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GREAT LAKES REGION
FINAL

Minneapolis-St. Paul International Airport
Dual Track Airport Planning Process

NEW RUNWAY 17/35 AND
AIRPORT LAYOUT PLAN APPROVAL

MINNEAPOLIS, MINNESOTA

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Figure 1—2010 Long Term Comprehensive Plan (LTCP) (*not available for website*)

Attachments (*not available for website; contact Great Lakes Region for copies*)

Attachment A

Comments and Responses on the FEIS and Section 4(f)
Evaluation

A.1—Comments and Responses on the FEIS

A.2—Appendix to City of Richfield Comments

A.3—Comments and Responses on the Section 4(f) Evaluation

Attachment B

Federal Agency Correspondence and Wildlife Refuge
Memorandum of Agreement

Attachment C

Late-Filed Comments on the FEIS and Responses

I. Summary of Decision

Based on a review of the Administrative Record, including the Final Environmental Impact Statement (FEIS) approved by the Federal Aviation Administration (FAA) on May 6, 1998, and the Section 4(f) Evaluation, dated May 1998, it is the final determination of the FAA to approve, for construction and use, the Minneapolis-St. Paul International Airport (MSP) 2010 Long Term Comprehensive Plan (LTCP), identified as the "Sponsor and FAA Preferred Alternative," and as shown in the revised Airport Layout Plan (ALP). The 2010 LTCP includes a new north-south 8,000-ft. air carrier length runway (Runway 17/35) on the west side of the airport, new taxiways, and associated facilities described in Section II.B. of this Record of Decision (ROD) and in the FEIS. Implementation of the 2010 LTCP will require FAA approvals and actions as described in Section II.A. of this ROD and in the FEIS. In addition, the 2010 LTCP is approved as eligible for federal funding as described further in this ROD, and as subject to further eligibility determinations. It is also determined that the 2010 LTCP is the environmentally preferable alternative because it promotes national environmental policy, as expressed in the National Environmental Policy Act (NEPA), and does this more successfully than the No Action Alternative or other alternatives considered during the Dual Track Airport Planning Process (see also Sections II and V of this ROD). The Metropolitan Airports Commission, as owner and operator of MSP and the project sponsor, has agreed to terms of approval, including mitigation measures, discussed below.

Projects described in Section II.B of this ROD include development of the MSP 2010 LTCP and the 2020 Concept Plan. These plans represent two phases for the proposed development of MSP, and received conditional ALP approval from the FAA on April 25, 1997. The April 1997 approval was made for planning purposes based on current safety, utility, and efficiency standards, and was conditioned on the satisfactory completion of the environmental review process. This ROD unconditionally approves the ALP for the 2010 LTCP. The conditional approval of the MSP 2020 Concept Plan remains unchanged.

In reaching this decision, the FAA has given careful consideration to: (a) the role of MSP in the national air transportation system, and the airport capacity/delay reduction needs, (b) the aviation safety and operational objectives of the project in light of the various aeronautical factors and judgments presented, (c) the preferences of the airport owner as the party with liability and primary responsibility to abate aircraft noise in the area surrounding the airport, and (d) the anticipated environmental impacts of the project. The decisions of the Minnesota State Legislature concerning the New Airport Alternative and the development alternatives at MSP, while not dispositive, were taken into account in defining reasonable alternatives.

A discussion of the leading factors considered by the agency in reaching this decision follows.

II. Introduction and Background

The subsections below will introduce the reader to this ROD, the MSP airport, and the proposed action. In addition, Section II.C describes the project background, which has involved a complex multi-year study process. This "Dual Track Airport Planning Process" was mandated by the Minnesota State Legislature in 1989, and required the completion of planning studies comparing the expansion of MSP with construction of a new replacement airport (see Section II.C for a more detailed project history).

A. Introduction

The FAA is issuing this Record of Decision (ROD) in accordance with the requirements of the Council on Environmental Quality (CEQ), 40 CFR 1505.2 to provide:

- a statement of the agency's decision;
- identification of all alternatives considered by the agency in reaching its decision, specifying the alternative considered to be environmentally preferable; and
- identification of all practicable means to avoid or minimize harm from the alternative selected and adoption and summary of monitoring and enforcement program, if applicable, for any mitigation.

FAA Approvals

This ROD provides final approval for the federal actions necessary to support the construction and operation of a new air carrier length runway, designated Runway 17/35, as well as related facilities at Minneapolis-St. Paul International Airport (MSP). The federal actions and associated airport development are described in the *Dual Track Airport Planning Process Final Environmental Impact Statement* (FEIS) and *Section 4(f) Evaluation*, dated May 1998.

Federal approval and implementation of the proposed action, as explained in detail in Section I.E of the FEIS, also involve the following FAA Division approvals and actions.

- Air Traffic. The proposed action will require that the FAA's Air Traffic Division expand the Class B airspace surrounding MSP and establish new air traffic control procedures, consistent with the information contained in the FEIS. Related Air Traffic actions may also involve redesign of the terminal radar approach control (TRACON) airspace surrounding MSP.
- Airway Facilities. The Airway Facilities Division will be responsible for the installation, operation, and maintenance of the aids to navigation required to support the proposed action.
- Airports. The Airports Division will be responsible for the technical and environmental approval of the ALP, administration of Airport Improvement Program (AIP) development grants funding the project, approvals to impose Passenger Facility Charges (PFCs) for similar purposes, and environmental approvals under NEPA.
- Flight Standards. The Flight Standards Division will be responsible for establishing instrument approach and departure procedures for the new runway and new or revised instrument approach and departure procedures for the existing runways, as well as specific aircraft and airline authorizations.
- Civil Aviation Security. The Civil Aviation Security Division will be responsible for ensuring the integrity of the airport perimeter and secured areas of the terminal and support facilities against intrusions; therefore, Security provides input to the approval of the ALP.

Airport Description

MSP is located on 3,100 acres in the central portion of the Minneapolis-St. Paul metropolitan area. The Metropolitan Airports Commission (MAC) owns and operates MSP and six reliever airports. The MAC was created by the Minnesota Legislature in 1943, and reports directly to the legislature and the Governor. MSP serves the Twin Cities with domestic and international commercial air service. In 1990, the Minneapolis-St. Paul area population was approximately 2.5 million people, the 16th largest metropolitan area in the country. In 1997, MSP was the 13th busiest airport in the United States and 19th in the world in terms of passengers, and the 10th in both the nation and the world in terms of aircraft operations. There were 491,300 aircraft operations (takeoffs and landings) and a total of 29.0 million passengers using MSP in 1997.

MSP has three operational runways: two parallel runways oriented in a northwest-southeast direction and one crosswind runway lying in a northeast-southwest direction (Figure 1). Runway 12R/30L is 200 feet wide and 10,000 feet long. Parallel and north of this runway is Runway 12L/30R, which is 150 feet wide and 8,200 feet long. Crosswind Runway 4/22 is 150 feet wide and it has been proposed by the MAC to be extended from 11,006 feet to 12,000 feet in length in the very near future. All runways are lighted and equipped with navigational aids which allow aircraft arrivals and departures under both visual and instrument landing conditions.

MSP is served by eight major airlines, two international carriers, two national carriers, four regional airlines and nine charter carriers. It is one of 26 airports nationwide and one of 4 airports in the North Central region designated as a large air traffic hub by the FAA. Northwest Airlines (NWA) is headquartered in Minneapolis-St. Paul and uses MSP as both a major connecting hub and a destination airport. The airline was the nation's sixth largest U.S. air carrier in terms of scheduled passenger service and fourth in revenue passengers miles in 1996. It comprised 76.8 percent of MSP's annual enplaned passengers in 1997.

MSP currently has two passenger terminals in use, the Lindbergh Terminal and Hubert H. Humphrey Terminal. The Lindbergh Terminal is used by passengers traveling on domestic, regional, and international airlines while the Humphrey Terminal is predominantly used by domestic and international charter passengers. There are 72 loading gates, 11,000 parking spaces and a foreign trade zone on the airport, as well as a NWA maintenance base and a variety of airport and airline support facilities and public uses.

B. Proposed Project

The MAC, the airport owner and project sponsor, proposes to implement its 2010 Long Term Comprehensive Plan (2010 LTCP) for MSP, which includes the major features of the proposed federal action (FAA Order 5050.4A, para. 21). The principal feature of the 2010 LTCP is the construction of a new 8,000-foot north-south runway (Figure 1). Additional development to be undertaken in carrying out the 2010 LTCP includes the following airfield and roadway modifications:

- taxiway improvements and a holding/deicing pad on the north end of the new runway
- new holding/deicing pads for Runways 12R, 30L and 30R
- enhanced storm water detention basins
- expansion of the Red, Gold and Green Concourses
- new Green Concourse people mover
- realignment and widening of the airport frontage road between 66th Street and 34th Avenue South
- reconstruction of the TH 77/66th street interchange
- reconstruction/construction of maintenance, aircraft hanger and air cargo facilities
- new apron pavement

Federal approval and implementation of the 2010 LTCP will also require the FAA Division approvals and actions noted above, in Section II.A of this ROD. Any development beyond the 2010 LTCP is subject to further environmental review and separate FAA and other agency approvals, and is not provided for by this ROD.

C. Project Background

Dual Track Airport Planning Process

Dual Track Legislation and Scoping Process. Findings contained in the 1988 *Airport Adequacy Study* prepared by the Metropolitan Council (MC), the region's Metropolitan Planning Organization (MPO) and a cooperating agency in the preparation of the FEIS, indicated that because of environmental and physical constraints, MSP might not be capable of expanding to the degree necessary to meet the region's long-term air transportation needs. In 1989, these findings led the Minnesota Legislature to enact the Metropolitan Airport Planning Act (1989 Minnesota Laws, Chapter 279). This Act provided the basis of determining whether the long-term air transportation needs of the Twin Cities metropolitan area and the state could best be met by enhancing capacity at MSP, or by developing a replacement air carrier airport (New Airport) elsewhere within the metropolitan area. In what came to be known as the "Dual Track Airport Planning Process," the legislation directed the MC and the MAC, in conjunction with the public and with cooperating federal, state, and local agencies, to complete a series of studies and documents which would evaluate long-range aviation alternatives to fulfill the aviation needs in the Twin Cities area for a 30-year period. The following six planning goals were established to guide each of the two "tracks" of the Dual Track Process and were applied throughout this process:

- Develop airport facilities to meet future aviation needs, to provide enhanced levels of air service, and to further the economic development of the State of Minnesota.
- Minimize costs to users.
- Develop the airport in a manner which is flexible and adaptable to changing conditions.
- << INSERT Figure 1—Aerial showing the 2010 LTCP. >>
- Provide an airport that is safe and reliable.
- Develop an airport that is consistent with state, regional, and local plans and economic development policies.
- Develop the airport and the airport vicinity to minimize and reduce adverse aircraft noise and other environmental effects.

The Dual Track Process included a series of environmental documents called Alternative Environmental Documents (AEDs). These documents included analyses to an EIS level-of-detail and were developed at the following decision points:

- Alternative search areas for a new airport, with only one carried forward to the next phase.
- Alternative new airport sites within the preferred search area, with only one site carried forward to the next phase.
- Alternative development plans on the preferred new airport site, with only one plan carried forward to the Draft EIS.
- Alternative development plans for MSP, with only one plan carried forward to the Draft EIS.

The AED study process was a state-led environmental procedure devised in response to the 1989 Dual Track legislation. As approved by the Minnesota Environmental Quality Board (EQB) on March 19, 1992, the procedure was integrated into the NEPA process and included numerous opportunities for public comment and public hearings.

The FAA as the lead federal agency, in cooperation with the MAC, jointly initiated the scoping process for the federal environmental impact statement in April 1992 by announcing its intent to prepare an EIS, and by requesting scoping comments. The FAA published the original *Notice of Intent* to advise federal, state, and local agencies of the availability of the *First Phase Scoping Report* and scheduled scoping meetings. The FAA also invited affected Federal, State and local agencies to participate as cooperating agencies. The *First Phase Scoping Report* clarified that

the AEDs would be conducted with the FAA's involvement and in accordance with NEPA requirements. The April 1992 *First Phase Scoping Report* also explained that the AEDs would identify one MSP expansion alternative and one new airport site and layout (the New Airport Alternative) for further analysis as part of the Dual Track EIS process.

The FAA mailed the *First Phase Scoping Report* to numerous agencies, including the U.S. Environmental Protection Agency (U.S. EPA), the U.S. Department of Interior, the Federal Highway Administration, the U.S. Army Corps of Engineers, the U.S. Department of Housing and Urban Development, the U.S. Department of Agriculture, the Advisory Council on Historic Preservation, and several other federal, state, and local agencies. In many cases, as throughout the Dual Track Process, this involved mailing letters to various management branches of federal agencies, including the local, regional, and national managers of the U.S. EPA and the U.S. Fish and Wildlife Service (USFWS). The first phase of scoping and the intent to prepare an EIS was also announced through advertisements published in local newspapers. These announcements and correspondence referenced the availability of the scoping document for review and invited participation in two public scoping meetings, held April 21 and 22, 1992, and one agency scoping meeting, held April 21, 1992 (see also Section VII—Public and Agency Involvement). In March 1993, the FAA and MAC published responses to all substantive oral and written comments received on the *First Phase Scoping Report*.

As planned during the first phase, the 3-year scoping/AED process evaluated several airport development alternatives using a level-of-detail equivalent to a federal EIS and then selected preferred configurations for both a New Airport Alternative and a MSP Expansion Alternative for evaluation in the Draft EIS (for more information concerning alternatives, see Section V of this ROD). While the U.S. EPA's initial comments on the AED process expressed some concerns—especially with regard to selection of the New Airport Alternative—the EPA also noted that it would treat the AED process as if it was being solicited for comments on an EIS. During the first phase of scoping, and throughout the entire AED process, additional comments were received from the U.S. EPA, the U.S. Department of Interior, and from several other federal and state agencies, as well as from county and local governmental units and elected officials. The written comments were published, along with FAA-MAC responses in connection with the Final AEDs and Scoping Decision Documents. This 3-year scoping and analysis process concluded without any significant agency comments in opposition to the process used to develop the final New Airport Alternative or the MSP Alternative, which were carried forward for more detailed evaluation in the Draft EIS, as summarized below.

In May 1995, after completion of the first phase of scoping (i.e., the AED process), the FAA reiterated its intent to prepare an EIS, established the preferred New Airport and MSP Alternatives to be evaluated in the Draft EIS, announced the availability of the *Second Phase Scoping Report*, announced second phase scoping meetings, and again invited various agencies to contribute to the EIS as participating agencies. The consultation and notification process used to conclude the first phase of scoping required many steps and detailed technical analyses, summarized in the AEDs. This part of the scoping process compared various airport development alternatives from the standpoint of environmental impacts, feasibility, and aviation capacity benefits (see Section V, below). In addition to the AEDs, the second phase of the scoping process included four "Scoping Decision documents," which focused on the screening of airport development alternatives at each of the following decision points:

- *New Airport Site Selection Scoping Decision* (June 1993);
- *MSP LTCP Scoping Decision* (March 1994);
- *New Airport Comprehensive Plan Scoping Decision* (June 1994); and
- *EIS Scoping Decision* (July 1995).

The joint federal-state scoping process was coordinated with the AEDs and included numerous public and agency scoping meetings and comment periods, concluding in July 1995 with publication of the *EIS Scoping Decision* document (July 26, 1995). The MAC was a cooperating agency and was directly responsible for assuring compliance with the Minnesota Environmental Protection Act (Minn. Stat. Chap. 116D) and Minnesota Environmental Quality Board Regulations (Minn. Rules Chap. 4410), as well as other state laws and regulations.

As described above and in Section V of this ROD, the AED evaluation and selection process included a number of reports and studies to arrive at preferred development alternatives for both a new airport site and for the existing MSP site. For the MSP Alternative, this included a seven-volume technical report that examined capacity, airspace, air service, and other issues. As such, the reports related to the AEDs were too voluminous to incorporate into the subsequent Draft EIS and Final EIS in their entirety. However, both the Draft and Final EISs drew extensively from these efforts (see also FEIS Section III.C.1, and selected figures in Appendix J); the AEDs and other reports were incorporated by reference within the EIS and were made reasonably available to the public throughout the environmental review process.

The July 1995 *EIS Scoping Decision* established the single preferred location and configuration for the New Airport Alternative and the preferred configuration of the MSP Alternative, which were both evaluated further in the Draft EIS. In doing so, the *EIS Scoping Decision* summarized the joint FAA-MAC scoping and AED study process, which took more than three years to complete. The Scoping Decision also noted the applicability of various environmental categories for further detailed EIS analyses.

Correspondence from the U.S. EPA, dated July 5, 1995, and included with the *EIS Scoping Decision*, observed that the state's AED process closely paralleled the NEPA process, and noted that part of the intent of NEPA is to avoid duplication and reduce paperwork. The EPA also stated that the State process had "done a very adequate job of avoiding and minimizing environmental impacts for both tracks of the Dual Track Airport Planning Process." Finally, the EPA stated that it supported the range of alternatives proposed for assessment in the Draft EIS.

Environmental Impact Statement. As a result of the AED process, the FAA and MAC had established which alternatives were still considered viable for further detailed analysis. A Draft EIS (DEIS), jointly prepared by the FAA and the MAC as both a state and federal document, focused on one alternative for the New Airport, one for MSP, and included a No Action Alternative. On December 22, 1995, the FAA and the MAC published the *Notice of Availability* of the Draft EIS in the *Federal Register*. Public comments were accepted on the Draft EIS until February 13, 1996. During the comment period, two public hearings were held on January 17 and 18, 1996.

In March 1996 MAC and MC submitted their report to the legislature in accordance with the 1989 Minnesota Laws, Chapter 279. This report contained the recommendations of MAC and MC on the preferred alternative for meeting the long-term commercial aviation needs for the region and future major airport development. On April 2, 1996, the Minnesota Legislature authorized the MAC to implement the MSP 2010 Comprehensive Plan which includes the new Runway 17/35, new taxiways, and associated facilities. The legislation (attached to the FEIS in Appendix A) also requires further legislative approval prior to implementation of the MSP 2020 Concept Plan, which includes new terminal construction and further facility development.

The joint FEIS for development of MSP was prepared by the FAA and MAC, published in May 1998, and serves as both a state and federal document prepared under NEPA and Minnesota environmental regulations. The Minnesota Environmental Quality Board (EQB) will review the project and render a determination of adequacy on the FEIS and proposed project at its next scheduled meeting, planned for October 29, 1998. An EQB adequacy determination on the FEIS, including responses to comments, will conclude the state's environmental compliance.

requirements for the proposed action. To allow sufficient time for consideration of MAC's pending application for a Letter of Intent (LOI) in fiscal year 1998, and to complete congressional notification, the FAA must complete this ROD before the EQB meets in October. The FAA may issue a letter to a project sponsor to announce its intent to obligate federal funds for an airport development project under the Airport Improvement Program. Letters of Intent allow project sponsors to receive reimbursement for certain expenditures made in advance of receiving an actual federal grant. FAA regulations require completion of the NEPA environmental review process before an LOI can be issued. According to these regulations, federal environmental work must be complete and the project work must be imminent before an LOI can be approved.

