ST. PAUL DOWNTOWN AIRPORT
HOLMAN FIELD

ASSESSMENT OF ENVIRONMENTAL EFFECTS OF THE METROPOLITAN AIRPORTS COMMISSION'S SEVEN YEAR CAPITAL IMPROVEMENT PLAN

FOR THE
METROPOLITAN AIRPORTS COMMISSION

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ASSESSMENT OF ENVIRONMENTAL EFFECTS
St. Paul Downtown Airport - Holman Field
Metropolitan Airports Commission Seven Year Capital Improvement Plan

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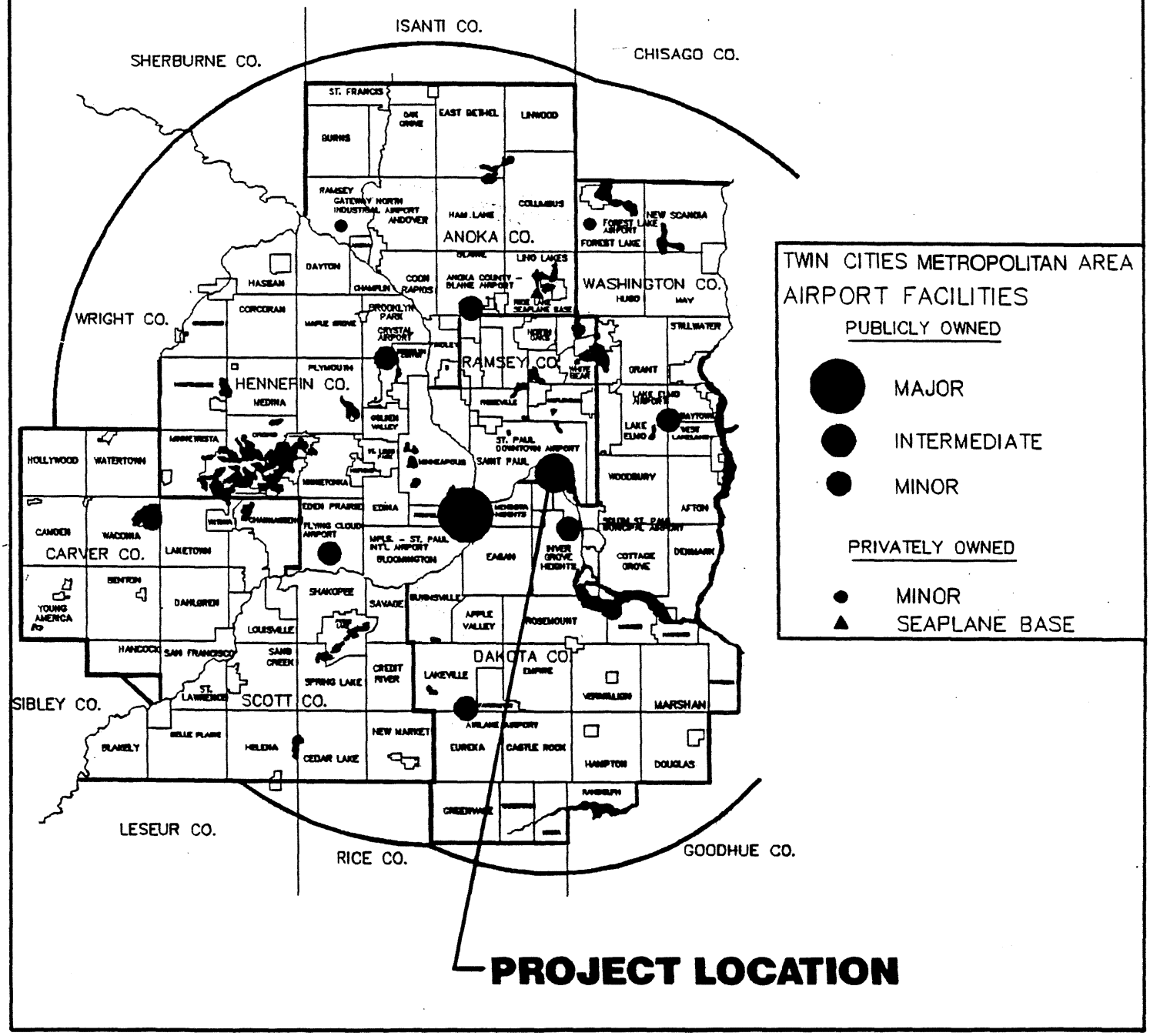

