

Final Environmental Assessment

Marquette Sawyer Regional Airport Gwinn, Michigan



Report prepared by

**Mead
& Hunt**

September 2023

This Environmental Assessment becomes a Federal document when evaluated, signed, and dated by the responsible FAA official.

Responsible FAA Official

Date

FINAL
ENVIRONMENTAL ASSESSMENT
for
BUILDING DEMOLITION
and
SECTION 106 MEMORANDUM OF AGREEMENT
at
MARQUETTE SAWYER REGIONAL AIRPORT
GWINN, MICHIGAN
Prepared
for
Federal Aviation Administration
September 2023

This Environmental Assessment becomes a Federal document when evaluated and signed by the responsible FAA official.

JOHN L. MAYFIELD JR

Digitally signed by JOHN L. MAYFIELD JR
Date: 2023.09.27 09:41:11 -04'00'

Responsible FAA Official

Date

Preface

The National Environmental Policy Act (NEPA) of 1969 requires that federal agencies or their representatives identify and consider the social, economic, and environmental impacts of proposed actions as part of their decision-making process. NEPA also requires that federal agencies provide information to the public and regulatory agencies and consider their input when reaching decisions. This Environmental Assessment (EA) has been prepared to satisfy these obligations, as well as all applicable state requirements.

The purpose of the proposed action is to create additional area for future development at Marquette Sawyer Regional Airport (Airport). The Airport desires to provide opportunities for redevelopment in an area where 14 vacant buildings currently exist. The FAA and the Airport have separate needs for the proposed action. The FAA's need for the proposed action is focused on the safety of aircraft operations at SAW. The 14 vacant buildings are in close proximity to the Airport's aprons and taxiways and pose a risk to aircraft due to potential impacts from hazardous materials and foreign object debris (FOD). The Airport needs the proposed action because the subject buildings do not meet its long-term planning goals for future redevelopment.

This EA has been prepared in accordance with the requirements of NEPA (42 U.S.C. §§ 4321 *et seq.*), Title V of the Public Law 97-248 of the Airport and Airway Improvement Act of 1982, FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*, and FAA Order 1050.1F, *Environmental Impacts Policies and Procedures*. The intent of the EA is to serve as a decision-making tool to be used by the public and local, state, and federal officials in evaluating the proposed building demolition and Section 106 MOA at Marquette Sawyer Regional Airport.

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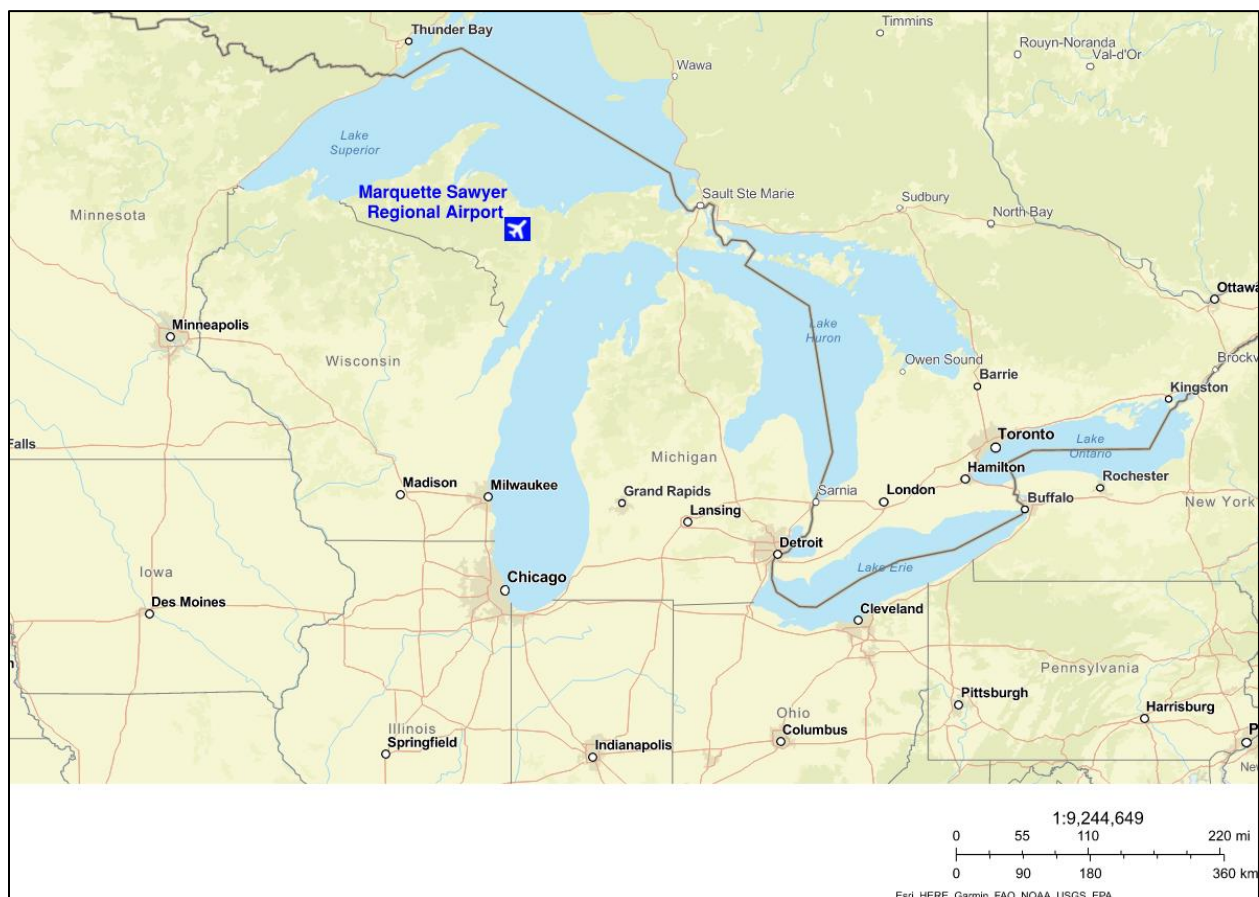
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Chapter 1.0 Purpose and Need

1.1 Introduction

Marquette Sawyer Regional Airport (SAW or Airport) is a county-owned commercial service airport centrally located in Michigan's Upper Peninsula within Marquette County (**Figure 1.0 Location Map**). Locally, SAW is approximately five miles northeast of Gwinn and approximately 16 miles south of the City of Marquette (**Figure 1.1 Vicinity Map**). Two commercial airlines currently serving the Airport are Delta Air Lines and American Airlines. Delta provides daily non-stop service to Detroit Metropolitan Wayne County Airport, and American offers daily non-stop service to Chicago O'Hare International Airport.

Figure 1.0 Location Map

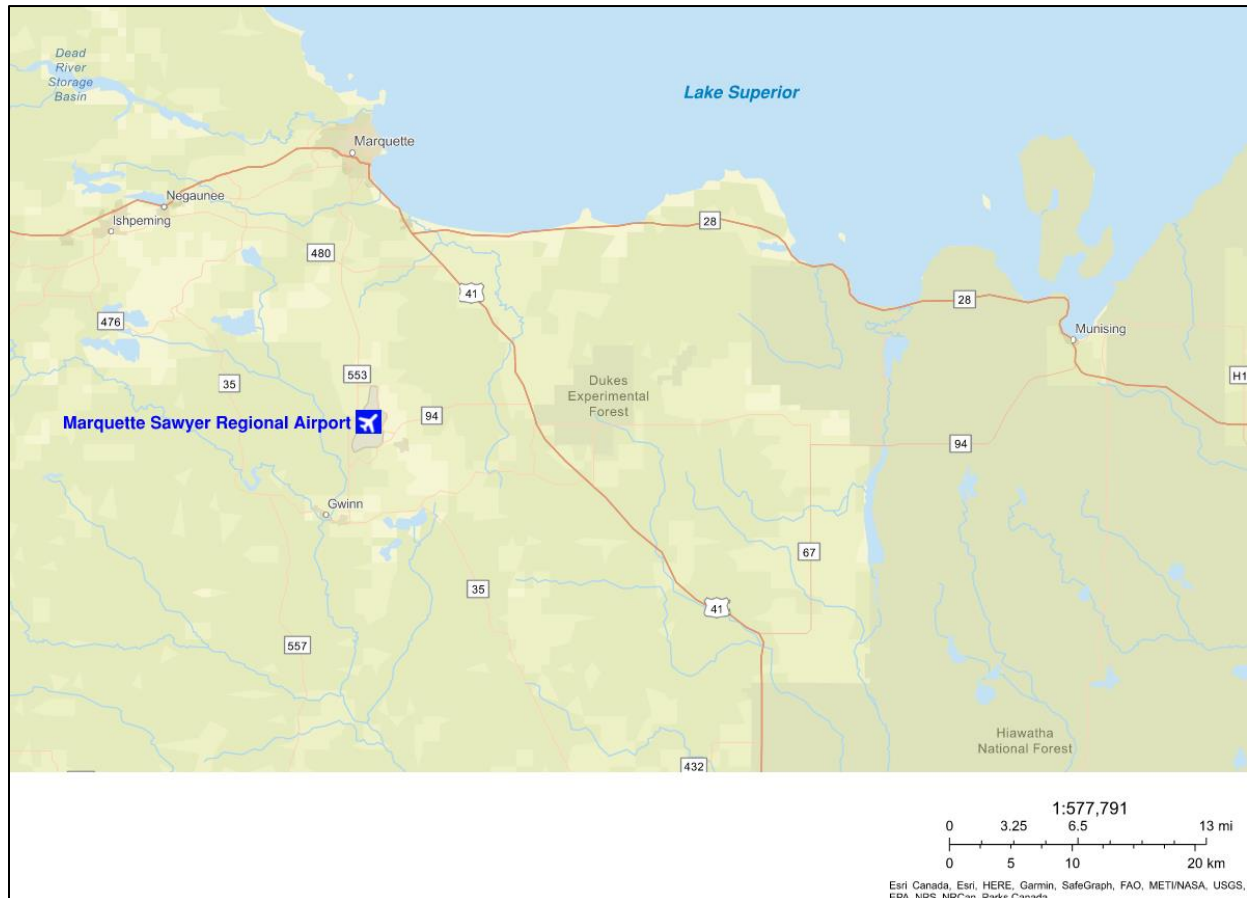


Source: US Environmental Protection Agency (USEPA) NEPAassist Tool with labeling by Mead & Hunt, 2023

Aircraft operations at SAW are supported by one paved runway. Runway 1/19 is 9,072 feet long by 150 feet wide and oriented in a north-south direction. The Airport property is 2,100 acres and includes commercial service and general aviation terminal buildings, hangars, a fixed base operator (FBO), an airport traffic control tower (ATCT), and an Airport Services Center. The Airport Services Center houses

the administration and operations, Aircraft Rescue and Fire Fighting (ARFF), Snow Removal Equipment (SRE), maintenance, wastewater treatment plant and customer service functions (**Figure 1.2 Existing Airfield Configuration**). For additional maps and information on the Airport including its history, existing facilities, and the role it plays in the community and the region, see **Chapter 3.0 Affected Environment & Environmental Consequences**.

Figure 1.1 Vicinity Map



Source: USEPA NEPAassist Tool with labeling by Mead & Hunt, 2023

The Airport, along with its aviation-related businesses and facilities, is a vital regional economic asset. In addition to the many aviation-related assets, the Airport also provides benefits to local businesses and industries, supports tourism, and encourages additional business development and expansion throughout the Upper Peninsula. The Michigan Department of Transportation Office of Aeronautics' (MDOT AERO) 2017 Michigan Aviation System Plan (MASP) quantified the total impact of SAW at 3,492 jobs with a total annual payroll of \$139.3 million and a total annual economic impact of \$517.8 million.

Figure 1.2 Existing Airfield Configuration



Source: Mead & Hunt, 2023

The Airport is also included in the Federal Aviation Administration's (FAA) National Plan of Integrated Airport Systems (NPIAS). This designation is indicative of its significance in the national air transportation system. At the state level, MDOT AERO defines the Airport as a Tier I airport, the highest classification in the 2017 MASP, further demonstrating SAW's importance to the air transportation system within the state of Michigan.

1.2 Purpose of the Proposed Action

The purpose of the proposed action is to create additional area for future Airport development. The Airport desires to provide opportunities for redevelopment in an area where 14 vacant buildings currently exist. The buildings were originally part of the former K.I. Sawyer Air Force Base, which operated from 1955 to 1995 before the Airport's conversion to a commercial service airport in 1999. Construction of the buildings occurred in the late 1950s and early 1960s. Construction materials and techniques in the subject buildings are consistent with construction of the era, and most of the buildings have undergone multiple renovations prior to the base closure in 1995. In most cases, renovations did not include removal of old building materials, lighting, or mechanical systems, thus adding to their existing dilapidated condition. As such, the buildings are in poor condition, contain hazardous materials, and are considered unsafe.

1.3 Need for the Proposed Action

The FAA and the Airport have separate needs for the proposed action. The FAA's need for the proposed action is focused on the safety of aircraft operations at SAW. The 14 vacant buildings are in close proximity to the Airport's aprons and taxiways and pose a risk to aircraft due to potential impacts from hazardous materials and foreign object debris (FOD). The Airport needs the proposed action because the subject buildings do not meet its long-term planning goals for future redevelopment.

1.4 Proposed Project

To meet the project's purpose and need, the following activities comprise the proposed project. These activities will be covered in detail as a part of the Preferred Alternative in **Chapter 3.0 Affected Environment & Environmental Consequences**. For additional discussion on the Preferred Alternative selection process, see **Chapter 2.0 Alternatives Considered**.

Proposed project activities consist of demolishing the previous administrative, maintenance, logistics, and emergency services buildings; backfilling the foundations; and grading the footprint of each building. The buildings proposed for demolition include:

- | | | | |
|----------------|----------------|----------------|----------------|
| • Building 403 | • Building 428 | • Building 601 | • Building 731 |
| • Building 404 | • Building 429 | • Building 610 | • Building 732 |
| • Building 414 | • Building 430 | • Building 725 | |
| • Building 426 | • Building 600 | • Building 726 | |

A map of these buildings is provided in **Figure 1.3 Buildings Proposed for Demolition**.

Map Location

Legend

Building Footprint

FIGURE 1
KI SAWYER
BUILDING DEMOLITION
 Building Locations
 GWINNETT, MI

Drawn By: DJF 1/18/2023
 Approved By: TRS 1/18/2023
 Project #: 2021-2800

P:\2021\2021-0920 Marquette County - Airport Building Demolitions\GIS\MXD\ArcGIS Pro\2021-0920 Marquette County Airport Demolition.aprx

1.5 Summary of Existing and Projected Operations

According to the FAA 2022 Terminal Area Forecast (TAF) released in February 2023, the Airport had the following activity levels in 2021:

- 43,956 total enplanements
- 18,578 total operations
 - 12,071 itinerant operations
 - 6,507 local operations
- 41 based aircraft

The TAF projects total operations will reach the following activity levels through the 5-, 10-, and 15-year planning horizons:

- 2026 – 18,411 operations
- 2031 – 18,769 operations
- 2036 – 19,144 operations

1.6 Required Environmental Review

Federal financial participation in projects through the *Airport and Airway Improvement Act of 1982* requires environmental review under the *National Environmental Policy Act (NEPA) of 1969*. In addition, the FAA must approve the Airport Layout Plan (ALP) elements associated with the proposed action evaluated under NEPA. An Environmental Assessment (EA) is a document prepared under NEPA that evaluates the effects of a proposed action on the surrounding natural, social, and economic environments.

This EA is prepared under the requirements of Title V of Public Law 97-248 of the *Airport and Airway Improvement Act of 1982*, NEPA, and FAA Order 5050.4B, *National Environmental Policy Act Implementing Instructions for Airport Actions* (April 2006). This EA also meets the requirements of FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, dated July 2015.

The intent of this EA is to provide the environmental documentation necessary to assist local, state, and federal officials and stakeholders in the evaluation of the proposed action at SAW. This EA evaluates the proposed action and a full range of alternatives (including a No Action alternative) that may meet the purpose and need identified in the EA. The analysis also identifies and discusses measures to avoid, minimize, and mitigate possible environmental impacts.