FAA's Role in the Dual Track Process. Throughout this extensive process, the FAA has monitored the methods and procedures used by the MAC in arriving at a preferred alternative. The FAA assisted in the analysis by providing guidance and advice in various technical committees. This included FAA participation in more than 75 committee meetings, including meetings of the following groups: the Capacity Design Team, the New Airport Technical Committee, the MSP Technical Committee, the Technical Advisory Committee for the LTCP, the State Advisory Council on Metropolitan Airport Planning, and the Surface Transportation Committee.

In addition to jointly preparing the Draft and Final EISs, the FAA has independently reviewed and evaluated all of the material presented in the scoping and environmental documents, and critical portions of the material have been independently verified. At each major milestone, the FAA reviewed the scoping and AED process to ensure coverage of a reasonable range of alternatives. This has included the FAA's independent evaluation of airspace modifications, which have concluded that the existing MSP terminal airspace can be reconfigured to accommodate the new north-south runway. The FAA and the MAC also provided for and participated in several opportunities for public participation. These included more than 20 public meetings held during the EIS scoping period, organized to obtain input on specific issues related to new airport site selection and the layout of the preferred build alternatives for both the New Airport and the MSP Alternative. The public and agency involvement aspects of the process are described further in the FEIS, Section VIII (Public and Agency Involvement) and in Section VII of this ROD.

Additional background information, especially in regard to project alternatives, is contained below in Section V.

Noise Mitigation

Overall Noise Mitigation Program. The legislation that completed the Dual Track Airport Planning Process and selected development of MSP to serve the long-term aviation needs of the Twin Cities metropolitan area required that the MAC complete a noise mitigation plan for MSP. This plan encompasses the 60 DNL noise contour for the airport and took into consideration proposed runway development at the airport. It is a critical element in the implementation of the 2010 LTCP, with the April 1996 legislation ordering no less than \$185 million to be spent on noise mitigation measures. The noise mitigation plan was developed by a Noise Mitigation Committee consisting of mayors of cities surrounding MSP, Northwest Airlines, Metropolitan Council, and the MAC. The plan was adopted in October 1996 by the MAC and contains measures for a sound insulation program, community stabilization and property value assurances, aircraft operations measures, and expediting the construction of the new runway. The elements, activities, and membership associated with the plan are reported in Appendix B of the FEIS.

The MAC has an ongoing residential sound insulation program. Over \$90 million has been committed to sound proof 4,200 homes. The FAA has awarded \$35.6 million in grants during the course of this program to fund sound insulation measures related to the existing airport's operations. The MAC intends to continue this effort in relation to the new runway. Additional mitigation is planned, as described in the noise mitigation plan, since the 2005 DNL 60-65

contour does not currently reach all of the properties projected to experience significant noise impacts. MAC further intends to expand this effort to the DNL 60 contour as long as it maintains a bond rating of at least an "A." Historically, general obligation bonds and revenue bonds issued by the MAC have been rated "AAA" by Moody's, Standard & Poor's Ratings Group (S&P), and Fitch IBCA, Inc. (based on approximately the last 10 years). Recently, S&P and Fitch rated MAC Series 1998 airport revenue bonds "AAA," considering a Municipal Bond Insurance Policy issued with respect to those bonds. Further, even without taking the insurance policy into account, S&P and Fitch rated the Series 1998 bonds "AA-" and "A+," respectively. While future bond issues will be subject to new ratings, it is clear that the MAC has historically maintained bond ratings above "A."

The FAA has concluded that federal funds eligibility for future residential sound insulation measures due to the proposed action is generally limited to the DNL 65+ contour. However, federal funds eligibility for the residential insulation program may be extended to include the area out to the DNL 60 contour if there are applicable local standards accepted by the FAA. For MSP, this is planned to be evaluated by the FAA through a future MAC-initiated FAR Part 150 Noise Compatibility Plan.

The FEIS estimates that the proposed action would result in an increase in the number of dwellings within the DNL 65+ contour, changing from 3,200 dwellings under No Action to 3,370 dwellings under the MSP Alternative (based on FEIS Tables Q-1 and Q-4). However, this analysis also estimates that the proposed action would result in a decrease in the number of dwellings within DNL 60+ contour, changing from 15,020 dwellings under No Action to 12,830 dwellings under the MSP Alternative. In addition to how the residential noise insulation program must be adjusted, the FEIS estimates that 158 households would be relocated as part of future noise mitigation measures within the City of Bloomington (see FEIS Figure T-4, in Appendix J).

Special Noise Mitigation Issues. Noise mitigation proposed to address the impacts of the proposed new runway on portions of the Minnesota Valley National Wildlife Refuge (Refuge or MVNWR) and to address the impacts of low frequency noise are addressed separately, within Section VI.A of this ROD, under the subheadings, "Noise," "Section 4(f)" and "Wildlife Refuges." These two noise issues, while part of the project background, have also involved ongoing coordination and FAA policy consideration since publication of the FEIS. Therefore, the referenced sections within the body of this ROD contain updated information on these noise mitigation issues, which are also addressed in detail within the attached comments and responses on the FEIS and Section 4(f) Evaluation (Attachment A). Attachment A.1 includes general comments and responses, including General Responses 1 and 2, which focus on the low frequency noise issue, and General Response 7, which focuses on the MVNWR Mitigation issues. Attachment A.1 also includes responses to individual comment letters on the FEIS, including letters from the U.S. Department of Interior (DOI), the City of Richfield, the Friends of the Minnesota River Valley, and others who expressed concerns about these current noise mitigation issues.

Attachment A.2 is a copy of additional information submitted by the City of Richfield, as an appendix to its comment letter presented in Attachment A.1. Parts of Attachment A.2 address low frequency noise issues; and this, as well as other information was considered by the FAA and MAC in preparing responses to Richfield's FEIS comment letter.

Attachment A.3 contains comments and responses on the Section 4(f) Evaluation, which are all generally or specifically related to the issue of noise mitigation for the MVNWR. Other pertinent information on these special noise mitigation issues is also included in Attachments B and C. Attachment B includes federal agency correspondence in relation to the U.S. EPA's review of the FEIS, correspondence with the DOI/USFWS stating concurrence on mitigation for the Refuge, and the signed Memorandum of Agreement (MOA) which contains the agreed-to plan for mitigating Refuge noise impacts (specifically, Attachment B includes two concurrence letters from

the DOI/USFWS, both dated September 21, 1998, and the MOA, which was signed by the DOI/USFWS on September 17, 1998, and signed by the MAC and the FAA on September 21, 1998). Attachment C contains additional FEIS comment letters filed after the June 15, 1998, deadline for comments; these letters pertain primarily to low frequency noise issues within the City of Richfield; and Attachment C also provides responses to those comments.

Related Environmental Documents and Actions

Further Studies to Develop the West Terminal. Continued long term development of MSP to include the new west terminal or other significant elements beyond those in the 2010 LTCP would necessitate the preparation of subsequent environmental documents. Environmental reviews of the 2020 off-airport highway improvements would be prepared by Mn/DOT and the Federal Highway Administration.

Other Actions. Major airports such as MSP are subject to numerous proposals for improvement and maintenance. Some airport improvement projects do not require any significant environmental documentation when they are found by an agency to have no potential for significant impacts—individually or cumulatively—on the environment and, therefore, do not need any detailed environmental analysis. Other projects have independent utility because they do not depend on other actions or are based upon satisfying a specific need that is not connected to a more comprehensive airport expansion proposal. Therefore, a project can go forward if it is justified independently of another project, such that it would not be unwise or irrational to proceed on one project without the other.

The MAC has undertaken annual development projects to maintain its facilities at MSP and to implement committed proposals contained in its ongoing Capital Improvement Program (CIP). MAC projects, such as the Part 150 airport noise compatibility program, the temporary extension of Runway 12R/30L, the extension of Runway 4/22 toward the northeast, and the implementation of a Runway 4/22 runway use system are part of this program. As appropriate, these past actions have been the subject of separate environmental actions and documentation. Known cumulative impacts that might affect the 2010 LTCP from this planned and contemplated action were included in the Dual Track FEIS based on the information available at the time the FEIS was published.

The MAC's CIP includes a commitment to temporarily extend Runway 12R/30L, and to permanently extend Runway 4/22 toward the northeast. The plan to extend Runway 4/22 would increase the runway's current length from 11,006 feet to 12,000 feet for use by aircraft on a permanent basis, to optimize nonstop B-747 service to Hong Kong with direct service, increasing to five flights per week from the recent average of 2.8 per week.

The proposed runway 4/22 extension to 12,000 feet is considered an action having independent utility from that of the proposed action in this ROD and the Dual Track FEIS. It is a phased project that first requires the temporary extension of Runway 12R/30L from 10,000 to 10,900 feet, to provide for certain operations requiring a runway length of 10,900 feet while the permanent Runway 4/22 extension is under construction. As such, full implementation of the planned runway extension will occur in phases and does not depend at all on the final disposition and progress on the new Runway 17/35 project authorized by this ROD. Further, the Runway 4/22 extension project is still in the planning phase of development, and an ALP depicting the proposed runway extensions in a location consistent with safety, efficiency, and utility at MSP has not yet been finalized and submitted to the FAA for approval.

The FAA and the MAC recognize that Northwest Airlines (NWA) has recently announced suspension of its current non-stop MSP to Hong Kong service effective November 1, 1998. After this announcement, recent discussions between the MAC and NWA have not determined if this

change in service should substantially influence progress on the proposed extension of Runway 4/22 to 12,000 feet. Therefore, the MAC is currently continuing to proceed with the Runway 4/22 extension project. As stated above and within the FEIS, the runway extension project is an action that is wholly independent of the Runway 17/35 project; even so, the two projects were carefully evaluated from the standpoint of cumulative impacts. In conclusion, a MAC decision to proceed, delay, or not proceed with the Runway 4/22 extension project will have no bearing on the new runway project authorized by this ROD.

As noted above, the Runway 4/22 extension project (which includes the temporary extension of Runway 12R/30L) does not affect the planned operation of the new north-south runway. The potential changes in runway use resulting from extending Runway 4/22 and the addition of the new-north south runway would not result in cumulative impacts for air quality, noise or wetlands. As reported in the FEIS, the known noise impacts due to the Runway 4/22 extension would not create a significant impact (defined as a 1.5 DNL increase in noise over any noise sensitive area located within the DNL 65 contour) at locations surrounding the airport which will experience noise increases as a result of the extension. Potential environmental consequences associated with these runway extensions are incorporated into the Runway 17/35 FEIS by reference in accordance with 40 CFR 1502.21. They are also included as cumulative impacts in the "Environmental Consequences" Section of the FEIS.

If fully implemented, the precise location of the Runway 4/22 extension and Runway Protection Zone may require minor adjustment for safety, efficiency, and utility reasons. However, the potential shifts in location involve negligible environmental and cumulative impacts, as noted in the above-referenced Environmental Assessment. As necessary, appropriate additional environmental review will be completed (independently from this ROD) before the FAA takes final action concerning the runway extension project.

Project Notifications

As previously noted, the FAA published a *Federal Register* notice dated April 2, 1992 (57 FR 11344), announcing its intent to prepare an EIS and to conduct the first phase of the public scoping process. A second notice was published on May 25, 1995 (60 FR 27804) announcing the intent to prepare an EIS and to conduct second phase scoping on the airport alternatives to meet long-term air transportation needs in the region. The scoping process concluded in July 1995 with publication of the EIS Scoping Decision document (July 26, 1995). A public notice of availability of the DEIS was published in local newspapers on various dates from December 15 to 22, 1995, and in the Federal Register on December 22, 1995 (61 FR 2507). The FAA and MAC held joint public hearings on the DEIS on January 17 and 18, 1996, during which oral comments were taken. All substantive oral and written public comments on the DEIS are responded to in Appendix I of the FEIS.

The FEIS was signed by the FAA on May 6, 1998 and released to the public on May 15, 1998. A public notice of availability of the FEIS was published in local newspapers on May 18, 1998, and in the Federal Register on May 15, 1998 (63 FR 27083). Comments on the FEIS were received and are included with responses in Attachment A of this ROD.

III. Purpose and Need for Action

The broad purpose of the Minnesota Dual Track Airport Planning Process is to provide efficient and economical movement of people and goods between the Minneapolis-St. Paul area and national and international markets, and help promote the orderly growth and economic development of the region. The state's Metropolitan Airport Planning Act of 1989 also stated that the airport's actions must satisfy the air transportation needs of the region to the year 2010, and there must be a concept plan that could assure that the air transportation needs of the region are

met to the year 2020. This was accomplished by the development of the 2010 LTCP, proposing the construction of new Runway 17/35, and the 2020 Concept Plan for additional improvements, including a new terminal building.

Throughout the Dual Track study process, the FAA has performed environmental and airspace analyses which supported and assisted the MAC to address these objectives. From the FAA's perspective, the primary focus has been to support the state's goal of satisfying the region's air transportation needs to the year 2010. Consistent with the mandated Dual Track process, the FAA has also participated in the analysis of a 2020 Concept Plan.

The FAA considered the purpose and need for this project in light of its statutory charter to encourage the development of civil aeronautics and the safety of air commerce. Further, FAA took into account the congressional declaration of policy that airport improvement projects that increase capacity should be undertaken to the maximum extent feasible to increase safety and efficiency, and to decrease delays.

More specifically, the need for the proposed MSP project stems from the findings and independent conclusions by the FAA and the MAC that without substantial airfield, terminal, and access improvements, future demand in aviation activity at MSP may not be accommodated in an efficient and economical manner. This would result in a significantly decreased level of service and increased user costs. These demand and efficiency issues, and the proposed addition of a new runway, were analyzed independently by the MAC and also by a FAA Airport Capacity Design Team, consisting of the FAA, the MAC, and aviation industry groups. The results were reported in the FAA's *Capacity Enhancement Plan* for MSP completed in 1993. The plan recommends a new runway because of its annual airfield delay-savings benefits in meeting forecast aviation activity levels.

At the 1995 actual operations level of 465,300 total takeoffs and landings, operations already exceeded the Baseline activity level in the *Capacity Enhancement Plan* where delay savings and operational benefits of the proposed action would be realized by making airfield improvements. At the future activity levels cited by the Airport Capacity Design Team, ranging from 530,000 to 600,000 annual operations, delay savings would range from 21,000 to 44,000 hours per year—resulting in a \$30 million to \$63 million benefit per year. The FAA has also completed a *Terminal Airspace Study* (August 1996) for MSP. This analysis found that the existing MSP airspace could be reconfigured to accommodate Runway 17/35 and that air traffic changes could further reduce the average airspace-related delays in the range of 900 to 7,000 hours annually.

A. Aviation Activity Forecasts

This subsection of the ROD discusses why the FAA and MAC decided to supplement the analysis of environmental consequences contained in the Draft EIS, with sensitivity analyses using the higher aviation activity levels in the MAC's "High Forecast." The Draft EIS used the MAC 1993 Baseline Forecast. Since 1993, the MAC's Baseline Forecast has been used extensively to develop and evaluate the environmental and financial consequences of the 2010 LTCP and the 2020 Concept Plan. The Baseline Forecast reaches 520,400 operations and 16.7 million enplanements by 2020. As explained in detail below, the MAC High Forecast is representative of the FAA's 1997 Terminal Area Forecast (TAF).

The 1993 Baseline Forecast was produced through a forecast update process initiated in October 1992 and completed in the publication: *Long-Term Comprehensive Plan, Volume 6, Revised Activity Forecasts*, December 1993. The results included the Baseline Forecast and several alternative scenarios which took into consideration variations in economic activity and airline industry factors. The 1993 forecasts were also developed taking into consideration the finding of a 1993 Legislative Auditor's report and input from four expert panels convened over an eight-

month period, including input from the FAA. Based on input received during the panel sessions, regional carrier operations were increased almost 10 percent over those used in the 1990 forecast and the hubbing ratio was significantly reduced. A regression analysis, similar to the methodology commonly used for forecasting aviation activity at other U.S. airports, was performed. The independent economic and industry variables used in this analysis were extensive , and reflect local conditions as measured by such agencies as the Bureau of Economic Analysis (BEA) in the U.S. Department of Commerce, and the Metropolitan Council of the Twin Cities. These efforts produced aircraft operations and enplanement forecasts that were lower than the previously completed 1990 forecasts.

The MAC 1993 forecasts reflect extensive input from the primary air service provider at Minneapolis-Saint Paul International Airport, NWA. NWA has developed a long-term strategic plan for Minneapolis. Although the details of the business plan are confidential, NWA shared major assumptions with the MAC so that the plans for MSP would include input from NWA (NWA letter dated February 8, 1995).

At the time of the 1993 forecast, NWA projected a fleet growth of less than one percent annually for the next five years (Meeting Summary, MAC and NWA, December 17, 1992). They had eliminated plans to add new markets as a result of aircraft order cancellations. NWA expected that, after an increase in the hubbing ratio in 1993 resulting from the new connecting bank, the hubbing ratio would decrease until the ratio of NWA jet to NWA jet connecting enplanements becomes 45 percent of total NWA jet enplanements at MSP. NWA had anticipated that the reduced connecting percentage would be achieved by limiting the annual increase in MSP available seat miles to less than 1 percent. Local originating passengers would then gradually displace connecting passengers. These factors served to lower demand vs. historical relationships (Dual Track Airport Planning Process Memorandum, meeting with Northwest Airlines June 23, 1993).

The 1993 forecast range also included the MAC's "High Forecast," used within the FEIS to test the sensitivity of environmental impacts to possible higher airport activity levels—up to 640,200 operations and 23.8 million enplanements by 2020. The MAC Baseline and High Forecasts utilize more detailed local data than the FAA's TAF, and the FAA has acknowledged that the state's Dual Track legislation required that the MAC prepare forecasts of activity levels through 2020. The FAA's TAF forecasts are only available through 2010, the normal planning horizon beyond which airport activity levels are not reasonably foreseeable. The TAF figures also do not take into account airport-specific capacity constraints, while the MAC has factored this into its forecasts.

The MAC's High Forecast is based on a combination of optimistic scenarios within the context of rapid economic growth and assumed improvements to the airport. It assumes that high regional and national economic growth will increase air carrier originations and will also increase national passenger activity.

As illustrated by Table 1, current airport activity levels are more consistent with the MAC High Forecast, or with the FAA's TAF, than they are with the Baseline Forecast. Differences between the MAC High Forecast and the FAA TAF for the years 2000, 2005, and 2010 are approximately 3.8, 3.6, and 9.8 percent respectively for passenger enplanements, and less than 3.1, 3.7, and 9.1 percent respectively for aircraft operations in each of these three time frames. The FAA believes these to be reasonable forecasts based on its professional judgement and because the differences are within the accuracy of forecasting. The forecast differences are also within the 10 percent "rule-of-thumb" used as a matter of practice by the FAA to determine whether to approve airport master plan forecasts after comparison with the TAF. Therefore, for the purposes of the FEIS, the FAA and MAC agreed that the MAC High Forecast is more representative of the level of future aviation activity expected at MSP than the Baseline Forecast, and the FEIS evaluates the environmental consequences of both the Baseline Forecast and the MAC High Forecast.

