
MAC

Minneapolis Saint Paul Metropolitan Airports Commission

Figure 8

Archaeological Properties

Dual Track Airport Planning Process | **New Airport Alternative Environmental Document**



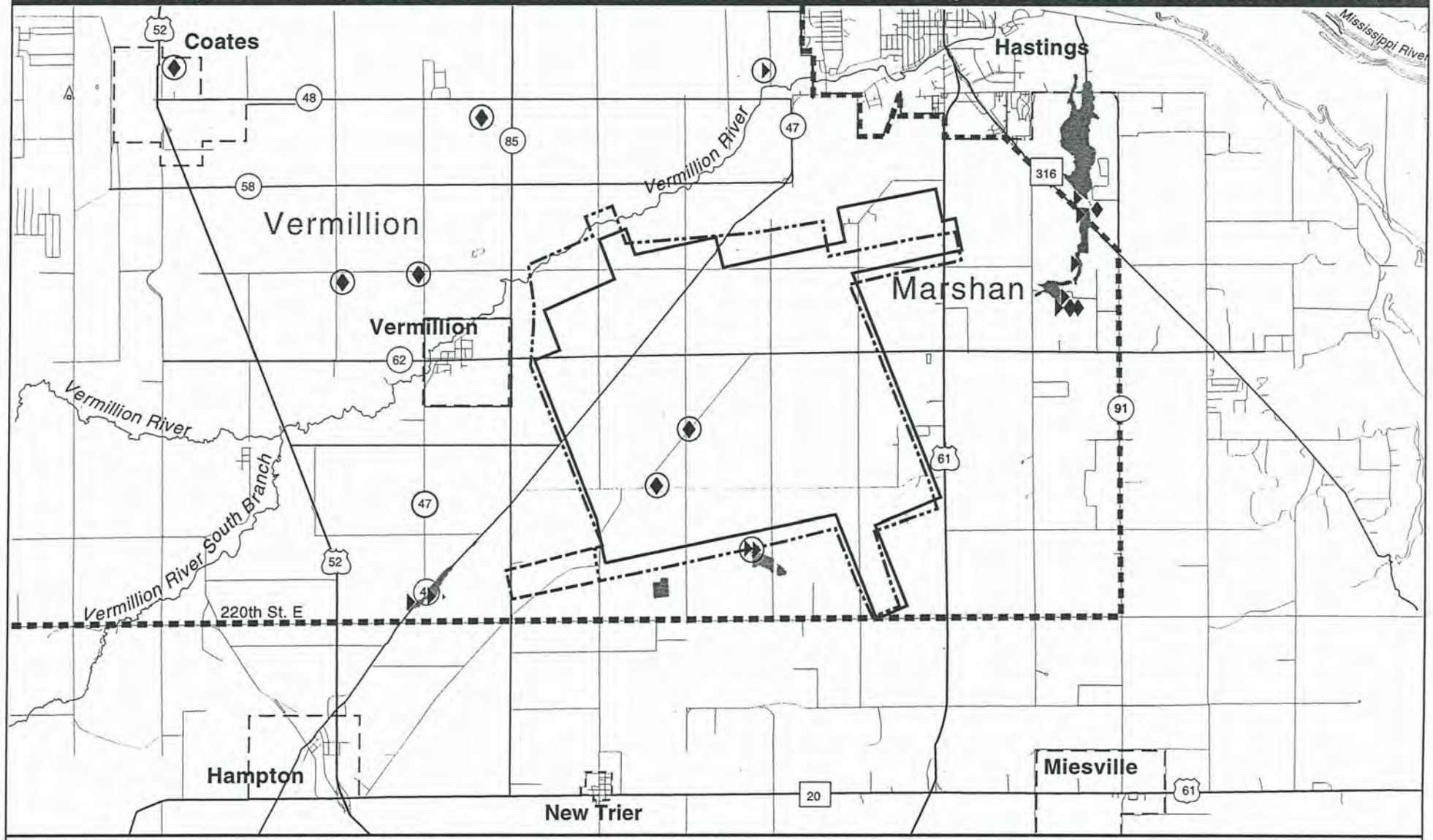
Airport Alternative 1
Airport Alternative 2
Airport Alternative 3
Airport Alternatives 1 & 2
DNL 65 - Alt 1
DNL 65 - Alt 2
DNL 65 - Alt 3
DNL 65 - Alts 1 & 2
Property Eligible for National Register
Search Area Boundary
0 .5 1
Scale in Miles
N

HNTB

MAC Minneapolis Saint Paul Metropolitan Airports Commission

Figure 9

Historic/Architectural Resources



HNTB

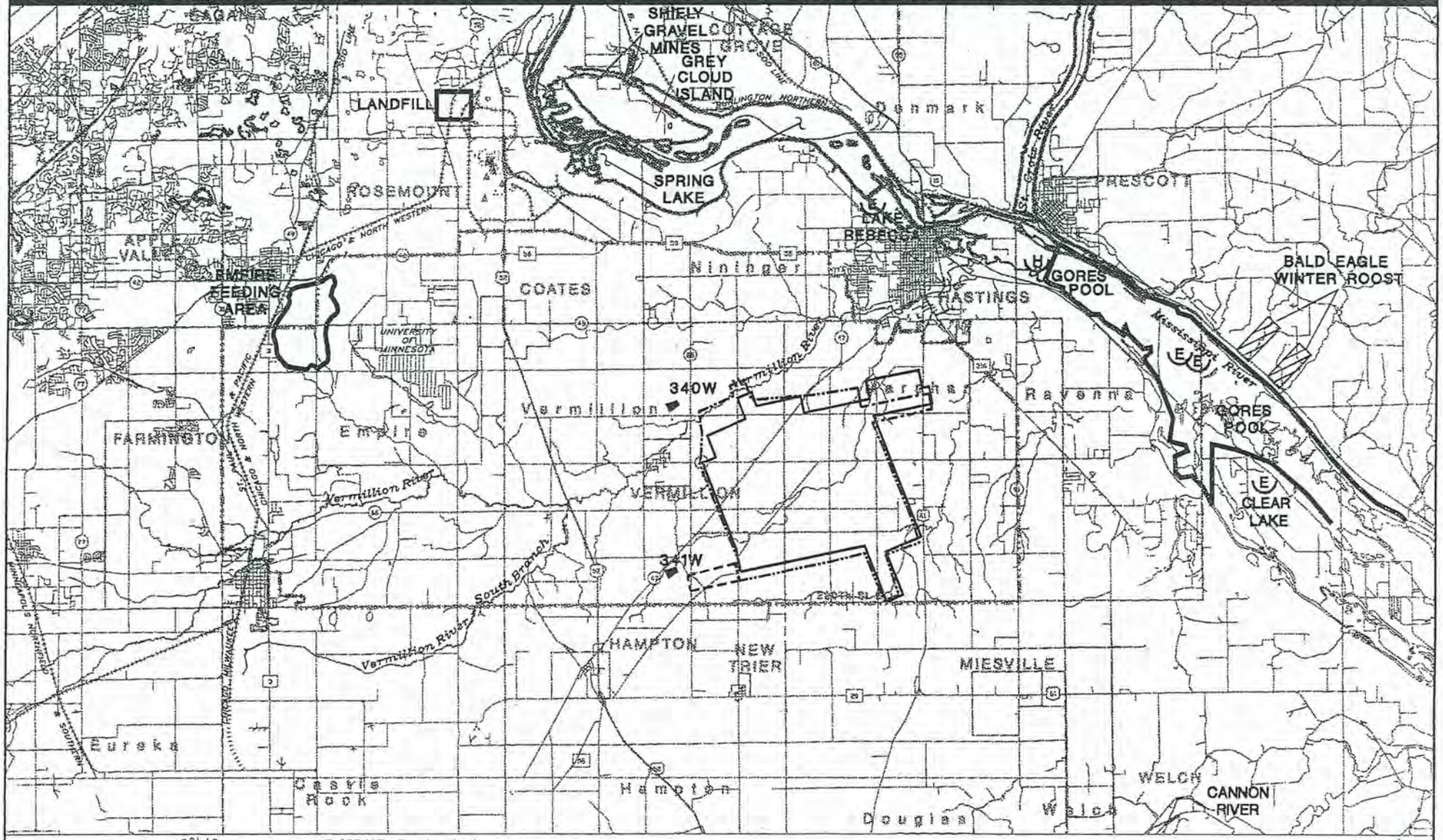
MAC Minneapolis Saint Paul Metropolitan Airports Commission

