Source Information: 2010 Microsoft Corporation and its Data Suppliers, Airport Staff



Figure 1-22 South GA Hangar Area

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MASTER PLAN CHIPPEWA VALLEY REGIONAL AIRPORT (EAU) EAU CLAIRE/CHIPPEWA FALLS, WI May 2013



Source Information: 2010 Microsoft Corporation and its Data Suppliers, Airport Staff



Figure 1-23 Terminal Area





MASTER PLAN CHIPPEWA VALLEY REGIONAL AIRPORT (EAU) EAU CLAIRE/CHIPPEWA FALLS, WI May 2013



EAU has its own Class D airspace with a ceiling of 3,500 feet MSL and a horizontal radius of five statute miles from the airport reference point (ARP). Aircraft must establish two-way communications with the ATCT prior to entering the Class D airspace. Class D airspace also requires that runway separation services be provided and that special visual flight rules are in place. When the ATCT is closed at night, the Class D airspace reverts to Class E airspace and is subject to those requirements. All aircraft conducting IFR operations must be in two-way communication with ATC to enter and operate within Class E airspace. Class E airspace. Class A airspace (above 18,000 feet MSL). Its requirements ensure the safety of instrument approach and departure areas. The airspace in the vicinity of EAU is presented in **Figure 1-24**. Air traffic immediately outside the ATCT's Class D airspace is controlled by the Minneapolis Air Route Traffic Control Center (ARTCC).

1.3.12 Aircraft Rescue and Fire Fighting Facility

The existing aircraft rescue and firefighting (ARFF) facility is located to the immediate north of the passenger terminal building. The ARFF building consists of approximately 2,200 square feet of floor space. This space includes one ARFF vehicle bay, an observation room, and staff quarters. The Airport has two ARFF vehicles, one of which is stored in the ARFF facility and one of which is stored in the snow removal equipment and maintenance facility south of the terminal.



EAU is rated as a Class I ARFF Index A facility. The airport class is determined based on the type of air carrier operations expected at a particular airport. Class I airports are expected to serve scheduled large air carrier aircraft (30+ seats), unscheduled large air carrier aircraft, and scheduled small air carrier aircraft (10-30 seats). The class of an airport in turn determines airport certification requirements under Federal Aviation Regulations (FAR) Part 139, Certification of Airports. The ARFF index is determined by the longest air carrier aircraft operating at the airport with an average of five or more daily departures. Index A airports include aircraft less than 90 feet in length. The ARFF index of an airport in turn determines ARFF equipment, extinguishing agent, and procedural requirements. ARFF Index A airports require one vehicle capable of carrying at least 500 pounds of sodium-based dry chemical, halon 1211, or clean agent, or 450 pounds of potassium-based dry chemical and water with a commensurate quantity of aqueous film forming foam (AFFF) to total 100 gallons for simultaneous dry chemical and AFFF application. As of 2012, EAU has two ARFF vehicles: an 2003 Oshkosh Striker 1500 with capacity for 1,500 gallons of water, 210 gallons of AFFF, and 500 pounds of dry chemical; and a 1990 Oshkosh P-19 with capacity for 1,000 gallons of water, 130 gallons of AFFF, and 500 pounds of halon 1211.





Source Information: FAA Aeronautical Navigation Products



Figure 1-24 Airspace Environment

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MASTER PLAN CHIPPEWA VALLEY REGIONAL AIRPORT (EAU) EAU CLAIRE/CHIPPEWA FALLS, WI May 2013



1.3.13 Snow Removal Equipment and Maintenance Facility

The Airport stores and maintains its vehicles and equipment, including snow removal equipment (SRE), in the Jim Armstrong Maintenance Facility located southeast of the passenger terminal building. The SRE building consists of 13,500 square feet of floor space, and is the main facility for field maintenance operations, as well as vehicle, equipment, and sand storage. Airport-owned snow removal vehicles and equipment, current as of February 2012, are listed in **Table 1-14**.