Table 1. Comparison of MAC and FAA Aviation Activity Forecasts

| | DEIS Forecast (MAC Baseline Forecast) | | MAC High Forecast | | FAA Forecast (1997 TAF) | |
|------------------|--|------------|-------------------|------------|-------------------------|---------------|
| Year | Enplanements | Operations | Enplanements | Operations | Enplanements | Operations |
| 1996 (actual) | 14,386,000 | 485,400 | | | | |
| 1997 (actual) | 14,335,600 | 491,300 | | | | |
| 2000 | 12,704,000 | 473,000 | 16,714,000 | 550,200 | 16,096,100 | 533,900 |
| 2005 | 13,895,000 | 484,800 | 18,810,000 | 575,000 | 19,487,900 | 596,500 |
| 2010 | 15,030,000 | 499,900 | 20,828,000 | 603,800 | 22,879,600 | 658,900 |
| 2020 | 16,681,000 | 520,400 | 23,774,000 | 640,200 | Not Available | Not Available |

The FAA and the MAC agree that current aviation activity trends imply the possibility of more robust growth than was expected in the Baseline Forecast, and a growth rate more consistent with the MAC High Forecast. However, just as events may be leading to higher activity levels, certain events and factors could also lead to lower activity levels or much slower growth rate at MSP—for example:

- labor difficulties at Northwest Airlines (NWA);
- increased maintenance costs (and FAA-imposed maintenance requirements) for the aging NWA DC-9 fleet; and
- significant expansion of airfield and terminal facilities at Detroit on behalf of NWA, which could divert connecting traffic from MSP.

Since future aviation activity levels at MSP can be influenced by these and other factors related to regional and national economic growth and airline profitability, it is premature to conclude that recent trends of increased activity represent material changes. Nevertheless, while preparing the FEIS, the FAA determined that it was necessary to test the higher forecast range to determine if it triggered any significant changes for certain environmental impacts or for mitigation strategies. Based on sensitivity analyses using the MAC High Forecast, the FAA found that there are not any significantly greater impacts using these higher activity levels. This is especially true for noise impacts, for which the worst-case year has been determined to be 2005 due to projected changes in the MSP jet aircraft fleet.

The MAC High Forecast was used to perform additional environmental analyses to determine if any environmental thresholds would be exceeded. These sensitivity analyses are reported in Appendix H of the FEIS and are summarized in Section VI.B of this ROD. The operations levels set forth in the FAA's 1993 *Capacity Enhancement Plan* fall within these higher MAC and FAA TAF 2010 forecast levels, and the delay savings realized from a new runway at these activity levels further establish the need for the proposed action. Overall, the FAA concludes that the new runway will permit the airport to effectively and safely accommodate existing and projected forecast demand at an acceptable level of delay.

B. Airport Demand/Capacity

Total annual airport passenger traffic is expected to grow to about 30.1 million by 2010 and annual aircraft operations are expected to increase to about 500,000 using the MAC Baseline Forecast and to about 41.7 million passengers with 604,000 operations using the MAC High Forecast. Under the No Action Alternative, it was found that the airport could only handle about 473,500 annual operations without excessive delays, and aviation activity demands would outstrip available capacity. Using a baseline activity level of 420,390 aircraft operations, based on annual traffic levels for 1992, the Airport Capacity Design Team in its *Capacity Enhancement Plan* estimated annual delays at MSP to be 3.1 minutes per operation at that time. With future activity levels ranging from 530,000 to 600,000 annual aircraft operations, the Team determined that if no improvements were made in airfield capacity the average delay per operation would increase to 7.1 minutes per operation at the lower activity level and 13.8 minutes per operation at the higher operations level. With a new north-south runway, these average delays were estimated to decrease to levels just over 3.0 minutes per operation at the 530,000 aircraft operations level and to 4.8 minutes at the 600,000 level. The MAC Baseline 2020 Forecast of 520,000 operations and High Forecast of 640,000 fall within similar ranges of activity and delay reduction as those of the Capacity Enhancement Plan, with and without the new runway.

C. Economic Considerations

MSP is a key economic force within the Minneapolis-St. Paul metropolitan area and a major component of both the regional economy and the national air transportation system. The airport has 175 flights per day to domestic cities, 11 Canadian cities, and 13 European and Asian destinations. By increasing the number of nonstop destinations, a connecting hub increases the frequency of service to individual cities, which decreases travel time and increases convenience. Good air service is a major consideration in corporate location decisions and its past and present level of air service has helped to make the Twin Cities and other Minnesota destinations competitive as business locations. Investments in payroll and facilities by Northwest Airlines and associated industries further benefit the economy of the Twin Cities. Reduced travel delays due to the proposed action and the enhanced level of air service will further the economic development of the State of Minnesota (see the discussion of delay reduction at the opening of Section III, above).

IV. Agency Actions

The federal actions and approvals required to implement the airport sponsor's proposed project include: (1) the unconditional approval of the revised Airport Layout Plan (ALP) for the MAC 2010 LTCP; (2) environmental approval for federal funding under the Airport and Airway Improvement Act of 1982, now referred to as Title 49 U.S. Code 47101 et seq., as amended, and determinations under 49 USC 47106 and 47107 and under various executive orders, (3) determination of potential eligibility for Federal grant-in-aid funds and Passenger Facility Charge funds for airfield and landside development and environmental mitigation; (4) replacement, relocation, and operation of navigational aids; and (5) approval to develop and implement new air traffic control and air space management procedures consistent with the FEIS.

For the MAC to implement the 2010 LTCP, revisions were required to the ALP, and new uses of airspace will result. The associated safety elements of the FAA approval actions include:

- Determination of effects upon safe and efficient utilization of airspace (FAR Part 157)
- Determination of conformance with FAA design criteria and approval of construction plans and specifications (AIP grant assurances)
- Determination that the project is in conformance with the provisions of other applicable Federal Aviation Regulations (FAR Parts 77 and 169)
- Review and approval of amended Airport Certification Manual (FAR Part 139)

- Establishment of a new Instrument Landing System (ILS), Runway Visual Range (RVR) equipment, approach lighting system (ALS) and relocation of the VHF omni-directional range station (VOR).
- Establishment of new flight procedures, including visual and instrument procedures, missed approach procedures, and standard instrument departure (SID) and standard terminal arrival (STAR) procedures of new runway 17/35 (FAR Part 95).
- Designation of controlled airspace and revised routings (FAR Part 71).
- Approval of amendments to the operations specifications of air carriers intending to operate at MSP, which authorize specific routes, types of operations and types of aircraft for use of the new runway (FAR Parts 121, 125, and 135).

In addition, conditional ALP approval of the MAC 2020 Concept Plan is addressed in this ROD. This conditional approval is restricted to the completion, processing, and concurrence with further environmental studies and other conditions the FAA determines in its findings (see also Section XI—Agency Decision and Order).

V. Alternatives Analysis

While the FAA does not have the authority to control or direct actions and decisions of the MAC and the Minnesota Legislature in planning and implementing the 2010 LTCP, it does have the authority to withhold approval of the proposed project, use of federal funding, and other actions described in this ROD. Alternatives to the proposed project have been considered from this standpoint, in terms of their respective performance and resulting environmental and other impacts. The FAA must be assured that a full array of reasonable alternatives, including a "No Action" Alternative, has been considered and that there is no possible, feasible, and prudent alternative to approve federal actions to support the sponsor's and the FAA's preferred alternative.

Numerous alternatives to the proposed project were examined in the FEIS. Various alternatives were eliminated for a variety of reasons and others were selected for detailed analysis of environmental impact on the basis of the achievement of the goals set out in the Dual Track Process.

A. Alternatives Considered and Eliminated

Scoping Decisions

The Dual Track Airport Planning Process initiated by the 1989 passage of the Metropolitan Airport Planning Act provided that the long range assessment of air transportation was to include both airport improvements at the existing airport and the location and development of a new airport. The MAC and MC were directed by the Minnesota legislature to compare these and all other feasible alternatives to meet 2020 aviation demand. As detailed in Section II.C of this ROD, the scoping process for the EIS was performed in two phases. In April 1992, a *First Phase Scoping Report* was prepared which described the Dual Track Process for identifying the alternatives and the issues and impacts to be addressed in the EIS, including the Alternative Environmental Document process (AED). This document outlined the plan for the 3-year scoping/AED process, which evaluated several airport development alternatives using a level-of-detail equivalent to a federal EIS and then selected preferred configurations for both a New Airport Alternative and a MSP Expansion Alternative for evaluation in the Draft EIS. The *EIS Scoping Decision document*, completed in July 1995, documents the results of that process and is the precursor to the EIS with respect to identifying feasible alternatives and identifying issues, concerns, and impacts of alternatives requiring detailed analysis in the EIS.

The FAA, as the lead federal agency, was directly responsible for federal aspects of the EIS scoping process, including early coordination with the U.S. EPA and other agencies concerning the proposed environmental process. During the multi-year scoping and AED period, the MAC and the Metropolitan Council devoted substantial resources to the treatment of alternatives for airport development at the existing airport site and at a new airport location (see also Section II.C).

As a result of the scoping process, concepts brought forward included: the MSP expansion alternative, the New Airport alternative, the No Action Alternative, and two additional concepts. These additional concepts were the Remote Runway Concept and the Supplemental Airport Concept. These five concepts and their variations, along with other concepts that arose during the Dual Track Process, are discussed below.

During the period when the New Airport Concepts and the MSP Expansion Concepts were being considered, community and agency participation was actively solicited. As described in Section II.C of this ROD, the FAA participated actively throughout this process by monitoring the methods and procedures used by the MAC in arriving at a preferred alternative and through its participation on various committees. At each major milestone, the FAA reviewed the scoping and AED process to ensure coverage of a reasonable range of alternatives.

New Airport Concepts

In 1991, the MC designated the search areas for consideration for a new airport as required by the Metropolitan Airport Development Act. The three search areas were evaluated for the development of a new airport using 2020 goals established by the MC. Because of excessive travel time and distance, adverse impacts on various environmental categories, or other reasons, two of the sites were eliminated as not meeting the MC 2020 goals. Based on siting criteria which included airspace considerations, land requirements, and environmental impacts, and other needs, the MC designated the Search Area to be located in Dakota County for planning and development of a new airport. The process used by the MC in designating the search area was approved by the Minnesota EQB and was reviewed by the FAA.

Seven potential airport sites were considered in the 115 square mile Search Area designated by the MC. As a result of the scoping process, four of seven MC sites were eliminated from further consideration (Sites 1, 4, 5, and 7) and three sites were selected for further study (Sites 2, 3, and 6). The sites that were eliminated had severe impacts on communities in the Search Area, impacts on wetlands and floodways, and other environmental effects. The MAC ultimately selected Site 3 as its preferred choice on the basis of 65 evaluation criteria. Site 3 was located east of the Vermillion River and roughly bounded by 170th Street and the City of Hastings on the north, U.S. 61 to the east, 220th Street on the south, and Goodwin Avenue to the west.

The MAC completed a conceptual design for the new airport, which included variations of three layouts basically consisting of four parallel runways and two crosswind runways, with supporting aviation and airport facilities for commercial and military use. A fourth alternative was developed which drew from the best elements of the three layouts and modified other aspects to address environmental and operational problems. The fourth alternative, and its site location, was selected as the New Airport Alternative in 1994. The other alternatives were eliminated in the AED evaluation (*Final Alternative Environmental Document, New Airport Site Selection Study, 1994*).

MSP Expansion Concepts

The *Long Term Comprehensive Plan (LTCP)* for MSP, *Volume 1, Goals, Assumptions and Methodologies* incorporated metropolitan planning goals to guide the development of the MSP

Alternative. As noted in Section III of this ROD (Purpose and Need) and in the FEIS Section III.C.1 (page III-7), these goals, augmented by objectives, were used to identify the best configuration for the MSP Alternative.

Initially, more than twenty concepts were reviewed for possible value in adding capacity to the existing MSP airport. Detailed computer simulations of the delay reductions were completed for each concept, and each was evaluated based on a range of environmental factors. An interactive planning group was formed to provide extensive input for this evaluation. Ultimately, six MSP concepts were selected for more detailed evaluation based on their performance characteristics, feasibility, and environmental impacts. The six concepts were then more fully evaluated while preparing the MSP LTCP. They were also the subject of more detailed environmental analysis. As a result of these processes, "Concept 6" (the addition of new Runway 17/35 and, ultimately, a new west terminal) was selected as the preferred MSP 2020 Concept Plan and the five remaining concepts were eliminated from further consideration.

Concepts 1 and 2 had a new 7,700-foot north-parallel runway (12/30), either with or without a new west terminal. These concepts were not retained for detailed study after the final MSP scoping evaluation (1995) for the following reasons:

- The north-south runway in Concept 6 provides more capacity than a north parallel runway. The 800-foot separation between the proposed north parallel runway and Runway 12L/30R would result in heavy aircraft wake/turbulence dependence, and would limit usability in poor weather. The proposed north-south runway would provide a delay savings of \$4.6 million annually compared to the third parallel runway, when operations reach 530,000, according to the FAA *Capacity Enhancement Plan*. If operations reach 600,000, there would be a delay savings of \$7.1 million annually with the north-south runway as compared to the third parallel runway.
- The north parallel runway would demolish contributing components of both the Fort Snelling National Landmark Historic District and the Old Fort Snelling National Register Historic District and would require the use (i.e., acquisition for airport purposes) of a Section 4(f) 9-hole golf course and Bossen Field, a Section 4(f) park.
- The north parallel runway would displace 601 more residents compared to Concept 6, and place 440 more monthly flights at altitudes less than 500 feet over lakes near MSP where birds congregate (considering the MAC Baseline Forecast of 2020 operations).

Based on these comparisons, the concepts involving a north-parallel runway were not considered feasible and prudent alternatives for adding one new runway to the MSP airfield. When compared to the proposed action (the north-south runway), the north-parallel concepts would result in more extensive environmental impacts, as documented in the AEDs and the FEIS.

In addition, the north-parallel runway is not a reasonable concept because it requires a change in state legislation enacted on April 2, 1996 (see FEIS Appendix A.14). Specifically, Subdivision 28 of that legislation requires that the MAC enter into a contract with each affected city agreeing to not construct a third parallel runway at MSP without approval from the affected cities (Minneapolis, Eagan, and Mendota Heights). The contract that the MAC has entered into with the City of Mendota Heights pursuant to the legislation provides that the MAC shall not affirmatively advocate construction of a third parallel runway prior to December 31, 2020 (*Contract Pertaining to Limits on Construction of a Third Parallel Runway*; signed by MAC and the City of Mendota Heights on December 23, 1996). The same contract states that the MAC shall not, without the approval of the City, construct a third parallel runway during the period for which the contract is effective (this period is at least through December 31, 2020, but there are automatic renewal clauses through December 31, 2050). The terms of the Mendota Heights contract also state that

the City shall take no action to oppose the planning and construction of the new north-south runway.

The details of similar contracts with the Cities of Minneapolis and Eagan are still being finalized, and will address the same issues as the contract entered into by MAC and the City of Mendota Heights.

Concepts 3 and 4 had a new 8,000-foot south-parallel runway (12/30), either with or without a new west terminal. These concepts are also not considered feasible and prudent and were eliminated during the early AED/scoping process for the following reasons:

- Significant operational problems, safety concerns, and minimal capacity expansion compared to Concept 6 are caused by the close proximity of the Fort Snelling National Cemetery; the cemetery boundary and terrain would require a stagger of about 5,000 feet between the proposed runway end and existing Runway 12R/30L.
- Compared to Concept 6, the south parallel runway would subject 10,000 more residents to aircraft noise levels greater than DNL 60.

This combination of minimal benefit and greater environmental impacts caused the FAA and the MAC to conclude that the south-parallel runway concepts are also not feasible and prudent. Compared to the proposed north-south runway, the addition of a south-parallel runway would involve higher costs, greater residential impacts, and more operational/capacity constraints.

Concept 5 had the north-south runway and an additional passenger terminal east of the existing terminal. This concept was eliminated during the final MSP scoping evaluation (1995) because it would be less convenient for passenger gate access and parking, less efficient for baggage transfer, less efficient for regional and international connecting passengers, offers less flexibility for the use of gates by different types of aircraft, and would create more conflicts in aircraft circulation. In terms of environmental impacts, this alternative involves the same runway configuration as the proposed action—the 2010 LTCP. Therefore, it involves similar environmental impacts as Concept 6 (the preferred 2010 LTCP). However, the eastern terminal included in Concept 5 would not provide sufficient benefits to warrant its inclusion in a longer-term airport development plan.

Given future airfield/terminal demands and constraints, it was concluded that only two locations for a terminal at MSP are feasible; they are the location of the existing Lindbergh Terminal and the proposed location of the new west terminal, southeast of the TH 62/77 interchange—at the site of the Original Wold Chamberlain Terminal Historic District. Continued use of the Lindbergh Terminal under the projected airport capacity requirements for the year 2020 will require the construction of additional aircraft gates. It was found that the only feasible location for those gates would be the site now occupied by the historic terminal complex. In fact, either phase of the airport's development—Involving additional aircraft gates for the existing terminal or a new terminal—will result in unavoidable demolition impacts within the Original Wold Chamberlain Terminal Historic District.

Other Concepts

High-Speed Intercity Rail. In 1991, the Minnesota Department of Transportation (Mn/DOT) performed a study of the implications of high-speed rail alternatives on air traffic in the Minneapolis-St. Paul, Madison, Milwaukee, and Chicago corridor. Rail technology with operating speeds of 125, 185, and 300 mph were considered. The purpose of this alternative was to retain the existing MSP and divert sufficient passengers and aircraft operations from air to rail service so that a new runway and terminal facilities would not be needed at the airport. The results of the

study show that rail service would not redirect enough passengers and operations from air travel to preclude a new runway and terminal at MSP.

Remote Runway. In concept, this alternative would retain the terminal area ticketing, baggage, and support facilities at MSP and new gates and runways would be constructed at a remote airfield location in Dakota County. A high-speed transit link would connect the MSP terminal with the new gates. The purpose of this alternative was to retain the ground accessibility and existing development related to MSP, while moving the airfield activity and effects to a remote location.

A study of this alternative was completed in 1995. Results of the study showed that the high-speed transit link between MSP and the remote runways would have adverse environmental impacts (especially due to potential relocations and other social impacts) and would disrupt service on more than 15 local roadways. This proposal would also introduce adverse aircraft noise into Dakota County without relocating the economic benefits and tax base. There were additional concerns that this split concept could eventually lead to passenger support facilities also developing at the new airfield site, resulting in a dual airport system. This alternative was dismissed on the basis of these and other inefficiencies, and because the cost of this alternative was determined to be slightly greater than the New Airport alternative.

Supplemental Airport. The objective of this alternative was to accommodate future demand at MSP without the need for major airfield and terminal additions by retaining the ground accessibility characteristics of MSP for most passengers without requiring extensive additional development. Certain components that constitute aviation demand (military operations, cargo activity, international operations, and general aviation) would be shifted to another existing airport in the state, primarily at Rochester International Airport; Rochester, Minnesota.

In analyzing this alternative, it was determined that shifting operations of military, cargo, general aviation, and international operations, would have little impact on traffic levels and airport delays at MSP because of either the small amount of activity generated by these operators or the off-peak scheduling of some of these operations. Increased travel time and inconvenience in connecting large numbers of transferring international or commuter passengers between airports reduced the overall effectiveness and efficiency of the MSP hub, also making this an infeasible concept. None of the supplemental airport concepts would defer the need for major expansion at MSP.

Northwest Airlines Concept 6A. In January of 1996, Northwest Airlines (NWA) proposed a concept for MSP expansion referred to as Concept 6A. This was a phased development program intended to address the existing to 20 year needs forecast for MSP in a cost-effective manner. Concept 6A focused on expanding the existing Lindbergh Terminal to supply the forecast demand for terminal activities, while an earlier proposed Concept 6 provided for a replacement West Terminal.