ASSESSMENT OF ENVIRONMENTAL EFFECTS **ST. PAUL DOWNTOWN AIRPORT**	FIGURE **1**

ASSESSMENT OF ENVIRONMENTAL EFFECTS
St. Paul Downtown Airport - Holman Field
Metropolitan Airports Commission Seven Year Capital Improvement Plan

A. INTRODUCTION

This report, prepared in response to the requirements of Minnesota Statutes 1986, Chapter 473, amended by Minnesota Statutes 1988, Chapter 664, presents an assessment of the environmental effects of projects in the Commission's Seven-Year Capital Improvement Plan (1991-1997) for St. Paul Downtown Airport - Holman Field Airport.

This assessment examines the cumulative environmental effects of all the listed Capital Improvement Projects at the airport from 1991 to 1997. Many of the projects listed entail only repair or rehabilitation of existing facilities. Such work would not affect the before/after usage of the facilities, and as such would not add to or subtract from the cumulative environmental effects. The projects included in the evaluation are those that have the potential of altering, creating, or in some manner affecting the environmental impact categories listed below.

B. IMPACT CATEGORIES USED TO ASSESS ENVIRONMENTAL EFFECTS

Aircraft Noise

The types of projects which might impact the effects of noise on the environment are new or lengthened runways, new or lengthened taxiways, new maintenance hangars, additional aircraft gates or facilities that may increase operations, and noise insulation and other noise mitigation measures.

Vehicular Traffic

The types of projects which might impact the effects of traffic at the airport or to the surrounding community are new buildings or building additions, new parking spaces or structures, and new or modified roadways or roadway systems.

Air Quality

Air quality impacts at the airport will be primarily caused by changes in vehicular or aircraft activity. Projects which might have an impact will generally be the same projects which affect aircraft noise or vehicular traffic.

Water Quality

Projects which might affect water quality are those which create additional runoff (new pavements or buildings), fire suppression systems, new retention basins, or projects which might affect the groundwater.

Light Emissions

Projects evaluated under this category are airport beacons, lights associated with new runways or taxiways and lights associated with new roadways, parking lots, or ramps.

Sewage

Those projects which have the potential to increase sewage discharged into the sanitary sewer system are new or expanded buildings or other changes that significantly alter the number of people using a facility.

Wetland Impact

All projects are evaluated to see if they would entail the full or partial filling of wetlands.

C. PROJECTS WITH POTENTIAL ENVIRONMENTAL EFFECTS

Table 1 is a listing of all the projects included in the MAC's Capital Improvement Plan for the years 1991 through 1997. Those projects determined to not contribute to the cumulative environmental effects at the airport are so noted on Table 1. The notations are keyed by number in order to better explain the type of work the project entails and why this type of project will not contribute to the cumulative environmental effects.

TABLE 1
ST. PAUL DOWNTOWN AIRPORT
METROPOLITAN AIRPORTS COMMISSION

See Note	Project Description	1991	1992	1993	1994	1995	1996	1997
(2)	Airport Beacon Rehabilitation	$70,000						
^**	Building Area Expansion	$2,400,000		$1,400,000				
(2)	Directional Signing	$50,000						
(2)	MAC Bldg Modifications	$200,000	$200,000	$100,000		$100,000		$100,000
(1)	Pavement Rehabilitation	$525,000	$250,000	$250,000				$200,000
^**	Pickerel Lake Wetland Mitigation	$585,000						
*	Riverside Hangar Fire Protection	$1,200,000						
(2)	Security Fencing	$100,000						
(2)	Wings Hangar Improvements	$700,000						
^*	Equip Bldg Fuel Tank Replacement		$50,000					
(2)	Riverside Hangar Roof Replacement			$350,000				
	Yearly Totals	$5,830,000	$500,000	$2,100,000	$0	$100,000	$0	$300,000

NOTES:

^ Items discussed in previous Assessment of Environmental Effects.