1.7 Requested Federal Action

The following actions require approval prior to actual construction of the proposed project:

- Unconditional approval of the Airport Layout Plan (ALP) that includes all the actions proposed in this EA.

- Determinations under 49 U.S.C. §§ 47106 and 47107 that are associated with the eligibility of the Proposed Project for federal funding under the Airport Improvement Program to assist with construction of potentially eligible development items from the ALP.

1.8 Projected Timeframe of Improvements

The proposed project timeframe, pending approval of the EA and funding, is anticipated to be:

- Draft EA: Summer 2023
- Final EA: Fall 2023
- Anticipated (Subject to FAA's NEPA decision) Building Demolition: Winter 2023/2024

Chapter 2.0 Alternatives Considered

2.1 Introduction

As the lead federal agency, the Federal Aviation Administration (FAA) is responsible for complying with the policies and procedures of the National Environmental Policy Act (NEPA) of 1969; Council on Environmental Quality (CEQ) regulations; FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*; and other related environmental laws, regulations, and orders applicable to federal actions.

In accordance with the CEQ regulations found in 40 Code of Federal Regulations (CFR) Part 1500 (2020), an environmental review process requires that reasonable alternatives for the proposed action be identified and evaluated, although there is no requirement for the inclusion of any specific number or range of alternatives. This also aids the FAA in fulfilling its additional duty to identify the agency's preferred alternative as defined in 40 CFR § 1502.14(d). For alternatives that were considered but eliminated from further study, an explanation of why such alternatives were eliminated from further consideration in accordance with 40 CFR § 1502.14(a) is required. Additionally, pursuant to Section 1502.14(c), the environmental document must include an analysis of the No Action Alternative as a baseline against which to compare the impacts of the Proposed Action and any alternatives being considered.

FAA Order 1050.1F requires a discussion of alternatives that are reasonable and meet the purpose and need of the proposed action. The alternatives discussion should include:

- A list of alternatives considered, including the Proposed Action and the No Action alternatives.
- A concise statement explaining why any initial alternative considered was eliminated from further study because they were not considered reasonable or did not meet the purpose and need.
- A statement identifying a Preferred Alternative if one has been identified.

This chapter documents different options that may reasonably meet the purpose and need of the proposed project at the Marquette Sawyer Regional Airport (SAW or Airport), as explained in **Chapter 1.0 Purpose and Need**.

The following alternatives are presented and discussed in this chapter:

- No Action Alternative – No Renovation or Demolition of Existing Buildings
- Build Alternatives:
 - Alternative 1 – Renovation of Existing Buildings
 - Alternative 2 – Demolition of Existing Buildings (Preferred Alternative)

2.2 No Action Alternative – No Renovation or Demolition of Existing Buildings

The No Action Alternative assumes that no action would be taken to demolish the 14 buildings shown in **Figure 1.3 Buildings Proposed for Demolition**. Under this alternative, the Airport would remain in its current state with no plans to renovate the buildings for prospective tenants or remove the buildings and prepare the sites for redevelopment. The buildings and support infrastructure would remain in their current locations and continue to deteriorate in condition. For safety reasons, some ongoing maintenance and repairs would potentially take place, but no attempt would be made to meaningfully improve any facilities or infrastructure. As such, this alternative would not meet the needs of prospective tenants who are seeking new, modern facilities in which to conduct their business operations. These businesses would continue to seek development opportunities at other airports.

The No Action Alternative does not meet the project's purpose and need of removing the subject buildings for safety reasons and to meet the Airport's long-term planning goals.

Although the No Action Alternative does not meet the project's purpose and need, it is a baseline for comparison of environmental impacts associated with build alternatives and is, therefore, retained and carried forward for analysis.

2.3 Alternative 1 – Renovation of Existing Buildings

Alternative 1 proposes to renovate the 14 buildings shown in **Figure 1.3 Buildings Proposed for Demolition** and convert them into new facilities for prospective tenants to lease. The renovations would involve gutting the buildings, reworking plumbing and electrical wiring, and replacing the following:

- Windows
- Roofs
- Heating, ventilation, and air conditioning (HVAC) systems
- Interior finishes
- Exterior finishes

Alternative 1 would convert vacant buildings that are in poor condition and pose a safety risk to aircraft operations into new facilities. However, this alternative does not meet the project purpose and need due to the physical characteristics of the subject buildings, which were originally designed and constructed for military purposes. Therefore, even with renovations, the buildings would not meet the Airport's long-term planning goals.

Because it does not meet the project purpose and need, Alternative 1 is not considered a reasonable alternative and is removed from further consideration.

2.4 Alternative 2 – Demolition of Existing Buildings (Preferred Alternative)

Alternative 2 proposes to demolish the 14 buildings shown in **Figure 1.3 Buildings Proposed for Demolition**, followed by backfilling the foundations and grading the footprint of each building. As such, this

alternative meets the proposed project's purpose and need of removing the subject buildings for safety reasons and providing an area for redevelopment that meets the Airport's long-term planning goals.

Alternative 2 is considered a reasonable alternative because it fully meets the project's purpose and need when compared to Alternative 1.

2.5 Comparison of Alternatives

Table 2-0 Summary of Alternatives Comparison provides an overview of each build alternative and compares these alternatives with the No Action Alternative.

Table 2-0 Summary of Alternatives Comparison				
Category	Criteria	No Action Alternative	Alternative 1	Alternative 2 (Preferred Alternative)
Meets Project Purpose and Need	Removes 14 Buildings for Safety Reasons and to Meet the Airport's Long-Term Planning Goals	No	No	Yes
Source: Mead & Hunt, Inc.				

2.6 Selection of the Preferred Alternative

After analysis of the advantages and disadvantages of each alternative, the alternative that best meets the project's purpose and need is Alternative 2.

Alternative 2's implementation would remove the 14 buildings that pose a risk to aircraft operations at SAW and aligns with the Airport's long-term planning goals of preparing the sites for redevelopment.

Alternative 2 is therefore considered the most reasonable alternative when compared to the other alternatives. As a result, Alternative 2 is carried forward in this Environmental Assessment for additional analysis, public comment, and agency review.

Chapter 3.0 Affected Environment & Environmental Consequences

3.1 Introduction

This chapter of the Environmental Assessment (EA) describes the resources that may be affected by the Preferred Alternative and the No Action Alternative. This chapter also presents an analysis of the reasonably foreseeable direct, indirect, and cumulative impacts of the Preferred Alternative when compared with those of the No Action Alternative, as well as mitigation measures to avoid or minimize such impacts. Each resource category listed below includes first a summary of the regulatory setting and then an analysis of the topic relative to the Preferred Alternative and the No Action Alternative, as well as any suggested mitigation plans.

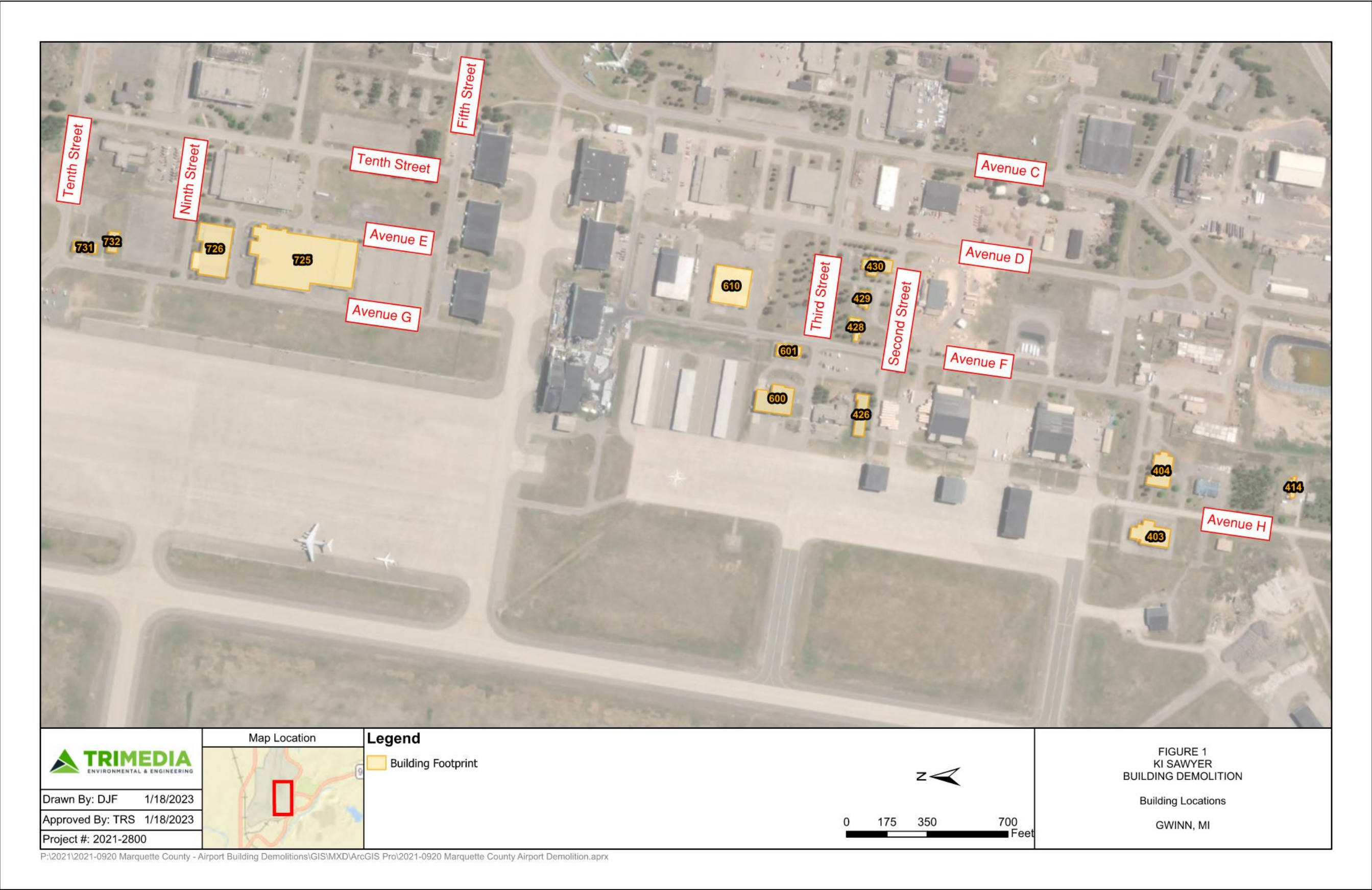
To help identify measures to first avoid, then minimize, and lastly mitigate impacts of the Preferred Alternative, assistance was received from the Marquette Sawyer Regional Airport (Airport or SAW), the Federal Aviation Administration (FAA), and various other regulatory agencies with jurisdiction or permitting authority over a particular resource category in the project area, which is shown in **Figure 3.0 Project Area**. Information received was incorporated into the EA where appropriate.

In addition to the project area, this EA considered potential indirect impacts within the greater study area, which is presented in **Figure 3.1 Indirect Impact Study Area**. The indirect impact study area is comprised of numerous land uses, including commercial, industrial, air transportation, and vacant land. No residential areas or other sensitive land uses, however, are within the indirect impact study area, and no indirect impacts are expected from implementation of the Preferred Alternative. **Table 3-5 Mitigation Summary of the Preferred Alternative** at the end of this chapter summarizes impacts and required mitigation associated with the Preferred Alternative.

As described in previous chapters, the Airport is proposing to demolish 14 existing buildings on Airport property. These buildings are vacant, in poor condition, pose a risk to aircraft operations due to potential impacts from hazardous materials and foreign object debris (FOD), and do not meet the Airport's long-term planning goals. The Preferred Alternative consists of demolishing the buildings, backfilling the foundations, and grading the footprint of each building. The buildings proposed for demolition include:

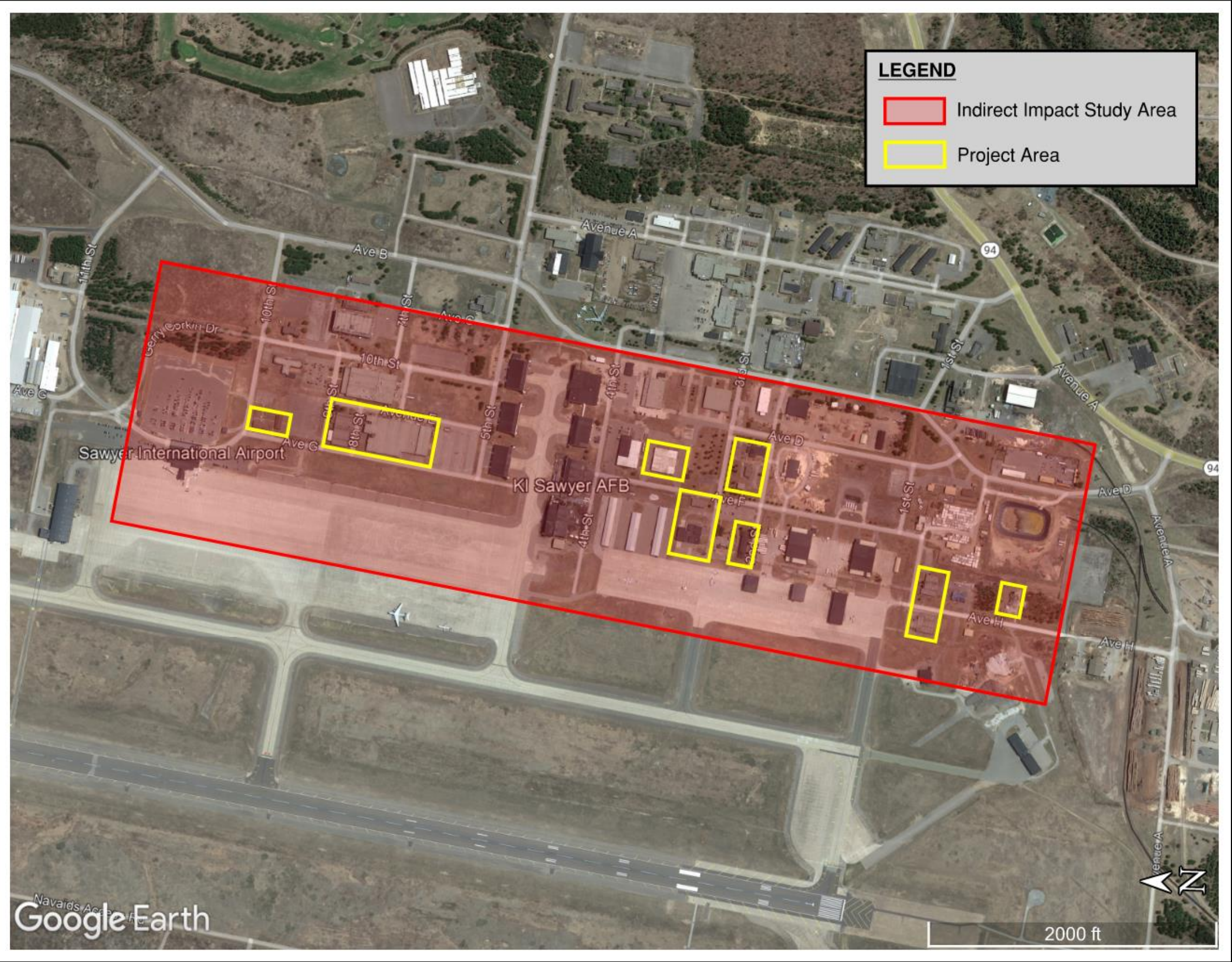
- Building 403
- Building 404
- Building 414
- Building 426
- Building 428
- Building 429
- Building 430
- Building 600
- Building 601
- Building 610
- Building 725
- Building 726
- Building 731
- Building 732

Figure 3.0 Project Area



Source: Trimedia Environmental & Engineering, 2023

Figure 3.1 Indirect Impact Study Area



Source: Google Earth and Mead & Hunt, Inc.