The NWA's Concept 6A is very similar to MAC's 2010 LTCP, with similar environmental impacts. The MSP 2020 Concept Plan differs considerably from the NWA Concept 6A plan because of the new terminal; but both plans are based upon development phasing dependent on demand and the MAC and NWA agree that the 2010 terminal development needs can be met by an incremental expansion program for the Lindbergh Terminal. Needs through 2020 can possibly be met by this development as well, although development beyond 2010 is less certain due to the inherent difficulties in forecasting activity so far into the future. MAC and NWA agree that a 2020 Concept Plan, showing the possibility of a new West Terminal with the existing Lindbergh Terminal complex reconfigured into linear gate concourses (2020 Concept Plan), should be used as a basis for environmental analysis and planning. This is because it shows the maximum impact of terminal development at MSP and provides for the development of the north-south runway and 2010 terminal expansion. If a new terminal is justified at some point in the future,

favorable completion of the planning, airspace, and environmental reviews will allow development to proceed based on the concurrence by all parties, including the Minnesota Legislature.

B. Alternatives Considered in Detail

New Airport Alternative

The MAC and MC, as the agencies designated by the Minnesota state legislature as responsible for implementation of the Dual Track Airport Planning Process, identified a search area in Dakota County and then identified alternative locations within the search area for a new airport. Three of the alternatives were fully evaluated and a specific site was selected for a potential new airport. The airfield for the New Airport Alternative, which was developed from this process, was a hybrid of three earlier airfield alternatives. It included four parallel runways and two crosswind runways surrounding a centrally located terminal on approximately 14,100 acres of land. A full array of airport and airline support facilities, and ground access needs were provided in the airport layout. The process for developing a New Airport Comprehensive Plan spanned nearly six years and included four major tasks; developing a conceptual airport layout, designating a search area, selecting a site in the search area, and developing a comprehensive plan for the site. Throughout this period, the FAA participated actively, through representation on the New Airport Technical Committee and by evaluating airspace and safety issues to ensure that the New Airport Alternative was a feasible concept. The results of the site and environmental investigations were reported in the New Airport AED (*New Airport Comprehensive Plan: Final Alternative Environmental Document, April 1995*).

Ultimately, a preferred site/layout for a New Airport Alternative was evaluated in detail with the Draft EIS (December 1995), and it was compared with the MSP and No Action Alternatives. The FAA prepared the DEIS jointly with the MAC, and carefully considered the merits of both the New Airport Alternative and the MSP Alternative, as well as comments received on the DEIS. In March 1996, the MAC and MC made their recommendations to the State Legislature, as required by the process, in consultation with the FAA. In comparing the MSP Alternative to the New Airport Alternative, the MAC and the MC highlighted several differences of environmental significance, including these:

- The New Airport Alternative would result in the physical destruction of more than 6,800 acres of wildlife habitat due to the placement of airport facilities, as compared to the loss of about 360 acres under the MSP Alternative.
- The New Airport would involve the acquisition of 17,000 acres of farmland while no farmland would be affected by the MSP Alternative.
- The New Airport would displace 1,132 residents whereas the MSP Alternative would displace 383 residents.
- The New Airport Alternative would result in major induced development impact within an area that is mostly rural and not served by urban infrastructure. The MSP Alternative can be served by existing infrastructure area and is more consistent with the region's development plans.
- The average travel times for Twin Cities residents to the New Airport would be about 20 minutes longer than to the existing MSP Airport site.

The MAC and the MC also concluded that the MAC's High Forecast of aircraft operations (640,000 annual operations) can be accommodated at MSP with the addition of the single new runway. Following the DEIS comment period, the MAC and MC fulfilled their statutory obligations under the original Dual Track legislation and made their recommendation to select the MSP Expansion Alternative in the *Report to the Legislature* (March 1996). The findings that resulted in the elimination of the New Airport Alternative and the selection of the MSP Alternative were based on the following evaluation criteria: (1) airport operational issues, (2) ground access

issues, (3) economic impacts, (4) financial issues, (5) environmental impacts, and (6) flexibility issues. In April 1996, the Minnesota Legislature considered these recommendations and the comprehensive planning documents and their environmental effects and eliminated the New Airport Alternative from further consideration, which arguably eliminated the need for detailed evaluation in the FEIS. Therefore, the New Airport Alternative is not a reasonable alternative to the extent that it requires a change in Minnesota law.

The FAA has also concluded that the New Airport Alternative is not a reasonable or possible, prudent and feasible alternative warranting detailed study in the FEIS. Even though aspects of the New Airport Alternative could have been technically feasible, the FAA finds that it did not appear to be financially feasible. Furthermore, the FAA does not consider the New Airport Alternative to be prudent because of a widespread record of opposition to this alternative. This is based upon review and consideration of testimony at public hearings, comments submitted in response to the DEIS, and coordination throughout the Dual Track Process with federal, state, and local agencies. The FAA also considered MAC's desire for flexibility to respond to changing demand through expansion at MSP rather than a new airport.

Under the Dual Track Airport Planning Process, the Minnesota Legislature, and the MAC, as the sponsor and airport proprietor, have the fundamental role of deciding how to satisfy aviation demand in the Twin Cities area and to determine the approach to the implementation of their selection. The FAA recognizes that the selection of the MSP Alternative by the Minnesota Legislature as the preferred alternative was not simply the result of technical evaluations and environmental impacts, but was strongly influenced by public opinion, political negotiations, economic factors, and airline involvement. Based on this, the FAA independently reviewed the New Airport Alternative and determined that it was not a feasible or prudent alternative warranting further detailed study in the FEIS as a matter of federal law. The FAA considered as a factor bearing on reasonableness, but not as dispositive, the decision of the State Legislature to reject the New Airport Alternative.

MSP Expansion Alternative (2010 LTCP and 2020 Concept Plan)

The MSP Expansion Alternative consists of the Long Term Comprehensive Plan for the year 2010 and the year 2020 Concept Plan. The 2010 LTCP is the first phase of the 2020 Concept Plan and includes the construction of a new 8,000 foot north-south runway, and the replacement of maintenance, cargo, and aircraft hanger facilities. Ground transportation improvements would be modified to the TH 77 and 66th Street interchange and airport frontage road. The major feature of the 2020 Concept Plan, in addition to the developments resulting from the completion of the 2010 LTCP, is a new replacement terminal building, parking and drop-off facility on the east side of the airport, and additional air cargo and maintenance facilities. There are substantial ground transportation access improvements, including interchange development and roadway widening to serve the new west side terminal in the 2020 Concept Plan. The proposed action for federal approval is the 2010 LTCP.

The complete MSP 2010 LTCP expansion alternative consists of the following elements:

- A new 8,000-foot north-south Runway 17/35 located on the west side of the airport. Associated taxiways and a holding/deicing pad at the north end would be developed to serve the new runway.
- Acquisition of residential property, as well as the Doubletree Grand, Sheraton and Excel Inn hotels and other commercial properties.
- New holding and deicing pads for Runways 12R, 30L and 30R
- Enhanced storm water detention basins
- Expansion of the Red, Gold, and Green concourses in the Lindbergh Terminal
- A new people mover in the Green concourse

- The realignment and widening of the airport frontage road between 66th Street and 34th Avenue South
- Reconstruction of TH 77 and the 66th Street interchange
- Relocation and construction of maintenance, aircraft hanger and air cargo facilities to facilitate new runway development
- Construction of new apron paving in locations around the terminal area and on the airfield

The proposed federal action also includes the FAA Division actions noted in Section II.A of this ROD.

The 2010 LTCP selected for MSP development and detailed environmental evaluation offered the least significant operational, noise and environmental concerns while meeting the purpose and need of the project. As the first phase of the 2020 Concept Plan, the 2010 LTCP can also accommodate longer-term needs in a manner consistent with the analyses contained in the FEIS.

The MSP Alternative was evaluated in detail in the DEIS and FEIS, and was recommended to the Minnesota Legislature by the MAC and the MC for development of MSP to meet the region's needs, for both 2010 and 2020. In responding to the joint recommendation of the MAC and the MC, the Minnesota legislature passed legislation, approved by the governor, which found that development of a new airport is not a prudent alternative to the expansion of MSP. On April 2, 1996, the Legislature directed the MAC to implement the MSP 2010 LTCP.

The FAA concluded that the MAC's analysis of the MSP Alternative (both the 2010 LTCP and the 2020 Concept Plan) was reasonable and sound, and considers the new terminal and other elements of that plan reasonable features to include in a later phase of the airport's development. However, the FAA has conditioned the 2020 ALP approval on the outcome of additional environmental studies (see also Section XI—Agency Decision and Order). As noted above under the "New Airport Alternative," the FAA has also advised the MAC that the April 1996 legislative directive did not prejudge the analysis of alternatives in the EIS pursuant to 40 CFR 1506.1.

No Action Alternative

The No Action Alternative consists of the existing airport facilities and access at MSP, and committed projects with funding approved for construction by the MAC in its current Capital Improvement Program which are not associated with the implementation of a new north-south runway. The No Action Alternative is the baseline environmental condition against which the environmental impacts of other alternatives were evaluated. The committed major projects included in this alternative are:

- Pavement rehabilitation of Runways 12/30
- Runway 12L holding/deicing pad
- Auto rental/parking expansion
- New automated underground people mover connecting parking ramps to main terminal
- A new skyway connector between the Green and Gold concourses
- Reconstruction of the HHH Terminal
- New Sun Country hanger
- New Taxiway W
- Increased use of Runway 4/22 runway use system

The No Action Alternative would result in operational flexibility at MSP remaining largely as it is today. Aircraft operations would be distributed among the runways in a similar manner as currently occurs although the number of operations would increase. Landside needs for surface transportation and terminal area to alleviate passenger congestion and inconvenience would not

be remedied. Under some circumstances, surface water quality affected by aircraft deicing and the lack of storm water detention basins would worsen environmental conditions on the airport. Air quality impacts would also worsen due to operational delays. A complete summary of the environmental impacts described within the FEIS is provided within Section VI.A of this ROD, below. The FEIS also includes impact summaries within the Executive Summary and within Appendix H—*Sensitivity of Impact Categories to MAC High Forecast*.

Although the No Action Alternative is the least disruptive alternative in terms of development impacts, it would fail to solve the capacity needs and delays existing at MSP. Therefore, it disregards the purpose and need set out in the Dual Track Airport Planning Process to provide for the efficient and economical movement of people and goods into and out of the Twin Cities region. It fails to address the critical elements of the long-range goals mandated by the Minnesota Legislature and described and analyzed in the FEIS. Both the MAC and the FAA have independently concluded that without substantial airfield, terminal and access improvements, future growth in aviation activity at MSP will significantly decrease the level of service and increase user costs. For these reasons, the No Action Alternative is not supported by the FAA.

C. Sponsor Preferred Alternative

The MAC's preferred long-term airport development alternative is the 2020 Concept Plan, which primarily consists of a new 8000-foot north-south runway, replacement west terminal, and associated airport facilities and roadways. This proposed alternative incorporates input from the community, other state and federal agencies, and the FAA. This recommendation was given to the Minnesota Legislature in the spring of 1996 for their selection of an alternative, as ordained by the Metropolitan Airport Planning Act of 1989. As previously noted, the Minnesota Legislature passed legislation (April 2, 1996) authorizing the MAC to implement only the MSP 2010 LTCP, the first phase of the 2020 Concept Plan. The legislation mandated that no further consideration of the New Airport Alternative be given, and that development of the west terminal only be allowed with further legislative approval at such time as capacity deemed it necessary.

D. Environmentally Preferred Alternative

The environmentally preferable alternative is the alternative that promotes the national environmental policy expressed in Section 101 of the NEPA. It is the alternative that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historic cultural and natural resources. The FAA and MAC preferred alternative (hereinafter "MAC Preferred Alternative") would slightly increase the number of individuals significantly affected by aircraft noise, displace approximately 227 more people, and use approximately 1,083 more acres of the Minnesota Valley Wildlife Refuge and 33 more acres of wetlands over the No Action Alternative. But it also would result in improvements in air quality, water quality, energy consumption, and some benefit in economic activity. Water and air quality impacts in particular would decrease as aircraft delays decrease, preventing damage to resources that would otherwise occur without the proposed project, with increased aviation activity. The MAC Preferred Alternative would reduce aircraft delays and harmful increases in carbon monoxide (CO) emissions in an area designated nonattainment for CO. It would also reduce fuel usage in 2010 by 6 million gallons per year. It would further decrease deicing associated with aircraft delays and deicing facilities would reduce daily CBOD₅ discharge from deicing by 1,300 pounds per day and significantly improve surface water quality.

There are differences in environmental effects between the build and no-build alternatives. The MAC Preferred Alternative has beneficial transportation improvements and fuel energy savings, and positive air and water quality effects, which outweigh its adverse noise, wetland, and Section 4(f) impacts. Although the MAC Preferred Alternative would result in impacts to the environment, all potentially significant adverse impacts would be ameliorated by appropriate mitigation. The No

Action Alternative might appear to be environmentally preferable because it results in fewer developmental impacts. Yet, it results in significant damage to the biological environment. Although admittedly a difficult judgement, after balancing the value of air and water quality improvements against developmental impacts, the FAA determined that the MAC Preferred Alternative is the environmentally preferred alternative.

E. Selected Alternative

The FAA has completed appropriate aviation technical review and has concluded that the proposed project in the MSP 2010 LTCP can be implemented and is consistent with considerations of safety, efficiency and utility. The FAA has also considered the fact that the sponsor's preferred alternative evaluated in the FEIS has undergone extensive public scrutiny; through an involvement process that has included numerous public hearings and extensive public participation, participation with multiple and diverse task force and technical committees, involvement in government agency participation at the local, state and federal levels, and direct involvement with the Minnesota Legislature, all occurring over a period of nearly 10 years. Additionally, the FAA has considered that MSP officials, along with the FAA, have conducted ongoing negotiations with airport neighbors including communities, the U.S. Fish and Wildlife Service (USFWS), and others, to resolve issues regarding impacts identified in the FEIS. Finally, the FAA has participated in and directed the addition of environmental analyses to assure that the MSP proposed action has been accurately and thoroughly reported.

After careful consideration of the analysis of the impacts of alternatives, and of the ability of these alternatives to satisfy the identified purpose and need for this proposal; and after review and consideration of the testimony at public hearings, of comments submitted in response to the circulation of the DEIS and FEIS, and of coordination with federal, state, and local agencies; the FAA finds the MSP 2010 LTCP identified in the Final EIS to be an acceptable and reasonable alternative to meet the purpose and need for satisfying current and future aviation in the Twin Cities area.

VI. Environmental Impacts and Mitigation

The Alternative Environmental Review Process approved by the Minnesota Environmental Quality Board (EQB) for the Dual Track Airport Planning Process in March 1992 required the assessment of environmental impacts of the alternatives to the year 2020. The issues and impact categories analyzed in the Alternative Environmental Documents (AEDs) were determined from the EQB-required scoping process as those warranting detailed analysis in order to compare alternatives. The EQB scoping procedures allow for the elimination of issues and impact categories if they are not relevant or so minor that they did not need to be addressed. Overall, the environmental process addressed an increasing number of environmental impact categories, to ultimately include several more impact categories than required by FAA Order 5050.4A. As a result, this process satisfied FAA requirements for determining if environmental consequences will result from the proposed action. The published FEIS satisfies the reporting requirements for both state and federal purposes and meets applicable state and national policy acts for evaluating environmental impacts. This joint preparation approach has been taken to reduce duplication between state and federal reporting requirements (40 CFR 1506.2, Minnesota EQB, 4410.3900, Subpart 1).

A. Summary of Findings by Each Impact Category

This section contains a brief summary of the principal findings relative to environmental consequences of the impact categories that have been examined. More detailed descriptions of the evaluations for these environmental categories can be found in the FEIS, Section V., "Environmental Consequences."

Air Quality. Criteria pollutants are those for which ambient air quality standards have been established by the U.S. Environmental Protection Agency and the Minnesota Pollution Control Agency, and which have been identified by the FAA as potential critical pollutants associated with airports. The two criteria pollutants that are considered critical at MSP are Carbon Monoxide (CO) and Sulfur Dioxide (SO₂). MSP is located within the designated CO Non-Attainment area and is in a Maintenance Area for SO₂. The on-airport sources for these pollutants include aircraft and ground support equipment, motor vehicles, and stationary sources such as boilers and fuel storage facilities.

Annual pollutant emissions are estimated in the FEIS for the years 2005 and 2020 for on-airport sources using the FAA's Emissions and Dispersion Modeling System (EDMS) model. The year 2005 was accepted by the FAA and U.S. EPA since it would be the first year of operation for the New Airport Alternative under consideration at the time. The 2005 and 2020 times were also consistent with the Minnesota Pollution Control Agency emissions inventory. The EDMS model compared the emissions levels of the total annual emissions directly caused by the MSP proposed project to the de minimis thresholds of 100 tons per year for CO and SO₂, and also predicted pollutant concentrations for peak hour on-airport activity for 1-hour and 8-hour increments. In addition, analysis was conducted for off-site residential areas and highway locations.

The de minimis limit of 100 tons per year is not exceeded at MSP for the 2010 LTCP, based on either the Baseline or High Forecast; therefore, mitigation of CO and SO₂ emissions is not required. All peak-hour concentrations are well below applicable standards. The MAC and FAA have determined that the proposed project conforms to the Clean Air Act Amendments of 1990 and the MSP 2010 LTCP would not have adverse impacts on air quality. The MAC High Forecast Sensitivity Analysis (FEIS Appendix H), however, indicated that mitigation measures would be required based on the High Forecast 2020 level of operations; and Appendix H noted that it is feasible to accomplish any required mitigation through the conversion of ground service equipment to either natural gas fuel or electricity. The need for such mitigation to address the 2020 High Forecast future can be determined later, as part of possible environmental studies for further consideration of the 2020 Concept Plan. The Governor of Minnesota has certified that the proposed project will comply with all applicable air quality standards in a certification letter contained in Appendix K of the FEIS.

Archaeological Resources. Investigations have been conducted within undisturbed or minimally disturbed portions of MSP and have not identified any sites that are eligible for listing in the National Register of Historic Places. As yet unidentified archaeological resources in constructed portions of the airport or in the area which could be impacted by the proposed project will be mitigated according to a data recovery plan developed by the MAC in consultation with the State Historic Preservation Office and subject to the approval of the FAA.

Biotic Communities. Biotic communities, considered to be fish, vegetation and wildlife, are subject to federal standards and guidelines set forth in regulations for the protection of wetlands and threatened and endangered species. A number of bird species use MSP and wetland systems comprise the most significant wildlife habitat on the airport and are addressed as a separate topic in the FEIS. Mother Lake had been designated by the Minnesota Department of Natural Resource's (MDNR) Heritage and Nongame Research Program as a colonial waterbird nesting site due to its long-term use by Forster's terns, a state special concern species.

The 2020 Concept Plan entails the placement of the MSP west terminal in a location where construction of a number of bridge structures would be required to allow vehicular access to the terminal. These structures would require piers into Mother Lake and the placement of bridge deck and resulting shadow over approximately 12 acres of wetland vegetation. Preceding the terminal development, the 2010 LTCP requires placement of fill in about 11.4 acres of Mother Lake for a runway safety area and access road off the end of the new north-south runway. Both the MSP

2010 LTCP and 2020 Concept plan would raise and stabilize the average water levels due to additional runoff on the airport, serving to possibly improve habitat through interspersion of vegetation and open water. This could improve the success of Forster's tern nests that are initiated there. Wildlife using habitats around MSP could incur noise impacts due to the redistribution of flights resulting from use of the new runway.