* The items marked with an asterisk have potential effects that are discussed in the text.

** Projects which are covered in the text and also in other environmental documents (EA/EIS/EAW).

(1) A rehabilitation project which does not physically alter the original size.

(2) A structural, mechanical or electrical modification that does not increase size or passenger capacity.

D. CUMULATIVE ENVIRONMENTAL EFFECTS

Following is a summary of the cumulative environmental effects by impact category. Appendix A contains an analysis of environmental effects on a project-by-project basis.

D.1 Aircraft Noise

The airport expansion noise impacts are discussed in the Final Environmental Impact Statement dated August 1983. Noise mitigation at St. Paul Downtown Airport is a multi-level government/business/ citizen effort that recognizes that it exists and actively reduces the problem through several strategies.

As discussed in Appendix A, only the building area expansion and the associated construction of hangars to store and maintain privately owned aircraft would have any significant noise associated with it within the seven year capital improvement program.

D.2 Vehicular Traffic

The cumulative effects of vehicular traffic are expected to be minimal. The estimate of the new southwest building area traffic associated with the hangars and FBO is approximately 2,000 vehicles per day when fully developed. Therefore, the total of the traffic from the existing and future building area onto Eaton Street and the frontage roads along either side of the Lafayette Freeway (TH 3) will not alter any established transportation patterns or disrupt access to community facilities. The existing roadways have adequate reserve capacity to carry this flow.

Traffic on Bayfield Street will likely decrease as more hangars are built and FBO operations shift to the new southwest building area. New construction in the northside building area is unlikely because of City of St. Paul flood regulations.

D.3 Air Quality

The cumulative effects of the projects are not expected to create significant impacts to air quality.

D.4 Water Quality

The present drainage system is sized to accept the flow from the airport expansion. The quality of the storm water will be similar to that of runoff from other airports in the area. A spill prevention control and counter measures plan has been developed for the airport.

The storm water conveyance system will be reviewed to assure compatibility with the final layout of the storm water drainage for the airport improvements.

The Riverside Hangar Fire Protection system will improve water quality by removing most of the Riverside Hangar floor drain runoff from the storm sewer system. Permits will be obtained to insure that firewater runoff is acceptable to regulatory agencies.

D.5 Light Emissions

Light emissions from the building area expansion will not impact residents in the vicinity of the projects.

D.6 Sewage and Industrial Waste

Inflammable waste traps will be installed for all of the industrial waste water systems which are within or next to the new building area. As each individual hangar or building is constructed, permits for sanitary wastewater and industrial wastewater will be obtained from the City of St. Paul. The inflammable waste traps will contain oil and cleaning fluids associated with aircraft and vehicle maintenance operations. A study of the entire new building area sanitary system accomplished during the construction of the existing building area showed that the anticipated flow from the development in the building area expansion will be easily accommodated.

D.7 Wetland Impacts

Two mitigative environmental projects have been completed in the Wilkie Park for Blue Lake and Fisher Lake. Planning and final design for Pikerel Lake to complete the mitigation for the loss of wetlands associated with the expansion of this airport are now underway.

The Final Environmental Impact Statement concluded in the summary analysis that the airport improvement "project as proposed is the most practicable alternative available which will meet the aviation needs of the area." (FEIS August 1983, page 90).