3.2 Early Agency and Public Coordination

Resource agencies and Native American tribes with potential jurisdiction over or interest in the proposed action were contacted at the beginning of the project and given the opportunity to comment on the proposed action. A copy of the distribution list, early coordination letters and maps sent to each agency and organization, and documentation received including response letters are found in **Appendix A Early Agency Coordination**. Specific information and direction received from responding agencies is noted and addressed in the appropriate resource sections below where appropriate.

Upon issuance of the Draft EA, the document was made available for public and agency review and comment for 32 days. A hardcopy of the Draft EA was available for public review at the Airport during normal business hours and an electronic version was available on the Airport's website. A public hearing was advertised during this time but was not requested by anyone from the public.

Two regulatory agencies provided comments on the Draft EA. Those comments were incorporated into the Final EA where appropriate. No public comments were received. See **Appendix I - Public and Agency Review of Draft EA** for details of the public and agency process including comments received and Airport responses.

3.3 Current Airport Environment and History

SAW is a commercial service airport in Marquette County in Michigan's Upper Peninsula, approximately five miles northeast of Gwinn and approximately 16 miles south of the City of Marquette. Owned and operated by Marquette County, SAW is predominantly in Forsyth Township, with portions of Airport property in Sands and West Branch Townships. **Figure 3.2 SAW Surrounding Area** provides a map of existing development around the Airport and a general overview of the local area.

3.3.1 Airport History

The Airport was established in 1949 as Marquette County's municipal airport. It was named after Kenneth Ingalls Sawyer, a former County Highway Department employee. The facility's role as a municipal airport serving civil aviation activity was short-lived, however, due to the Cold War.

The Cold War between the United States and the Soviet Union lasted from approximately 1946–1989. Cold War fears pressured the United States to be prepared to enter combat on short notice. There was a renewed emphasis on the nation's air defense, and the Army worked to maintain an active force that was prepared to quickly deploy to combat zones. In 1947 the United States Armed Forces were unified under the oversight of the Department of Defense by the National Security Act. This Act also created the Air Force independent from the Army.

Figure 3.2 SAW Surrounding Area



Between 1951 and 1954, the Air Defense Command (ADC) surveyed multiple municipal airports and United States Air Force locations for placement or relocation of fighter-interceptor squadrons to counter Soviet trans-polar bomber threats and to improve the United States' capability to detect incoming attacks. In June 1954, ADC presented arguments for "perimeter defense of the United States" along the northern border and Sawyer Airport was chosen as one of six brand new Air Force installations to support this objective. The other bases included Glasgow, Montana; Minot and Grand Forks, North Dakota; Klamath Falls, Oregon; and Kinross, Michigan. In 1955 the United States Government signed a 99-year lease to establish the K.I. Sawyer Air Force Base with the agreement of joint military and public use. Total control of the site was transferred to the Air Force in 1956 and all civil aviation activity ceased in 1957. Civilian operations moved to the Marquette County Airport in Negaunee, Michigan, for the next 40 years.

In 1956 the base was activated as part of the Eastern Air Defense Force of the ADC and the 473rd Fighter Group was activated under this command. Twenty-five F-102 *Delta Dagger* aircraft were placed on duty in 1958. The 473rd became the 56th Fighter Group (FG) in 1959 with the 62nd Fighter Interceptor Squadron (FIS) serving under it. The 62nd FIS was equipped with F-101 Voodoo supersonic interceptors. They were responsible for the patrol and defense of Sault Ste. Marie Defense Sector, which was one of many north-south corridors along the United States-Canada border. The Sault Ste. Marie sector included a Semi-Automatic Ground Environment (SAGE) system that cycled early warning data of elevation, speed, and distance of incoming targets and calculated the most efficient interception route. The information was then relayed to fighters to eliminate the threat. The SAGE system consisted of a blast-resistant, windowless SAGE building that housed two, large IBM computers, as well as radar and communications equipment.

The role of Sawyer Air Force Base solely as an interceptor base was short-lived. In 1957 the Gaither Report recommended that strategic aircraft be dispersed to numerous bases as a safeguard in the event of a Soviet strike. The 4042nd Strategic Wing (SW; redesignated 410 Bombardment Wing [BMW] in 1963) was activated at the base in 1958. Their mission was to operate KC-135 tankers for the 923rd Air Refueling Squadron (AREFS; redesignated 46th ARWFS in 1961) and B-52H bombers of the 644th Bombardment Squadron (BMS; redesignated 526th BMS in 1963).

The SAGE facility was deactivated in 1963 and the base was reassigned from the ADC to the Strategic Air Command (SAC). The SAC mission was to maintain "a capability of conducting long-range bombardment operations....and to sustain the capability to engage in effective air refueling operations." The 410th BMW became the base host and were on constant alert to respond to any threat situation. The 56th FG was deactivated and the 62nd FIS remained as a tenant of the base.

Throughout the 1960s, the 410th BMW participated in several of high-profile operations. In 1961, KC-135 crews were part of Project Quick Step, where a B-58 bomber set a record flying from New York to Paris with in-flight fueling. Tankers from Sawyer Air Force Base were part of Operation Greased Lightning in 1963, setting a B-58 speed record flying from Tokyo to London. Beginning in 1965, the KC-135s participated in Operation Young Tiger, an air refueling operation over Southeast

Asia. The 410th BMW aircraft and crews participated in Operation Arc Light, a bombing campaign over Vietnam in 1968.

In 1971, the 62nd FIS was reassigned, and the 87th FIS along with F-106 *Delta Darts* were transferred to the base. In 1979, control of the 87th FIS was shifted from ADC to Tactical Air Command (TAC), but the interceptor mission continued. In 1985, the 87th FIS and the F-106s were removed from the base along with their interceptor mission, marking the first time the base did not have an interceptor mission.

The 526th BMS and their B-52s were removed from alert in 1991. In 1992, the base and the 410th BMW (renamed 410th BW) were reassigned from SAC to Air Combat Command (ACC) and the 46th AREFS was transferred to Air Mobility Command. The Defense Base Closure and Realignment Commission announced the base was closing in 1993. The 46th AREFS was deactivated that year, followed by the reassignment of the 526th BS in 1994. In 1995, the base officially closed.

The base was leased to the County of Marquette from the Air Force for operation as a commercial service airport between 1995 and 1999 when it was transferred to County ownership on September 22, 1999. The County transferred operations from the Marquette County Airport in Negaunee in September 1999 and, subsequently, closed the Negaunee site.

Today, SAW is a publicly owned, public-use airport that accommodates both general aviation and commercial airline service. Two air carriers serve the Airport: Delta Air Lines and American Airlines. Delta Air Lines provides daily non-stop service to Detroit while American Airlines provides daily non-stop service to Chicago. Many of the Airport's buildings are used as private residences, businesses, churches, and medical offices, as well as the K.I. Sawyer Heritage Air Museum.

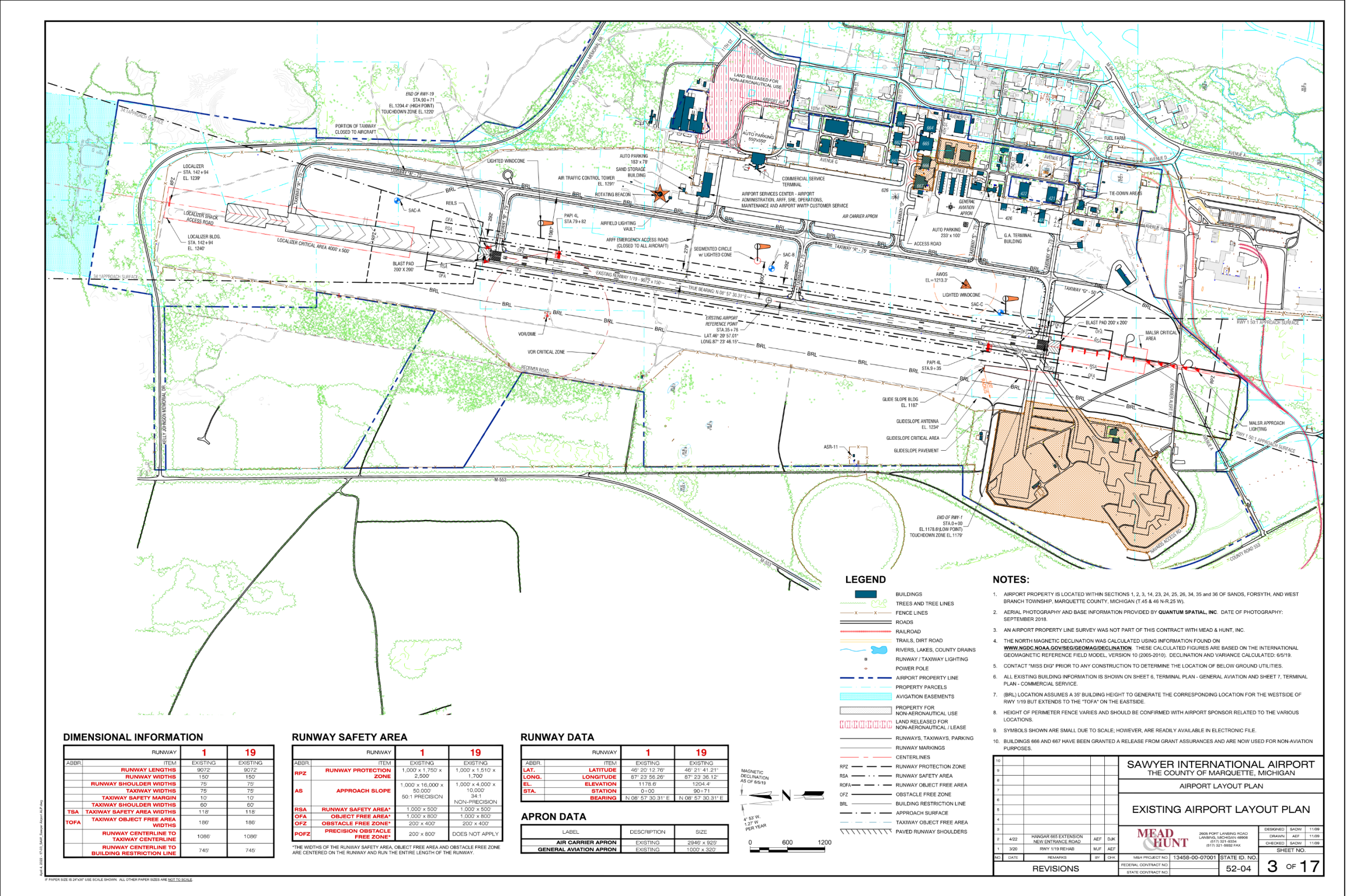
3.3.2 Existing Airport Facilities

The discussion of existing facilities is presented in two categories: airside and landside. The airside facilities include infrastructure such as the runway, taxiways, and navigational aids (NAVAIDs). The landside facilities include the commercial service and general aviation terminal buildings, aprons, hangars, Airport Traffic Control Tower (ATCT), automobile parking, support facilities, and vehicular access. See **Figure 3.3 Existing Airport Layout Plan**, for a graphic representation of airport facilities and their locations on Airport property.

Airside Facilities

The Airport's single runway, Runway 1/19, is oriented in a north-south direction and measures 9,072 feet long and 150 feet wide. The runway is grooved and has an asphalt surface reported to be in good condition on the FAA Form 5010-1, *Airport Master Record* (last inspection date of June 2022).

Figure 3.3 Existing Airport Layout Plan



Source: Mead & Hunt, Inc.

Taxiway A is a full-length parallel taxiway for Runway 1/19, with Taxiways B and C connecting the runway to Taxiway A. Taxiway D provides access between Taxiway A and a series of hangars on the southeast side of the air carrier apron, while Taxiways E and F connect Taxiway A to the general aviation apron. Lastly, Taxiway G connects Taxiway A to the Hangar 400 apron.

Visual NAVAIDs at SAW include:

- Rotating beacon
- High Intensity Runway Lights (HIRL)
- A 4-light Precision Approach Path Indicator (PAPI) at both ends of Runway 1/19
- Runway End Identifier Lights (REIL) at the Runway 19 end
- A medium intensity approach lighting system with runway alignment indicator lights (MALSR) at the Runway 1 end.

In addition to visual NAVAIDs, the Airport is also equipped with electronic NAVAIDs to help pilots navigate in inclement weather. Existing electronic NAVAIDs include an Instrument Landing System (ILS) approach for Runway 1, a Very High Frequency Omni-directional Radio Range (VOR) approach for Runway 19, and Global Positioning Satellite (GPS) approaches for both ends of Runway 1/19.

Landside Facilities

The apron facilities at SAW include the air carrier apron and the general aviation apron. The air carrier apron is east of Runway 1/19 and adjacent to the commercial service terminal building. The apron covers over 320,000 square yards (100 acres). Taxiways A, C, and D provide access to the apron. The general aviation apron is south of the air carrier apron and adjacent to the general aviation terminal building. The apron is approximately 73,000 square yards (15 acres). Access to this apron is provided via Taxiways A, E, and F.

Additionally, there is a hold apron east of the approach end of Runway 1 that aircraft use to conduct engine run-ups prior to departure and to wait for departure clearance from air traffic control.

The commercial service terminal building is at the northeast corner of the air carrier apron. The terminal building has two gates, both of which are equipped with jet bridges that provide weather protected access for passengers. Immediately north, south, and east of the terminal building are parking lots that provide parking spaces for passengers, rental car companies, airline, rental car, and airport employees.

The general aviation terminal building is at the general aviation apron across from Taxiway E. Boreal Aviation, SAW's fixed base operator (FBO), leases the building where it provides general aviation services including:

- Fuel sales
- Overnight parking and tiedowns

- Aircraft maintenance
- Crew lounge
- Pilot snooze room
- Conference room
- Aircraft deicing
- Courtesy vehicles
- Cold and heated hangar storage
- In-flight catering
- Repair and calibration services for aircraft and commercial precision measurement equipment.

A parking lot immediately east of the terminal building provides parking spaces for general aviation users and FBO employees.

The Airport has several hangars of various sizes for aircraft storage. T-hangars are provided for storage of small general aviation aircraft at the northeast corner of the general aviation apron. Additionally, box hangars and conventional hangars for storage of multiple or larger aircraft are on the general aviation apron and along Taxiway D at the southeast corner of the air carrier apron, respectively.



SAW Airport Traffic Control Tower

Source: UPMatters.com

The Airport's ATCT is north of the air carrier apron and east of Taxiway A. SAW is the only airport in the Upper Peninsula that operates an ATCT. Midwest Air Traffic Control Services manages the landing and departure of aircraft at SAW under the FAA's contract tower program.

At the north end of the air carrier apron is the Airport Services Center. This facility houses the airport administration, Aircraft Rescue and Fire Fighting (ARFF), Snow Removal Equipment (SRE), airport operations, maintenance, and airport wastewater treatment plant customer service functions under one roof.

Vehicular access at SAW is provided via Kelly Johnson Memorial Drive, which intersects M-553 on the north side of the Airport. M-553 connects the Airport to Marquette to the north and Gwinn to the south. The surrounding road network also provides access to SAW from points east, south, and southwest.

3.4 Potential for Resources to be Affected

The ensuing sections of this chapter present analyses of the impacts of the Preferred Alternative and the No Action Alternative on the social, environmental, and economic (SEE) environments of the project area, which is comprised of the footprints of the individual buildings proposed for demolition (see **Figure 3.0 Project Area**), and the indirect impact study area (see **Figure 3.1 Indirect Impact Study Area**). Most of these analyses did not include field investigations of the project area due to the nature of the project (i.e., demolition of buildings) and the characteristics of the project area (i.e., disturbed and developed with few trees and areas of maintained turfgrass). For example, no wetland delineation or biological field investigations were conducted. Instead, because the project involves the demolition of buildings in a disturbed and developed area of the Airport, the potential for impacts to these categories of resources was assessed through a desktop survey of online databases. Field investigations were only conducted for hazardous materials and historic resources due to the age and condition of the buildings proposed for demolition and the Airport's former role as an Air Force base from the Cold War era.