Due to various spatial constraints, the filling of wetlands to construct the north safety area for the north-south runway is an unavoidable impact of the proposed project. Shifting the safety area out of Mother Lake would require the runway to be moved south or shortened. The position of the 8,000-foot runway's south end is fixed by the location of I-494. Shortening the runway would cause operational limitations and would be inconsistent with the facility requirements set forth in the MSP 2010 LTCP.

Bird-Aircraft Hazard. While not listed as an impact category in FAA guidelines, in response to comments by the USFWS, the FAA and MAC included an analysis of bird hazards in the Draft EIS. An investigation of potential bird-aircraft hazards is prudent when siting new aviation facilities in the vicinity of bird attractants. Based on the analysis of bird concentrations and attractions in the vicinity of MSP, available data does not indicate a clear distribution pattern sufficient to ascribe incidents of specific bird concentration areas and no clear hazard distribution could be determined.

In response to USFWS questions and concerns about the FEIS, the FAA and MAC carefully checked the bird-aircraft hazard analysis contained in the FEIS—especially in Table D-5, on page V-33. This process included re-analyzing predicted flight profiles over bird concentrations, resulting in the corrected table, shown below as Table 2.

Table 2 (corrected FEIS Table D-5) – Summary of Monthly Jet Aircraft Overflights of Bird Concentration Areas

| Altitude AGL | MSP 2020 ¹ | | | MSP 2010 ¹ | | | No Action Alternative ¹ 2010/ 2020 | | |
|-----------------|-----------------------|-------|-------|-----------------------|-------|-------|--|-------|-------|
| | ML | GCL | LML | ML | GCL | LML | ML | GCL | LML |
| <500 Ft. | 2,080 | 3,150 | 0 | 1,940 | 2,920 | 0 | 2,990 | 3,750 | 0 |
| 500-2000 Ft. | 2,150 | 2,360 | 4,600 | 1,990 | 2,210 | 4,280 | 2,160 | 3,510 | 0 |
| >2000 Ft. | 0 | 0 | 1,040 | 0 | 0 | 970 | 0 | 0 | 2,000 |

1 ML=Mother Lake; GCL=Gun Club Lake; LML=Long Meadow/Black Dog Lake complex

Source: HNTB Analysis

The analysis presented in the FEIS has been revised in the ROD, and correctly reflects the new runway's emphasis on operations to the south. The revised analysis shows that the proposed action is not expected to increase operations below 500 feet over bird concentration areas. As stated in the FEIS, the FAA has found that 90 percent of all bird strikes occur below 500 feet above ground level (AGL). While the proposed action would lessen the numbers of very low-altitude overflights at bird concentration areas, the potential for ongoing bird strikes exists in the vicinity of the airport, most notably at altitudes of less than 2,000 feet AGL, and is an unavoidable

impact. This is due to the distribution of bird concentrations around MSP and the impracticability of redistributing flight operations to avoid overflying these areas when aircraft are close to the ground in the critical arrival or departure regime of their flight.

Construction Impacts. Construction of the MSP 2010 LTCP would create some unavoidable temporary impacts to surrounding communities such as noise, fugitive dust, traffic delays, and water quality effects. Carbon monoxide emissions from on-airport construction is estimated to yield a total of 20 tons per year from the combination of haul trucks, employee trips and construction equipment. These emissions are below the 100 tons per year de minimis level. Other impacts are less discernible and would be mitigated through the use of proper construction techniques, many of which are regulated. The design and construction will be in accordance with applicable state and local ordinances and regulations, such as those recommended by the Soil Conservation Service and FAA (*FAA AC 150/5370-10A: Standards for Specifying Construction of Airports, Item P-156, Temporary Air and Water Pollution, Soil Erosion and Siltation Control*). Adverse impacts during construction will be minimized to the extent feasible but cannot be avoided, as is similar to the effects of similar heavy construction projects.

Coastal Barriers. MSP is not a coastal barrier. Analysis of this environmental category with respect to the Coastal Barriers Resources Act is not required.

Coastal Zone Management Plan. MSP is not within a coastal area as defined by the federal government. There is no Coastal Zone Management Program approved by the state for Lake Superior. Analysis of this environmental category with respect to an approved Coastal Zone Management Program is not required.

Endangered and Threatened Species. The bald eagle is the only federally listed species having habitat near enough to MSP to be potentially affected by the proposed project. The bald eagle is recorded as threatened on both state and federal lists. An assessment (*Bald Eagle Biological Assessment, November 1990*) relating to the nesting of bald eagles from potential impacts of Runway 4/22 expansion concluded that it was unlikely that eagle reproduction success would be impacted from runway development. USFWS issued a "No Jeopardy" Biological opinion in relation to that project and has confirmed that formal consultation is not required for the MSP 2010 LTCP and 2020 Concept Plan (USDOI letter of March 18, 1996).

Forster's tern, a state listed special concern species, has historically used Mother Lake at the northwest corner of the airport on an intermittent basis. No mitigation measures are readily available to directly replace any lost habitat from the lake although the water levels could rise and stabilize as a result of the proposed project. This would result in more interspersion of water and vegetation so as to improve the quality of the remaining habitat and reduce near drown outs.

Economic. Economic impacts include the cost of acquiring land and property and the resulting loss of municipal revenues, as well as the costs of airport development and the effects on jobs, sales, and tax bases. A number of analyses of these conditions were conducted by the University of Minnesota and private groups during the environmental process and aspects of the economy were modeled to determine direct and indirect effects of the MSP proposed project. The principal findings of all of this work, as reported in the FEIS, determined direct and indirect employment in the 2010 timeframe to be 35,000 workers and wages to be over \$1 billion. Tax capacity would be reduced by \$4.6 million because of acquisition of residences and businesses needed to complete the proposed project. Development costs of the MSP 2010 LTCP are estimated at \$803 million in 1995 dollars. Tax capacity for businesses removed for airport development potentially could be replaced in other areas in proximity to major highways. Removed residential tax base is unlikely to be replaced because of the lack of developable land for infill construction in adjacent communities.

Energy Supply and Natural Resources. The primary energy and natural resource affected by the proposed project is fuel consumption used by aircraft during flight operations, and vehicle consumption on the regional highway network for airport related trips which account for approximately 1.5% of regional trips. Aircraft fuel use for the 2010 LTCP is less than the No Action Alternative because of airfield operating efficiencies while the vehicle fuel consumption is higher because of the increase in air passengers accessing the Lindbergh Terminal, with a longer average vehicle trip than would occur with the new west terminal proposed in the 2020 Concept Plan.

Farmland. There are no impacts to farmland or the agricultural economy from the MSP or No Action alternatives.

Floodplains. The Minnesota River floodplain lies to the east of MSP. There is no structural encroachment from the existing airport or the proposed alternatives in this floodplain, and no resulting impacts.

Historic/Architectural Resources. The 2010 LTCP includes potential effects on the following properties and districts listed, or eligible for listing, in the National Register of Historic Places: the Original Wold-Chamberlain Terminal Historic District, the Old Fort Snelling Historic District, Fort Snelling National Cemetery, Nokomis Knoll Residential Historic District, Spruce Shadows Farm Historic District, and the Soo Line Corridor. The 2010 LTCP would destroy portions of the Original Wold-Chamberlain Terminal Historic District. The Nokomis Knoll Residential Historic District is also in the DNL 65-70 noise contour and would continue to be incompatible with noise criteria. Only the Spruce Shadows Farm is affected by the 2010 LTCP DNL 65-70 contour when compared to the No Action Alternative, and it will receive treatment in accordance with the joint *Programmatic Agreement* described below. A small portion of the cemetery would have noise levels greater than DNL 70 for either alternative. The Old Fort Snelling National Register Historic District does not currently contain land uses which are incompatible with aircraft noise. The Soo Line Corridor would not be affected by the MSP alternative.

Numerous laws and regulations address the protection of cultural resources. The federal statute most applicable is the National Historic Preservation Act (16 U.S.C. 470) as amended, which contains provisions applicable to federally funded projects on listed and eligible historic properties. The DEIS initiated formal consultation with the Advisory Council on Historic Preservation and with the State Historic Preservation Office (SHPO), and included the National Park Service, Minnesota Department of Natural Resources, Federal Highway Administration, Minnesota Department of Transportation, Minneapolis Heritage Preservation Commission, the MC and the FAA. These parties have executed a joint *Programmatic Agreement* (FEIS, Appendix C) which takes into account the MAC Long-Term Comprehensive Plan and makes FAA responsible for assuring that stipulated measures in the agreement are carried out. These measures include surveying the historic resources to determine adverse effects, and developing the means to ensure maximum retention and curation of significant resources, as well as providing noise mitigation where appropriate. Demolition will be mitigated by documentation for the Historic American Buildings Survey, which is maintained at the Library of Congress.

The MSP 2010 LTCP irreversibly affects portions of the Original Wold-Chamberlain Terminal historic District. The 2020 Concept Plan would demolish the entire district. These adverse impacts are unavoidable. Sound insulation will be used to mitigate adverse noise impacts on other historic buildings, pending the outcome of detailed architectural and engineering studies to determine their integrity.

Induced Socioeconomic Impacts. The 2010 LTCP provides the potential for induced or secondary effects on surrounding communities as a result of airport development. Changes would occur in the City of Bloomington where the Runway Protection Zone for the new north-south runway removes existing development and where the state safety zone will call for less dense

development. Other effects and mitigation is described under the Land Use, Noise, Surface Transportation Access, and Historical/Architectural Resources parts of this section since induced impacts also affect these categories. Approximately 420,000 square feet of office development and over one million square feet of industrial development are expected to be induced between 2005-2020 as a result of airport expansion.

Land Use Impacts. Land use adjoining MSP to the north in Minneapolis and to the west in Richfield is predominantly residential while areas south and east are in public use for the Minnesota Valley National Wildlife Refuge, historic Fort Snelling and the National Cemetery. Commercial land use within the City of Bloomington, including the Mall of America, is also found at the southwest corner of the airport. The airport site is bounded by major transportation arteries on all sides. Land use effects from the 2010 LTCP do not involve actual airfield construction on lands in the airport environs, but instead require takings to accommodate safety areas in connection with the new north-south runway. In particular, three hotels, a power substation, two service stations, a VFW post, a warehouse, and two office buildings (all within the City of Bloomington) would be acquired to provide for the Runway Protection Zone at the south end of the proposed new runway.

Minnesota law requires city comprehensive plans to be consistent with the MC's land use compatibility guidelines, and zoning regulations to be consistent with the City's comprehensive plan and Mn/DOT safety rules. Existing and planned land use in the state safety zones south of the proposed new north-south runway are not consistent with these requirements. The City of Bloomington would have to amend its development regulations to assure conformity with Mn/DOT airport zoning standards for safety zones. Land use to the north would not be affected by the 2010 LTCP although redevelopment might occur in this direction in the long-term future. The Rich Acres Golf Course, leased to the City of Richfield by the MAC, would be converted to aviation use. In addition, the displacement of 7 households and 14 businesses between the TH 77 arterial and Cedar Avenue would be required to permit modifications to the 66th Street interchange. These relocations, as well as proposed changes to connecting roadways, would result in some land use and land access changes in the area west of the TH 77/66th Street interchange.

In summary, direct land use impacts will occur as a result of providing for the runway and Runway Protection Zones, other airport facilities, and reconstructed highway facilities. In addition, rezoning in state safety zones will be required. The MAC will acquire the above-noted properties in Bloomington and Richfield for these needs and the Rich Acres Golf Course would be eliminated. These impacts are unavoidable for the airport to implement the 2010 LTCP and provide the operational safety required by the FAA. The MAC and MC will also continue to work with communities around MSP to develop noise mitigation measures, as described in the section dealing with community stabilization in the airport's Noise Mitigation Plan (FEIS, Appendix B).

Light Emissions Impacts. Approach lights for the south end of the new runway in the 2010 LTCP would be located off-site to the south of the I-494 interstate highway in Bloomington. FAA criteria require that no buildings be located in the Runway Protection Zone where these lights are located. As a result, they will be visible to businesses on surrounding properties. No approach lights are planned for the north end of the new runway and runway lights would not be visible to surrounding properties. Lighting on the exteriors of buildings being developed in the 2010 LTCP has not been determined, but would most likely be similar to what exists on present buildings on the airport. Lights illuminating new roadways, and traffic using these roads, will result in increased light emissions, as will lights used in connection with aircraft operations. In the overall, impacts from lighting will be minimal from the 2010 LTCP. The sequenced flashing strobe lights associated with the approach light system to the south of the new runway has the potential for impacts on surrounding commercial property; however, no impact on residential properties is expected.

Noise. Airport noise is one of the principal concerns associated with the 2010 LTCP. The FAA has required a comprehensive evaluation of the potential noise impacts of the proposed project to be conducted, and the MAC has also prepared a Noise Mitigation Plan to deal with this matter. The analysis of noise in the FEIS was conducted using the FAA's accepted Day-Night Average Sound Level (DNL) metric and the Integrated Noise Model to predict present and future noise levels. FAR Part 150 land use compatibility guidelines were used to determine incompatible land uses, except in the case of the impacted Wildlife Refuge, where additional criteria were also considered (see the Section 4(f) discussion, below). State noise impact criteria based on the L_{10} metric, which measures the point at which specific sound levels are exceeded at least 10% of a specific time duration, are also used in the analysis. This information is extensively reported in the noise section of the FEIS. Additionally, where a particular impact category such as Section 4(f) or Historic/Architectural Resources may experience noise effects, the information is reported in that specific environmental category. Additional noise metrics used in the noise analysis include peak Sound Exposure Level (SEL), Time Above (TA) measurements of various decibel levels, and Maximum A-Weighted Sound Level (L_{max}). These three metrics are used to identify noise impacts for specific land use points rather than for determining overall geographic areas of effect.

EIS Noise Analysis Methods and Results. As discussed in Section V.Q of the FEIS, the year 2005 was selected for use in the noise impact analysis. This is considered to be a worst-case scenario because resulting 2005 DNL noise contours are larger than 2010 and 2020 contours due to the aircraft fleet mix containing relatively noisy "hush-kitted" aircraft (29% of the year 2005 air carrier fleet). It is reasonable to anticipate that the proportion of hush-kitted aircraft would decline after 2005, resulting in less noise impact—even though 2020 total average daily operations are forecast to be 7 percent greater than 2005. Because of this, the 2010 LTCP and the 2020 Concept Plan are similar from a noise impact standpoint because both the aircraft fleet and resulting noise contours are quieter than those that would result from the 2005 fleet at lower activity levels.

In the base year of 1994, approximately 42.3 square miles of land around MSP was in the DNL 60 or greater noise contour, with 19.7 square miles in the DNL 65 and greater contour. Over 65,000 people and 28,220 dwellings were affected by the DNL 60 contour, of which 22,000 people resided in the DNL 65 contour in 9,570 dwellings. For year 2005, the DNL 65 contour encompasses approximately 9.7 square miles, including a population of 7,650 people in 3,370 dwellings. The DNL 60 contour had a population of 22,030 and 9,460 dwelling units. In addition to the population and housing affected in 2005, 11 noise-sensitive uses (churches, schools, parks and a wildlife refuge) are located in the DNL 65 contour (see FEIS Table Q-5, page V-84).

Supplementing the DNL area contours, the noise analysis includes impacts on 42 noise-sensitive land use points in communities surrounding the airport, using the other noise metrics mentioned above. This resulted in most selected locations seeing significant decreases in DNL noise levels from existing conditions, with some locations experiencing noticeable increases in DNL levels. A separate analysis was undertaken to identify noise level effects on Richfield and south Minneapolis associated with taxiing aircraft, using the L_{max} metric. This study revealed noise increases of differing values with one off-site increase of 12 dBA.

Low Frequency Noise Impacts. In 1997, the City of Richfield independently commissioned two studies regarding: (1) the anticipated low frequency aircraft noise in Richfield due to the operation of a proposed north-south runway at MSP; and (2) a field analysis of annoyance due to low frequency runway sideline noise. While the former study was based on analysis at MSP, the latter study was based on a sample survey of residents in El Segundo, CA exposed to sideline noise from the Los Angeles International Airport (LAX). Copies of both studies were eventually provided to the FAA in response to the FEIS, and are attached to this ROD (see Attachment A.2). By letter dated August 27, 1998, Richfield also transmitted the following reports:

- *Final Report—BWI Low Frequency Noise Analysis for Allwood Neighborhood*; Acoustical Design Collaborative, Ltd.; July 24, 1997.
- *Study of Low Frequency Takeoff Noise at Baltimore-Washington International Airport*; Harris Miller Miller & Hanson, Inc.; April 1998.
- *Residential Sound Insulation at Baltimore/Washington International Airport*; AIP 3-24-005-39, Engineers Report; Undated.
- *Similarities in Current Low-Frequency Aircraft Noise Exposure at Baltimore-Washington International Airport and Expected Exposure in Richfield*; BBN Technologies (for the City of Richfield); August 1998.

Copies of these reports are included in Attachment C.

The FAA and MAC have carefully reviewed all of the information submitted by the City of Richfield in regard to low frequency noise issues. As noted above, this information is included in this ROD's attachments. The attachments also include several detailed responses to Richfield's comments on this issue—specifically:

- Attachment A.1—This attachment includes responses to two general comments: (1) the impacts of low frequency noise were not adequately addressed in the FEIS; and (2) the FEIS did not provide mitigation for significant adverse impacts due to low frequency noise (see the responses to General Comments 1 and 2). Attachment A.1 also includes responses to all of the written comments on the FEIS submitted by the City of Richfield, of which several address concerns about low frequency noise.
- Attachment A.2—This attachment is a copy of an appendix submitted by the City of Richfield along with its FEIS comment letter. Parts of Attachment A.2 address low frequency noise issues; and this information, as well as other information, was considered by the FAA and MAC in preparing this ROD and the attached responses to comments.
- Attachment C—Attachment C contains additional comments on the FEIS filed after the deadline for comments. This information was received from the City of Richfield or interested Richfield parties and pertains primarily to low frequency noise issues. Although not legally required, the FAA is including this attachment, including FAA responses to their comments, in order to update readers on the status of the low frequency noise considerations.

As noted above, the complete responses to the City of Richfield's concerns about low frequency noise are found in Attachment A.1, and are particularly addressed in General Responses 1 and 2, as well as within specific responses to correspondence received from Richfield in Attachments A.1 and C. While the FAA and the MAC are not legally required to further investigate the matter of low frequency noise impacts, nor to provide for mitigation, the MAC has proposed and commits to immediately address the issue. Specifically, the MAC is willing to conduct noise studies and vibration measurements to identify the existence, if any, of perceptible vibration from low frequency noise. Such studies must be done in a comprehensive manner and with the involvement of *all* potentially affected communities, including the City of Richfield. If supported by the studies, MAC will prepare and implement a low frequency noise mitigation program for the affected communities as part of an update to the MSP FAR Part 150 Noise Compatibility Plan. The end result of such a mitigation program would be to offset any impacts of low frequency noise that would not be mitigated by conventional sound insulation treatment provided for under the existing MSP Noise Mitigation Plan.