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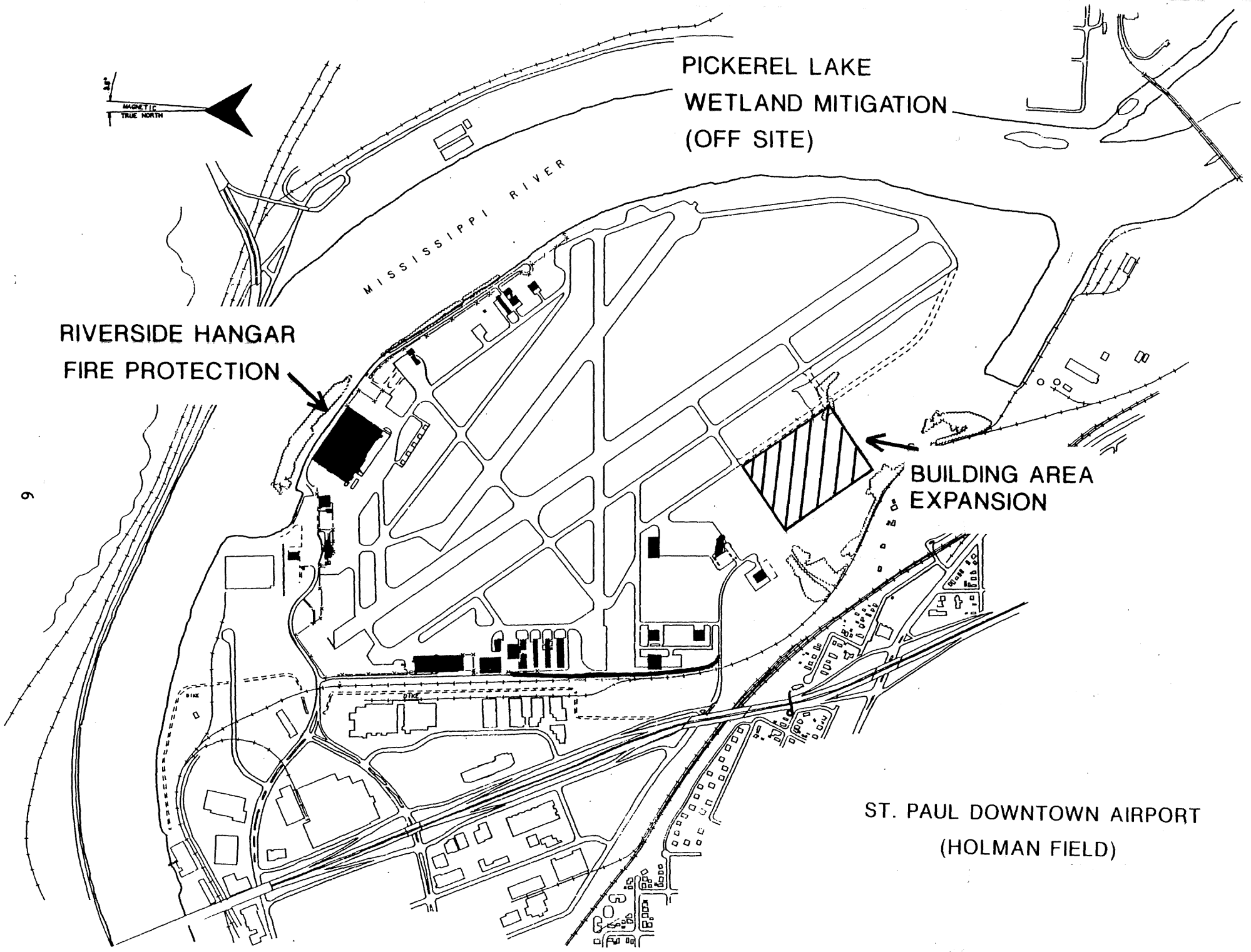
PICKEREL LAKE
WETLAND MITIGATION
(OFF SITE)
MISSISSIPPI RIVER
RIVERSIDE HANGAR
FIRE PROTECTION
BUILDING AREA
EXPANSION
ST. PAUL DOWNTOWN AIRPORT
(HOLMAN FIELD)