Figure 10

Biotic Communities

Dual Track Airport Planning Process

New Airport Alternative Environmental Document



MDNR Protected Wetland

Frietz Heron Rookery

Bald Eagle Nests

Airport Alternative 1

Airport Alternative 2

Airport Alternative 3

Airport Alternative 1 & 2

Search Area Boundary

Scale: 0 1 2 3 Scale In Miles

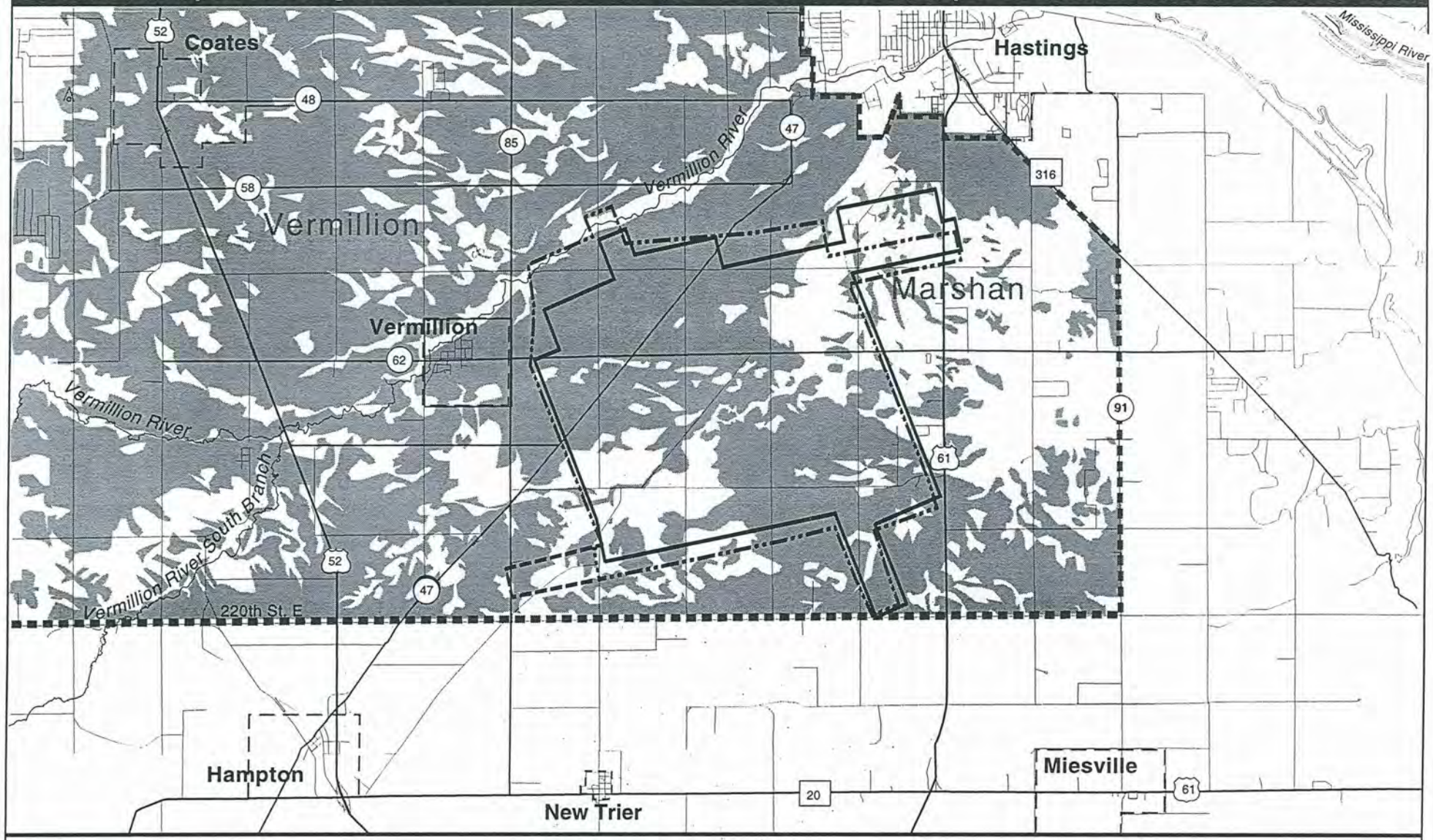
N

HNTB

MAC Minneapolis Saint Paul Metropolitan Airports Commission

Figure 11

Potential Bird - Aircraft Hazard Areas

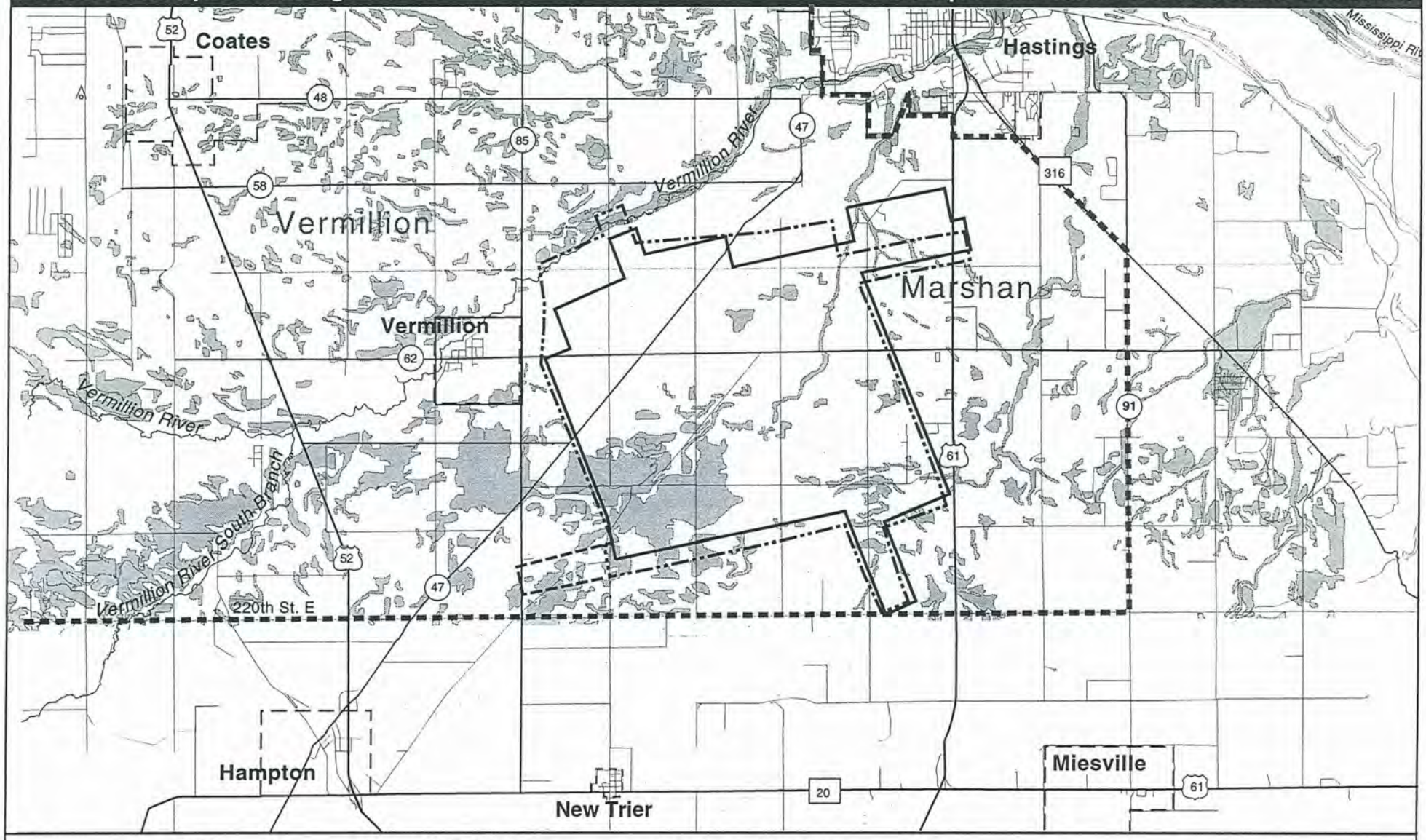


HNTB

MAC Minneapolis Saint Paul Metropolitan Airports Commission

Figure 12

Prime Farmland



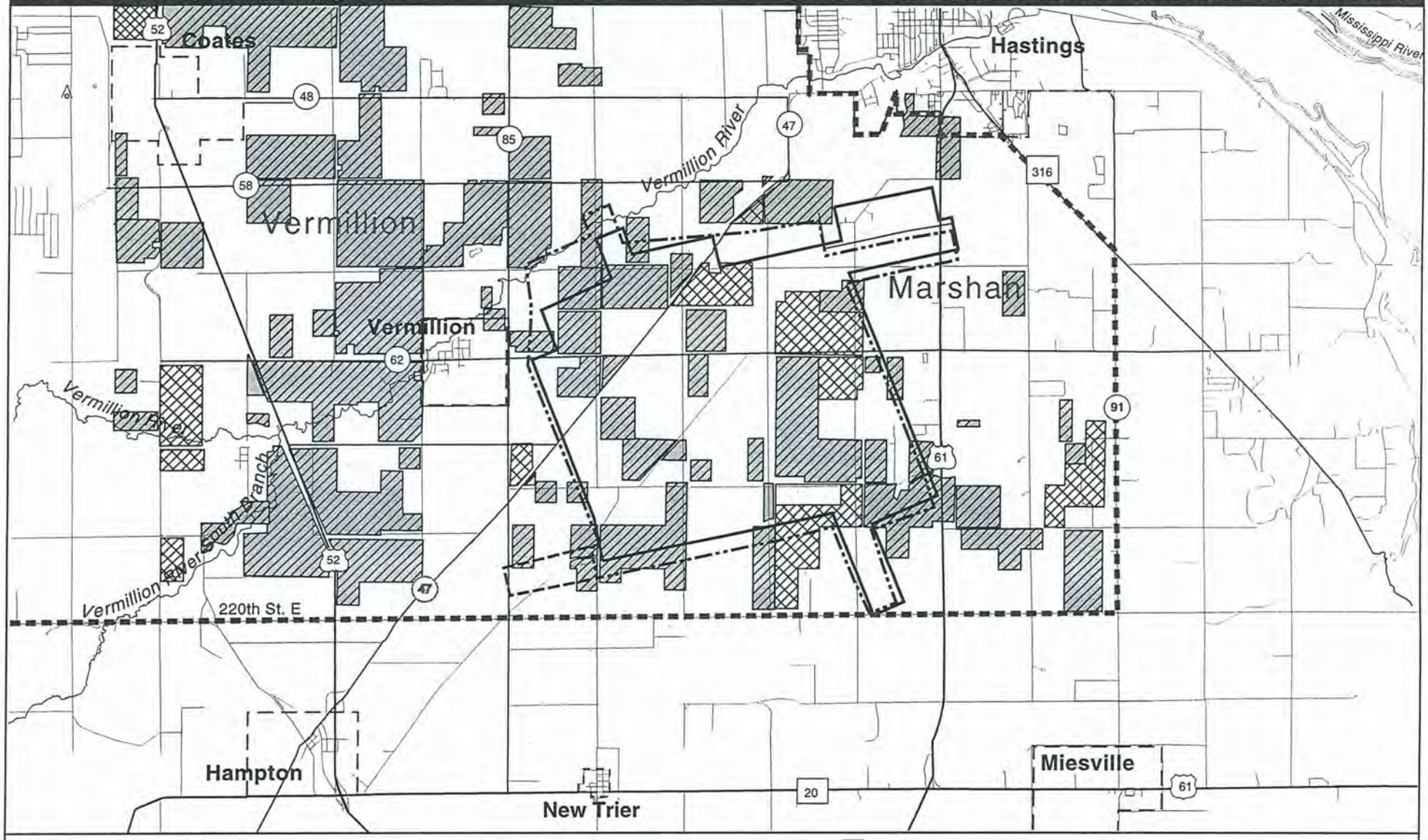
Airport Alternative 1
Airport Alternative 2
Airport Alternative 3
Airport Alternatives 1 & 2
Search Area Boundary
Farmlands of Statewide Importance