Based on the reviews of the project area, the EA analyzed the potential environmental effect of the Preferred Alternative and the No Action Alternative for the following categories of environmental impacts:

- Air Quality
- Biological Resources
- Climate
- Coastal Resources
- Department of Transportation Act, Section 4(f)
- Farmlands
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Historical, Architectural, Archeological, and Cultural Resources
- Land Use
- Natural Resources and Energy Supply
- Noise and Noise Compatible Land Use
- Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks
- Visual Effects (Including Light Emissions)
- Water Resources (Wetlands, Floodplains, Surface Water, Ground Water, and Wild and Scenic Rivers)
- Cumulative Impacts

3.5 Air Quality

An air quality analysis is the measure of the condition of the air in terms of pollutant concentrations. Air quality is regulated out of concern for human health (especially the health of children, the elderly, and those with certain health conditions). Poor air quality can also affect crops and vegetation as well as buildings and other facilities. Air quality is regulated by the United States Environmental Protection Agency (USEPA) under the Clean Air Act (CAA) described in 42 U.S.C. §§ 7401- 7671q. The USEPA regulates pollutants to permissible levels via standards called National Ambient Air Quality Standards (NAAQS).

In addition to the USEPA, the Michigan Department of Environment, Great Lakes, and Energy (EGLE) also addresses air quality in the project area.

Areas which have concentrations of the criteria pollutants below the NAAQS are designated as “attainment areas.” Areas with concentrations of these pollutants above the NAAQS are designated as “nonattainment areas.” Nonattainment areas must implement plans to lower pollutant levels below the standards. In addition, aviation-related federal projects planned for nonattainment areas may be required to conform to these plans, known as “General Conformity.” Marquette County is in attainment for all criteria pollutants; therefore, no General Conformity analysis was completed.

Summary of Findings: Given Marquette County’s attainment status for all criteria pollutants and the temporary nature of construction emissions, the proposed action is not anticipated to cause or contribute to any violation of the NAAQS. Temporary air quality impacts, such as the creation of dust from building demolition and ground disturbing activities, would result from implementation of the Preferred Alternative, but long-term impacts are not expected. No impacts to air quality would result from implementation of the No Action Alternative.

Since there are no long-term impacts anticipated, no specific mitigation is proposed. However, to further reduce the potential for temporary air quality impacts for both workers and the surrounding area, the following Best Management Practices (BMPs) should be considered during building demolition activities under the Preferred Alternative where feasible:

- Use low-sulfur diesel fuel (less than 0.05 percent sulfur).
- Retrofit engines with an exhaust filtration device to capture diesel particulate matter before it enters the construction site.
- Position the exhaust pipe so that the diesel fumes are directed away from the operator and nearby workers, thereby reducing the fume concentration to which personnel are exposed.
- Use catalytic convertors to reduce carbon monoxide, aldehydes, and hydrocarbons in diesel fumes. These devices must be used with low sulfur fuels.
- Use climate-controlled cabs that are pressurized and equipped with high efficiency particulate air (HEPA) filters to reduce the operator’s exposure to diesel fumes. Pressurization ensures that air is moved from the inside to the outside. HEPA filters ensure that any incoming air is filtered first.
- Regularly maintain diesel engines, which is essential to keeping exhaust emissions low, and follow the manufacturer’s recommended maintenance schedule. For example, blue/black smoke indicates that an engine requires servicing or tuning.
- Reduce exposure through work practices and training, such as turning off engines when vehicles are stopped for more than a few minutes, training diesel operators to perform routine inspections, and maintaining filtration devices.
- Purchase new vehicles that are equipped with the most advanced emission control systems available.
- With older vehicles, use electric starting aids as block heaters to warm the engine to reduce diesel emissions.

- Apply water or suitable chemicals to materials stockpiles and other surfaces to control airborne dust during demolition activities.
- Install and use hoods, fans, and fabric filters to enclose and vent the handling of dusty material.
- Cover open equipment for conveying or transporting material likely to create air pollution when airborne.
- Promptly remove spilled or tracked dirt and other materials from paved streets.

3.6 Biological Resources

Biological resources include plants (vegetation), animals (wildlife), and the habitats where they occur. Habitats are the resources and conditions that support the continuous existence of plants or animals in any particular area. Together, biological resources form ecosystems, which are dynamic and respond over time to changes in the environment, whether natural or human induced. Biological resources provide aesthetic, recreational, and socioeconomic values to society, as well as being valuable in their own right. Accordingly, federal and state laws and statutes exist to protect certain species and habitats of special importance.

Early agency coordination with federal and state regulatory agencies with interest or jurisdiction over biological resources in the project area was conducted at the onset of this project. Agency response letters are found in **Appendix A Early Agency and Tribal Coordination**.

3.6.1 Endangered & Threatened Species

The Endangered Species Act (Act) of 1973 (16 U.S.C. §1531-1544) and subsequent amendments, require the conservation of federally listed threatened and endangered plant and animal species, and critical habitats in which they are found. A species is considered endangered if it is in danger of extinction throughout all or a significant amount of its range. Threatened species are defined as those that are likely to become endangered in the foreseeable future. The U.S. Fish and Wildlife Service (USFWS) administers the Act primarily for land and freshwater species and designates critical habitat for species protected under the Act. Section 7 of the Act requires all federal agencies to consult with the USFWS, as applicable, before initiating any action that may affect a listed species or designated critical habitat. Candidate species, which may be listed as threatened or endangered in the future, are not provided any statutory protection under the Act but conservation efforts are encouraged.

At the state level, threatened and endangered species are protected from being taken or harmed during project activities under Part 365 of the Natural Resources and Environmental Protection Act (1994, as amended) (NREPA). The Michigan Department of Natural Resources (DNR) has authority over Part 365. An environmental review must be completed for the project area to identify whether any threatened and endangered species may be affected by project actions. Permits may be required by DNR and EGLE if impacts are identified.

To determine the presence of federally listed threatened, endangered, proposed, and candidate species and evaluate the potential impacts from the proposed project, a review was conducted via the USFWS Information for Planning and Consultation (IPaC) database. The study area for this

review is shown in **Appendix B Biological Resources**. This was coupled with use of the All-Species Michigan Determination Key (Dkey), which provided recommended effect determinations for species within the project area based on information provided by the user through an interview process. A determination of the presence of state-listed threatened and endangered species and potential impacts from the proposed project was conducted via a Voluntary Transportation Preliminary Review Request in the EGLE's MiEnviro Portal, which requested feedback by EGLE staff.

Summary of Findings: Information from the USFWS IPaC database on federally endangered and threatened species in the vicinity of the proposed project area is presented in **Table 3-0 USFWS Endangered and Threatened Species List**. According to this information, there are no critical habitats in the project area.

Table 3-0 USFWS Endangered and Threatened Species List		
Species Name	Common Name	Status
<i>Myotis septentrionalis</i>	Northern Long-eared Bat	Endangered
<i>Perimyotis subflavus</i>	Tricolored Bat	Proposed Endangered
<i>Lynx canadensis</i>	Canada Lynx	Threatened
<i>Canis lupus</i>	Gray Wolf	Endangered
<i>Calidris canutus rufa</i>	Red Knot	Threatened
<i>Danaus plexippus</i>	Monarch Butterfly	Candidate

Source: USFWS Information for Planning and Consultation (IPaC) Database

Recommended determinations made through the Michigan Dkey, located within the USFWS IPaC database, are presented in **Table 3-1 Recommended Effect Determinations from All-Species Michigan Dkey**.

Table 3-1 Recommended Effect Determinations from All-Species Michigan Dkey		
Common Name / Species Name	Status	Dkey Determination
Canada Lynx (<i>Lynx canadensis</i>)	Threatened	NLAA*
Gray Wolf (<i>Canis lupus</i>)	Endangered	NLAA*
Monarch Butterfly (<i>Danaus plexippus</i>)	Candidate	No Effect
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	Endangered	No Effect
Red Knot (<i>Calidris canutus rufa</i>)	Threatened	No Effect
Tricolored Bat (<i>Perimyotis subflavus</i>)	Proposed Endangered	No Effect

*NLAA=May affect, but not likely to adversely affect

Source: All-Species Michigan Determination Key (Dkey)

Early agency correspondence received from EGLE confirmed that the Preferred Alternative would have no impacts on state-listed species (see **Appendix A Early Agency and Tribal Coordination**).

Based on the results of USFWS and EGLE consultation and given the disturbed and developed nature of the project area and lack of quality habitat, endangered and threatened species impacts are not expected from implementation of either the Preferred Alternative or the No Action Alternative. No mitigation is proposed.

For details on the biological resources in the vicinity of the project area including USFWS and EGLE consultation, see **Appendix B Biological Resources**.

3.6.2 Migratory Birds

The *Migratory Bird Treaty Act of 1918* (MBTA) described in 16 U.S.C. § 703 et seq and its amendments are the main driver for the protection of migratory birds in the United States. Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, also obligates all federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitats.

In a biological sense, a migratory bird is an avian that has a seasonal and somewhat predictable pattern of movement. Generally, migratory birds are defined as all native birds in the United States, except those non-migratory species such as quail and turkey that are managed by individual states.

Summary of Findings: The USFWS IPaC database identified seven migratory birds with the potential to exist in the vicinity of the project area (see **Appendix B Biological Resources**). However, due to the disturbed and developed nature of the project area as well as the lack of trees, bushes, and bodies of water near the buildings, the habitat typically associated with migratory birds does not exist. Migratory bird impacts are not expected from implementation of the Preferred Alternative or the No Action Alternative. No mitigation is proposed.

3.7 Climate

Climate change and greenhouse gases are a growing concern for the aviation industry. The primary source of greenhouse gas emissions at an airport are associated with aircraft operations and the short-term emissions from construction equipment activity. Climate change is generally governed by the CAA (42 U.S.C. §§ 7408, 7521, 7571, 7661 et seq.).

Although there are no federal standards for aviation-related greenhouse gas emissions, it is well established that greenhouse gas emissions affect climate.¹ Where a proposed action would result in an increase in greenhouse gas emissions, the emissions should be assessed either qualitatively or quantitatively. There

¹ Federal Aviation Administration. 2007. An Environmental Desk Reference for Airport Actions, October 2007. https://www.faa.gov/airports/environmental/environmental_desk_ref/.

are no significance thresholds for aviation greenhouse gas emissions, and it is not required for a National Environmental Policy Act (NEPA) analysis to attempt to link specific climate impacts to a proposed action or alternative(s) given the small percentage of emissions that aviation projects contribute annually.

In terms of relative U.S. contribution, the U.S. General Accounting Office (GAO) reports that aviation accounts “for about 3% of total U.S. greenhouse gas emissions from human sources, according to USEPA data” compared with other industrial sources such as the country’s transportation sector (20 percent) and power generation (41 percent).² The International Civil Aviation Organization (ICAO) estimates that greenhouse emissions from aircraft account for roughly 3 percent of all anthropogenic greenhouse gas emissions globally. Climate change due to greenhouse gas emissions is a global phenomenon, so the affected environment is the global climate.³

Summary of Findings: Based on FAA data, the current and forecasted operations activity at the Airport (less than 20,000 operations per year) is minor when compared to overall national aviation activity. Therefore, assuming that greenhouse gases occur in proportion to the level of activity, demolition activities under the Preferred Alternative and subsequent operational activity in future years at the Airport, relative to aviation throughout the United States, is negligible.

Climate impacts are not expected from implementation of the Preferred Alternative or the No Action Alternative. However, to reduce any greenhouse gas emissions from the proposed project, the contractor will recycle demolition materials where possible.

3.8 Coastal Resources

The Coastal Zone Management Act of 1972 (16 U.S.C. §§ 1451-1466) established the Federal Coastal Zone Management Program to encourage and assist states in preparing and implementing management programs to “preserve, protect, develop, and where possible, to restore or enhance the resources of the nation’s coastal zone.” In addition, the Coastal Barrier Resources Act of 1982 requires that no new federal expenditures or financial assistance may be made available for construction projects within the boundaries of the Coastal Barriers Resource System. Executive Order 13089, Coral Reef Protection requires federal agencies to “identify any actions that might affect coral reef ecosystems, protect and enhance the conditions of these ecosystems, and ensure that the actions carried out, authorized, or funded by federal agencies will not negatively impact or degrade coral reef ecosystems.”

² IPCC Report as referenced in U.S. General Accounting Office (GAO) *Environment: Aviation’s Effects on the Global Atmosphere Are Potentially Significant and Expected to Grow*, GAO/RCED-00-57, February 2000, p. 14; GAO cites available USEPA data from 1997.

³ As explained by the U.S. Environmental Protection Agency, “greenhouse gases, once emitted, become well mixed in the atmosphere, meaning U.S. emissions can affect not only the U.S. population and environment but other regions of the world as well; likewise, emissions in other countries can affect the United States.” Climate Change Division, Office of Atmospheric Programs, U.S. Environmental Protection Agency, *Technical Support Document for Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act 2-3* (2009), available at <http://USEPA.gov/climatechange/endangerment.html>.

Summary of Findings: The Airport is 15 miles inland from Lake Superior and is not included in the state's Coastal Zone Management Plan. Impacts to coastal resources are not expected from implementation of the Preferred Alternative or the No Action Alternative. No mitigation is proposed.

3.9 Department of Transportation Act, Section 4(f)

Section 4(f) of the Department of Transportation Act (49 U.S.C. § 303) requires that the Secretary of Transportation 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 land from a historic site of national, state, or local significance as determined by the officials having jurisdiction unless there is no feasible and prudent alternative to the use of such land.

Summary of Findings: The Airport is eligible for listing in the National Register of Historic Places (NRHP) as a Historic District under Criterion A in the areas of Military and Politics/Government. Its eligibility is related to Cold War era military efforts. All 14 buildings proposed for demolition were determined to be contributing resources to the K.I. Sawyer Air Force Base Historic District based on coordination with the State Historic Preservation Office (SHPO). SHPO determined the proposed project will have an adverse effect on the Historic District. See **Section 3.12 Historical, Architectural, Archeological, and Cultural Resources** for additional SHPO coordination and information on historic resources in the project area.

Given that Section 4(f) resources include historic properties, a Section 4(f) Evaluation was completed as part of this EA (**Appendix H Section 4(f) Evaluation**). **Figure 3.4 Section 4(f) Evaluation Study Area** shows the location of the buildings proposed for demolition, which served as the study area for the Section 4(f) Evaluation. The Section 4(f) Evaluation included an alternatives analysis to determine if there were any feasible and prudent alternatives that avoided the use of the Section 4(f) property. Section 4(f) alternatives included the following:

- No Action Alternative – No Renovation or Demolition of Existing Buildings
- New Location – Construction of New Buildings Elsewhere on Airport Property
- Alternative 1 – Renovation of Existing Buildings
- Alternative 2 – Demolition of Existing Buildings

Based on the Section 4(f) alternatives analysis there were no feasible and prudent alternatives that avoided the use of Section 4(f) property. When there is no prudent and feasible avoidance alternative, the FAA must choose from the remaining alternatives. The FAA will analyze the remaining alternatives and select the alternative that causes the least overall harm in light of Section 4(f)'s preservationist purpose. This is known as "least overall harm analysis."

Figure 3.4 Section 4(f) Evaluation Study Area



Source: Google Earth, 2023, with labeling by Mead & Hunt, Inc.

The least overall harm analysis determined Alternative 2 – Demolition of Existing Buildings fully meets the project's purpose and need, while Alternative 1 Renovation of Existing Buildings fails to meet the project's purpose and need. Although Alternative 2 would pose greater harm to the Section 4(f) properties compared with Alternative 1, the ability to mitigate adverse impacts, the relative significance of the Section 4(f) properties, and the views of the Michigan SHPO as “Official with Jurisdiction” over the Section 4(f) resources are essentially the same under both alternatives. If both alternatives are viewed equally by SHPO, the alternative that best meets the project's purpose and need was selected. The Section 4(f) Evaluation recommended Alternative 2 – Demolition of Existing Buildings as the Preferred Alternative. The U.S. Department of the Interior (DOI) concurred with this determination on August 2, 2023. See **Appendix H Section 4(f) Evaluation** for the DOI concurrence letter.