APPENDIX A

ENVIRONMENTAL ANALYSIS OF INDIVIDUAL PROJECTS

APPENDIX A
ENVIRONMENTAL ANALYSIS OF INDIVIDUAL PROJECTS

I. PROJECTS BEGINNING IN 1991

The following projects are included in the MAC's Capital Improvements Plan for 1991 and have the potential to effect the environment:

- Pickerel Lake Wetland Mitigation
- Building Area Expansion
- Riverside Hangar Fire Protection

I.A. PICKEREL LAKE WETLAND MITIGATION

The development of Runway 14/32, associated taxiways and elevated buildings at the airport resulted in the loss of the wetlands (determined to be 705 wildlife habitat units). This loss was mitigated by the creation or reclamation of new wetland areas in coordinations with the Minnesota Department of Natural Resources (DNR) and the U.S. Department of the Interior, Fish and Wildlife Service.

During 1984/85, a project was completed in the Wilkie Regional Park which provided water level control structures on the outlets of both Blue Lake and Fisher Lake. Those lakes are adjacent to the Minnesota River and the project allows water to be controlled at more constant levels and thus provide more waterfowl habitat. That project replaced 580 wildlife habitat units.

Pickerel Lake, recently purchased by the City of St. Paul for further development of the Harriet Island-Lilydale Regional Park, has been chosen as the mitigation site to fulfill the replacement of the remaining wildlife habitat units. The plans include construction of a dike to protect the lake from inflow of the Mississippi River up to a projected 15-year flood elevation and the construction of a control structure including water level control and a rough fish screen barrier. Following completion of the control structure, the DNR plans to kill the existing rough fish population and restock the lake with game fish. The lake level will be raised by approximately one foot, which will create more shoreline. The St. Paul Parks Department then plans to construct a dike around the north and west sides of the lake. This will ensure compatibility with and meet the overall development intent of the various entities.

I.B. BUILDING AREA EXPANSION

The existing 25-acre southwest side elevated building area created in conjunction with the new runway/taxiway improvement project at St. Paul Downtown Airport is expected to be completely leased in the near future. This project will extend the building area another 1,100 feet to the southeast along Taxiway B (approximately 15 acres). The project consists of placing approximately 630,000 cubic yards of soil borrow in the first phase. Utilities and pavements will be placed in a second phase after the soft soils have compressed to make this space available for private hangar construction in the early 1990's.

- Noise Impacts

  The building area expansion noise impacts are discussed in the Final Environmental Impact Statement (EIS) dated August 1983. Noise mitigation at St. Paul is a multi-level government/business/ citizen effort that recognizes that it exists and actively reduces the problem through several strategies. The EIS found that the "project as proposed is the most practical alternative available which will meet the aviation needs of the area.

- Vehicular Traffic

  The expansion of the building area will not alter any established transportation patterns or disrupt access to any community facility. The eventual full occupancy of the building area will increase traffic on the Eaton Street access to the airport and on the new west service road. Eaton Street and the frontage roads along either side of the Lafayette Freeway (TH 3) have adequate reserve capacity to carry this flow.

- Air Quality

  The contribution of emissions from the airport will not result in a violation of the State or Federal Ambient Air Quality Standards according to the Final Environment Impact Statement.

- Water Quality

  The present drainage system is sized to accept the flow from the building area expansion, however, it does not at this time have facilities to treat storm water runoff or contain spills. The quality of the storm water will be similar to that of other apron runoff from the airport. A spill prevention control and counter measures plan has been developed for the airport.

The storm water conveyance system will be reviewed to assure its compatibility with the final layout of the storm water drainage for the building area expansion.

- Light Emissions

  Light emissions from the project will not create an annoyance among people in the vicinity of the building area.