0 .5 1
Scale in Miles
N

HNTB

Figure 13

Farmlands of Statewide Importance

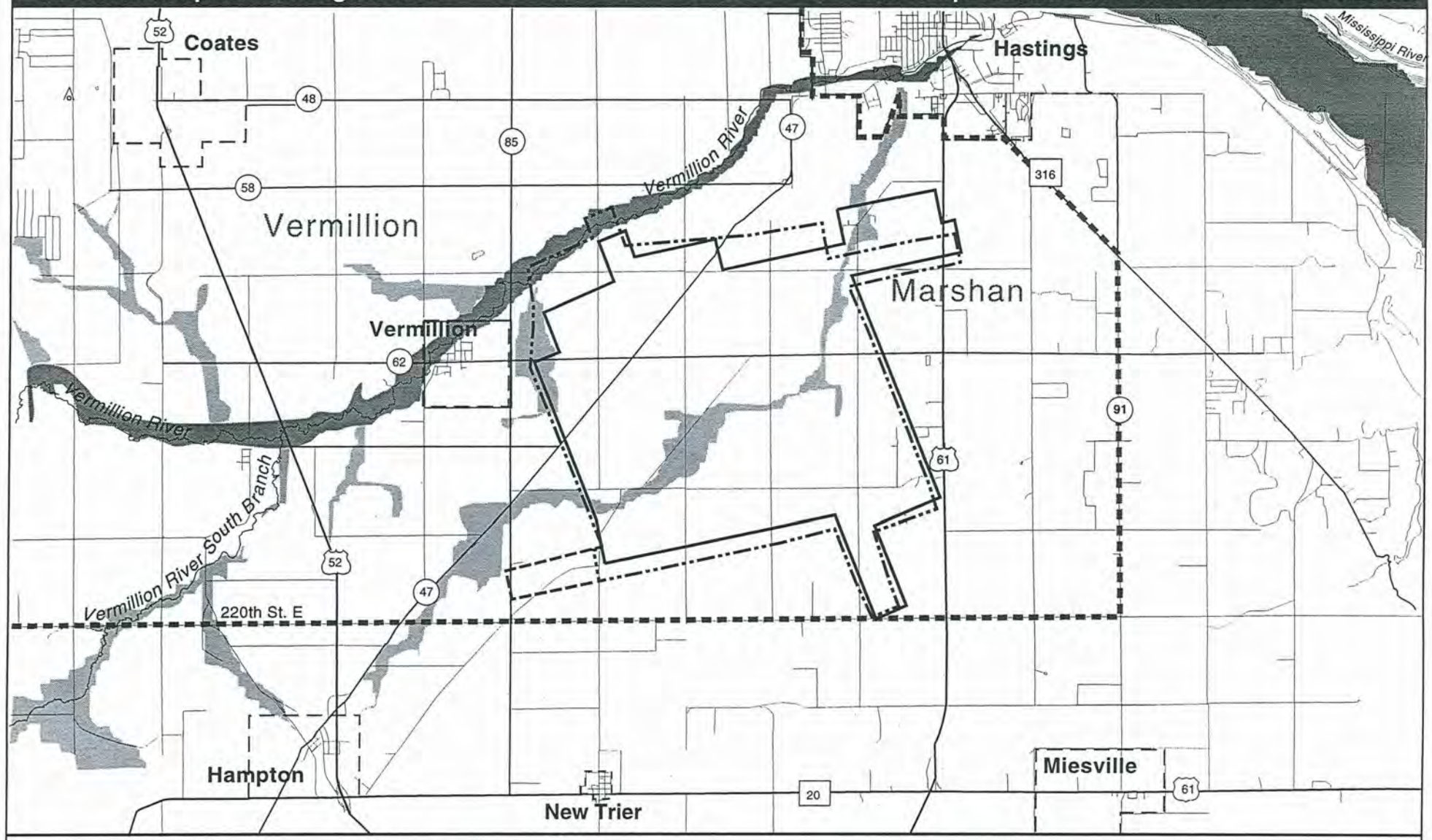


HNTB

MAC Minneapolis Saint Paul Metropolitan Airports Commission

Figure 14

Agricultural Preserves

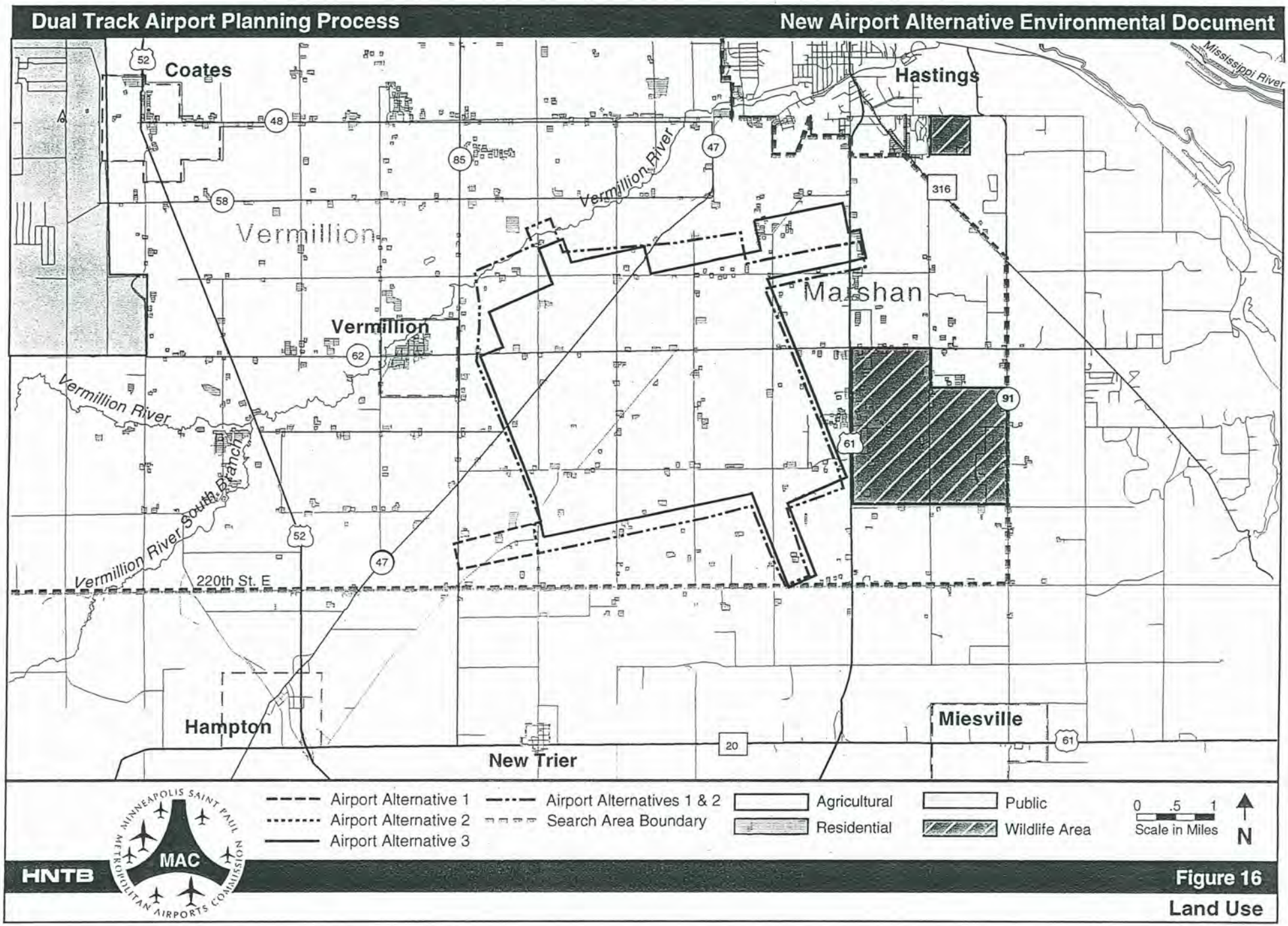


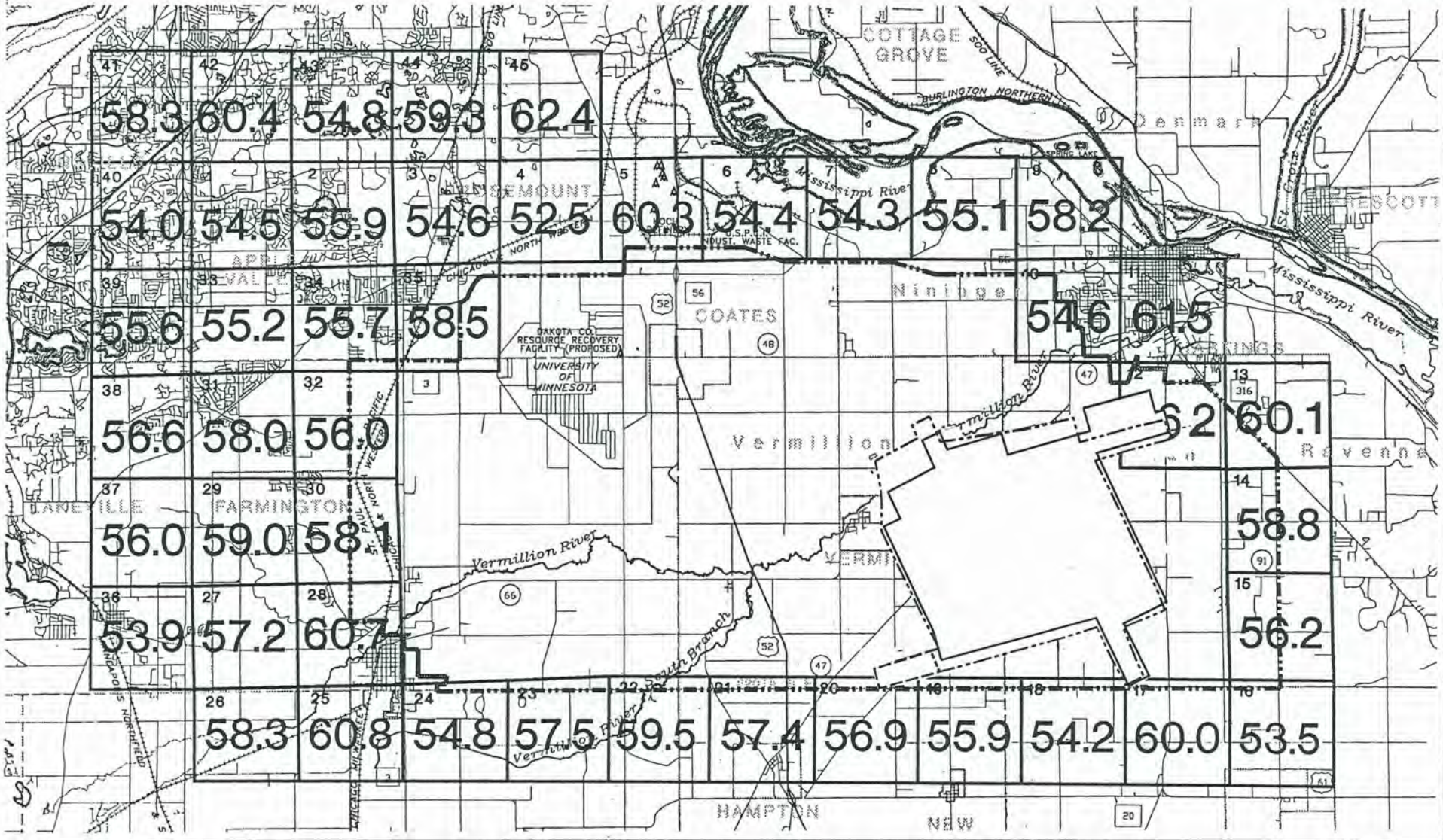
HNTB

MAC Minneapolis Saint Paul Metropolitan Airports Commission

Figure 15

Floodways and Floodway Fringe


Dual Track Airport Planning Process
New Airport Alternative Environmental Document
Coates
Hastings
Mississippi River
Vermillion
Vermillion River
Marshan
Vermillion River South Branch
220th St. E
Hampton
New Trier
Miesville
Airport Alternative 1
Airport Alternative 2
Airport Alternative 3
Airport Alternatives 1 & 2
Search Area Boundary
Agricultural
Residential
Public
Wildlife Area
0 .5 1
Scale in Miles
N
HNTB
MAC
Minneapolis Saint Paul Metropolitan Airports Commission
Figure 16
Land Use