To mitigate Section 4(f) impacts, a Memorandum of Agreement (MOA) between the FAA, SHPO, the Airport, and the Michigan Strategic Fund was executed in August 2023 (**Appendix E Historic Resources**). It stipulates that the FAA will ensure the following measures are carried out in order to mitigate for the demolition of the 14 contributing buildings. Mitigation measures include:

- Historic property survey and Historic Property Management Plan
- Archival photographic documentation and report

See **Section 3.12 Historical, Architectural, Archeological, and Cultural Resources** for details of the mitigation measures included in the MOA document.

Impacts to Section 4(f) resources are also expected from implementation of the No Action Alternative. The No Action Alternative assumes that no action would be taken to demolish the 14 buildings. Under this alternative, the Airport would remain in its current state and the buildings would continue to deteriorate to the point of dilapidation, thus affecting the historic integrity of the buildings.

3.10 Farmlands

The *Farmland Protection Policy Act of 1981* (FPPA) described in 7 U.S.C. §§ 4201-4209 was enacted to minimize the extent to which federal actions and programs contribute to the unnecessary and irreversible conversion of farmland to non-agricultural uses. Per FPPA, “*farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.*”

Prime farmland has the best combination of physical and chemical characteristics for producing food, forage, fiber, and oilseed crops. Unique farmland is defined as land other than prime farmland that is used for the production of specific high-value food and fiber crops such as citrus, tree nuts, olives, cranberries, fruits, and vegetables. Any federal action which may result in conversion of farmland to a non-agricultural use requires coordination with the U.S. Department of Agriculture's (USDA) Natural Resource Conservation Services (NRCS).

Summary of Findings: According to maps available from the NRCS, the proposed project area is on soil classified as “Not Prime Farmland.” Therefore, no farmland impacts are expected with implementation of the Preferred Alternative or the No Action Alternative. No mitigation is proposed. See **Appendix C Farmland** for the NRCS farmland classification map for the Airport and surrounding area.

3.11 Hazardous Materials, Solid Waste, and Pollution Prevention

Hazardous materials are those which can pose a risk to health, safety, and property, including hazardous wastes and hazardous substances as well as other materials. Hazardous materials are regulated under several statutes, including the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. §§ 9601-9675), the Resource Conservation and Recovery Act (RCRA, described in 42 U.S.C. §§ 6901-6992k), and the Toxic Substance Control Act (15 U.S.C. §§ 2601-2697). Solid waste is discarded material that falls into specific regulatory definitions; solid waste is regulated under RCRA. Pollution prevention refers to efforts to avoid, prevent, or reduce discharges and emissions of pollutants.

Summary of Findings: The Airport retained a qualified environmental consulting firm to perform two types of environmental investigations for each of the 14 buildings proposed for demolition (for a location of the buildings, see **Figure 3.0 Project Area**). Investigations included a Hazardous Materials Assessment (HMA) and a Phase I Environmental Site Assessment (Phase I ESA). The HMA is structured such that information that applies to all subject buildings is included in the body of the report. Specific information relevant to individual buildings is presented in Appendix A of the HMA report. In the case of the Phase I ESAs, the consultant prepared a separate report for each of the 14 buildings.

Due to the page size of the combined HMA and Phase I ESA reports (over 10,000 pages), an abridged version of the documents was created that only included the findings, conclusions, and recommended mitigation, while excluding items such as historical documents, laboratory results, miscellaneous supporting data, and chain-of-command forms. The abridged version of the reports and an executive summary are found in **Appendix D Abridged Hazardous Materials**. The full reports are available from the Airport upon request.

Hazardous Materials Assessment

The HMA identified and quantified the existence of asbestos containing materials (ACM), lead-containing paint, mercury-containing equipment, polychlorinated biphenyls (PCBs) and other hazardous materials within the 14 buildings proposed for demolition. The HMA was conducted in June-July 2021 and September 2022 and was intended to identify building contaminants that, if mismanaged during demolition activities, could pose an environmental or health and safety concern.

The following findings were the results of the HMA:

- ACM is present throughout the selected buildings in all but one inspected building.
- Paint samples collected from the selected buildings contained detectable lead concentrations.

- All exit signs and smoke detectors in the selected buildings may contain radioactive material. It is the responsibility of the contractor to confirm the presence or absence of the hazardous material in items impacted by the demolition/renovation.
- There is a significant quantity of fluorescent bulbs in the selected buildings that are assumed to contain mercury.
- There is a significant quantity of light ballasts in the selected buildings assumed to contain PCBs.
- There are high voltage transformers at some selected buildings that may contain PCB oil, or that may have caused contamination impacting building materials and soil.
- There are emergency light batteries and emergency generator batteries present in the selected buildings.
- There may be mercury-containing devices including thermostats and switch gears.
- There is lead sheathing present in Building 725.
- Selected buildings may have historical chemical contamination from facility processes.

The HMA led to the following conclusions based on these findings:

- Most buildings will require asbestos abatement prior to demolition.
- The concentrations of lead in some of the painted surfaces presents a potential inhalation and dermal contact exposure risk to employees.
- Components generally will not meet the definition of hazardous waste when handled appropriately. However, the following materials require special handling:
 - PCB light ballasts,
 - Hazardous material-containing devices such as smoke detectors and exit signs,
 - Fluorescent and other mercury-containing lamps and bulbs,
 - Mercury-containing thermostats.
- Waste characterization may be required prior to disposal.

For details of the HMA report including findings and conclusions and recommended mitigation, see **Appendix D Abridged Hazardous Materials**.

Phase I Environmental Site Assessments

A Phase I ESA was conducted in November 2022 for each of the 14 buildings proposed for demolition. The Phase I ESAs were conducted in general accordance with American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (E1527-13).

The Phase I ESAs consisted of a review of environmental records, site reconnaissance, review of historical data, and interviews with Airport staff and local government officials. The purpose of the Phase I ESAs was to evaluate the subject property for the presence of Recognized Environmental Conditions (RECs) as defined by ASTM E1527-13. The investigations were conducted to provide the prospective owner with a basis for asserting landowner liability protections and defenses (should landowner liability protections and defenses become necessary) under the Comprehensive

Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, 42 U.S.C. et seq.) and applicable state law. Performance of the Phase I ESAs was intended to reduce, but not eliminate, uncertainty regarding environmental matters, while recognizing reasonable limits of time and cost.

All buildings had lead-based paint, asbestos, and mold. In addition, most buildings had at least one REC, soil and ground water contamination, a requirement for a site-specific Health and Safety Plan, and a recommendation for use of appropriate personal protective equipment during demolition.

The results of the individual Phase I ESAs are discussed in **Appendix D Abridged Hazardous Materials** by building number. For each building, a description of the building and its physical location are provided, followed by the consultant's findings, opinion, and recommended mitigation.

Based on the information from the HMA and individual Phase I ESAs, hazardous material impacts are expected from implementation of the Preferred Alternative. The mitigation requirements outlined in the HMA should be followed for all subject buildings, while the recommended mitigation from the Phase I ESAs should be followed for each building as described in **Appendix D Abridged Hazardous Materials**.

There would be no hazardous materials impacts from implementation of the No Action Alternative.

3.12 Historical, Architectural, Archeological, and Cultural Resources

Historical, architectural, archeological, and cultural resources include a variety of sites, properties, and facilities related to activities and societal and cultural institutions. Such resources express past and present elements of human culture and are important to a community. Section 106 of the National Historic Preservation Act (NHPA) (Section 106 of the National Historic Preservation Act, 54 U.S.C. § 300101) requires federal agencies to consider the effects their actions may have on these properties.

As explained in **Section 3.3.1 Airport History**, before SAW's current role as a commercial service airport, the Airport had a long history as K.I Sawyer Air Force Base. Due to the Airport's unique history, SAW retained a consultant to complete a Section 106 report for the 14 buildings proposed for demolition to assess their eligibility for listing in the National Register of Historic Places (NRHP) as part of a draft Categorical Exclusion in 2021. For this report, the above-ground Area of Potential Effect (APE) included the entirety of the former K.I. Sawyer Air Force Base (approximately 5,759 acres) to account for any effects of the building demolition project on the base as a whole. The archeology APE was defined to include all areas that may be impacted by ground disturbing activities related to the project.

For the above-ground APE, the consultant conducted a literature review at the SHPO to identify any previously recorded above-ground resources or previously conducted above-ground surveys. The consultant also compiled information derived from a review of the National and State Registers of Historic Places, historic aerials and maps, and online repositories.

For the archeology APE, the consultant conducted a separate literature review at the Michigan SHPO to compile information regarding previously identified archeological sites and surveys in the archeology APE

and in the surrounding 1.0-mile archeology study area. In addition, the information derived from a review of the National and State Registers of Historic Places, historic aerials and maps, and online soils data helped aid in the understanding of the archeological potential of the project area.

The Section 106 report is presented in **Appendix E Historic Resources**.

Summary of Findings: According to the Michigan SHPO, no previously recorded archeological sites or investigations overlap the archeology APE. Therefore, the proposed project will not affect previously recorded archeological sites. The archeology APE was in areas where soils were previously disturbed during the construction of the streets and buildings associated with the K.I. Sawyer Air Force Base. Therefore, the Section 106 report concluded the proposed project activities are unlikely to encounter undisturbed soils or significant archeological deposits.

The Section 106 report recommended that the K.I. Sawyer Air Force Base is, however, eligible for listing in the NRHP. It is eligible under Criterion A in the areas of Military and Politics/Government. Its eligibility is due to its associations with Cold War era military efforts and the expansion of the United States Air Force into northern Michigan. The eligibility is also a result of its associations with changing political policies during the Cold War that increasingly focused on air defense and detection. All 14 buildings proposed for demolition were recommended as contributing resources to the historic nature of K.I. Sawyer Air Force Base.

The Section 106 report was submitted to the SHPO in December 2022. In a letter dated January 5, 2023 (found in **Appendix E Historic Resources**), the SHPO concurred with the Section 106 report findings that the K.I. Sawyer Air Force Base is eligible for the NRHP as a historic district and that the project, as proposed, would result in an adverse effect to the K.I. Sawyer Air Force Base Historic District.

In order to resolve adverse effects under 36 CFR 800.6, consultation is required with interested parties to develop a MOA that will mitigate adverse effects to the proposed historic district. A Section 106 Case Study was therefore prepared that outlines the identified adverse effect to the K.I. Sawyer Air Force Base Historic District. The study also provided a history of consultation with SHPO, the Advisory Council on Historic Preservation (ACHP), and project stakeholders to participate in development of alternatives to avoid adverse effects and identify mitigation measures to include in a MOA. The Section 106 Case Study is provided in **Appendix E Historic Resources**.

The Section 106 Case Study identified the following measures to mitigate impacts to the K.I. Sawyer Air Force Base Historic District, which served as the basis for the MOA:

- Historic property survey and Historic Property Management Plan
- Archival photographic documentation and report

The executed MOA (found in **Appendix E Historic Resources**) between the FAA, SHPO, the Airport, and the Michigan Strategic Fund was signed in August 2023. It stipulates that the FAA will ensure the following measures are carried out in order to mitigate for the demolition of the 14 buildings:

I. Cultural Resources Survey and Historic Property Management Plan

The Airport will conduct a cultural resources survey to document resources within the area of the former K.I. Sawyer Air Force Base that is subject to FAA oversight to ascertain the contributing and noncontributing status of resources. The Airport or its agent will develop a Historic Property Management Plan (HPMP) to identify future planning needs and recommendations. The survey and HPMP will be developed in accordance with the plan outlined in Appendix A of the MOA.

Survey and development of the HPMP are to be completed by individuals who meet the Secretary of the Interior's Standards for history and/or architectural history. Work will follow the guidelines from SHPO in the *Michigan Above-Ground Survey Manual*.

II. Archival Photography and Narrative Context

Prior to MOA execution, the 14 buildings identified for demolition were documented in large-format, black and white archival photographs. These photographs will be supplemented with a contextual narrative report that meets the standards of the *Michigan Above-Ground Survey Manual*.

The narrative will synthesize information from previous documentation, including the 1995 *Historic Building Inventory and Evaluation: K.I. Sawyer Air Force Base, Marquette County, Michigan*, and the 2021 *Cultural Resources Review for the Marquette County Airport Building Demolitions Project, Marquette County, Michigan* report and site forms.

Development of the narrative context shall be completed by individuals who meet the Secretary of the Interior's Standards for history and/or architectural history.

Based on the information above, it is concluded that the Preferred Alternative will have an adverse effect on the K.I. Sawyer Air Force Base Historic District due to the proposed demolition of the 14 buildings. The impacts will be mitigated through the measures outlined in the MOA.

Impacts to the historic district may also result from the implementation of the No Action Alternative. The No Action Alternative assumes that no action would be taken to demolish the 14 buildings. Under this alternative, the Airport would remain in its current state and the buildings would continue to decline in condition thus affecting the historic integrity of the buildings.

3.13 Land Use

As described in 1050.1F *Desk Reference*, "Section 1502.16(c) of the Council on Environmental Quality (CEQ) regulations requires the discussion of possible conflicts between the proposed action and the objectives of federal, state, regional, and local land use plans, policies, and controls for the area concerned. Where an inconsistency exists, the EA document should describe the extent to which the agency would reconcile its proposed action with the existing land use plan." The FAA also requires airport operators to ensure that actions are taken to establish and maintain compatible land uses around their airports.

Land use regulations near airports typically focus on safety for airport users and the surrounding community. Elements of airport actions can change existing land use patterns and, in some instances, disrupt communities, require residential or business relocations, or degrade surface transportation service. Land use controls and zoning regulations generally discourage or prohibit land use that is incompatible with airport operations. The authority to enact zoning codes usually lies at the local level.

As previously explained, the Airport is predominantly within Forsyth Township. According to the Forsyth Township's current land use map for the SAW area (see **Figure 3.5 Forsyth Township Land Use Map – Marquette Sawyer Regional Airport Area**), the buildings proposed for demolition are surrounded by the following land use classifications:

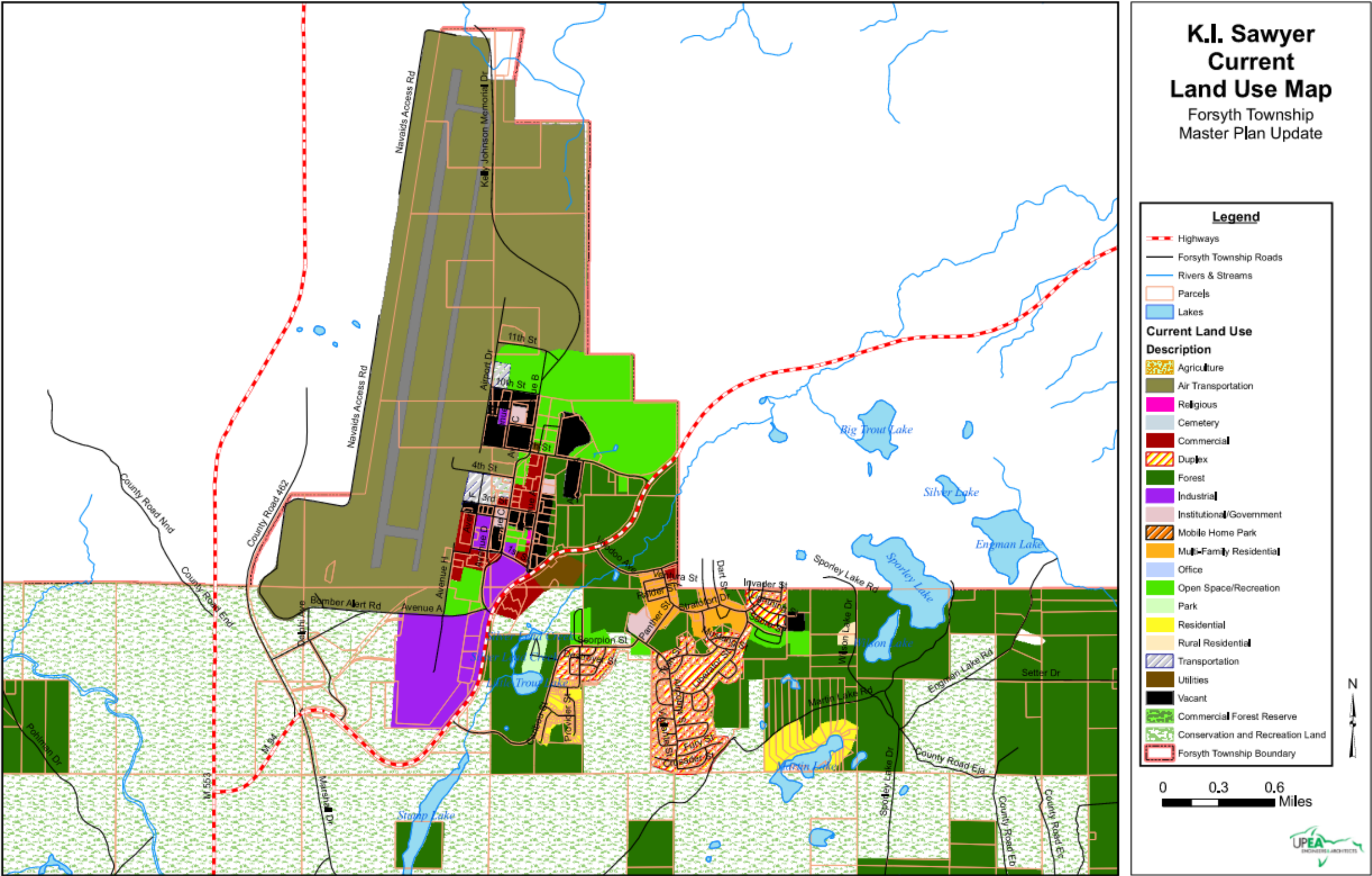
- Air Transportation
- Vacant
- Transportation
- Industrial
- Institutional/Government
- Commercial
- Open Space/Recreation
- Forest

According to FAA Advisory Circular (AC) 150/5200-33C, *Hazardous Wildlife Attractants on or near Airports*, the FAA also requires that consideration be given to the potential increases in wildlife attractants that a project may create and that an assessment be taken of existing incompatible land uses near airports such as solid waste landfills, crops, open water, and wetlands that may act as wildlife attractants.