Table 1-14: Snow Removal Equipment Inventory		
Туре	Make/Model	Year
Truck	Oshkosh P Series	1998
Truck	Ford L800	1994
Loader	John Deere 644G	1994
Loader	Case 821	1996
Tractor	John Deere 9400	1996
Broom	Sweepster (16-foot)	1994
Broom	Sweepster (9-foot)	1996
Plow	Blue Max (18-foot)	1994
Plow (2)	Schmidt (16-foot)	1994/1996
Sander	Swenson Tailgate Spreader	1998
Sander	HiWay V-Box	1994
Blower	Blanchard HS	1994
Ramp Plow	Pro-Tech (20-foot)	2008

Source: Airport Staff

1.3.14 Fuel Storage and Dispensing Facility

The existing fuel farm is located northeast of the Mrow hangars, just inside the gate where Starr Avenue transitions into Melby Street. The fuel farm consists of four above-ground storage tanks (ASTs). Two of the ASTs are owned by the Airport and each have a 10,000 gallon capacity for storage of diesel and automotive fuels. The other two ASTs are owned by Heartland Aviation and each have a 12,000 gallon capacity for storage of Jet A and 100LL fuels. Heartland Aviation has expressed an interest in possibly obtaining a larger AST for Jet-A storage. There is another smaller Jet-A AST in the south GA



hangar area next to the Mayo hangar that is also owned by Heartland Aviation.



Mobile fuel trucks load fuel at the storage tanks and transport it to the GA ramp and terminal ramp for dispensing into aircraft. Potential for spills and leaks occur during the transportation of fuel and from tank leaks. Spills and leaks are avoided, minimized, and mitigated using best practices described in the Airport's Spill Prevention Control and Countermeasures (SPCC) Plan.

1.4. CLOSE-IN OBSTRUCTION REVIEW

This section reviews and summarizes existing airspace obstruction information out to the extents of the runway protection zones (RPZ) for each runway end at EAU. This review provides a snapshot of near-in obstructions to runway approaches and is not intended as a replacement for a full aeronautical survey.

1.4.1 Survey Data

The obstruction data utilized for this review was collected as part of a wide-area augmentation system (WAAS) aeronautical survey conducted in November 2007 for EAU. The data was obtained from the third party survey system (TPSS) on the FAA website in January 2012. The obstacle requirements for the November 2007 survey were "limited to providing obstacle representation to the obstruction identification surfaces specified in the WAAS Program Phase 10 statement of work."

1.4.2 Runway 4/22

Surveyed navigational aids within the RPZ on the Runway 4 end include the localizer, localizer shelter, and distance measuring equipment (DME). Other surveyed objects within the Runway 4 RPZ include Airport Road which traverses the RPZ from south to north; the Airport perimeter fence which runs alongside Airport Road on its east side; and a collection of trees in the southwesternmost corner of the RPZ. The locations and heights of existing objects within the Runway 4 RPZ will be verified as part of the alternatives analysis in Chapter 4.

Surveyed navigational aids within the RPZ on the Runway 22 end include lighting elements associated with the MALSR approach lighting system. There are no other surveyed objects within the Runway 22 RPZ, as this RPZ was cleared of trees and other objects when the runway was shifted 800 feet to the north in the early 2000s.

1.4.3 Runway 14/32

There are no surveyed navigational aids, nor any other surveyed objects, within either the Runway 14 RPZ or the Runway 32 RPZ.



1.5. Historic Aviation Activity

The following sections summarize historical aviation activity at EAU, including passenger enplanements, aircraft operations, based aircraft, and based aircraft fleet mix.

1.5.1 Passenger Enplanements

Annual passenger enplanements at EAU from 1990 to 2010, categorized by enplanement type, are summarized in **Chart 1-1: Passenger Enplanements**. Passenger enplanements decreased incrementally from 1990 to 2000 rose to a recent peak in 2005, and then declined back to 2000 levels by 2010. Between 2000 and 2010, total annual enplanements ranged from approximately 20,000 to 27,000.

1.5.2 Aircraft Operations

Annual aircraft operations at EAU from 1990 to 2010, categorized by operation type, are summarized in **Chart 1-2: Aircraft Operations**. Overall, aircraft operations remained relatively steady from 1990 to 2005, and then declined significantly between 2005 and 2010. This was due mostly to reductions in air taxi, commuter, and general aviation operations at the Airport.