HNTB

Figure 17

Ambient DNL Noise Levels

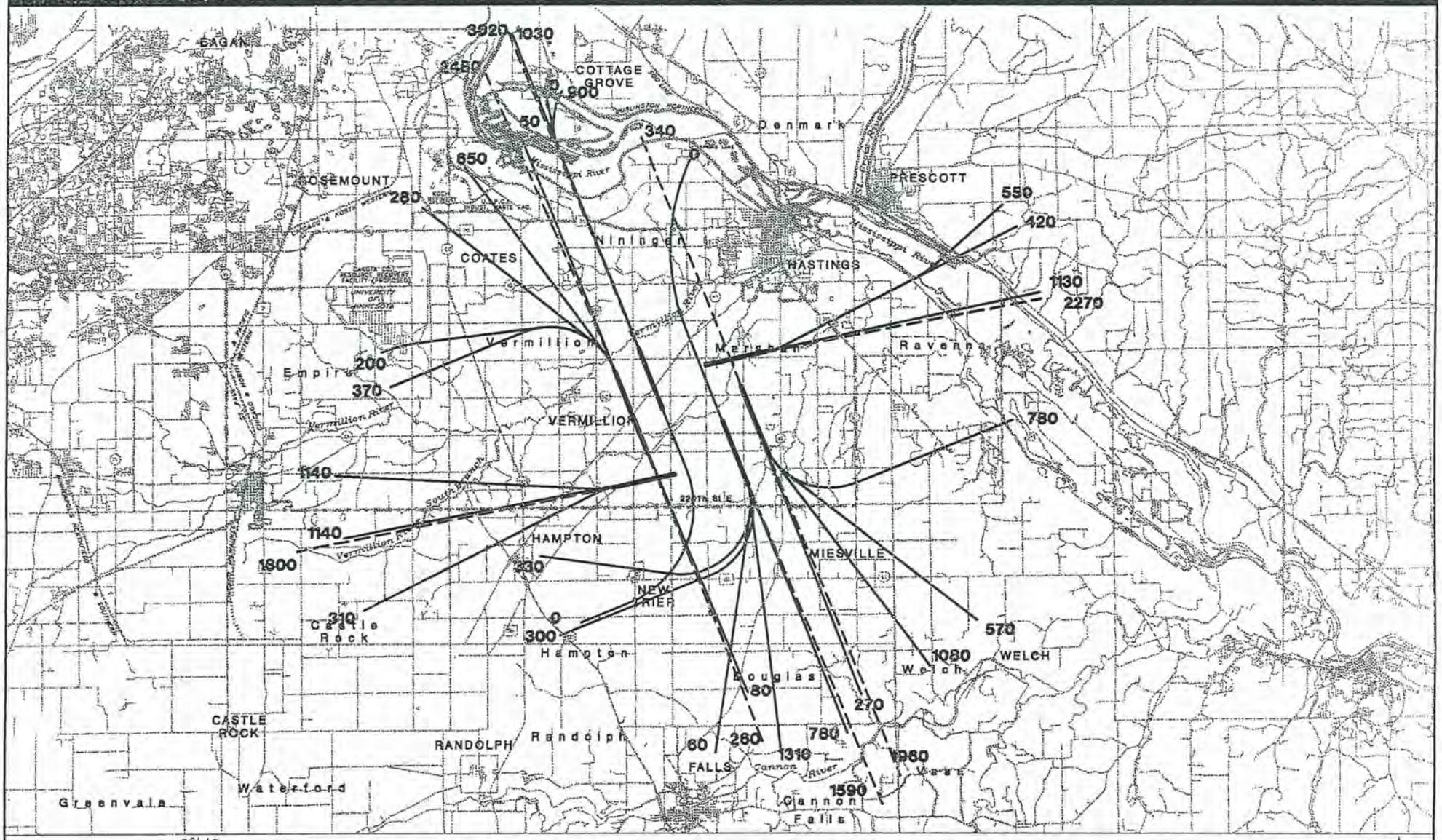
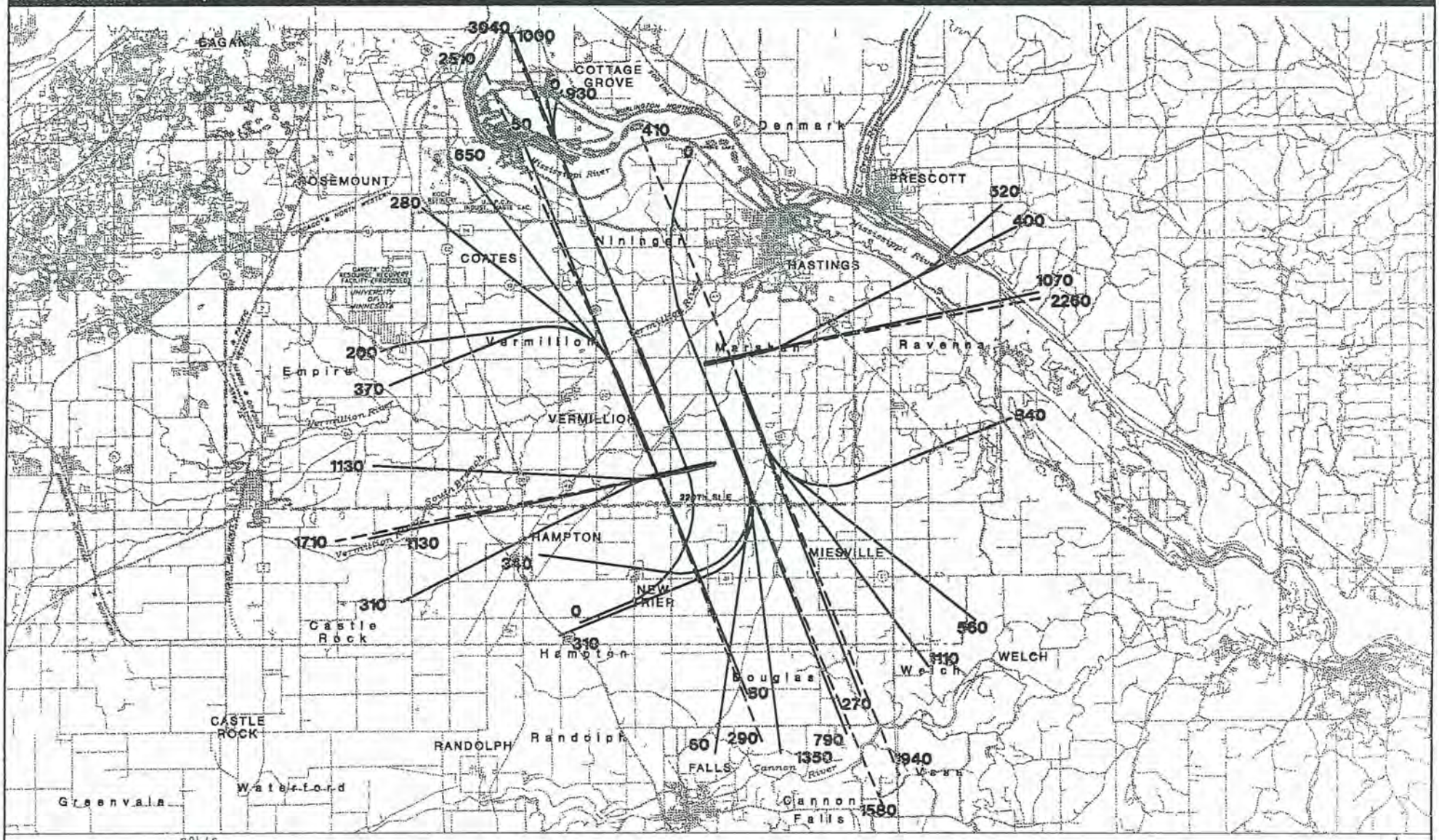