Summary of Findings: The FAA has not established a significance threshold for land use, or factors to consider when determining significance of a project's effect on land use; however, to determine the potential for land use impacts caused by the Preferred Alternative and No Action Alternative, an evaluation of the proposed action and its compatibility with local land use controls and plans was completed.

No land use classification changes would occur with the Preferred Alternative or the No Action Alternative. No noise sensitive areas (residential, educational, health, religious, park or recreational, wildlife refuges, or cultural and historical) will be introduced or impacted. In compliance with 49 U.S.C. § 47017 (a)(10), the Airport has been proactive in restricting incompatible land uses adjacent to and within the immediate vicinity of SAW when feasible. All building demolition activities will take place on existing Airport property in areas classified as Commercial, Industrial, Transportation, and Vacant as shown in **Figure 3.5 Forsyth Township Land Use Map – Marquette Sawyer Regional Airport Area**. Based on conversations with the Airport manager, existing and future land use patterns will remain unchanged after the implementation of the project. The Preferred Alternative is considered compatible with the existing and future land uses surrounding the project area.

Figure 3.5 Forsyth Township Land Use Map – Marquette Sawyer Regional Airport Area



Source: Forward Forsyth 2035 – Strategic Comprehensive Plan Update, 2012

The proposed action will not increase wildlife attractants or introduce new wildlife that are hazardous to aircraft operations. No wetlands, open water, or habitat will be created from implementation of the Preferred Alternative.

In addition, neither the Preferred Alternative nor the No Action Alternative are expected to increase congestion, cause degradation of level of service, or permanently close any surface roads within, or adjacent to, the project area. Traffic from construction vehicles would be managed to avoid and minimize any impacts to local roads by defining haul routes and by scheduling the arrival and departure times of construction traffic so that normal traffic patterns are not interrupted. Any potential construction impacts to surface transportation would be temporary in nature.

Based on the above information, and in accordance with the required airport sponsor's assurance under 49 U.S.C. § 47107(a)(10), it is determined that the Preferred Alternative and the No Action Alternative are compatible with existing and planned land uses and zoning requirements. Land use impacts associated with the proposed action will not be significant based upon the factors described above.

3.14 Natural Resources and Energy Supply

Executive Order 13834, *Efficient Federal Operations* directs projects to examine the potential changes in the demand for energy or natural resources that would have a significant measurable effect on local supplies due to the implementation of the Preferred Alternative or the No Action Alternative. Energy requirements associated with an airport usually fall into two categories: (1) those which relate to changed demands for stationary facilities and (2) those which involve the movement of air and ground vehicles. Examples of these include airfield lighting, terminal building heating and cooling systems, and aircraft and passenger vehicles.

As described in 1050.1f *Desk Reference*, 40 CFR § 1502.16(e)(f) of the CEQ regulations require that federal agencies consider energy requirements, natural depletable resource requirements, and the conservation potential of alternatives and mitigation measures be evaluated in NEPA documents. Though specific significance thresholds for natural resource consumption and energy supply have not been established by the FAA, the proposed action should be examined for the potential to cause demand to exceed available or future supplies of these resources.

FAA guidance typically states that airport improvement projects do not generally increase the consumption of energy or natural resources to the point that significant impacts would occur unless it is found that implementation of a proposed project would cause demand to exceed supply.

The facilities at the Airport require electricity and natural gas for lighting, cooling/heating, and operations. The area around the Airport is considered a rural area with adequate access to natural resources for aircraft operations and construction projects as well as meeting the needs of the surrounding region.

Summary of Findings: Electric or gas use required to operate SAW facilities is not expected to increase because of the proposed project. A decrease in energy consumption will instead result once the buildings proposed for demolition are removed.

The Preferred Alternative will not require the consumption of petroleum-based fuels or other natural resources in quantities that would surpass available supply. BMPs to reduce energy consumption during building demolition will be employed, where applicable. To reduce energy consumption associated with the temporary use of excavators, cranes, and vehicles for the Preferred Alternative, construction equipment should be in good working order to ensure the most efficient use of fuel. All vehicles and equipment should be checked for leaks and repaired immediately.

The nature of the project does not lend itself to significant increases in energy or natural resources beyond temporary energy consumption associated with building demolition activities under the Preferred Alternative. Therefore, natural resources and energy supply impacts are not expected from implementation of either the Preferred Alternative or the No Action Alternative.

3.15 Noise and Noise Compatible Land Use

Compatible land use is described in FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*. Noise is considered unwanted sound that disturbs or interrupts routine activities. Aviation noise includes sounds made by aircraft during departure, arrival, flight, taxiing, and other activities. The compatibility of land use around an airport is typically determined based on the level of aircraft noise. The degree of annoyance that people suffer from aircraft noise varies depending upon their activities at any given time.

The FAA uses the Day-Night Average Sound Level (DNL) as its primary noise metric. DNL accounts for the levels of aircraft events, the number of times those events take place, and the timeframe in which they occur (day or night). Noise levels greater than 65 DNL on noise sensitive areas are considered a potential impact.

Noise sensitive areas typically include residential, educational, health, religious structures and sites, parks, recreational areas, wilderness areas, wildlife refuges, and cultural and historical sites. In the context of airport noise, such facilities, or areas within the 65 DNL contour, may be considered a noise sensitive land use.

Per FAA Order 1050.1F – *Environmental Impacts: Policies and Procedures*, and the *FAA Environmental Desk Reference for Airport Actions*, any airport that exceeds 90,000 annual piston-powered aircraft operations or 700 annual jet-powered aircraft operations or 10 or more daily helicopter operations, or any project that includes the construction of a new airport, a runway relocation, runway strengthening, or a major runway expansion requires a noise analysis. A noise analysis is performed for actions that result in a general overall increase in daily aircraft operations or the use of larger/noisier aircraft. The FAA's noise analysis primarily focuses on how proposed airport actions would change the cumulative noise exposure of individuals to aircraft noise in areas surrounding the airport.

Summary of Findings: According to the FAA 2022 Terminal Area Forecast (TAF), SAW's total operations are forecast to remain below 21,000 annual operations through 2050, which is below 90,000 operations (see **Appendix F Noise**). Therefore, the propeller aircraft activity levels are below the stated threshold for a noise analysis.

SAW's Airport Master Record (last inspection date of June 2022) indicates there are no based helicopters at the Airport, which means it is unlikely the threshold of 10 daily helicopter operations for a noise analysis will be exceeded (see **Appendix F Noise**).

According to the FAA's Traffic Flow Management System Counts (TFMSC) database, Instrument Flight Rules (IFR) jet operations at SAW totaled 3,575 in 2019; 2,800 in 2020; 3,812 in 2021; and 2,983 in 2022, all of which exceed the 700 annual jet operations threshold (see **Appendix F Noise**).

Although the threshold for annual jet operations is exceeded, the purpose of the proposed project is to remove vacant buildings and prepare the sites for redevelopment. The proposed action does not involve constructing a new airport, runway relocation, runway strengthening, or a major runway expansion.

The Preferred Alternative will not cause an increase in noise levels over existing conditions and will not change existing air traffic patterns or result in a reclassification or relocation of a runway. During project implementation, some noise will be generated by construction equipment and building demolition activities; however, these impacts are temporary in nature. Therefore, due to the nature of the proposed action, a noise analysis was not completed, and long-term noise impacts are not expected from implementation of either the Preferred Alternative or the No Action Alternative. No mitigation is proposed.

3.16 Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks

Statutes related to socioeconomic impacts include the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970 (42 U.S.C. § 61 et seq.). Environmental justice, as defined by the EPA, is the "fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. EPA has this goal for all communities and persons across this Nation." Title VI of the Civil Rights Act of 1964 (42 U.S.C. §§ 2000d2000d-7), Executive Order 12898 – *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* and Executive Order 13045 – *Protection of Children from Environmental Health Risks and Safety Risks*, Executive Order 14096 – *Revitalizing Our Nation's Commitment to Environmental Justice for All*, and other federal guidance have been issued to address environmental justice and children's environmental health and safety risks.

Airport development projects can impact the socioeconomic conditions of the surrounding community. Such projects have the potential to impact neighboring populations, including children, and may do so disproportionately to the overall area population. The proposed project was evaluated for socioeconomic and environmental justice impacts as well as health and safety risks to children.

3.16.1 Socioeconomic Impacts

The types of socioeconomic impacts that can arise from airport development projects include:

- Relocation of residences, businesses, or farms
- Alteration of surface transportation patterns that may restrict community access

- Disruption of established communities
- Disruption of orderly, planned development
- Creation of appreciable changes in employment.

Table 3-2 Top 10 Largest Employers in Marquette County, 2022 lists important employers in the region and the number of people employed. The area's major employers and industry are not expected to be adversely impacted by the proposed action. In addition, no appreciable changes in employment in the surrounding region are anticipated as a result of the building removals.

Table 3-2 Top 10 Largest Employers in Marquette County, 2022	
Employer	# of Employees
UP Health System - Marquette	1,599
Cleveland-Cliffs, Inc.	972
Northern Michigan University	914
Upper Peninsula Medical Center	603
Marquette Area Public Schools	410
Walmart	392
UP Health System - Bell	350
Michigan Department of Corrections	284
Resolve Surgical Technologies	250
County of Marquette	238

Source: Lake Superior Community Partnership

Summary of Findings: No residential, business, or farm relocations will be required as part of this proposed project. All development will take place on existing SAW property; therefore, no alteration of surface transportation patterns, community disruptions, or disruptions of orderly, planned development are expected.

Socioeconomic impacts from implementation of either the Preferred Alternative or the No Action Alternative are not expected. No mitigation is proposed.

3.16.2 Environmental Justice

The purpose of Executive Order 12898 – *Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations*, is to identify, address, and avoid disproportionate and adverse human or environmental effects on minority and/or low-income populations. Environmental justice is defined as the right to a safe, healthy, productive, and sustainable environment for all, where “environment” is considered in its totality to include the ecological, physical, social, political, aesthetic, and economic environments.

The FAA 1050.1F *Desk Reference* also suggests the following factors as an example of the magnitude to consider when analyzing typical environmental justice impacts. Guidance asks if the project will:

- Disrupt or divide the physical arrangement of an established community
- Cause extensive relocation when sufficient replacement housing is unavailable
- Cause extensive relocation of community businesses that would cause severe economic hardship for affected communities
- Disrupt local traffic patterns and substantially reduce the levels of service of roads serving an airport and its surrounding communities.

In compliance with Executive Order 12898, U.S. Census data was reviewed to determine the characteristics of people living in proximity to SAW. Based on 2020 Census data, the racial composition of the state of Michigan, Marquette County, and Forsyth Township is predominately White/Caucasian. Black/African American residents account for the second largest racial group in the state, while residents of other races comprise the second largest racial group in the county and township (**Table 3-3 Racial Diversity**).

Table 3-3 Racial Diversity		
Geographic Area	Population	Percent
State of Michigan		
Asian	334,300	3.3%
Black/African American	1,376,579	13.7%
White/Caucasian	7,444,974	73.9%
All Other	921,478	9.1%
Total	10,077,331	100.0%
Marquette County		
Asian	406	0.6%
Black/African American	805	1.2%
White/Caucasian	59,551	90.2%
All Other	5,255	8.0%
Total	66,017	100.0%
Forsyth Township		
Asian	32	0.5%
Black/African American	57	0.9%
White/Caucasian	5,543	89.5%
All Other	562	9.1%
Total	6,194	100.0%

Source: U.S. Census 2020

As shown in **Table 3-4 Median Household Income**, the annual median household income (in 2021 dollars) of Marquette County (\$57,981) and Forsyth Township (\$54,924) are less than the state of Michigan (\$63,202).

Table 3-4 Median Household Income	
Geographic Area	Median Income*
State of Michigan	\$63,202
Marquette County	\$57,981
Forsyth Township	\$54,924

*In 2021 dollars

Source: 2022 U.S. Census Bureau State & County QuickFacts

Summary of Findings: A review of Census information and USEPA Environmental Justice Screen showed that areas directly surrounding the Airport and project area do not have high proportions of minority or low-income populations. Given that demolition of the buildings would occur entirely within existing Airport property, environmental justice impacts are not expected.

Environmental justice impacts from implementation of either the Preferred Alternative or the No Action Alternative are not anticipated. No mitigation is proposed.

3.16.3 Children’s Environmental Health and Safety Risks Impacts

The FAA 1050.1F Desk Reference requires the identification of any potential environmental health risks to children as stated: “Environmental health risks and safety risks include risks to health and safety that are attributable to products or substances that a child is likely to come in contact with or ingest, such as air, food, drinking water, recreational waters, soil, or products they might use or be exposed to.”

The FAA has not established a significance threshold for impacts to children’s environmental health and safety; however, an analysis should include a determination on a proposed action’s potential to cause disproportionate health or safety risks to children.

Summary of Findings: All demolition activities under the proposed action would occur on SAW owned property, and access to the site would be restricted. It is unlikely that implementation of either the Preferred Alternative or the No Action Alternative will include products or substances a child is likely to encounter. It is therefore unlikely that either the Preferred Alternative or the No Action Alternative will result in any environmental health or safety risks that could disproportionately affect children.

Children’s Environmental Health and Safety Risks Impacts from implementation of either the Preferred Alternative or the No Action Alternative are not anticipated. No mitigation is proposed.

3.17 Visual Effects (Including Light Emissions)

Airport lighting is required for security, obstruction identification, and navigation. The essential lighting systems required to safely operate an airport and its components can contribute to light emissions. When projects introduce new or relocated existing airport lighting facilities that may affect residential or other light-sensitive areas in proximity to an airport, an analysis of these impacts is necessary.

A project can also have impacts on the visual resources and visual character of the surrounding area. Visual resources and visual character impacts are typically related to a decrease in the aesthetic quality of an area resulting from development, construction, or demolition. FAA guidance states that an analysis of visual impacts is necessary when the proposed action would affect, obstruct, substantially alter, or remove visual resources including buildings, historic sites, or other landscape features, such as topography, water bodies, or vegetation, that are visually important or have unique characteristics.