- Sewage

  As each individual hangar or building is constructed, permits for sanitary wastewater and industrial wastewater will be obtained from the City of St. Paul. Inflammable waste traps are required to be installed in each individual hangar or building wastewater system which will contain oil and cleaning fluids associated with the industrial waste water. A study of the entire building area sanitary system accomplished during the construction of the existing building area showed that the anticipated flow from the development in the building area expansion will be easily accommodated.

- Wetland Impact

  The two mitigative environmental projects previously mentioned have been accomplished at Blue Lake and Fisher Lake. Planning and final design for Pickerel Lake to complete the mitigation of the loss of wetlands associated with this project are now underway.

  The Final Environmental Impact Statement concluded in the analysis of the wetland impacts that the "project as proposed is the most practicable alternative available which will meet the aviation needs of the area." (FEIS August 1983, page 90)

I.C. RIVERSIDE HANGAR FIRE PROTECTION

This project involves constructing a new watermain to provide sprinkler fire flow capability for the entire Riverside hangar, a new sprinkler system for the east half of the hangar, and a firewater system (foam) to be installed in conjunction with the sprinkler system. The project also involves constructing sanitary sewer and diversion structures in order to divert flow from the hangar floor drains into the sanitary sewer instead of storm sewer to which the floor drains are currently connected.

- Water Quality

  The diversion of the floor drains from the storm sewer to the sanitary sewer will have a positive impact on water quality by ensuring that the runoff from the hangar floors is sent to a waste treatment plant before being outlet to the Mississippi River.

  A triggering of the hangar sprinkler system will create a flow greater than the sanitary sewer can accommodate. This runoff will be diverted into the storm sewer system and into the river. Necessary permits will be obtained to insure that the type of firewater forming agent which is used will be acceptable to the agencies which regulate water quality.

II. PROJECTS BEGINNING IN 1992

The following project is included in the MAC's Capital Improvements Plan for 1992 and have the potential to effect the environment:

- Equipment Building Fuel Tank Replacement

II.A. EQUIPMENT BUILDING FUEL TANK REPLACEMENT

This project involves the study and possible removal of existing fuel tanks which have the possibility of fuel leaks. It includes the replacement or upgrading of the tanks to meet new Environmental Protection Agency (EPA) Standards.

The only impact of this project would be slightly positive due to increased groundwater protection.

APPENDIX B

1991 CAPITAL IMPROVEMENT PROJECTS
1992 CAPITAL IMPROVEMENT PROGRAM

1991 CAPITAL IMPROVEMENT PROJECTS
RELIEVER AIRPORTS

ST. PAUL DOWNTOWN AIRPORT

AIRPORT BEACON REHABILITATION - $70,000

This project provides for a thorough analysis of the existing rotating airport beacon and tower and refurbishment or replacement to comply with current FAA criteria. Previously approved by the Commission.

BUILDING AREA EXPANSION - $2,400,000

The 25-acre elevated building area created in conjunction with the new runway taxiway development project is expected to be completely leased in the near future. This project will extend the building area another 1,100 feet to the southeast along Taxiway A-3 (approximately 15 acres) and include all necessary excavation, fill material, sewer, water, paving, etc., required to make this space available for hangar construction. Previously approved by the Commission.

DIRECTIONAL SIGNAGE - $50,000

Staff has been working with MnDot in an attempt to improve highway signage identifying exits, etc. for the airport. Modifications to existing or new signs will be required to provide a more positive identification of the airport and its facilities. Previously approved by the Commission.

MAC BUILDING MODIFICATIONS - $200,000

This category will provide for facility modifications/rehabilitations to ensure continued efficient operation of the buildings or modifications necessary to meet the requirements of the various tenants. The most significant item contemplated this year will involve the construction of an elevator in the Administration Building to meet handicapped accessibility requirements.

PAVEMENT REHABILITATION - $525,000

Periodically, it is necessary to rehabilitate aircraft operational areas (runways, taxiways, aprons) through bituminous overlays, sealcoats, or in some instances, reconstruction to restore the surfaces to a smooth, even condition and improve overall operating conditions. This year's project will provide for the rehabilitation of Runway 8/26 and the reconstruction of Taxiway D.