Figure 18

2005 Flight Tracks - Alternative 1

Dual Track Airport Planning Process

New Airport Alternative Environmental Plan



Search Area Boundary

Monthly Arrivals Below 2,000 Feet

Monthly Departures Below 5,000 Feet

Scale: 0 1 2 3 4

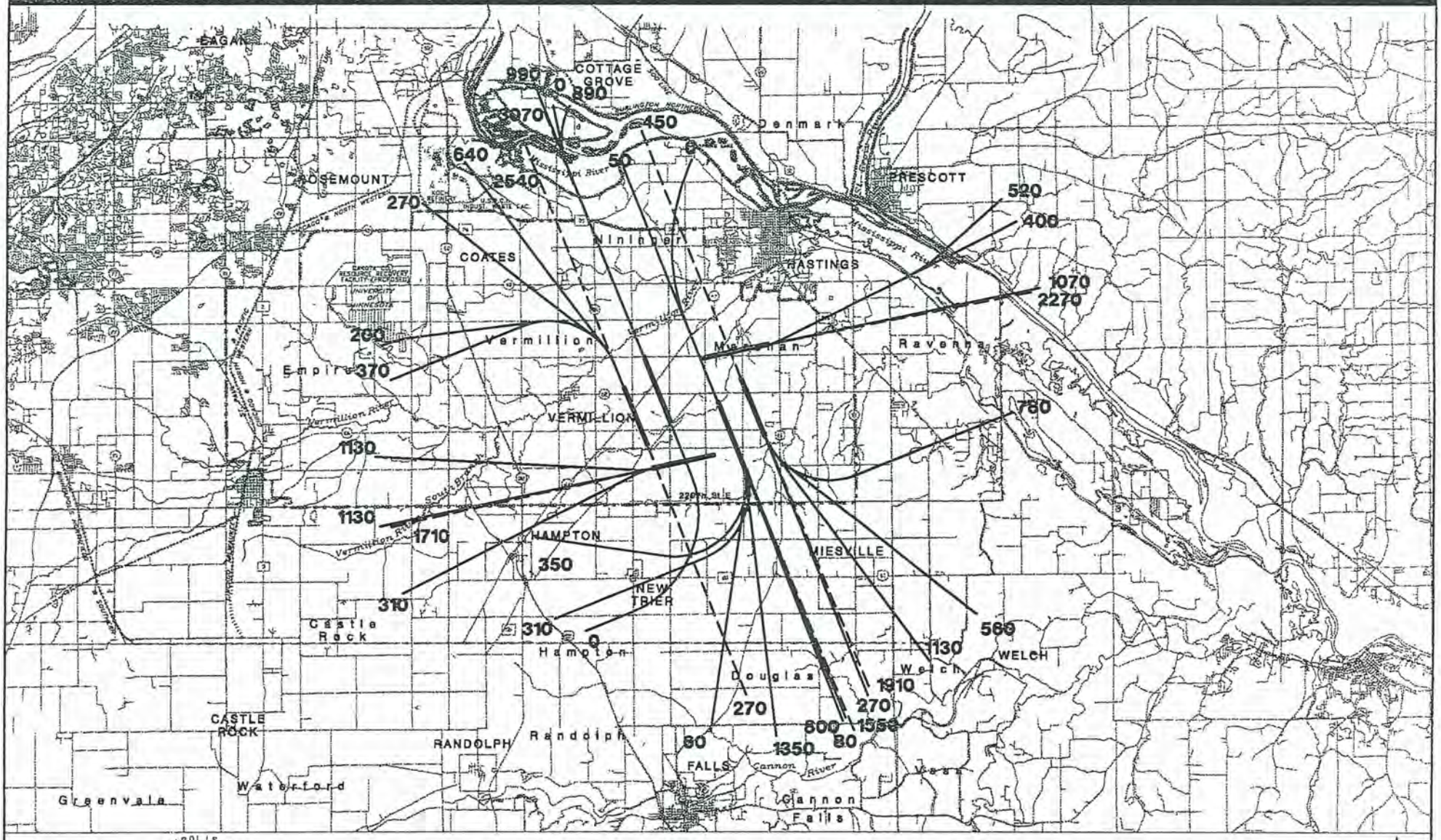
Scale In Miles

N

HNTB

Figure 19

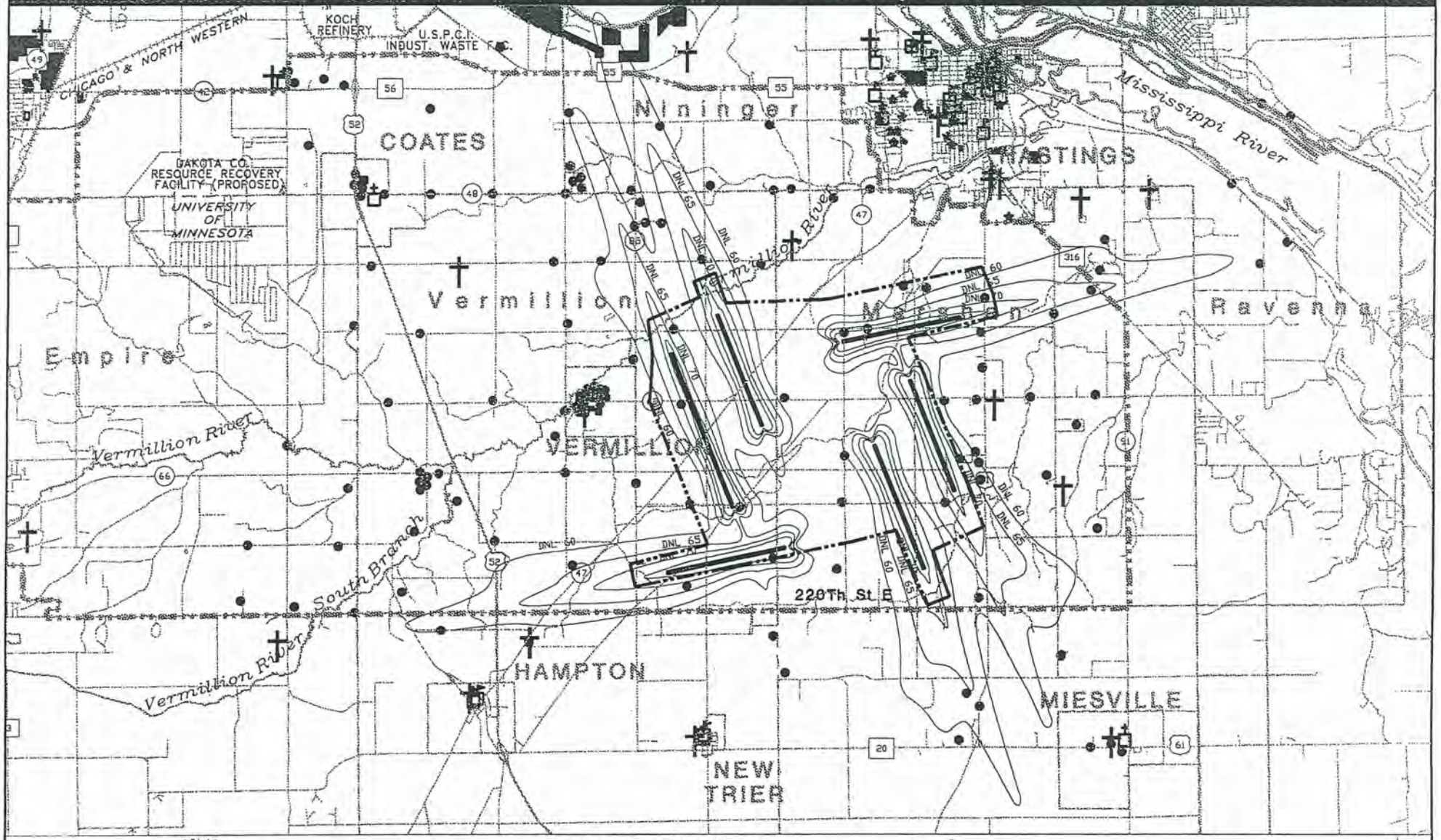
2005 Flight Tracks - Alternative 2



2005 Flight Tracks - Alternative 3

Dual Track Airport Planning Process

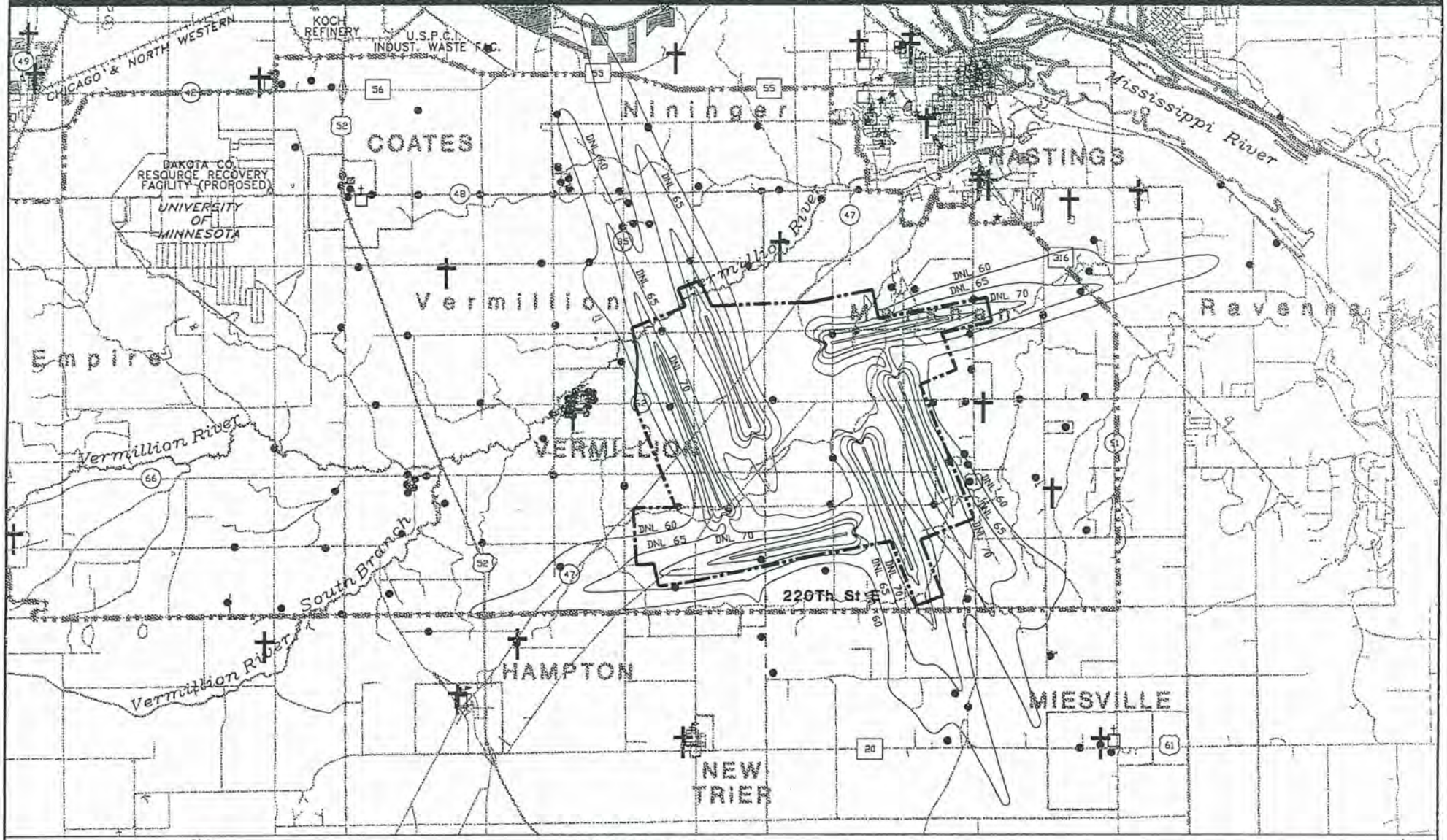
New Airport Alternative Environmental Document



HNTB

Figure 21

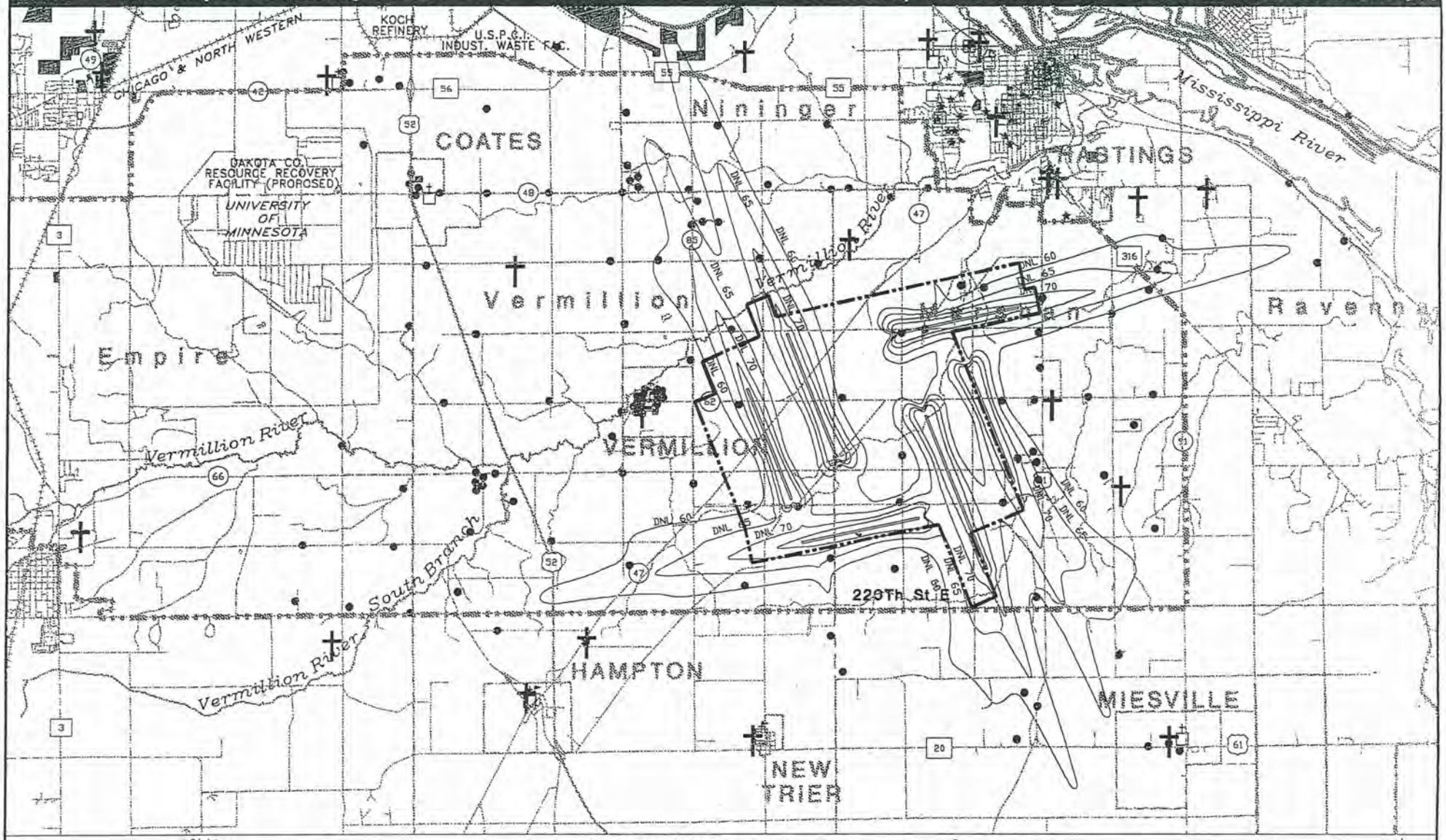
2005 DNL Contours And Noise-Sensitive Land Uses - Alternative 1