Source: FAA Terminal Area Forecast; U.S. Department of Transportation T-100 Data



Chart 1-2: Aircraft Operations



Source: FAA Terminal Area Forecast

1.5.3 Based Aircraft and Fleet Mix

Annual numbers of historical based aircraft at EAU from 1980 to 2010, categorized by aircraft type, are summarized in **Chart 1-3: Based Aircraft** below. The total number of aircraft based at the Airport rose significantly between from 1980 to 2000, largely due to significant additions in single-engine piston, multi-engine piston, and jet aircraft. Total based aircraft then declined from 2000 to 2005, but remained steady from 2005 to 2010. There are currently 78 based aircraft at EAU; approximately 90% of based aircraft at EAU are single-engine piston aircraft. However, the Airport also hosts seven jet aircraft and one helicopter aircraft.



Chart 1-3: Based Aircraft



Source: FAA Terminal Area Forecast

1.6. DEMOGRAPHIC AND SOCIOECONOMIC TRENDS

In order to determine the needs of an airport, it is important to understand the community and surrounding area it serves. Socioeconomic trends described in this section provide a statistical snapshot of the community and identifies trends that may impact current and future aviation operations. Specific elements described include population, employment, and income.

1.6.1 Population

Population growth is a key factor in determining future Airport space and technological needs, as a larger regional population will result in increased use of the Chippewa Valley Regional Airport. Population data for the Eau Claire-Chippewa Falls Metropolitan Area – defined as Eau Claire and Chippewa Counties – was gathered from Woods and Poole, an economic development firm specializing in long-term community economic data. According to the general population statistics, the Eau Claire-Chippewa Falls Metropolitan Area has seen continuous gradual population growth since 2001. For example, between 2001 and 2010 the Eau Claire-Chippewa Falls Metropolitan Area population grew by seven percent, from 149,655 residents to 161,443, respectively. Woods and Poole projects that by 2020 the Eau Claire-Chippewa Falls Metropolitan Area population will increase by another eight percent to 176,822 and by 2040 the population will reach 208,568. **Chart 1-4** indicates the gradual population growth for the metro area.







Chart 1-4: Historical and Projected Eau Claire-Chippewa Falls Metropolitan Area Population

The Airport also draws passengers from other surrounding counties and cities that are not included within Eau Claire-Chippewa Falls Metropolitan Area, including Dunn County and the city of Menomonie. According to Woods and Poole, Dunn County is also projected to slowly grown in population from 43,898 in 2010 to 53,136 by 2040. The city of Menomonie reported a population of 43,898 in 2010, which is projected by Woods and Poole to increase to 53,136 by 2040.

1.6.2 Employment and Income

Employment and income data are also good indicators for future Airport growth and expansion needs as increased disposable income often leads to increased passenger travel and general aviation activity. Predominant job sectors in Eau Claire and Chippewa Counties include education, healthcare, and home improvement companies. **Table 1-15** represents the top ten area employers as of 2010.



Source: Woods & Poole, Inc.

Table 1-15: Top Employers in Eau Claire and Chippewa Counties
Eau Claire Area School District
Mayo Health System
Menard, Inc.
TTM Advanced Circuits, Inc.
University of Wisconsin-Eau Claire
Chippewa Falls Public School
Saint Joseph's Hospital
GSI Commerce (EBAY)
Hutchinson Technology
United Heath
Nestle

Source: Chippewa Valley Regional Airport Economic Impact 2010 statement

According to the Department of Work Force Development, the total Eau Claire and Chippewa Falls labor force was 91,542, which garnered an average per capita income of \$31,625. Woods and Poole data projects that the average per capita income (adjusted for inflation) will continue to grow to \$41,548 by 2030 and \$49,380 by 2040. The projected per capita income for the Eau Claire-Chippewa Falls Metropolitan Area over the next 40 years is shown in **Chart 1-5** below.





Source: Woods & Poole, Inc.

1.7. INVENTORY SUMMARY

EAU has a network of airside and landside pavements, structures, buildings, and other facilities that support the needs of passengers, businesses, airlines, and private aircraft operators. The Airport also has staff and procedures in place to ensure smooth and safe operation of the Airport. The information presented in this chapter will be compared against the forecasts presented in the next chapter to determine Airport facility requirements.