With the technical guidance and assistance of the FAA and others, the subsequent studies will, among other things, undertake necessary vibration measurements in Richfield and other potential areas to assist in documenting the existence of perceptible vibration impacts due to existing or planned operations at MSP. Although there is no established state or federal standard of

significance for low frequency noise and vibration, guidelines for judging human perception of vibration levels have been published in several different forums, and may be considered. If supported by the studies, the MAC will prepare and implement a low frequency noise mitigation program for those affected communities as part of an update to the MSP FAR Part 150 Noise Compatibility Plan. The end result of such a mitigation program would be to offset any impacts of low frequency noise that would not be mitigated by conventional sound insulation treatment provided for under the existing MSP Noise Mitigation Plan.

High Forecast Sensitivity Analysis and Noise Impacts. As previously noted (Section III.A of this ROD) the FEIS also includes a sensitivity analysis to disclose the potential noise impacts of the MSP 2010 LTCP and the 2020 Concept Plan based on a higher range of aviation activity forecasts, conducted at the request of the FAA. This analysis considered the noise effects that could occur from a forecast of higher aircraft operations in these two time frames, as described in Section III.A of this ROD. Based upon the MAC High Forecast, no significant noise impacts were found for the proposed action. The contours resulting from the 2005 base and 2005 high forecast scenarios are reasonably equivalent for the DNL 65 contour, with differences mostly occurring in areas to the south of the airport. The 2020 DNL 65 contour is slightly smaller than for the 2005 65 DNL contour at these higher forecast levels. For more information, see Appendix H in the FEIS, including Figure H-1 (various other noise contour maps are also presented within FEIS Appendix J).

Noise Mitigation Plan. In April 1996, the Minnesota Legislature directed the MAC to develop a noise mitigation plan for the proposed action of a new north-south runway. In October of that year, the MAC adopted the plan (FEIS Appendix B), which included elements regarding sound insulation, community stabilization, aircraft operational requirements, and other matters related to airport noise effects and improvement funding. Elements of this noise mitigation program are underway with the noise insulation program being the most evident measure in effect. The noise mitigation plan is the means that will be used to mitigate noise from the proposed project (for more information about the MAC's ongoing and planned noise mitigation measures, see the discussion under "Noise Mitigation" in Section II.C. of this ROD—Project Background).

Parks and Recreation. Within the airport boundary, the Runway Protection Zones, and the DNL 65+ noise contour, there are 10 parks and recreation areas. Bossen Field, Lake Nokomis, Diamond Lake and Todd Parks are located under the jurisdiction of the Minneapolis Park Board and used for active and passive recreation. Taft Park and the Rich Acres Golf Course are administered by the City of Richfield for active recreational activities, while the River Ridge Playground is a small recreation area approximately one mile from MSP in the City of Bloomington. Fort Snelling State Park is located on both sides of the Mississippi River and portions of the area are adjacent to MSP on the north and to the southwest. A nine-hole golf course, which is a part of this park, lies within the existing DNL 65 noise contour. The Mississippi National River and Recreation Area, stretching along the River and including a portion of the Minnesota River, is mostly owned by other park agencies and the MDNR in particular. The Minnesota Valley National Wildlife Refuge (MVNWR) provides habitat for a variety of wildlife and also provides wildlife recreation areas and environmental education facilities south and east of MSP along much of its boundary. The Refuge is addressed in other sections of this ROD, under "Wildlife Refuges" and "Section 4 (f)."

Under FAA land use compatibility criteria (FAR Part 150), the MSP 2010 LTCP would not result in noise levels for these park and recreational uses which are incompatible with federal guidelines. Removal of the Rich Acres Golf Course and recreation complex for the proposed project is not considered to be a taking of publicly owned park area since the use is located on property leased from the MAC. This lease permits MAC to retake possession of the property if it is needed for airport purposes so long as unamortized investments are compensated for as set out in the lease. No other mitigation is required at other parks and recreation areas.

Environmental Justice. Federal agencies are required to identify and address disproportionately high and adverse impacts on low-income and minority populations as a result of the proposed action (Executive Order 12898, Feb. 11, 1994). Low income in this instance consists of households having a median income below the Census Bureau's statistical poverty thresholds. The MAC conducted analysis to determine residents and employees who might be displaced due to the proposed project because of development or safety reasons, or would be located in the DNL 65 contour as a result of the new runway operations. Both minority and income data were analyzed and the census block group level. Employment analysis was less fine-grained due to lack of data sources and job elimination was tied to business elimination or relocation.

From this analysis, it was determined that employment losses resulting from the 2010 LTCP occurred across a full range of pay scales and low-income employees would not be disproportionately impacted, using comparisons of minorities in affected block groups compared to minority populations in affected jurisdictions. These losses occur as a result of business removals located in the Runway Protection Zone for the new runway, and the construction of highway improvements in Richfield and the southwest corner of the airport. Residential displacement would primarily occur in Bloomington and along Cedar Avenue (Trunk Highway 77) in Richfield. Residential displacements of minority households were also comparable between minority composition in affected block groups and minority compositions in entire affected jurisdictions (approximately 4-5% for each). No disproportionate effects on low-income or minority households were determined to exist when compared to the No Action Alternative. Displacements and relocations would meet the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

Social. Social impacts include the disruption of established residences and businesses, and to other patterns in the community. Impacts could include displacement or relocation of housing, employment, or established institutions such as schools or parks. The FEIS (pages V-108 and 109) identifies 8 households to be displaced due to the direct impacts of the 2010 LTCP—from the clearance of Runway Protection Zones (1 household) and highway reconstruction (7 households). A total of 73 businesses would also be displaced by the proposed action, involving an estimated 2,891 employees. The FEIS also estimates that 158 households would be relocated as part of future noise mitigation measures. Community institutions that would be displaced include the Rich Acres Golf Course and recreational complex, the Airport Medical Clinic, and a VFW Post.

The proposed mitigation for residents and businesses displaced by the development associated with the 2010 LTCP is the use of relocation assistance provided in accordance with the Uniform Act, cited above. The Uniform Act provides for relocation assistance for persons in affected residences and businesses, moving costs, and payment for the actual property being affected.

Displacement of residents and businesses is an unavoidable adverse impact resulting from the proposed project. Financial loss and displacement effects will be mitigated by the Uniform Act and the airport sponsor as a condition of approval of this ROD.

Section 4(f). Section 4(f) of the Department of Transportation Act of 1966 provides that the Secretary shall not approve any program or project that requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state or local significance, or any land from a historic site of national, state, or local significance as determined by officials having jurisdiction thereof unless there is no feasible and prudent alternative to the use of the land and the program or project includes all possible planning to minimize harm.

Under section 4(f), use of land may be either physical or constructive. A constructive use occurs where use of or adverse impacts to Section 4(f) land conflicts with the normal activity associated with the land so as to constitute a substantial impairment of its value. In the case of the 2010 LTCP, both the actual use and constructive use of property are involved. The FAA has published

a *Section 4(f) Evaluation* (May 1998) which describes in detail why the proposed expansion of MSP will result in the use of Section 4(f) resources which include: (1) the demolition of the Original Wold-Chamberlain Terminal Historic District, located within the airport boundary, (2) constructive use of the Spruce Shadows Farm Historic District, and (3) the constructive use of some of the environmental education and wildlife recreation activity areas of the Minnesota Valley National Wildlife Refuge (MVNWR). Under Section 4(f), all possible planning must be implemented to minimize the harm from each use.

Historic Resources. Mitigation for the demolition of the Original Wold-Chamberlain Terminal Historic District is addressed in an interagency *Programmatic Agreement* (PA). This agreement is signed by the FAA, the MAC and MC, the State Historic Preservation Officer and the Advisory Council on Historic Preservation (AHP), with the U.S. Corps of Engineers, the Federal Highway Administration, the Minneapolis Heritage Preservation Commission, the National Park Service, and the Minnesota Department of Transportation all included as concurring parties. The major elements of the mitigation program, as agreed to in the PA, include:

- Document the Original Wold-Chamberlain Terminal Historic District according to the standards of the Historic American Building Survey (HABS) and obtain HABS concurrence on the documentation prior to alteration of the District (the HABS documentation is to be archived in the Library of Congress).
- Ensure that the Smithsonian Institution and the Minnesota Historical Society can select elements or objects from the Original Wold-Chamberlain Terminal Historic District for curation and display.
- Conduct a supplemental study of historic and architectural resources within the Area of Potential Effect (APE) in 2005, due to the planned phasing of construction.
- Evaluate the cultural resource potential of any property added to the APE, which consists of land area within the DNL 65 contour, the expanded airport boundaries, properties affected by roadways directly serving the airport, properties acquired for wetland or other mitigation, and areas impacted due to airport-induced socioeconomic and land use effects.
- Prepare a comprehensive research design for future archaeological evaluation of those portions of the APE that are not accessible at this time because archaeological evidence may exist beneath built-up and paved areas; notify the ACHP if additional resources are found.
- Conduct annual consultations with the parties involved in the PA.
- Determine and agree with the parties on appropriate mitigations if future actions result in as-yet-unforeseen impacts on historic resources.
- The PA stipulations are designed, in part, to address the major phases of development for the MSP 2010 LTCP and the 2020 Concept Plan.

Minnesota Valley National Wildlife Refuge. Implementation of the MSP Alternative does not require land acquisition or other direct taking of facilities within the boundaries of the MVNWR. However, a "constructive use" under Section 4(f) will occur since the noise from the proposed action will substantially impair bird-watching, educational activities, and public use or enjoyment of approximately 1,083 acres of publicly owned land within the approximately 10,000-acre MVNWR.

As reflected in the FEIS and Section 4(f) Evaluation, the FAA and the MAC have participated in detailed consultations with the USFWS regarding the noise impacts to the MVNWR lands resulting from the MSP Alternative. As part of the MVNWR consultation process, the FAA acknowledged that it is currently reexamining its land use compatibility criteria with respect to aircraft overflights of national parks and wildlife refuges, and is applying site-specific analyses based on the circumstances and using other noise impact criteria. This approach was prompted by legal rulings, which have determined that the recreational land use categories in 14 CFR Part 150 may be appropriate guides to acceptable noise levels over areas of a refuge devoted to

traditional recreational uses, but bear little or no relevance to the other role of wildlife refuge and to those who visit it to study and enjoy its wildlife. These rulings also held that actions having only an insignificant effect on the existing use of lands protected under Section 4(f) do not constitute a use.

For the MVNWR, the FAA considered the following to reach a determination on substantial impairment:

- Federal Highway Administration (FHWA) regulations, which state that there is no constructive use when the increase in noise due to the proposed action is "barely perceptible (3 dBA or less)," even when the post-project noise levels exceed the agency's noise abatement action levels.
- the work of the Federal Interagency Committee on Noise (FICON) and research on the impact of noise levels on communication;
- the MVNWR's development history and historical relationships to the urban environment; and
- a technical analysis of noise impacts in the Refuge, including existing ambient noise levels.

Further, the FAA relied solely on the site-specific circumstances and technical noise impact analysis to evaluate impacts on bird watching and similar site-specific Refuge activities and circumstances. Among the findings were these:

- historical aircraft and other urban ambient noise exposure dates back to the Refuge's establishment and, therefore, have always been part of the user's environment within these areas (this is discussed further within the Section 4(f) Evaluation);
- current ambient noise levels monitored in the MVNWR range from 52 to 65 DNL, with six of the eight sites experiencing noise levels of DNL 57 or above (see further discussion below and in Appendices 3 and 4); and
- the expected increase in noise would generally be less than 3 dBA.

These findings led the FAA to conclude that land within the DNL 60 contour, where a 3 dBA increase in noise is expected, reasonably represents the area of substantial impairment for publicly owned parcels within the MVNWR. FAA also determined that noise within the DNL 60 dBA contour was the appropriate basis for determining significance and Section 4(f) substantial impairment. In making this determination, the FAA recognized that: (1) the DNL 60 noise contour may not always conform to the specific MVNWR's public use areas and patterns; and (2) the determination relies on the DNL noise metric. Furthermore, the FAA concluded that the value of mitigation measures should be equal to the fair market value of:

- aviation easements of publicly owned lands within the MSP Alternative's DNL 65 contour and inside the MVNWR's authorized boundary; and
- aviation easements of publicly owned lands inside the MVNWR's authorized boundary that are expected to experience a 3 dBA noise increase and are between the DNL 60 and DNL 65 contours resulting from the proposed action; and
- the impact due to diminished value of the Visitor Center, given its connectivity with the Bass Ponds area.

In the FEIS and Section 4(f) Evaluation, the FAA also determined that certain other mitigation components, such as reasonable costs to plan mitigation, are acceptable and committed to work with the MAC and the USFWS to further define those components. Mitigation alternatives were identified to assure that environmental consequences were fairly evaluated in the decisionmaking process and that the project would include all possible planning to minimize harm from the use of the MVNWR resulting from the proposed action. Since publication of the FEIS and Section 4(f)

Evaluation, the FAA, the MAC, and the USFWS have continued to consult about the exact amount of compensation required to replace and realign facilities, and considered retail and exhibit space at MSP, to develop a detailed implementation and enforcement of a mitigation program. For more information, see Attachment A.1, especially General Response 7.

In order to formalize an agreed-to mitigation approach, a Memorandum of Agreement (MOA) that specifies compensation sufficient to minimize adverse impacts to the MVNWR has been signed by the USFWS and MAC, with the FAA as a concurring party (a copy of the signed MOA is included in Attachment B). Completion of the MOA formalizes the plan to provide the necessary mitigation, as proposed within the FEIS and Section 4(f) Evaluation, to replace the portion of the Refuge that would be substantially impaired by the proposed project. Recent activities which led to the execution of the attached MOA have involved several discussions and correspondence concerning appraisals, which are being conducted to determine the appropriate level of mitigation to minimize harm. (Currently, the parties expect the appraisal process to be completed by the end of September 1998.)

The appraisals have been conducted, and the agreement reflected in the MOA has been reached, using methodologies and following requirements which consider the types of concerns raised by the USFWS that have a bearing on the final compensation amount. In correspondence from USFWS to the FAA dated September 21, 1998 (from Daniel M. Ashe to Lynne Pickard—see Attachment B), the USFWS has noted that because of the adequacy of the compensation plan provided in the MOA, and the cooperative work between the agencies, all of its previous concerns have been resolved. While noting that there are additional details to discuss, this letter also states that the USFWS can foresee no barriers to swift and positive resolution of all remaining compensation matters.

An additional letter from the U.S. Department of Interior (DOI), dated September 21, 1998 (from Willie R. Taylor to Jane F. Garvey—see Attachment B) states that, based on the signing of the MOA, its inclusion as part of this ROD, and pending successful negotiation of additional compensation for the realignment of and increased costs to operate the Refuge, the U.S. DOI concurs that the project includes all possible planning to minimize harm to the MVNWR. This letter also states that, based on discussions since the USFWS filed its comments on the FEIS, the U.S. DOI has now come to recognize the tradeoffs between the alternatives examined during the Dual Track process and concurs with the FAA that there are no feasible and prudent alternatives to the constructive use of Refuge lands resulting from the proposed new runway.

The accepted resolution to these concerns, as documented in the attached MOA (signed by the USFWS on September 17, 1998, and by the MAC and the FAA on September 21, 1998) includes these two basic points:

- The mitigation to offset unavoidable adverse project impacts to the Refuge will be a cash settlement paid by the MAC to USFWS, based on appraised values in conformance with applicable standards and regulations.
- In no case shall the amount of the cash settlement for real property damages to the existing Refuge property be less than \$20 million, based on an estimate of valuation by the appraiser.

In addition to compensation for the appraised real property value, the MOA provides for additional funding, in an amount to be determined, to be provided to the USFWS to realign the Refuge (e.g., new facilities, design, engineering work, and overhead tied directly to the alignment). It also states that additional funds, in an amount to be determined, will be provided to the USFWS to cover increased costs to operate the Refuge. For more information, refer to the signed MOA, presented in Attachment B.

The parties agree that the MOA (pending further negotiations required by the agreement) will be sufficient to provide the Refuge with replacement land of habitat quality equal to that which will be impacted by the project, and to provide for the construction of ponds, hiking trails and trail markers, and other site improvements which will be necessary to replace comparable Refuge components adversely impacted as a result of the construction and operation of proposed Runway 17/35. The parties to the MOA have also agreed to terms that limit the heights of structures and objects within the affected parts of the Refuge and that aircraft shall have the right of flight and to make noise over those areas.

Execution by MAC of the MOA and related special grant conditions provide a commitment on the part of the MAC to provide compensation in accordance with the final appraisal standards to accomplish "all possible planning to minimize harm," consistent with the plan and procedures recommended and set forth in the Section 4(f) Evaluation.

Solid Waste Impacts. There are no significant impacts resulting from solid waste generation. The airport and tenants have various recycling programs in place and waste hauling contracts are used for off-site removal of non-recyclable wastes.

Surface Transportation Access. Access to the MSP terminal and airport facilities is provided by 4-6 lane interstate highways, freeway and arterials, which surround the airport on all sides. The primary access point is Glumack Drive, which is a dedicated airport entrance road from the TH 5 freeway. A secondary access point from 34th Avenue and I-494 provides access to airline and air cargo facilities, the Humphrey International Terminal and fixed based operators. Several other access points service airport and military support facilities.

Improvements to the TH 77/66th Street interchange and the realignment and widening of the airport frontage road on the south and west side of the airport between 66th Street and 34th Avenue South are included as part of the proposed action. The FAA, MAC , Mn/DOT, FHWA and MC have reached consensus and jointly endorsed an approach for implementing the roadway projects required by the 2010 LTCP and the phasing approach to carrying out these measures (FEIS Appendix F). Implementation of the frontage road, primarily to serve relocated air cargo and maintenance facilities, is expected to be located entirely on airport property. Reconstruction of the interchange will require the acquisition of four residences containing seven residential units and 14 businesses, and the reconstruction of interchange approaches, as part of the project. The displacements would follow the provisions of the Uniform Act described in the Social Impacts section above, since their effects constitute unavoidable adverse impacts as a consequence of the proposed project. MAC and Mn/DOT are pursuing cooperative agreements with the affected jurisdictions to address funding, design and construction of the frontage road and interchange. Implementation of the 2010 LTCP will not significantly affect traffic volumes on roadways in the vicinity of MSP.

Major Utilities. The only effect on major utilities in the airport environs is to a 115 kV power line and substation located in the Runway Protection Zone, which is incompatible with the approach to the new north-south runway. The MAC has committed to putting the line underground and relocating the substation to the office park located to the east of the RPZ, which will effectively mitigate this impact. No new major utilities are required to serve the 2010 LTCP.

Visual Impacts. Visual impacts associated with the 2010 LTCP involve the relocation and addition of airport facilities on airport property. These facilities would include maintenance and aircraft hangers and air cargo facilities, and associated aircraft parking aprons, which are displaced by the new north-south runway. These structures would be visible from highways and areas surrounding the airport but do not intrude on vistas in the vicinity of MSP. The MSP development would be located on the existing airport site except for the approach lighting system for Runway 35 which would be located south of I-494 in Bloomington. This system would have no effect on

residences because the off-site location where it will be placed is surrounded by commercial development.

The proposed action would also involve development of a cargo area along the west side of the airport (immediately east of Trunk Highway 77)—the area currently used as the Rich Acres Golf course. This land is owned by the MAC and leased to the City of Richfield, with the intent that it would ultimately be used for airport development. As a result, the visual changes associated with the cargo area's development are reasonably foreseeable and consistent with the area's plan. Furthermore, these visual changes will not appreciably alter the already urbanized character of lands along the west side of the Highway 77 corridor, which include commercial and residential parcels.