Summary of Findings: The proposed project will not introduce new or relocate existing airport lighting facilities that may affect residential or other light-sensitive areas in proximity to SAW. Although the proposed project will remove 14 existing buildings, impacts on resources that are visually important or have unique characteristics are not anticipated. As previously explained, a variety of land uses exist in and surrounding the project area. These include the following:

- Air Transportation
- Vacant
- Transportation
- Industrial
- Institutional/Government
- Commercial
- Open Space/Recreation
- Forest

Based on this information, implementation of either the Preferred Alternative or the No Action Alternative is not expected to have visual effects (including light emissions) impacts. No mitigation is proposed.

3.18 Water Resources

1050.1F references the Clean Water Act (CWA) described in 33 U.S.C. §§ 1251-1387, which provides the federal government with the authority to regulate activities related to water quality, including controlling discharges, preventing or minimizing loss of wetlands, and protecting local aquifers or sensitive ecological areas. In essence, the quality of surface water and groundwater should not be degraded by the planned construction or operations associated with a proposed development.

Water resources are surface waters and groundwater that are important to the ecosystem and the human environment. Analysis of water resources includes checking for disruption as well as changes in quality. Because wetlands, floodplains, surface waters, groundwater, and other water resources are all connected within the overall system, this section encompasses an analysis of each.

3.18.1 Wetlands

Wetlands are areas that support specific vegetation due to inundation or saturation by ground water. Sometimes these are called swamps, marshes, or bogs. Wetlands provide benefits to the natural and human environments that include habitat, water filtration, storage, and recreation. There are several statutes, regulations, orders, and other requirements related to wetlands. The CWA regulates the discharge of pollutants into Waters of the U.S. (including wetlands) and establishes a program to regulate discharge of fill material into such waters as well as requires projects not to violate water quality standards.

Surface waters or wetlands considered jurisdictional are regulated under the CWA; however, not all surface waters are under the authority of the CWA. The jurisdictional determination is made on a case-by-case basis by the United States Army Corps of Engineers (USACE). Non-jurisdictional wetlands are protected under Presidential Executive Order 11990, *Protection of Wetlands*, commonly known as the “No Net Loss” Executive Order. This Executive Order directs any project that uses federal funds or is federally approved to mitigate for all wetland impacts that it causes regardless of size or regulatory status. Therefore, any wetland impacts as a result of the Preferred Alternative will require mitigation.

Summary of Findings: To determine the locations and limits of area wetlands, appraise their types and functions, and evaluate potential impacts from the proposed project, USFWS National Wetlands Inventory (NWI) and EGLE Wetlands Map Viewer maps were reviewed. According to these maps, there are no wetlands or wetland soils in the project area; therefore, no wetland impacts are expected. The NWI and EGLE Wetlands Map Viewer maps are presented in **Appendix G Water Resources**.

Wetland impacts are not anticipated with implementation of either the Preferred Alternative or the No Action Alternative. BMPs will be implemented to mitigate any potential runoff or other unexpected impacts to wetland resources in the greater project area.

3.18.2 Floodplains

Executive Order 11988, *Floodplain Management*, defines floodplains as “the lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year.” Executive Order 11988 discourages federal actions in a floodplain unless no practicable alternative exists and requires measures to minimize unavoidable short-term and long-term impacts if the proposed action occurs in a floodplain.

A floodplain is a flat, low area adjacent to a stream, river, or creek that may be flooded during high water flow conditions. A 100-year floodplain includes the area that has a one percent (1%) chance of flooding in any given year. Projects within a 100-year floodplain are discouraged.

Summary of Findings: Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) were obtained for the project area to evaluate potential floodplain impacts. These floodplain maps are presented in **Appendix G Water Resources**.

FIRMs indicated that no regulated floodplains are found throughout the project area. Therefore, no floodplain impacts are expected with implementation of either the Preferred Alternative or the No Action Alternative. No mitigation is proposed.

3.18.3 Surface Water

The CWA, in conjunction with the Fish and Wildlife Coordination Act (16 U.S.C. §§ 661-667d), Rivers and Harbors Act (33 U.S.C. § 401 and 403), the Safe Drinking Water Act (SDWA) found in 42 U.S.C. §§ 300(f)-300j26, and other local statutes, establishes regulations that protect the Nation's water resources. Surface waters are typically lakes, rivers, streams, creeks, and wetlands. Surface waters collect the water from precipitation, which does not infiltrate the soil and instead flows across the land. Surface waters can be hydrologically connected to groundwater.

Summary of Findings: The USEPA's NEPAAssist Tool and Google Earth imagery were used to determine the presence of surface water resources within and near the proposed project area (see **Appendix G Water Resources**). According to these sources, there are no surface water resources within the project area. The surface water resources within the immediate vicinity of the project area are as follows:

- Silver Lead Creek, which runs approximately 0.5 miles southeast of the southern boundary of the project area at its nearest point.
- Little Trout Lake, located approximately 0.6 miles southeast of the southern boundary of the project area.
- Stump Lake, located approximately 1 mile south of the southern boundary of the project area.

These resources are unlikely to experience any impacts from the proposed project due to their distances from the project area.

Given the project involves the demolition of buildings, there will be no increase in impervious surfaces and therefore no increase in stormwater runoff. However, the Airport's Stormwater Pollution Prevention Plan (SWPPP) will be updated to include BMPs to reduce erosion and discharge of pollutants from building demolition activities.

Soil erosion is a source of concern due to possible adverse impacts to surface waters from construction projects. Since the Airport site is generally flat, there is not expected to be a high risk of soil erosion during building demolition and ground disturbing activities. However, some amount of erosion may occur during these activities, which will be minimized through the use of appropriate BMPs. The following list of BMPs represents common erosion control measures that should be considered during building demolition and applied where applicable:

- Sediment traps
- Temporary cement ponds
- Temporary grassing of disturbed areas
- Vegetation cover replaced as soon as possible
- Erosion mats and mulch
- Silt fencing and drainage check dams
- Settling basins for storm water treatment.

All excavated soils and staging areas for demolition equipment will be placed in non-sensitive upland areas with disturbed areas replanted as soon as possible to reduce the likelihood of erosion.

Mitigation measures prepared under an erosion control plan, in accordance with FAA AC 150/5370-10H, *Standards for Specifying Construction of Airports*, will help minimize long-term impacts to area water quality and to the existing drainage system.

In accordance with Part 91, Michigan Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended, a soil erosion permit and a storm water runoff control permit are required from the Marquette Conservation District.

The Airport is also required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activity disturbing one acre or more of soil. Permittees are required to control runoff from construction sites and develop a construction SWPPP that includes erosion prevention and sediment control BMPs.

Surface water impacts from implementation of either the Preferred Alternative or the No Action Alternative are not anticipated.

3.18.4 Ground Water

Ground water is water that is below the surface of the ground within the spaces between soil and rock formations. Ground water quality is primarily governed under the SDWA administered by the USEPA. The study area for ground water includes all areas where the ground could be disturbed by construction of the Preferred Alternative, where impervious surfaces could change rates of ground water infiltration, where airport operations could increase spills or leaks, and where construction vehicles and other equipment could potentially impact ground water due to staging, machinery, storage, and spills.

In evaluating ground water resources in the project area, the following databases were reviewed:

- USEPA Sole Source Aquifer for Drinking Water Database and Mapping Tool
- EGLE Open Data GIS dataset for water wells in south central and southeastern Michigan
- EGLE Open Data GIS dataset for wellhead protection areas in Michigan

The USEPA maintains a database of ground water sources that serve as the sole source of drinking water for a population. According to this database, the proposed project is not within a Sole Source Aquifer for Drinking Water.

The EGLE maintains several databases of water wells and wellhead protection areas in Michigan. According to EGLE's Open Data water wells GIS dataset for the Upper Peninsula, there are no water wells in the proposed project area or on SAW property (see **Appendix G Water Resources**).

Wellhead protection areas represent the land surface area that contributes ground water to wells serving public water supply systems throughout Michigan. The wellhead protection areas define a landscape in which management strategies are employed to protect public water supply from ground water contamination. According to EGLE's Open Data wellhead protection dataset, SAW property is not within a wellhead protection area (see **Appendix G Water Resources**).

Summary of Findings: The construction of additional impervious surfaces within a project area can decrease the area of land available for water infiltration. However, under the Preferred Alternative, no increase in impervious surfaces will occur since the project involves building removals. Therefore, the Preferred Alternative is not anticipated to negatively impact ground water recharge rates or impact public water supply.

Based on the information above, no violations to water quality standards under the SDWA are anticipated with the Preferred Alternative since no water wells are within the proposed project area and SAW is not located within a wellhead protection area.

Ground water impacts from implementation of either the Preferred Alternative or the No Action Alternative are not anticipated. No mitigation is proposed.

3.18.5 Wild and Scenic Rivers

Wild and Scenic Rivers are those resources that have extraordinary scenic, recreational, geologic, ecosystem, historic, or cultural value as defined in the Wild and Scenic Rivers Act. The Wild and Scenic Rivers Act (16 U.S.C. §§ 1271-1287) creates a national system intended to preserve certain rivers in a free-flowing condition for current and future enjoyment. The national system is administered by the Bureau of Land Management (BLM), the National Park Service (NPS), the USFWS, and the United States Forest Service (USFS). The land surrounding a protected river or river segment determines the agency that administers the national system.

The Nationwide Rivers Inventory (NRI) is a list maintained by the NPS that identifies river segments that possess remarkable natural or cultural values and are of more than local or regional importance. All federal agencies are required to avoid or mitigate impacts to NRI segments.

According to the National Wild and Scenic Rivers System website, there is one river segment in the National Wild and Scenic Rivers System in Marquette County. This segment is approximately

37 miles northwest of SAW and is a part of the Yellow Dog River. A segment of the West Branch Whitefish River, which is in the National Wild and Scenic Rivers System, is approximately 26 miles southeast of SAW in Delta County.

According to the NPS, a segment of the East Branch Escanaba River, which flows west of SAW, is listed on the NRI. This river segment is approximately two miles southwest of the project area at its closest point.

Summary of Findings: There are no Wild and Scenic Rivers located at or within proximity of the project area. The closet NRI river segment (East Branch Escanaba River) is located approximately two miles from the project area. Impacts to Wild and Scenic Rivers and NRI resources are not anticipated with implementation of either the Preferred Alternative or the No Action Alternative. No mitigation is proposed.

3.19 Cumulative Impacts

Cumulative impacts on the environment commonly result from the incremental change of an action when added to past, present, and reasonably foreseeable development in the area that is not directly associated with the Preferred Alternative, regardless of what agency or person undertakes such actions. According to FAA Order 5050.4B, reasonably foreseeable actions include those “*on or off-airport that a proponent would likely complete and that has been developed with enough specificity to provide meaningful information to decision makers and the interested public.*” In some cases, the individually minor impact of separate projects can have substantial effects when considered together over time.

Since 2018, the Airport has undertaken the following noteworthy projects:

- Runway 1/19 rehabilitation (2018)
- Airfield crack sealing and pavement marking (2020)
- Hangar 665 expansion (2021)
- Hangar 665 apron reconstruction (2021)
- Terminal building entrance road relocation (2021)
- Hangar 664 fire suppression upgrades (in progress as of April 2023)

SAW is planning various improvement projects in the coming years. According to the Airport Capital Improvement Program (ACIP) prepared for SAW in 2022, the following projects are planned at the Airport over the next five years:

- 2023 – Terminal Building Rehabilitation and Expansion (Design)
- 2023 – Runway 1/19 and Taxiway E, F, and G Crack Sealing and Marking (Design)
- 2023 – Runway 1/19 and Taxiway E, F, and G Crack Sealing and Marking (Construction)
- 2023 – Taxiway A, B, and C Rehabilitation (Construction)
- 2023 – Taxiway D Rehabilitation (Construction)
- 2023 – Taxiway C Shift/Reconfiguration (Construction)
- 2024 – General Aviation Apron Reconstruction/Rehabilitation (Design)

- 2024 – ATCT Improvements (Design)
- 2025 – Terminal Building Expansion (Construction)
- 2025 – General Aviation Apron Reconstruction/Rehabilitation (Construction)
- 2025 – ATCT Improvements (Construction)
- 2026 – Runway and Taxiway Crack Sealing and Marking (Design)
- 2026 – Runway and Taxiway Crack Sealing and Marking (Construction)
- 2027 – Terminal Apron Reconstruction/Rehabilitation (Construction)
- 2027 – ARFF Truck Acquisition

The Michigan Department of Transportation (MDOT) conducts other federal or federally assisted transportation improvement activities in Marquette County. According to MDOT's 2023-2027 Five-Year Transportation Program, MDOT proposes to complete the following projects in Marquette County:

- 2023 – Widen-Maintain Lanes – US-41 over the Carp River
- 2023 – Traffic Safety – US-41 at Lakeshore Drive
- 2023 – Traffic Safety – M-28 Bridge at Lakeshore Drive
- 2025 – Road Rehabilitation – US-41 from M-94 East Junction to Kunde Road
- 2025 – Bridge Removal – Old M-28 over the Carp River
- 2025 – Road Rehabilitation – M-35 from County Road 480 to US-41
- 2025 – Road Capital Preventive Maintenance – M-95 from County Road LLL to County Road FLK/LLK

The closest of these projects to the Preferred Alternative is the rehabilitation of US-41 from M-94 East Junction to Kunde Road, which is approximately eight miles east of SAW.

Summary of Findings: The above-described projects are not expected to result in cumulative impacts when considered with the implementation of the Preferred Alternative. Given the minor project related impacts, it is unlikely the implementation of the Preferred Alternative, when viewed in light of past, current, and future planned actions, would result in significant cumulative impacts. All future actions on or off Airport property will be subject to avoidance and minimization studies and will undergo agency review and permitting, as required.

Cumulative impacts are not anticipated with implementation of either the Preferred Alternative or the No Action Alternative. No mitigation is proposed.

3.20 Other Project Considerations

This section discusses other items that, while not specifically covered in previous sections, are important to the understanding of the project's potential impacts on the social, environmental, and economic surroundings.

Conformance with Plans, Policies, and Controls: An airport development project plays an important role in the local and regional economy. Often, a project influences the type and location of specific land uses, the

ground transportation network, and the general direction of community growth. When evaluating an action's conformance with plans and policies, there are usually two levels of planning involved. The first level addresses policy plans, which are goals and objectives for the area or jurisdiction. The second addresses specific physical plans that direct development of the physical infrastructure. In the case of this EA, the proposed project involves removal of physical infrastructure rather than development. Coordination with the Airport does not indicate any conflicts with local, county, or regional planning efforts.

Conformance with Laws and Administrative Rules: In preparing this EA, various federal, state, regional, and local agencies were contacted to solicit their comments on the proposed project as it related to their specific area of expertise or regulatory jurisdiction including permitting and mitigation requirements (**Appendix A Early Agency Coordination**). Based on this coordination, inconsistency with known federal, state, or local laws or administrative rules is not expected. The proposed action will adhere to appropriate regulations and permitting requirements including any necessary mitigation measures.

Means to Mitigate Adverse Environmental Impacts: Projects should take care to avoid permanent adverse impacts on the environment. It is important that all adverse environmental impacts be minimized or mitigated if avoidance is not possible. The various impacts of the Preferred Alternative and the means to mitigate them to the greatest extent possible are summarized in **Table 3-5 Mitigation Summary of the Preferred Alternative**, found below.

Degree of Controversy on Environmental Grounds: The Preferred Alternative is consistent with all federal, state, regional, and local plans and laws. According to conversations and correspondence with various federal and state agencies and the Airport, there have been no negative public comments or controversy concerning the proposed action.