HNTB

Figure 22

2005 DNL Contours And Noise-Sensitive Land Uses - Alternative 2



Search Area Boundary
Airport Boundary
Source: HNTB

Approximately 10 Dwelling Units
Hospitals

Place of Worship
Schools

Cemetery
Daycare Facilities

Scale: 0 1 2
Scale in Miles

N

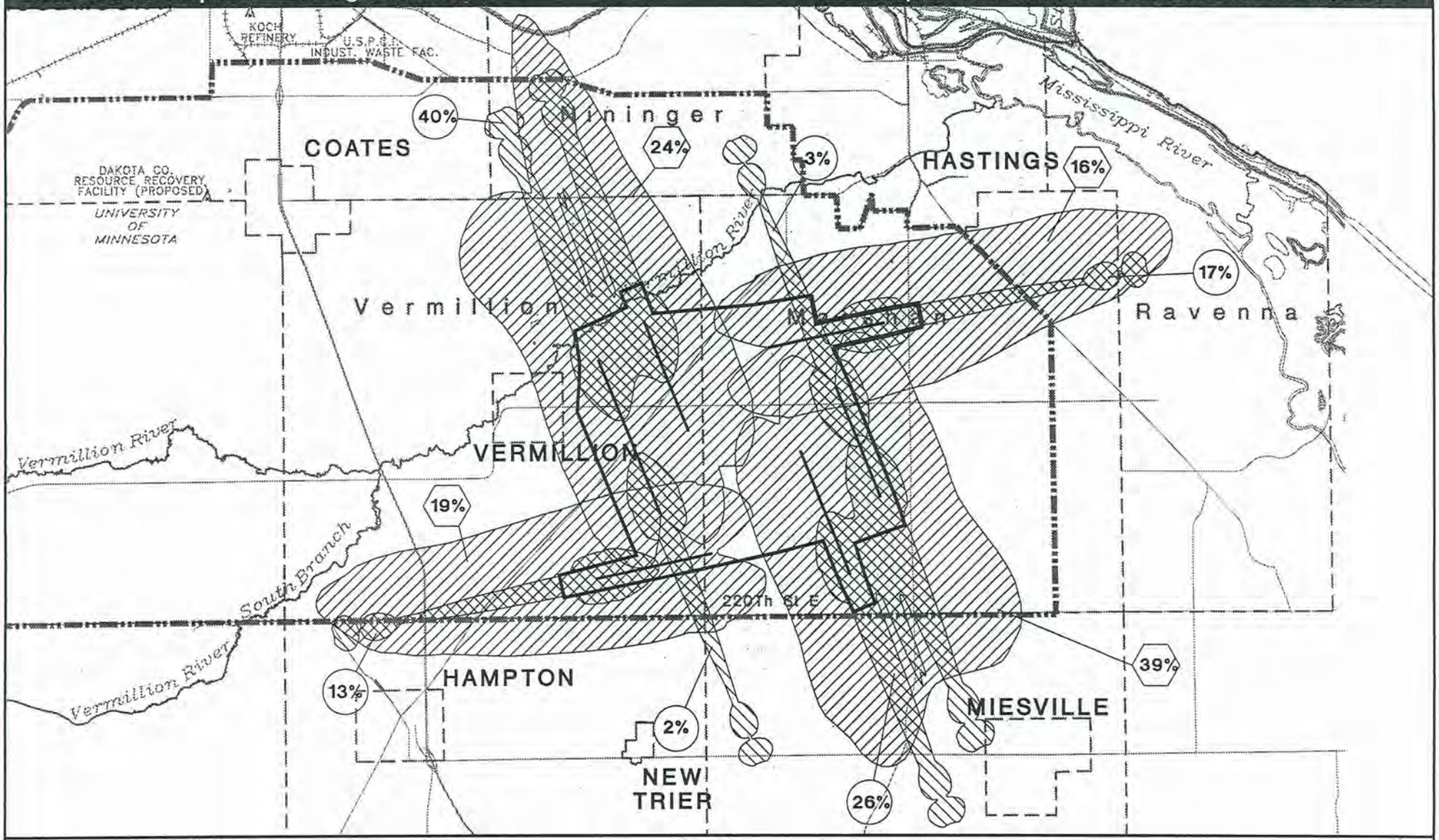
HNTB

Figure 23

2005 DNL Contours And Noise-Sensitive Land Use - Alternative 3

Dual Track Airport Planning Process

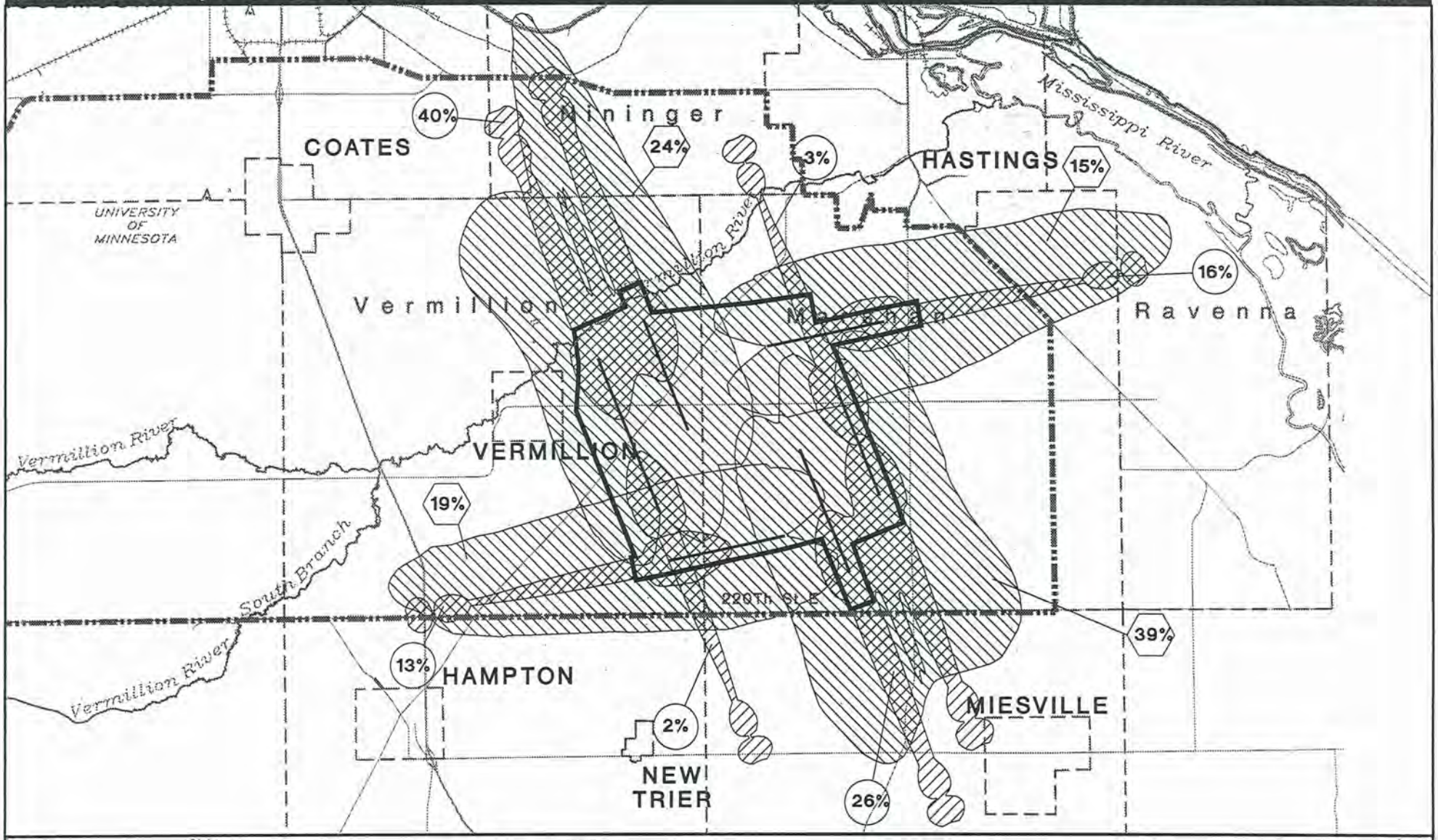
New Airport Alternative Environmental Document



HNTB

Figure 24

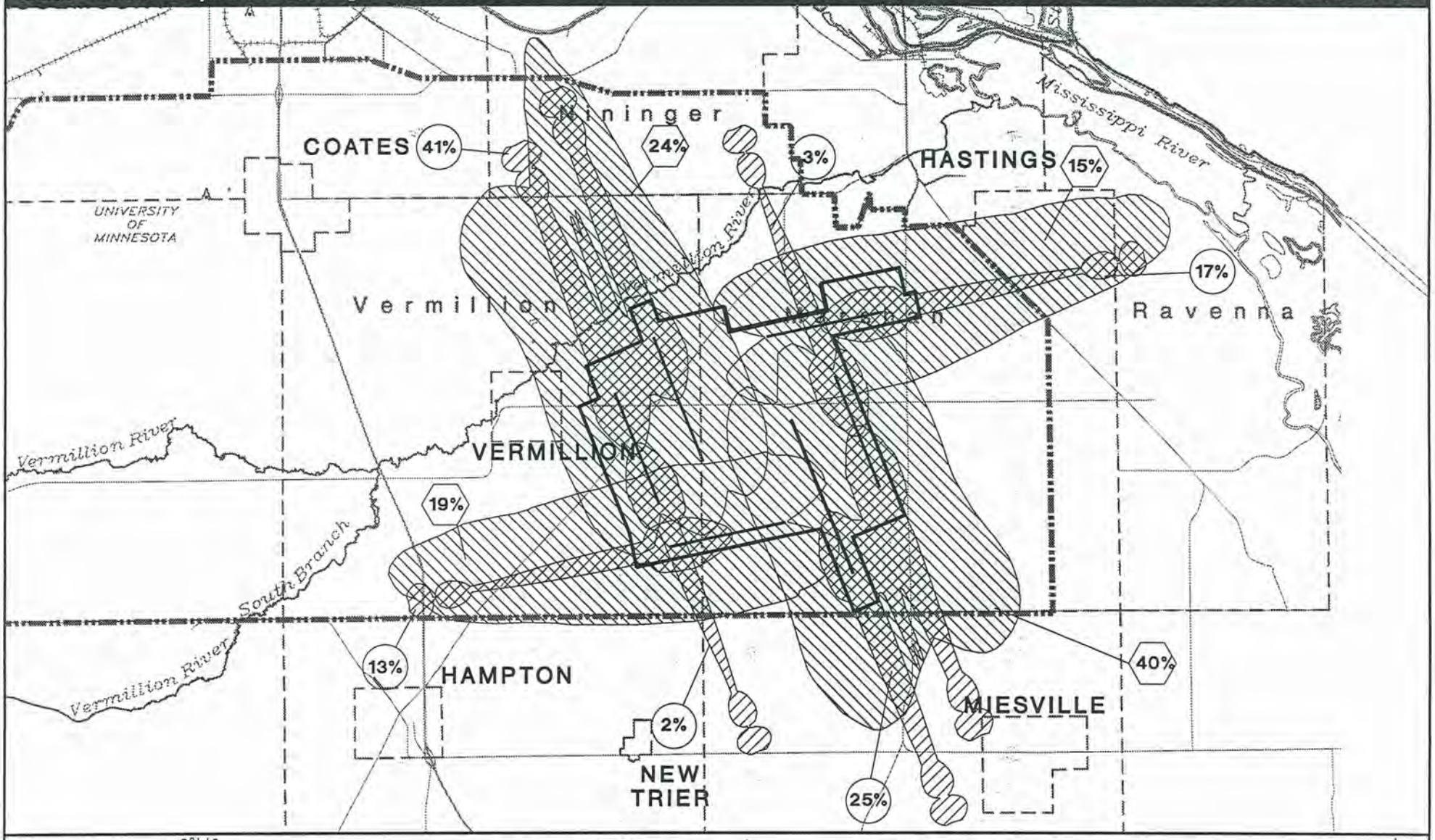
L_{10}65 Noise Contours And Runway Use - Alternative 1