Wastewater. Wastewater from the projects in the 2010 LTCP will continue to discharge into the Metropolitan Council Environmental Services (MCES) interceptor and treatment system. Volumes projected by the MSP proposed project would not pose capacity problems for either the MCES conveyance or treatment systems.

Water Supply. Existing water supply at MSP is provided by two sources, which include on-site production wells and supply from the Minneapolis Water Works. It is likely that the wells will be abandoned, with future demands more than doubling the current airport usage from the Minneapolis Water Works. The present 48-inch main servicing the airport has sufficient capacity to service the 2010 LTCP and would not impact supply sources or distribution systems.

Surface Water Quality. Sources of potential impact on surface water quality are primarily storm water discharge and aircraft deicing products. MSP discharge is regulated by the Minnesota Pollution Control Agency (MPCA) through a National Pollutant Discharge Elimination System (NPDES) permit. The MAC currently performs in-river water quality analysis as required in its 1993 NPDES permit, primarily to determine discharge impacts into the Minnesota River which is the principal outfall for discharge from the airport. The airport's containment program is based on the use of plug structures in storm sewer lines and tanker trucks to evacuate glycol impacted storm water to storage ponds on the airport property. Diluted product can be metered into the sanitary treatment system and higher concentrations can be captured for recycling by an outside contractor.

The MAC is currently in the process of applying for reissuance of its five-year NPDES permit. The 2010 LTCP includes the construction of three dedicated deicing pads on different runways and two more pads will be built under the NPDES reissuance. Currently, stormwater drainage is mostly captured in detention ponds on the MSP site and some of the drainage winds up in the Minnesota River. Duck Lake, the primary retention basis for storm drainage on site, will be abandoned for construction of the new north-south runway. Because of this and other changes in drainage patterns and detention needs, additional storm water detention facilities are needed to replace and enhance containment and management of surface water impacts and to control toxicity. The mitigation approach to accomplish these improvements is uncertain. The Governor has provided a certification letter for compliance with water quality standards (FEIS, Appendix K) and mitigation measures will be completed as specified in the renewed NPDES permit.

Groundwater Quality. Historical practices and general activities at MSP have resulted in localized impacts to near-surface soils and the perched water table on the site. When impacts have been discovered, primarily the result of errant fluid releases and spills, they have been addressed through remediation efforts such as source removal and treatment. Existing groundwater quality data indicate that environmental impacts on aquifers associated with MSP operation have been negligible. It is not anticipated that there has been or will be increased potential for impact on the underlying aquifers as the result of potential increases in airport operations and activities.

Wetlands. A total of 15 wetland basins are located on the MSP site with a cumulated area of 193 acres, and ranging in size from 142 acres at Mother Lake to less than 2 acres of combined water hazard areas on the Rich Acres Golf Course. An additional 98 acres of wetlands are located within or immediately outside the airport ownership along the TH 62 arterial. An extensive floodplain forested wetland is adjacent off-site in the Minnesota River valley south and east of the airport, and would not be impacted by the proposed project.

Because of the wide distribution of the wetlands in the northwest portion of the MSP property, the 2010 LTCP requires taking some of these areas to permit the construction of the new north-south runway and air cargo facilities. Eight of these impact wetland areas are small water hazards located on the Rich Acres Golf Course. The Duck Lake and Ball Field wetlands, totaling 20 acres, will be filled for the airfield needs, as will approximately 11 acres of the 142 acres in Mother Lake. In all, 33 acres of wetlands are required for the proposed project. No feasible or prudent alternatives exist to the taking of these wetlands to carry out the proposed project. For this reason, mitigation has been provided for. It is anticipated that 59 acres of replacement wetlands will be required to meet applicable regulatory replacement programs administered by the U.S. Corp of Engineers (*Clean Water Act, Section 404*), MAC (*Minnesota Wetland Conservation Act, 1991*), and the Minnesota DNR (*Minnesota DNR Protected Waters Program*). This replacement wetland acreage will be located off-site and will require a DNR Protected Waters Permit, a Wetland Conservation Act Permit and a Corp of Engineers 404 Permit. Mitigation will be performed by the MAC as specified in the 404-Permit and the requirements of state permitting agencies.

Wild and Scenic Rivers. There are no wild or scenic river designations on or in the vicinity of MSP. Analysis of this environmental category with respect to the Wild and Scenic Rivers Act is not required.

Wildlife Refuges. The MVNWR is managed by the USFWS and includes the Minnesota River floodplain from Fort Snelling State Park to areas approximately 34 miles southeast in the river valley. In total, the refuge includes about 9,300 acres of land, which is both publicly and privately owned. An additional 6,900 acres of state and locally owned and managed recreational lands are interspersed with the MVNWR management units along the river. The two refuge management areas closest to MSP are the Long Meadow Lake Unit (2,600 acres) and the Black Dog Lake Unit (1,400 acres). There are a variety of public use areas lying within the affected area of the airport including: the Bass Ponds, a series of old bass-rearing ponds that are 9,600 feet from the nearest runway at MSP and will be approximately 7,500 feet from the new north-south runway; a Visitors Center, which includes trails and observation areas as well as environmental education facilities and programs; and other trails and features for active and passive recreation. The MVNWR supports a broad range of wildlife and 97 species of breeding birds. The refuge is also used by birds on a temporary basis during migration periods.

Although the 2010 LTCP does not involve the acquisition of any land in the MVNWR, more than 4,600 additional monthly aircraft overflights at altitudes between 500-2,000 feet are expected to occur over the Refuge. These flights would result in disturbance to Refuge users and possible impacts to wildlife and waterfowl, although studies of the effects of aircraft overflights on birds and animals are inconclusive. Redistributing aircraft operations using the north-south runway is impractical as is the rerouting of aircraft arrivals and departures, due to the close proximity of the runway to the refuge lands. Because the adverse impacts to portions of the MVNWR cannot be avoided in carrying out the proposed project, the environmental process required a Section 4(f) evaluation to assure that there are no prudent and feasible alternatives to the constructive use of a portion of the Refuge. It also required a determination that the project includes all possible planning to minimize the harm resulting from the use. More information about this determination, and the planned mitigation measures, is provided above under "Section 4(f)." According to the results of this determination, the MAC and the USFWS have entered into a Memorandum of Agreement (MOA), with the FAA as a concurring party. The MOA is presented within Attachment

B, and its terms and other background information are discussed within the "Section 4(f)" resource discussion, above. The recent execution of the attached MOA further reinforces the determination of the FAA that the project includes "all possible planning to minimize harm," and demonstrates that a detailed mitigation program, including compensation, has been developed in accordance with the mitigation plan described in the FEIS and Section 4(f) Evaluation.

Design, Art and Architectural Application. The 2010 LTCP consists of developing horizontal airfield operating surfaces and redeveloping existing airport facilities. A new air cargo complex would be located adjacent to the TH 77 highway corridor and visible from the arterial, while the air cargo center north of I-494 in the vicinity of 24th Avenue South would be razed. Additional aircraft maintenance facilities would be provided in the vicinity of I-494 and 34th Avenue South. It is premature to assess the aesthetic qualities of these new facilities but there are no outstanding qualities to the buildings and structures being demolished, and no adverse impact as a result of the new developments.

B. MAC High Forecast Sensitivity Analysis

While completing the FEIS, the FAA found that aviation activity at MSP had been tracking more closely with the FAA's 1997 Terminal Area Forecast (TAF) and the MAC High Forecast versus the MAC Baseline Forecast used throughout the Draft EIS. Therefore, the FAA requested that the airport sponsor conduct sensitivity analyses of environmental categories for the 2010 LTCP using the MAC High Forecast as the basis for possible impact determination (FEIS, Section II, C.2.) for year 2010. The MAC's High Forecast is based on a combination of optimistic scenarios within the context of rapid economic growth and assumed improvements to the airport. It assumes that high regional and national economic growth will increase air carrier originations and will also increase national passenger activity, requiring MSP to accommodate more of the Chicago connecting overflow.

Differences between the MAC High Forecast and the FAA TAF for the years 2000, 2005, and 2010 are approximately 3.8, 3.6, and 9.8 percent respectively for passenger enplanements, and less than 3.1, 3.7, and 9.1 percent respectively for aircraft operations in each of these three time frames. The FAA believes these to be reasonable forecasts based on its professional judgement and because the differences are within the accuracy of forecasting. The forecast differences are also within the 10 percent "rule-of-thumb" used as a matter of practice by the FAA to determine whether to approve airport master plan forecasts after comparison with the TAF. Therefore, for the purposes of the FEIS, the FAA and MAC agreed that the MAC High Forecast is more representative of the level of future aviation activity expected at MSP than the Baseline Forecast, and the FEIS evaluates the environmental consequences of both the Baseline Forecast and the MAC High Forecast.

Each of the specific environmental categories in the FEIS was analyzed to determine any significant increases in impacts as a result of the higher activity levels. Based on the MAC High Forecast, no significant increases in environmental impacts were found to result from the 2010 LTCP. On-airport CO emissions increased by 27% in 2010 as a result of the higher forecast level but remained less than the No Action Alternative at the higher activity level. SO_x increased 24% over the lower activity, and remains higher than the No Action Alternative when both are at the high forecast level. With respect to surface water quality, effluent loads increase approximately 17-19%, depending on the location of the particular watershed, as a result of going from the baseline to the high forecast for discharge of CBOD₅ on an extreme case day. Other environmental categories affected by the use of the higher forecast include additional potential for aircraft-bird hazards, increased economic and induced socioeconomic activity, increases in aircraft and vehicle fuel consumption of about 21%, additional solid waste generation, and increases in water consumption and wastewater discharges.

Use of the MAC High Forecast for impact determination does not result in any significant increases in effects requiring substantial and unforeseen mitigation beyond what has already been anticipated in the MAC Baseline Forecast.

VII. Public and Agency Involvement

A. Environmental Document Preparation and Process

The process used in the preparation of environmental documents was approved by the Minnesota EQB in 1992, and is in accordance with FAA's Airport Environmental Handbook (*FAA Order 5050.4A*). The Alternative Environmental Review Process, which Minnesota EQB approved, required the assessment of environmental impacts of alternatives to the year 2020 and the examination of impacts for specific environmental categories, based on an increasing level of detail. Compliance with the FAA's Order 5050.4A establishes that the documents meet the procedural and substantive environmental requirements set fourth by the Council on Environmental Quality in regulations implementing the National Environmental Policy Act of 1968, as amended. Many of these state and federal requirements are similar. These analyses are documented in search area reports for a new airport, and separate environmental documents were prepared for new airport site selection, the new airport comprehensive plan, and the MSP LTCP update. A joint federal-state Draft Environmental Impact Statement was published in December 1995. The FAA and MAC completed the FEIS following findings issued by the MAC and the MC, and in relation to state legislation, dated April 2, 1996 (see Section II.C). The final statement was published in May 1998. This process avoided duplication in preparing an FEIS (40 CFR 1506.2) and satisfies both federal, state and local reporting requirements. The FAA and the MAC are cooperating under a Memorandum of Understanding in the preparation of the FEIS.

B. Agency Consultation and Coordination

Throughout the environmental preparation process and before, the FAA has been involved with agency consultation and coordination at the federal, state and local levels. Federal agencies have been consulted in addition to internal coordination with FAA operating divisions. The U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Army Corp of Engineers, Federal Highway Administration, and the National Park Service have all been involved in the consultation and coordination process. The FAA's state agency consultations have included the MAC, Minnesota Departments of Transportation, Historic Preservation, Agriculture, Natural Resources, and Environmental Quality Board. Local consultation and coordination has occurred with elected and appointed representatives of numerous cities and counties in the region, as well as special interest groups and the public at large.

As detailed in Section II.C of this ROD, the FAA's consultation and coordination process began with joint federal-state scoping meetings in early 1992 and continued up to the preparation of this ROD, which is a federal document in its entirety. The resulting joint federal-state preparation of the DEIS and FEIS built upon the earlier AED evaluation and selection process, which closely paralleled the NEPA process, as acknowledged by the U.S. EPA in correspondence dated July 5, 1995. This approach sought to avoid duplication of effort and reduce paperwork, as mandated in CEQ regulations (40 CFR 1500.4(n)). The U.S. EPA also stated support for the range of build alternatives proposed to be evaluated in the DEIS, which included the sponsor's preferred airfield layout (Concept 6) evaluated in the FEIS.

The FEIS includes signatory approval of the interagency *Programmatic Agreement on Historic Preservation* (FEIS Appendix C), signatory approval of the *Consensus Approach to Surface Transportation* (Appendix F), and a preliminary draft of a Memorandum of Agreement concerning noise impacts and mitigations within the Minnesota Valley National Wildlife Refuge.

Interagency coordination activities have continued through the FAA's preparation of this ROD. In particular, recent and ongoing consultations have addressed concerns expressed by the U.S. Department of Interior concerning Section 4(f) impacts on the Minnesota Valley National Wildlife Refuge and the U.S. EPA concerning NEPA process issues. As noted previously in Section V.B. of this ROD, the MAC and the USFWS have entered into a Memorandum of Agreement (MOA), with the FAA as a concurring party. The USFWS has stated its concurrence with the general scope of impacts requiring mitigation, and the mitigation compensation committed to by the MAC, as described in correspondence between the two federal agencies. The signed MOA, as well as a letter from the FAA to USFWS (dated September 18, 1998) and two letters addressed to FAA from the U.S. Department of Interior and from USFWS (both dated September 21, 1998) are included within Attachment B. This correspondence, along with the signed MOA, demonstrates that the USFWS is in concurrence with the FAA in terms of its findings that: (1) there are no feasible and prudent alternatives to the proposed action, and (2) the proposed action, with the mitigation provided for in the MOA, incorporates all possible planning to minimize harm to the Refuge.

A letter from the U.S. EPA, dated August 11, 1998, and included in Attachment B, is evidence of the progress made in consultations between the U.S. EPA and the FAA. This recent consultation has included discussions of the U.S. EPA's written comments on the FEIS—included in Attachment A.1 along with responses. The EPA's comments have focused on the rationale for selecting alternatives (summarized in Section C.II of this ROD) and the relationship of other airport improvement actions to the MSP 2010 LTCP, in particular the proposed extension of Runway 4/22 to 12,000 feet. Based upon the EPA's letter of August 11, 1998, the FAA concludes that it has satisfactorily resolved the U.S. EPA's concerns in these areas. For more information, see the responses to U.S. EPA's comments on the FEIS in Attachment A.1, including General Response 6; and see the U.S. EPA letter of August 11, 1998, in Attachment B.

C. Responses to Environmental Concerns

Alternative Environmental Documents (AEDs) were prepared for the new airport and MSP alternatives which evaluated the impact of these proposals on the environment. The AEDs focused on the detailed comparison of alternatives for the purposes of EIS scoping and identified potential mitigation measures. Public hearings were conducted to present the findings in the Draft AEDs, and both oral and written comments were received during comment periods on the AED analyses. The comments and responses are contained in the Final AED reports, which recommended the MSP and New Airport Alternatives for further study within the EIS.

Responses to scoping comments are included in the July 1995 *EIS Scoping Decision* document, and were used in preparing the DEIS, published in December 1995, as previously detailed (Section II.C). Responses to the oral and written comments on the DEIS are contained in the FEIS (FEIS, Appendix I). A Notice of Availability of the FEIS was issued in the Federal Register on May 15, 1998. The FEIS was sent to federal, state, and local agencies, libraries and interested groups and individuals. This distribution was followed by a 30-day comment period on the document that ended on June 15, 1998. The MAC also published local notices of the FEIS's availability in newspapers on May 18, 1998 with a comment period also ending on June 15th. Copies of the comment letters and responses are included as Attachment A of this ROD.

Environmental concerns and comments have been dealt with in the DEIS and FEIS. In some instances, the concerns have resulted in additional analyses, supplementing previous analyses or methodologies, or making factual corrections. In other instances, the comments have simply been noted, usually where an opinion rather than a substantive concern has been expressed.

VIII. Related Matters

A. Federal Involvement in the Dual Track Process

The initiation of the Dual Track Airport Planning Process began with the enactment of the Metropolitan Airport Planning Act approved by the Minnesota Legislature in 1989. The law specified a series of activities as the planning program proceeded, and the MAC and MC were charged with the responsibilities for completion of the program and reporting their recommendations to the legislature.

The process that was used to complete the Dual Track Process placed major emphasis on public and agency involvement. Affected federal, state, and local agencies were all involved in the program to varying extents. Direct coordination with the FAA was maintained throughout the process. The FAA reviewed the alternate environmental review process to be used in the Dual Track Process in 1990 and determined it to be consistent with FAA policies and regulations. The FAA formed an Airport Capacity Design Team for MSP in 1992 that issued a report the following year concerning delay causes and possible capacity enhancements for MSP. The FAA and the MAC executed a Memorandum of Understanding in 1995 to work cooperatively and jointly in complying with state and federal environmental requirements arising in the Dual Track Process. It was agreed that the two parties would jointly produce a Draft EIS to meet both federal and state DEIS requirements, and that the FAA would be the lead agency for the Federal EIS and the MAC would be responsible for the AEDs and the Final State EIS.

Throughout the Dual Track Planning Process, the FAA has monitored the methods and procedures used by the MAC in arriving at a preferred alternative. The FAA assisted in the analysis by providing guidance and advice in various technical committees. In addition, the FAA has independently reviewed and evaluated all of the material presented in the DEIS and FEIS, and critical portions of the material have been independently verified. FAA reviewed the scoping and AED process at key points to assure that a reasonable range of alternatives was examined.

The FAA recognizes that the selection of the MSP 2010 LTCP as the proposed action was not simply the result of technical evaluations and environmental impacts, but was strongly influenced by public opinion, political negotiations, economic factors, and airline involvement. As such, the FAA considered its purposes and needs and the common sense realities of the planning process in the development of alternatives. This resulted in the preparation of a joint FEIS, which reflects considerable effort by both the FAA and the MAC to evaluate impacts in detail and make reasonable commitments to mitigation. This ROD represents the findings of the FAA that the Dual Track Process was thorough and reasonable.

B. Additional FAA Participation in the Planning and Environmental Process

As stated above, the entire Dual Track Airport Planning Process is now culminating through the issuance of this ROD. It constitutes a federal order and therefore allows for the commencement of several follow-up actions. As previously established, however, the FAA's involvement in the planning and environmental process dates back to some of the earliest activities, well in advance of publication of the DEIS and FEIS.

The FAA served on numerous committees throughout the Dual Track Process (see Section II.C) and assisted in the analysis of AED alternatives, which has been previously established as an integral part of this long and detailed NEPA process. The FAA has participated during this process through direct consultation with the MAC, and it jointly prepared the First Phase Scoping Report, Second Phase Scoping Report, the DEIS and the FEIS. Throughout the planning effort, the FAA reviewed the methods and procedures used by the MAC and its consultants in site selection and evaluation of new airport and MSP expansion alternatives considered in the AED process, and assisted in their analysis. The FAA also conducted independent airspace and airfield capacity studies for MSP.