Table 3-5
Mitigation Summary of Preferred Alternative

Environmental Factor	Proposed Mitigation and Permits
Air Quality	<p>Since there are no long-term impacts anticipated, no specific mitigation is proposed. However, to further reduce the potential for temporary air quality impacts for both workers and the surrounding area, the following Best Management Practices (BMPs) should be considered during building demolition activities under the Preferred Alternative where feasible:</p> <ul style="list-style-type: none"> • Use low-sulfur diesel fuel (less than 0.05% sulfur). • Retrofit engines with an exhaust filtration device to capture diesel particulate matter before it enters the construction site. • Position the exhaust pipe so that the diesel fumes are directed away from the operator and nearby workers, thereby reducing the fume concentration to which personnel are exposed. • Use catalytic convertors to reduce carbon monoxide, aldehydes, and hydrocarbons in diesel fumes. These devices must be used with low sulfur fuels. • Use climate-controlled cabs that are pressurized and equipped with high efficiency particulate air (HEPA) filters to reduce the operator's exposure to diesel fumes. Pressurization ensures that air is moved from the inside to the outside. HEPA filters ensure that any incoming air is filtered first. • Regularly maintain diesel engines, which is essential to keeping exhaust emissions low, and follow the manufacturer's recommended maintenance schedule. For example, blue/black smoke indicates that an engine requires servicing or tuning. • Reduce exposure through work practices and training, such as turning off engines when vehicles are stopped for more than a few minutes, training diesel operators to perform routine inspections, and maintaining filtration devices. • Purchase new vehicles that are equipped with the most advanced emission control systems available. • With older vehicles, use electric starting aids as block heaters to warm the engine to reduce diesel emissions. • Apply water or suitable chemicals to materials stockpiles and other surfaces to control airborne dust during demolition activities. • Install and use hoods, fans, and fabric filters to enclose and vent the handling of dusty material. • Cover open equipment for conveying or transporting material likely to create air pollution when airborne.

**Table 3-5
Mitigation Summary of Preferred Alternative**

Environmental Factor	Proposed Mitigation and Permits
	<ul style="list-style-type: none"> Promptly remove spilled or tracked dirt and other materials from paved streets.
Biological Resources	None Required
Climate	To reduce any greenhouse gas emissions from the proposed project, the contractor will recycle demolition materials where possible.
Coastal Resources	None Required
Dept. of Transportation Act, Section 4(f)	<p>An executed MOA between the FAA, SHPO, the Airport, and the Michigan Strategic Fund to ensure the following measures are carried out in order to mitigate for the demolition of the 14 buildings. Mitigation measures include:</p> <ul style="list-style-type: none"> Historic property survey and Historic Property Management Plan Archival photographic documentation and report
Farmlands	None Required
Hazardous Materials	<p>Because of the hazardous substances and potentially hazardous components that were detected during the Hazardous Materials Assessment, contractors working on the proposed project should be aware of the specific mitigation requirements outlined in Appendix D Abridged Hazardous Materials that will affect demolition of the subject buildings. A summary of the requirements are as follows:</p> <p><u>Asbestos:</u></p> <p>Contractors are responsible for complying with all requirements regulating work conducted in an area potentially containing asbestos.</p> <ul style="list-style-type: none"> <i>Training Requirements:</i> All employees and subcontractors should be provided with appropriate hazard awareness training as required in Michigan Occupational Health Standards for Construction Chapter VI, Part VI – General Workplace Requirements, Rule 6601 General Requirements Section (1) Part (b) and Asbestos Worker/Supervisor Training Class I per 29 CFR 1926.1101 (K). <i>Licensing Requirements:</i> All asbestos-impacting activities - with the potential exceptions of roofing material, <1% material, and exterior sealants - must be performed by a licensed abatement contractor utilizing certified employees in accordance with Michigan Part 602, 29 CFR 1926.1101, and 40 CFR Part 61, Subpart M. Abatement and demolition specifications should address asbestos abatement requirements and project expectations in detail.

Table 3-5
Mitigation Summary of Preferred Alternative

Environmental Factor	Proposed Mitigation and Permits
	<ul style="list-style-type: none"> • <i>Materials Containing <1% Asbestos:</i> Materials present at the facility have been found to contain less than one percent asbestos. These materials are not regulated under 40 CFR Part 61, Subpart M by definition. However, the Michigan Occupational Safety and Health Administration regulates these materials in compliance with published opinions from the Occupational Safety and Health Administration (OSHA). Materials containing <1% asbestos as verified by 400-point count methodology for Polarized Light Microscopy require: removal prior to renovation or demolition; determination of worker exposure during removal and providing appropriate respiratory protection; means and methods to reduce potential exposure; and prompt packaging in leak-proof containers. Materials containing <1% asbestos may be disposed as construction and demolition debris. A licensed asbestos abatement contractor and certified workers are not required for removal of <1% material. • <i>Disposal:</i> Asbestos-containing materials (ACM) waste is categorized as a special waste and may be deposited in municipal Class II or III landfills. Marquette County maintains flow control rules requiring that all waste generated in the county be landfilled at the Marquette County Solid Waste Authority (MCSWA). MCSWA does not generally accept non-friable asbestos waste as construction and demolition debris. Project specifications should indicate that National Emission Standards for Hazardous Air Pollutants-compliant demolition of non-friable ACM in place and deposition as construction and demolition debris is not allowed. The building owner must obtain copies of all asbestos waste manifests generated by the landfill and retain the manifests. • <i>Exempt Trades:</i> Abatement of ACM roofing materials and non-friable exterior building materials does not require licensed abatement contractors and certified workers. These materials may be abated by any firm with appropriate training such as a demolition or roofing contractor. <p><u>(Lead) Painted Surfaces:</u> During demolition of interior surfaces, dermal contact and inhalation exposure risks may be present from the lead-containing paint. During demolition of any painted surfaces, employees may be required to wear appropriate personal protective equipment (PPE), including respiratory</p>

Table 3-5
Mitigation Summary of Preferred Alternative

Environmental Factor	Proposed Mitigation and Permits
	<p>protection (i.e., respirators) and skin protection (i.e., appropriate gloves and clothing). It is recommended that detailed requirements for impacting lead-bearing paint surfaces be included in project specifications. One subject building (Building 725) contains lead sheathing. Due to the operational nature of the former K.I. Sawyer Air Force Base, lead sheathing and/or lead lining associated with sensitive areas may be discovered during the course of demolition activities, although no other buildings containing lead sheathing were discovered during the HMA.</p> <ul style="list-style-type: none"> • <i>Training Requirements:</i> All employees involved in the demolition of painted surfaces and employees who may be exposed to airborne lead should be trained in the exposure hazards of airborne lead and the proper use and selection of appropriate PPE. This includes skin, eye, and respiratory PPE. Furthermore, the general contractor should be trained in the OSHA Lead Exposure in Construction Standard. Specific provisions of this Standard include, but are not limited to, an Exposure Assessment. • <i>Responsibilities Related to Lead and Metals Exposure in Construction:</i> Part 603 – Lead Exposure in Construction (R325 of the Michigan Administrative Code) and Part 309 (R325 of the Michigan Administrative Code) – Cadmium Exposure in Construction, hereafter referred to as the Standard, for general contractors and all subcontractors employed in completion of the project. As noted in the Standard, the Employer (i.e., general contractor) is responsible for complying with all rules and regulations set forth in the Standard. In accordance with the “Lead Exposure in Construction Standard,” Part 603 of R325.51992 of the Michigan Administrative Code (amended October 18, 1999), the general contractor is required to conduct an initial Exposure Assessment to determine if levels of airborne particulate lead exceed the action level of 30 micrograms per cubic meter (mg/m³). Also, in accordance with the “Cadmium Exposure in Construction Standard,” Part 309, R325 of the Michigan Administrative Code (amended April 5, 1999), the general contractor is required to conduct an initial Exposure Assessment to determine if levels of airborne particulate cadmium exceed the action level of 2.5 mg/m³. • <i>Waste Disposal:</i> Painted surfaces can generally be disposed at the landfill as general construction debris (Type II Waste). The

Table 3-5
Mitigation Summary of Preferred Alternative

Environmental Factor	Proposed Mitigation and Permits
	<p>State of Michigan requires that concrete, brick, or block coated with lead-bearing paint be disposed in a landfill. The State of Michigan does not quantitatively define “lead-bearing”; consequently, any detection of lead in paint on these surfaces requires landfill disposition of debris material. Additional testing of demolition debris may be necessary prior to disposal of these materials to meet landfill requirements for Toxicity Characteristic Leaching Procedure (TCLP) sample analysis. In some cases, analytical data provided in this report and material calculations may be accepted by the landfill rather than required TCLP analysis.</p> <ul style="list-style-type: none"> • <i>Recycling:</i> Metal coated with lead-bearing paint film may be recycled by approved scrap yards. Recycling metal with lead-bearing paint qualifies as transfer of ownership and relieves the building owner of any responsibilities related to the lead-bearing paint. Building 725 has an X-ray garage that contains a significant quantity of lead sheathing and lead-lined doors. This material may be recycled. <p><u>Disposal Requirements:</u></p> <p>System and building components impacted by demolition of the buildings generally will not meet the definition of hazardous waste when handled appropriately. However, the following materials require special disposal handling:</p> <ul style="list-style-type: none"> • Devices containing polychlorinated biphenyl (PCB) oils • Mercury-containing lamps and bulbs • Mercury-containing thermostats • Radioactive materials-containing devices • Construction salvage debris containing hazardous metals • Asbestos waste <p>The construction debris may contain metals that will need to be characterized as a waste stream prior to being accepted for disposal at the solid waste disposal facility selected to receive the demolition material.</p> <p>The Phase I ESAs recommended the following mitigation procedures during demolition activities for Buildings 403, 404, 414, 428, 429, 430, 610, 725, 726, 731, and 732. See Appendix D Abridged Hazardous Materials for details of the mitigation requirements for each building. A summary of the requirements are as follows:</p>

**Table 3-5
Mitigation Summary of Preferred Alternative**

Environmental Factor	Proposed Mitigation and Permits
	<ul style="list-style-type: none"> • If suspect contaminated soil and/or groundwater is encountered during demolition activities, characterization and/or monitoring of the material should be conducted during excavation and earth moving activities. • Demolition contractors and personnel who may encounter contaminated soil and/or groundwater should wear appropriate PPE as required with state and/or federal requirements for worker safety. • A site-specific Health and Safety Plan is the responsibility of the demolition contractor to address the Recognized Environmental Conditions (RECs) identified.
Historical, Architectural, Archeological, and Cultural Resources	<p>An executed MOA between the FAA, SHPO, the Airport, and Michigan Strategic Fund stipulates the FAA will ensure the following mitigation measures are implemented:</p> <ul style="list-style-type: none"> • <u>Cultural Resources Survey and Historic Property Management Plan</u> The Airport or its agent will conduct a cultural resources survey to document resources within the area of the former K.I. Sawyer Air Force Base that is subject to FAA oversight to ascertain the contributing and noncontributing status of resources. The Airport or its agent will develop a Historic Property Management Plan (HPMP) to identify future planning needs and recommendations. The survey and HPMP will be developed in accordance with the plan outlined in Appendix A of the MOA. Survey and development of the HPMP will be completed by individuals who meet the Secretary of the Interior's Standards for history and/or architectural history. Work will follow the guidelines from SHPO in the <i>Michigan Above-Ground Survey Manual</i>. • <u>Archival Photography and Narrative Context</u> Prior to MOA execution, the 14 buildings identified for demolition were documented in large-format, black and white archival photographs. These photographs will be supplemented with a contextual narrative report that meets the standards of the <i>Michigan Above-Ground Survey Manual</i>. The narrative will be completed by the Airport or its agent. The narrative will synthesize information from previous documentation, including the 1995 <i>Historic Building Inventory and Evaluation: K.I. Sawyer Air Force Base, Marquette County, Michigan</i>, and the 2021 <i>Cultural Resources Review for the Marquette County Airport Building Demolitions Project, Marquette County, Michigan</i> report and site forms.

Table 3-5 Mitigation Summary of Preferred Alternative	
Environmental Factor	Proposed Mitigation and Permits
Land Use	<ul style="list-style-type: none"> Traffic from construction vehicles would be managed to avoid and minimize any impacts to local roads by defining haul routes and by scheduling the arrival and departure times of construction traffic so that normal traffic patterns are not interrupted.
Natural Resources and Energy Supply	<ul style="list-style-type: none"> BMPs to reduce energy consumption during building demolition will be employed, where applicable. To reduce energy consumption associated with the temporary use of excavators, cranes, and construction vehicles for the Preferred Alternative, construction equipment should be in good working order to ensure the most efficient use of fuel. All vehicles and equipment should be checked for leaks and repaired immediately.
Noise and Noise Compatible Land Use	None Required
Socioeconomics, Environmental Justice, or Children's Environmental Health and Safety Risks	None Required
Visual Effects & Light Emissions	None Required
Water Resources	<p><u>Wetlands:</u></p> <ul style="list-style-type: none"> BMPs will be implemented to mitigate any potential runoff or other unexpected impacts to wetland resources in the greater project area. <p><u>Floodplains:</u> None Required</p> <p><u>Surface Water:</u></p> <ul style="list-style-type: none"> The Airport's Stormwater Pollution Prevention Plan (SWPPP) will be updated to include BMPs to reduce erosion and discharge of pollutants from building demolition activities. Soil erosion is a source of concern as a possible adverse impact to surface waters from construction projects. The following list of BMPs represents common erosion control measures that should be considered during building demolition and applied where applicable: <ul style="list-style-type: none"> Sediment traps Temporary cement ponds Temporary grassing of disturbed areas Vegetation cover replaced as soon as possible Erosion mats and mulch Silt fencing and drainage check dams Settling basins for storm water treatment

Table 3-5
Mitigation Summary of Preferred Alternative

Environmental Factor	Proposed Mitigation and Permits
	<ul style="list-style-type: none"> • All excavated soils and staging areas for demolition equipment will be placed in non-sensitive upland areas with disturbed areas replanted as soon as possible to reduce the likelihood of erosion. • Mitigation measures prepared under an erosion control plan, in accordance with FAA AC 150/5370-10H, Standards for Specifying Construction of Airports, will help minimize long-term impacts to area water quality and to the existing drainage system. • In accordance with Part 91, Michigan Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended, a soil erosion permit and a storm water runoff control permit are required from the Marquette Conservation District. • The Airport is required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for demolition activity disturbing one acre or more of soil. • Permittees are required to control runoff from construction sites and develop a construction SWPPP that includes erosion prevention and sediment control BMPs. <p><u>Ground Water:</u> None Required</p>
Cumulative Impacts	None Required
Irreversible and Irretrievable Commitment of Resources	<p>An executed MOA between the FAA, SHPO, the Airport, and Michigan Strategic Fund to ensure the following mitigation measures are implemented:</p> <ul style="list-style-type: none"> • Cultural Resources Survey and HPMP • Archival Photography and Narrative Context

Chapter 4.0 List of Preparers

The chapter lists the names and qualifications of the principal Mead & Hunt participants that assisted in the preparation of the Environmental Assessment, as well as representatives from the Airport and the FAA.

Mead & Hunt, Inc.

Stephanie Ward, AICP, Project Principal / Quality Control - Has more than 20 years of experience in preparing airport master plans, ALPs, environmental overviews, airport site selection studies, airport feasibility studies, and developing community support and understanding of airports and their importance to a community. Has prepared more than 60 planning studies for air carrier and general aviation facilities.

William Ballard, AICP, Project Manager - More than 18 years of experience evaluating environmental impacts associated with transportation projects and preparing National Environmental Policy Act (NEPA) documents. Has served as project manager for various environmental assessments and environmental impact statements.

Brauna Hartzell, Wetlands and Biological Resources Scientist - More than 20 years of experience in the execution of National Environmental Policy Act (NEPA) environmental compliance documents including state and federal wetland delineations, biological surveys, and regulatory permitting. Has served as project manager for wetland and biological analysis, permitting and mitigation design.

David Clawson, Airport Planner - Serves as an airport planner for Mead & Hunt and is responsible for developing planning and environmental documents. Has assisted with several environmental assessments and has a strong understanding of the National Environmental Policy Act (NEPA), environmental management systems, system plans, and economic analysis.

Emily Pettis, Cultural Resources Department Manager – 15 years of experience in cultural resources management. National resource for Section 106 and Section 4(f) regulatory coordination, historic resource requirements for NEPA documentation, as well as environmental document review. Conducts architectural surveys and preservation planning across the country and serves as project manager for historic preservation projects

Marquette Sawyer Regional Airport - Duane DuRay, CM, Director of Operations/Airport Manager

Federal Aviation Administration - Misty Peavler, Environmental Protection Specialist

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