HNTB

Figure 25

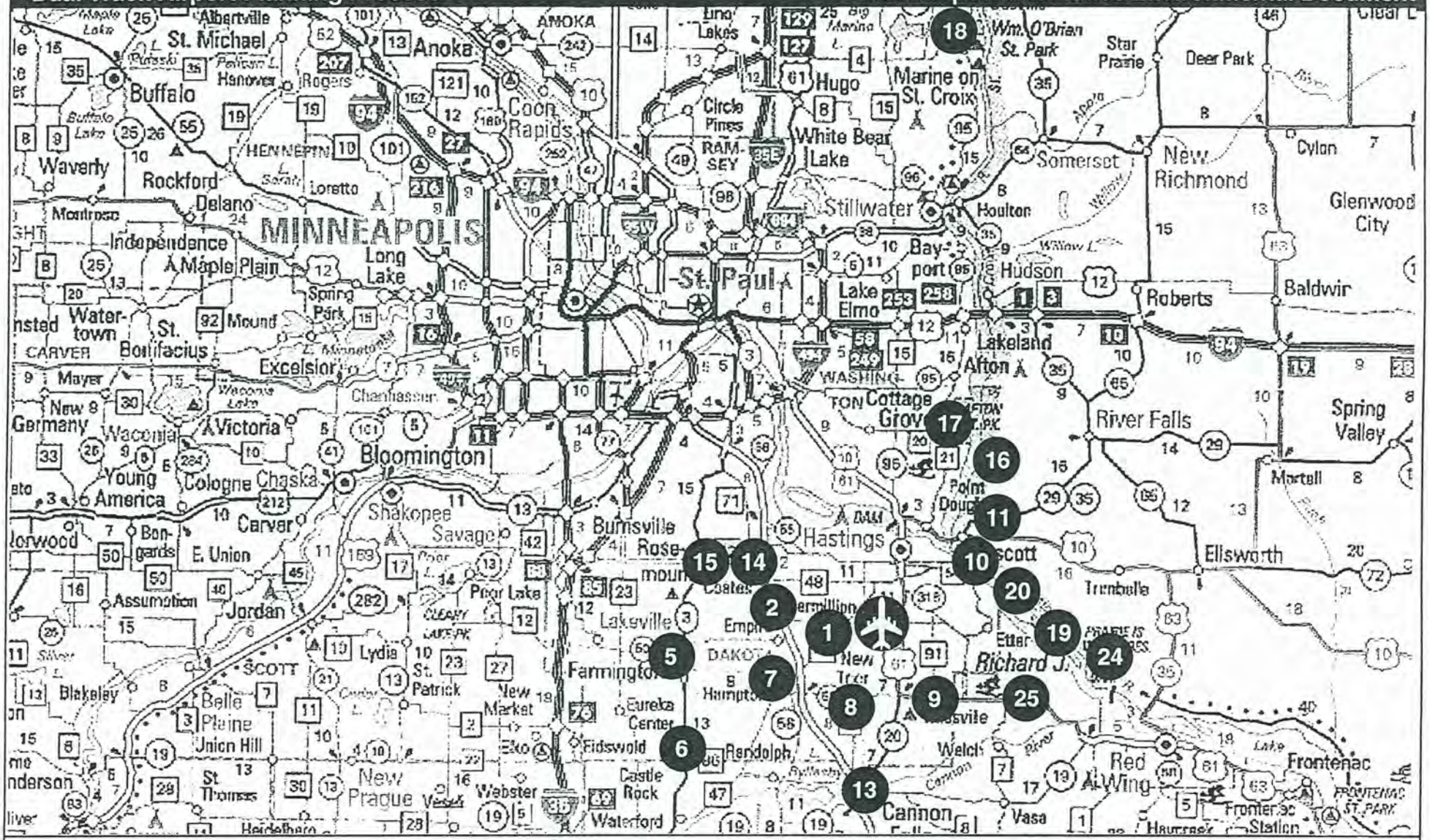
L_{10}65 Noise Contours And Runway Use - Alternative 2



HNTB

Figure 26

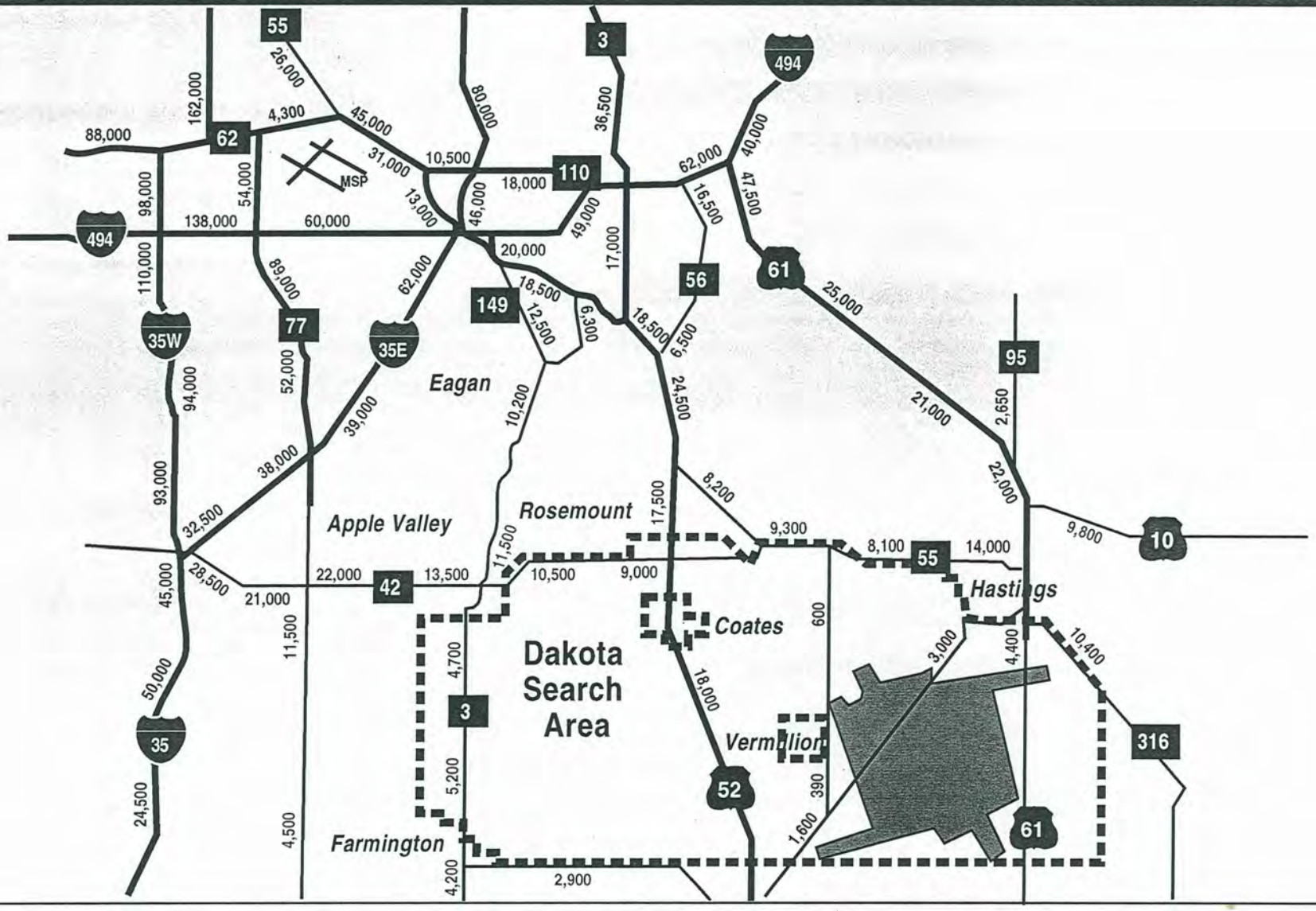
L_{10} 65 Noise Contours And Runway Use - Alternative 3