C. Governor's Air and Water Quality Certifications

The air and water quality certifications from the Governor of the State of Minnesota are included as an attachment to the FEIS, as required for compliance with Section 102(2)(c) of the NEPA and with regulations codified at 49 U.S.C. 47106(c)(1)(B), implementing Section 509(b) of the Airport and Airway Improvement Act of 1982. See the FEIS Appendix K.

IX. Agency Findings

The FAA makes the following determinations for this project, based upon appropriate evidence set forth in the FEIS and other portions of the administrative record:

- A. There has been consultation with the Secretary of Interior and Administrator of the US EPA. (49 USC 47101(h)). No possible and prudent alternative to the project exists and that every reasonable step has been taken to minimize the adverse effect on the environment [49 U.S.C. 47106 (c)(1)(C)].

This Record of Decision highlights the consultation with the Secretary of Interior and Administrator of the U.S. EPA in accordance with 49 USC 47101(h). It also highlights the alternatives and other factors considered by the FAA in making its decisions, as well as the mitigation measures that have been considered for the alternative selected and made a condition of project approvals. The north parallel runway, and other development alternatives were determined not to be possible or prudent alternatives for the reasons summarized above in Section V of this ROD. Therefore, approval of the proposed improvements is in accordance with 49 U.S.C. 447106 (c)(1)(C). A wide range of alternatives has been thoroughly analyzed and the project includes every reasonable measure to minimize adverse effects on the environment of the airport and its environs. Mitigation requirements are discussed in detail below, in Section X of this ROD.

- B. The Governor of the State of Minnesota has certified in writing that there is reasonable assurance that the project will be located, designed, constructed and operated in compliance with applicable air and water quality standards [49 U.S.C. 47106 (c)(1)(B)].

By letter dated April 24, 1997 the Governor of the State of Minnesota certified that the airport proposed project evaluated in the FEIS will comply with applicable air and water quality standards, as discussed in Section VIII.C of this Record of Decision. The FAA must have this certification to approve grants of federal funds for projects involving location of a runway.

- C. The project is consistent with existing plans of public agencies authorized by the state in which the airport is located to plan for the development of the area surrounding the airport [49 U.S.C. 47106 (a)(1) and Executive Order 12372, Intergovernmental Review of Federal Programs, respectively].

The Metropolitan Council (MC) is the public agency authorized by the State of Minnesota to plan for development of the Minneapolis-St. Paul metropolitan area. Given the MC's review of the FEIS and its continued involvement throughout the environmental process, the FAA is satisfied that the project is reasonably consistent with the plans of this public agency. The MC is a cooperating agency in the preparation of the FEIS and has been involved in the Dual Track Airport Planning Process since its inception. The MC comments on the FEIS are included in Attachment A of this Record of Decision, and incorporate the finding that the MSP 2010 and 2020 development plans are consistent with the aviation chapter of the *Metropolitan Development Guide*.

- D. The interests of the community in or near which the project may be located have been given fair consideration [49 USC 47106 (b) (2)].

This determination is supported by a long history of communication between the MAC and the surrounding political jurisdictions, documented in the FEIS and beginning at the earliest project planning stages when the Dual Track Airport Planning Process was mandated by the Minnesota Legislature. Through the course of preparing numerous planning and environmental studies, providing for committee structures and public hearings, and as a result of the state's legislative

mandates, the participation process has remained open and available to interested parties. The MAC has executed agreements with surrounding communities and special interests (historic, noise, refuge, surface transportation, etc.) in consideration of concerns and commitments of interested parties regarding the proposed project. Further, the MAC is currently in the process of adopting contracts with affected communities regarding the planning and development of a north parallel runway. The language in force or proposed in these contracts generally provides that the communities will not oppose construction of the new north-south runway while the MAC agrees to not advocate the construction of a north parallel runway, nor construct such a runway, for an extended time period (the actual or proposed contract terms extend as far into the future as 2050).

Consistent with FAA commitments made to the City of Minneapolis, MSP control tower personnel will utilize Runway 17/35 in accordance with the conditions set forth in the Dual Track Airport Planning Process FEIS, Appendix A, page A.3-17. Therefore, tower personnel will utilize Runway 17/35 so that the runway is not used for departures to the north and arrivals to the south, except under the following limited circumstances, described on page A.3-17 of the FEIS: (1) safety reasons; (2) weather conditions; or (3) temporary runway closures due to snow removal, due to construction, or due to other activities at the airport.

Section VIII of the FEIS, "Public and Agency Involvement," identifies the times throughout the project where adjacent communities have had the opportunity to express views on the proposed airport development program.

E. Appropriate action, including the adoption of zoning laws, has or will be taken to the extent reasonable to restrict the use of land next to or near the airport to uses that are compatible with normal airport operations [49 USC 47107 (a)(10)].

The airport sponsor is required in every grant application to furnish a statement of compatible land use. Each grant the sponsor receives contains an assurance of compatible land use. The MAC does not have legal authority to control land use outside the airport boundaries. It has worked extensively with local jurisdictions in the past to develop and implement plans and policies to ensure compatible land use in the airport environs. The MAC has coordinated with local jurisdictions and advised them of its current and future planned development. It has completed a FAR Part 150 Noise Compatibility Planning Study, and a Part 150 Update which involved input from the local jurisdictions. Part of the study's recommendations include adoption of additional land use controls by the surrounding communities to control future non-compatible development.

The Minnesota Department of Transportation promulgates airport zoning standards for state safety zones around airports. Communities around the airport have adopted zoning standards that are consistent with these standards for the currently developed airport. A MSP Joint Zoning Board will establish zoning regulations for areas affected by the new runway, subject to Mn/DOT approval.

F. For this project, which will involve the displacement and relocation of a limited number of persons, fair and reasonable relocation payments and assistance have been or will be provided pursuant to the provisions in Title II of the Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970, as amended. Comparable decent, safe, and sanitary dwellings are available for occupancy on the open market or will be built if necessary prior to actual displacement [42 USC App 4601, there and after].

Implementation of the proposed action requires the relocation of 8 households and 73 businesses. Of the residential use, three people in one dwelling unit would be displaced because of being located in a Runway Protection Zone and approximately 16 persons would be displaced due to highway reconstruction. The business relocation process will displace about 2,891 workers. Of the 73 businesses to be displaced, 56 would be displaced because of runway construction or location in the RPZ, which involves all but 81 of the 2,891 affected employees. In

addition, the FEIS estimates that future noise mitigation measures—to be implemented over an extended time period—will result in the relocation of 158 households, or approximately 365 persons.

All land acquisition and relocation assistance will be carried out in accordance with the provisions of Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and Part 24 of the Regulations of the office of the Secretary of Transportation. A local relocation contact will be established to aid residents and businesses in their relocation efforts. The FAA will continue to coordinate with the MAC concerning compatible land use and will require the MAC to provide fair and reasonable relocation payments and assistance payments pursuant to the provisions of the Uniform Relocation Assistance Act.

G. For this project, involving new construction which will affect wetlands, there is no practicable alternative to such construction. The proposed action includes all practicable measures to minimize harm to wetlands which may result from such use [Executive Order 11990, as amended]

The FAA finds that there is no practicable alternative to the proposed project's use of 33 acres of the 291 acres of wetlands located on or near MSP. This is due to the proposed north-south runway being determined as the only feasible and prudent location for siting one new runway at MSP. The northwest quadrant of the airport, where the affected wetlands are located, is the only remaining mostly undeveloped portion of the site, and there is also very limited space available—overall—in which to accomplish airport improvements.

The project is in compliance with Executive Order 11990, as amended. The project's wetlands commitments include meeting mitigation specified in required permits from the U.S. Army Corp of Engineers, the Minnesota Department of Natural Resources, and the Board of Water and Soil Resources. The FAA will ensure that the airport sponsor provides wetland mitigation as specified in these required permits. Mitigation of wetland loss will be through replacement wetlands of 59 acres. These replacement wetlands would be located outside the vicinity of the airport.

H. The Federal Aviation Administration has given this proposal the independent and objective evaluation required by the Council on Environmental Quality [40 CFR 1506.5].

As outlined in the FEIS, there was a lengthy process that led to the ultimate identification of the preferred alternative and appropriate mitigation measures. This process began as a result of Minnesota legislative action and the FAA provided input, advice, and expertise throughout the planning and environmental analyses, along with administrative and legal review of the proposed project. Such assistance neither compromised the objectivity of the FEIS or hampered the FAA's ability to insure that environmental consequences were accorded full consideration. From its inception, FAA has taken a strong leadership role in the environmental evaluation of this proposed project and has maintained objectivity throughout.

The decision to prepare an EIS for the proposed project was made by the FAA. From the outset, the FAA took the lead in the scoping process, including issuance of the notice of intent, inviting the participation of other agencies, determining the issues to be analyzed in depth, and assigning responsibilities for inputs to the EIS. The FAA established a clear definition of the federal actions, the alternatives, and the impacts needing detailed study, as well as those that did not.

Although the FAA is dependent upon the sponsor, and others for certain information and data concerning the details of the proposed project, that data is independently evaluated by the FAA. The FAA evaluated all substantive analyses throughout the process, including the AEDs that preceded preparation of the EIS, and is ultimately responsible for all of the judgements, analyses and decisions contained in the EIS. FAA contributed to all aspects of the EIS documents, including writing, review and completion of the FEIS.

Similarly, the FAA is satisfied that it conducted an independent review of the factual assumptions and all EIS documentation relied upon by Mn/DOT, MAC and their consultants, and added FAA expertise through review and revisions, as needed. Individuals at all levels of the FAA have devoted hundreds of hours to ensuring compliance with the National Environmental Policy Act, and other environmental measures. Accordingly, it is found that the independent and objective evaluation called for by the Council on Environmental Quality has been provided.

I. The Secretary of Transportation may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historical site of national, state, or local significance, only if:

- There is no prudent and feasible alternative to using the land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use [49 USC 303].

The proposed project would result in the constructive use of a portion of the Minnesota Valley National Wildlife Refuge. Other runway alternatives that were considered at MSP also involve the use of Section 4(f) properties and other adverse impacts, and do not provide as much airfield capacity; therefore, they are not considered feasible and prudent alternatives. As detailed in Section V.A of this ROD, the north-parallel runway alternatives require use of historic, park and recreational property; south-parallel runway alternatives are not operationally prudent because of significant safety issues and would encroach into historic cemetery land of national significance. The Final AED for the New Airport identified six properties with historic National Register eligibility. Each alternative considered under the Dual Track Airport Planning Process involved considerations of potential Section 4(f) affected lands. The proposed project results in a Section 4(f) determination as a constructive use of property rather than actual taking of lands. The Section 4(f) Evaluation prepared by the FAA provides detailed discussion of the Refuge and the impacts that result to it from the proposed project. In this Evaluation, the FAA noted the plans for mitigation included monetary compensation to restore the functions of publicly owned lands in the MVNWR that have substantial impairment (Section 4(f) Evaluation, pages 33-34). The USFWS has stated that it is not opposed to the expansion of MSP; but has also consistently made clear that it cannot concur and no decision should be made until the amount of compensation has been agreed to.

The MAC and the USFWS, with concurrence, have agreed that MAC will pay at least \$20 million to USFWS based on valuation by a professional appraiser, as well as additional compensation to realign and operate the MVNWR. The USFWS agrees that this provides full compensation for impacts upon the Refuge, pending successful negotiation of the remaining details. The agreement has been formalized in a MOA. A copy of the signed MOA, which is discussed further in Section VI.A of this ROD, is included within Attachment B. The FAA requires, as a condition of this ROD, and as a special condition in future federal grant and PFC funding for this project, that MAC carry out all possible planning to minimize harm to the MVNWR in accordance with the FEIS and Section 4(f) Evaluation. Further, FAA requires that the USFWS and MAC reach a final agreement before the FAA approves any Federal grant or use of passenger facility charges relative to the construction of Runway 17/35.

Construction of the proposed project also requires the demolition of portions of the Original Wold-Chamberlain Terminal Historic District, which is eligible for listing as a National Historic Landmark District, and involves the constructive use of the Spruce Shadows Farm Historic District (due to noise impacts). The FAA and the MAC have developed a *Programmatic Agreement* that establishes appropriate procedures to be used during construction and beyond, and which has

been executed with national, state and local historic interests concerned with this matter, including the federal Advisory Council on Historic Preservation, the Minnesota State Historic Preservation Officer, and the Minneapolis Heritage Preservation Commission.

The FAA finds that there is no feasible and prudent alternative to the use of land from these properties to accomplish the proposed project. The FAA also concludes that the Sponsor has provided an enforceable commitment to carry out, in the form of compensation based upon additional Refuge appraisal information and negotiations, all possible planning to minimize the harm to the use of historic properties and the MVNWR that may result from construction and operation of the new runway.

X. Conditions of Approval

The approvals contained in this Record of Decision are specifically conditioned upon full implementation for the following measures. These terms of approval will be included as special grant conditions in future Federal airport grants to the MAC:

- The mitigation measures that will be implemented are those listed in the FEIS and in this ROD (Section V of the FEIS and Section VI of this ROD). These are hereby adopted in this ROD. The key measures are:
- Compliance with applicable air quality standards in accordance with the Governor of Minnesota's certification letter, and investigation of measures to reduce automobile use and to encourage the use of alternative fuels and aircraft ground support services at the airport.
- Compliance with the provisions of the *Programmatic Agreement* regarding the identification and mitigation of the effects of the 2010 LTCP on archaeological, historic and architectural resources, and conformity with permits issued by agencies having jurisdiction to insure the protection of these resources.
- Adherence to best management practices to avoid and minimize impacts during construction of the proposed project.
- Establishment of airport zoning standards for state safety zones to restrict land use and development in the airport environs.
- Implementation of measures regarding insulation, community stabilization, airport operations, and runway use, set out in the MSP Noise Mitigation Program.
- Establishment of the organization and funding mechanisms to provide relocation assistance to displaced owners of businesses and residences in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.
- Implementation of the Memorandum of Agreement between the MAC and the U.S. Fish and Wildlife Service (see Attachment B) to provide all possible planning to minimize harm to the Minnesota Valley National Wildlife Refuge.
- Compliance with applicable water quality standards in accordance with the Governor of Minnesota's certification letter.
- Compliance with environmental control measures in a currently issued National Pollutant Discharge Elimination System (NPDES) permit.

These mitigation measures, which constitute all the practicable means to avoid or minimize environmental harm for the project, are hereby adopted. The FAA will monitor

their implementation as necessary to assure that they are carried out as project commitments.

- Project contractors will apply for and obtain appropriate permits prior to construction. FAA grant agreements with the airport sponsor will ensure that these standard permits are obtained prior to the commencement of construction.
- Provisions set out in a renewed NPDES permit will be adhered to and incorporated into development plans for the proposed project. All conditions of the NPDES permit are made conditions of the approval of this ROD.
- Provisions of the Section 404 permit to be obtained from the U.S. Army Corp of Engineers will be followed to ensure compliance. All conditions of approval of the permit are made conditions of approval of this ROD.
- Development of an erosion control plan during the design phase will be required by FAA (FAA Advisory Circular 150/5370-10A) prior to commencement of construction.

XI. Agency Decision and Order

The Dual Track Airport Planning Process is discussed in the Executive Summary and Appendix A of the FEIS as well as earlier in this Record of Decision. The FEIS acknowledges the extensive efforts conducted to determine the most appropriate means of meeting future aviation needs in the Minneapolis-St. Paul region, and the series of scoping meetings, public hearings, and other meetings through which residents and communities surrounding the airport were involved in bringing this process to a conclusion. The FAA's objectives have been carefully considered in relation to the 2010 LTCP and the proposed project discussed in the FEIS, including the purposes and needs to be served by the project, the alternative means of achieving them, and the costs and benefits in terms of effective and responsible use of Federal funds.

Although the No Action Alternative has fewer developmental impacts than the selected alternative, it lacks any surface transportation improvements and consumes more fuel energy, has greater air and water quality impacts, and fails to meet the purposes and needs for the project. For the reasons contained in this ROD, and supported by the detailed evaluations in the FEIS and the state's legislative process, the FAA has determined that there is no possible, feasible, and prudent alternative to the airport sponsor's and the FAA's preferred alternative.

As previously noted, the FAA recognizes that the selection of the MSP Alternative by the Minnesota Legislature as the preferred alternative was not simply the result of technical evaluations and environmental impacts, but was strongly influenced by public opinion, political negotiations, economic factors, and airline involvement. Based on this, the FAA considered as a factor, but not as dispositive, the various decisions and mandates of the Minnesota State Legislature.

Having made this determination, the FAA has the choice of either approving the agency actions that are necessary to implement the project or not approving them. Approval would signify that applicable federal requirements relating to airport development planning have been met, and would permit the MAC to go forward with the proposed project and receive federal funds for eligible development items. Not approving these agency actions would prevent the MAC from proceeding with federally supported development in a timely manner.

I have carefully considered the FAA's goals and objectives in relation to various aeronautical aspects of the proposed master plan update development actions discussed in the FEIS, including the purposes and needs to be served by this project, the alternative means of achieving them, the environmental impacts of these alternatives, the mitigation necessary to preserve and enhance the environment, and the costs and benefits of achieving these purposes and needs in terms of efficiency and fiscally responsible expenditure of Federal funds.

Therefore, under authority delegated to me by the Administrator of the FAA, I find that the projects summarized in this ROD in Section II.B are reasonably supported, and for those projects I therefore direct that action be taken to carry out the agency actions discussed more fully in Section IV of this Record, including:

- A. Approval under existing or future FAA criteria of project eligibility for Federal grant-in-aid funds and/or Passenger Facility Charges, including the following elements:
 - Land Acquisition
 - Site Preparation
 - Runway, Taxiway and Runway Safety Area Construction
 - Terminal and Other Landside Development
 - Certain MAC-installed Navigational Aids
 - Environmental Mitigation
- Unconditional approval of the revised airport layout plan (ALP) for the projects summarized in Section II.B, which constitute the airport's 2010 Long Term Comprehensive Plan (2010 LTCP).
- Confirmation of the conditional approval of projects in the MAC 2020 Concept Plan, as shown on the ALP last conditionally approved by the FAA on April 25, 1997, and as evaluated in the FEIS and described in Section II.B of this ROD—this approval being conditioned on a requirement for further environmental processing, such that the new terminal and other elements of the 2020 Concept Plan shall not be undertaken without prior written environmental approvals from the FAA.
- Approval for the installation, relocation, operation and upgrade of navigational aids.
- Development of air traffic control and airspace management procedures that are consistent with operating considerations in the FEIS and designed to affect the safe and efficient movement of air traffic to and from the proposed new runway, including the development of a system for the routing of arriving and departing traffic and the design, establishment, and publication of standardized flight operating procedures, such as standard instrument approach/departure procedures and runway utilization practices.
- Appropriate amendments to air carrier operations specifications.
- Certification that implementation of the proposed project approved in this ROD is reasonably necessary for use in air commerce pursuant to 49 U.S.C. 44502(b).

APPROVED BY

/original signed by/ 9/23/98
Larry H. Ladendorf Date
Acting Manager, Airports Division
Great Lakes Region FAA

APPROVED BY:

/original signed by/ 9/23/98
Cecelia Hunziker Date
Regional Administrator
Great Lakes Region FAA

RIGHT OF APPEAL

These decisions are taken pursuant to 49 U.S.C. Subtitle VII, Parts A and B, and constitute a Final Order of the Administrator which are subject to review by the courts of appeals of the United States in accordance with the Provisions of Section 1006 of the Federal Aviation Act of 1958, as amended, 49 U.S.C. 46110.