PICKEREL LAKE WETLAND MITIGATION - $585,000

The development of Runway 14/32, associated taxiways and elevated building area at the airport resulted in the loss of wetlands. The loss of the wetlands (determined to be 705 wildlife habitat units) was to be mitigated by the creation or reclamation of new wetland areas, in coordination with the Minnesota Department of Natural Resources and the U.S. Department of Interior, Fish and Wildlife Service.

During 1984/1985, a project was completed in the Wilkie Regional Park which provided water level control structures on the outlets of both Blue Lake and Fisher Lake, adjacent to the Minnesota River, to allow water levels to be controlled at more constant levels and provide more waterfowl habitat. That project replaced 580 wildlife habitat units.

Pickerel Lake, purchased by the City of St. Paul for further development of the Harriet Island-Lilydale Regional Park, has been chosen as the mitigation site to fulfill the replacement of the remaining wildlife habitat units. The plans include construction of a dike to protect the lake from inflow of the Mississippi River up to a projected 15-year flood elevation and construction of a control structure including water level control and a fish screen barrier. Following completion of the control structure, the DNR plans to kill the existing rough fish population and restock the lake with game fish. The lake level will be raised by approximately 1 foot, which will create more shoreline. The St. Paul Parks Department then plans to construct a dike around the north and west sides of the lake, which, to ensure compatibility and to meet the overall development intent of the various entities, was designed in conjunction with the control structure to be built by the Commission. Previously approved by the Commission.

RIVERSIDE HANGAR FIRE PROTECTION SYSTEMS - $1,200,000

The Fire Protection System in the Riverside hangar is approaching 50 years old; by current code, the useful life of sprinkler heads is limited to 50 years. There has also been a loss in water pressure in the system. A project to replace the watermain serving the facility to address the pressure issue as well as a rehabilitation of the interior system will be scheduled for 1991. In conjunction with the fire protection system will be the separation of the floor drain system from the storm to the sanitary sewer system.

WINGS HANGAR IMPROVEMENTS - $700,000

An office annex on the Wings Hangar has been uninhabitable for the past few years due to structural inadequacies. The hangar facility is also in need of rehabilitation. This project will provide for the complete reconstruction of the office annex and will also include a rehabilitation of the hangar facility including items such as, hangar door replacement, window replacement, floor replacement, installation of radiant heating and lighting improvements. It is expected the tenant for the facility will participate in the rehabilitation costs in an amount not-to-exceed $350,000 over a 10-year lease term.

SECURITY FENCING - $100,000

It is proposed the perimeter security fencing program previously initiated to identify airport property and minimize unauthorized access to airport operational areas be completed. Previously approved by the Commission.

1992 CAPITAL IMPROVEMENT PROGRAM
RELIEVER AIRPORTS

ST. PAUL DOWNTOWN AIRPORT

EQUIPMENT BUILDING FUEL TANK REPLACEMENT - $50,000

Recent Environmental Protection Agency regulations regarding underground storage tanks (UST) include comprehensive corrosion/spill/overflow prevention and leak detection requirements. Existing MAC underground tanks at the airport will be reviewed in 1991 to determine what will be required to comply with EPA regulations. Previously approved by the Commission.

MAC BUILDING MODIFICATIONS - $200,000

This category will provide for facility modifications/rehabilitation to ensure continued efficient operation of the buildings or modifications necessary to meet the requirements of the various tenants. A recommendation will be available concerning specific items when the CIP is updated for the 1992 construction season.

PAVEMENT REHABILITATION - $250,000

Periodically, it is necessary to rehabilitate aircraft operational areas (runways, taxiways, aprons) through bituminous overlays, sealcoats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. A pavement condition survey will be conducted in 1991 and a specific recommendation will be available when the CIP is updated for the 1992 construction season.