HNTB

Figure 27

Noise Sensitive Points

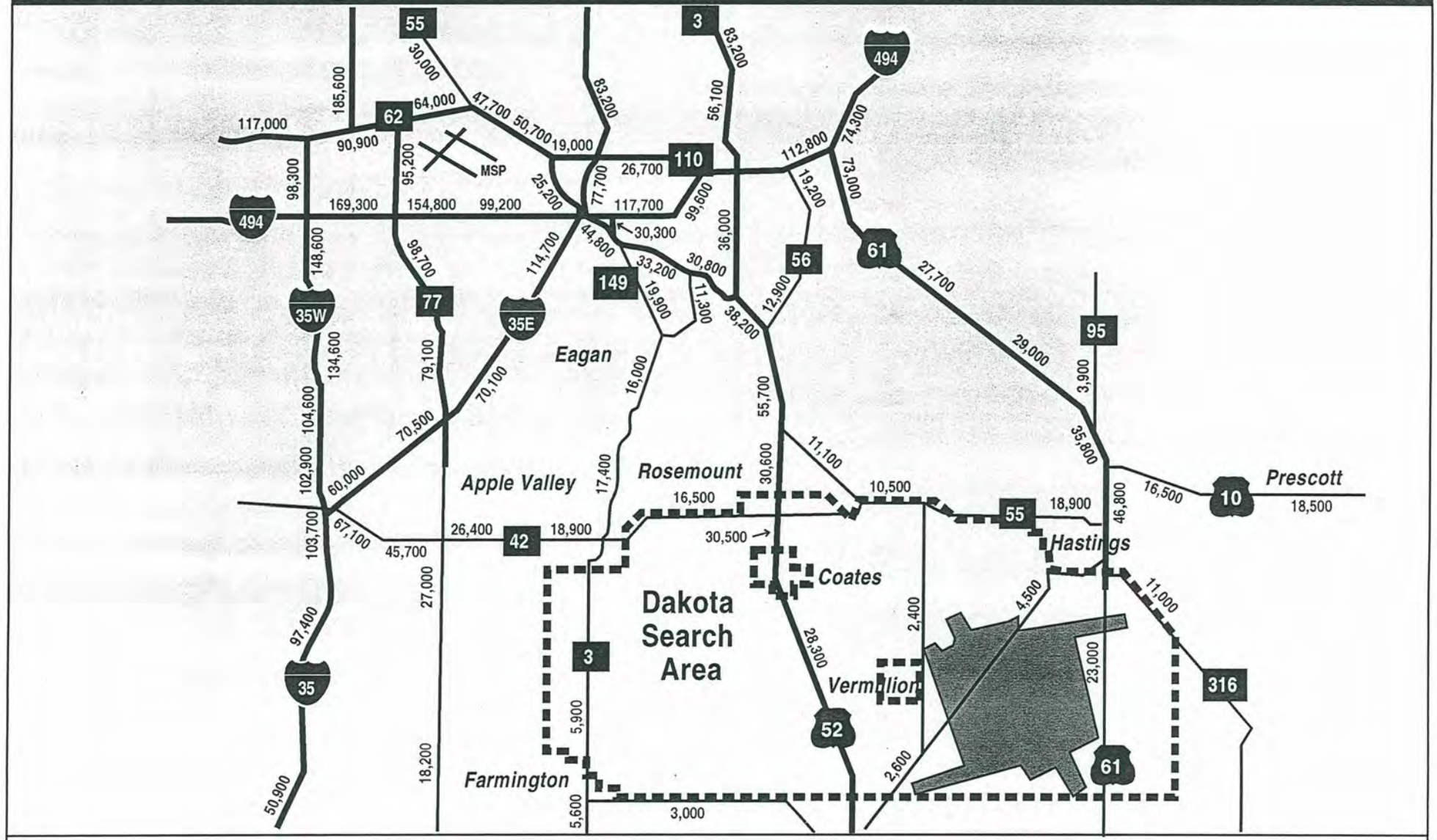


HNTB

MAC Minneapolis Saint Paul Metropolitan Airports Commission

Figure 28

1992 Daily Roadway Traffic



10,500 Average Daily Traffic
Divided Highway
Undivided Highway

Source: Metropolitan Council

0 1 2 3
Scale in Miles

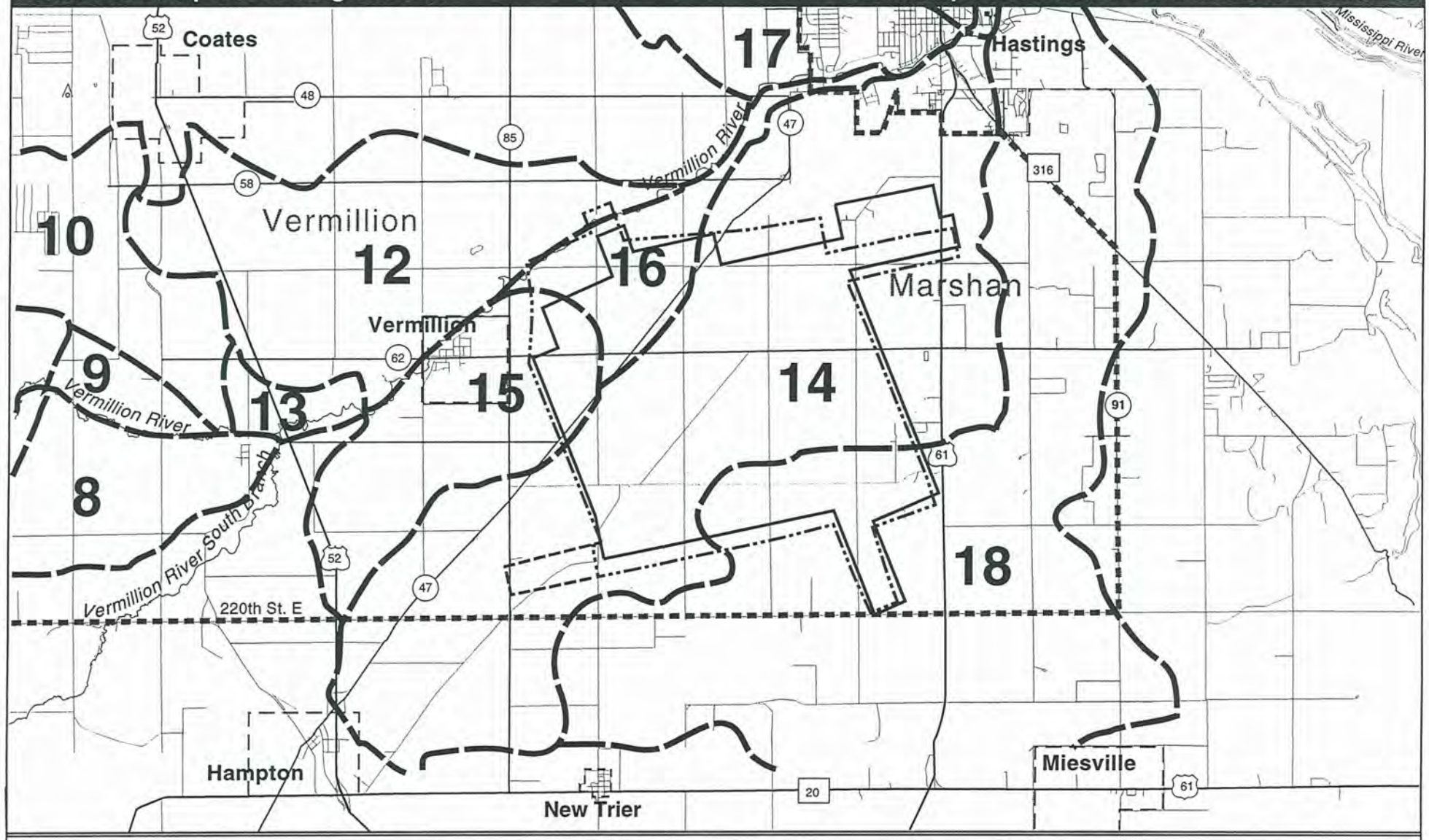
N

HNTB

MAC Minneapolis Saint Paul Metropolitan Airports Commission

Figure 29

2020 Daily Roadway Traffic - No Action



Airport Alternative 1
Airport Alternative 2
Airport Alternatives 1 & 2
Airport Alternative 3
Watershed Management Sectors
Search Area Boundary

Source: Vermillion Watershed Management Organization

0 .5 1
Scale in Miles

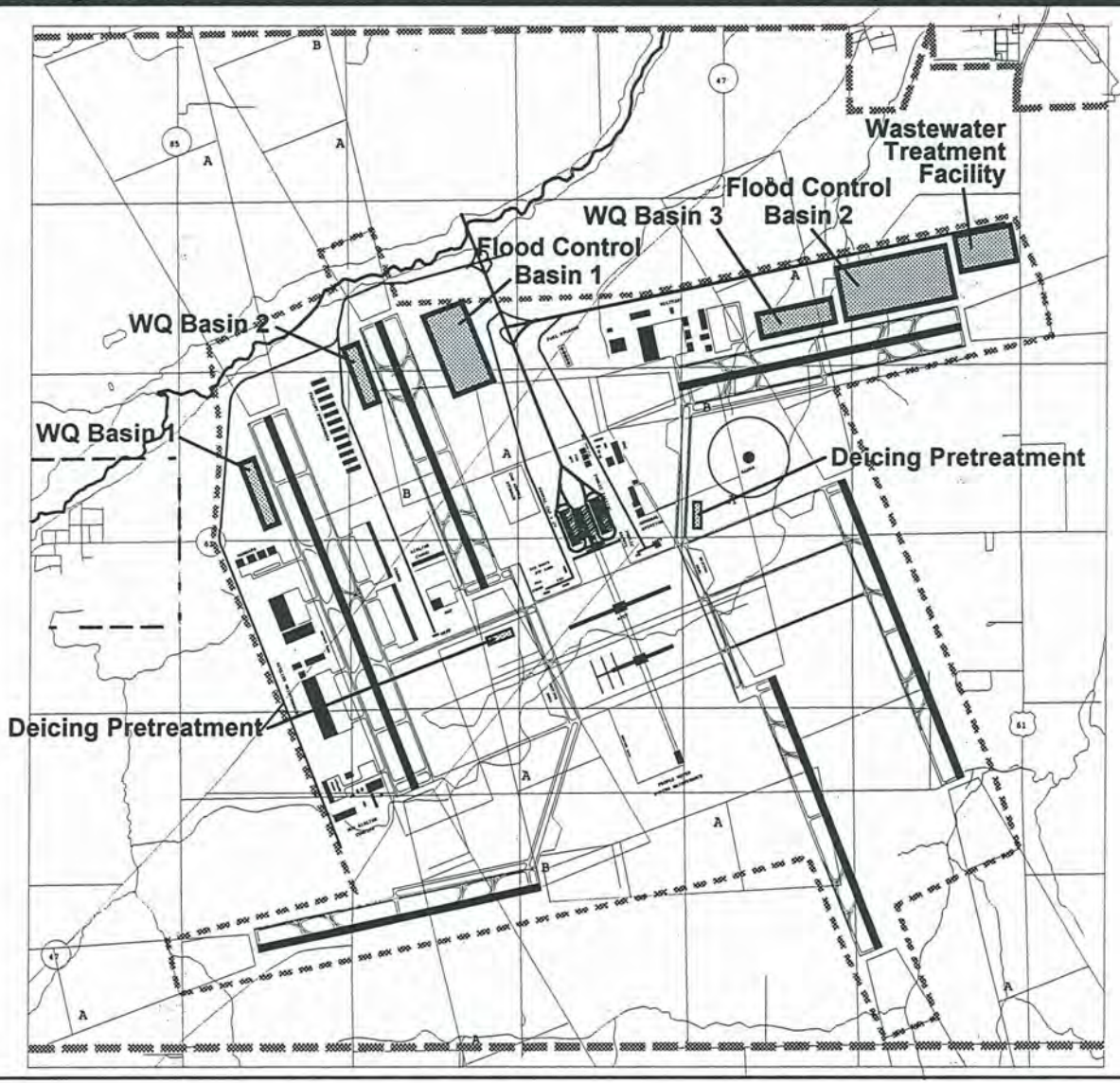
N

HNTB

MAC

Figure 30

Vermillion River Watershed Management Sectors



Search Area Boundary

Airport Site Boundary

On-site Water Management Facilities

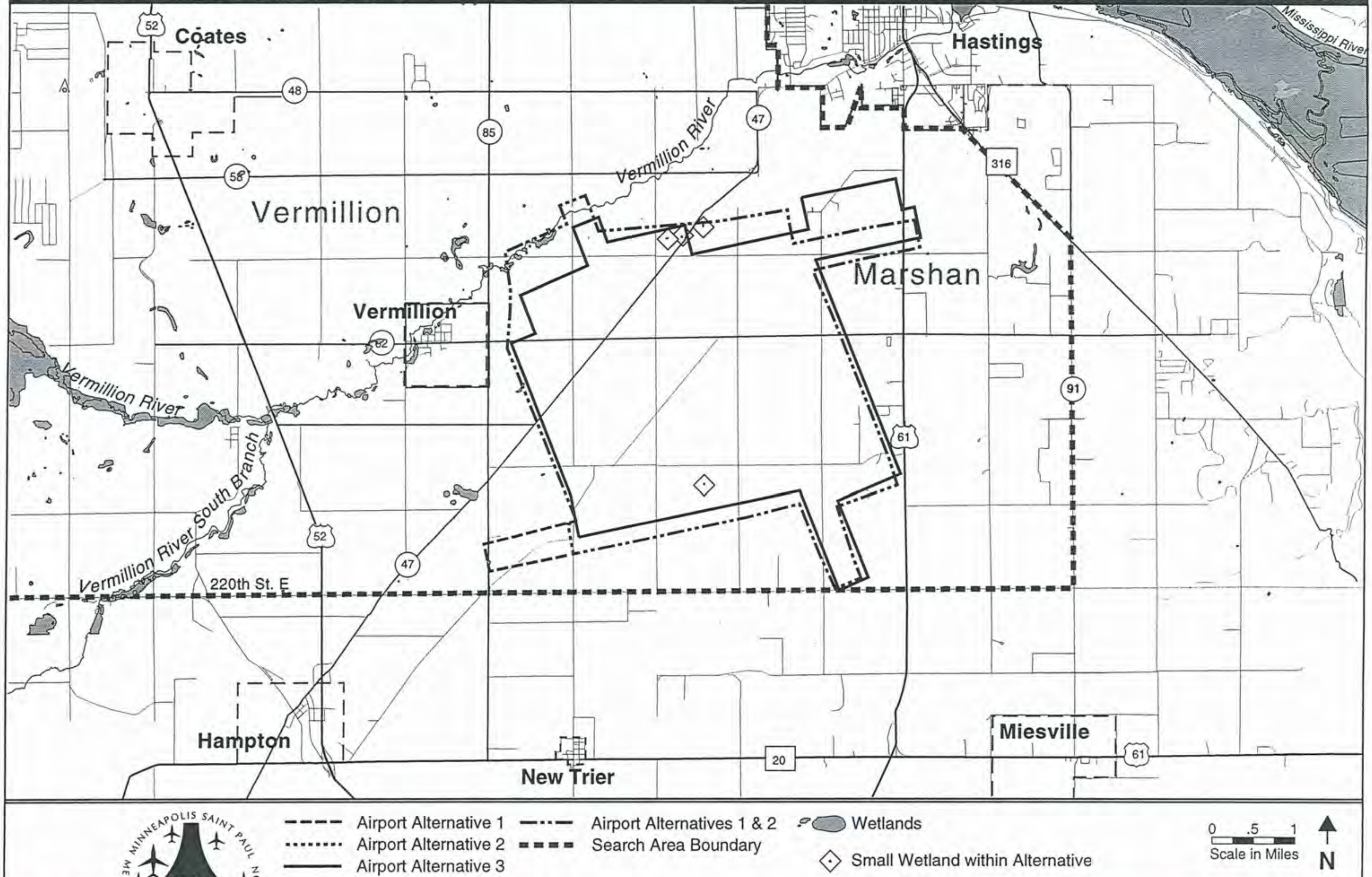
0 1 2 3 4 5
Thousands of Feet

N

HNTB

Figure 31

Stormwater Management Facilities



Coates
Hastings
Mississippi River
Vermillion River
Vermillion
Vermillion
Marshan
Vermillion River
Vermillion River South Branch
Vermillion River
220th St. E
Hampton
New Trier
Miesville
52
48
85
47
58
316
62
91
61
47
52
20
61
Airport Alternative 1
Airport Alternative 2
Airport Alternative 3
Airport Alternatives 1 & 2
Search Area Boundary
Wetlands
Small Wetland within Alternative
0 .5 1
Scale in Miles
N

HNTB

MINNEAPOLIS SAINT PAUL METROPOLITAN AIRPORTS COMMISSION MAC

Figure 32

Wetlands