



CHAPTER 5  
**Environmental Overview**

This chapter presents an overview of environmentally sensitive features and land uses on and surrounding Central Wisconsin Airport (CWA or the Airport) to identify potential impacts resulting from the recommended development plan. Known or readily visible environmental resources were assessed in conformance with applicable Federal Aviation Administration (FAA) environmental guidance and applicable federal, state, and local regulations. The environmental overview is not intended as a substitute for a National Environmental Policy Act (NEPA) document. Rather, the intent is to provide information regarding environmental resources for general airport planning purposes. This information is organized in the following sections:

- Aircraft Noise Analysis
- Compatible Land Use
- Local Land Use Controls
- Environmental Resources
- Environmental Overview Summary

## 5.1 Aircraft Noise Analysis

Noise analysis and planning is essential for an airport to maintain a positive relationship with its neighbors and mitigate noise-related land use compatibility concerns. When CWA was constructed in 1969, it was a sufficient distance from sensitive areas and avoided noise concerns. The Airport is still in a relatively undeveloped location, surrounded by mainly agricultural, commercial, and industrial uses. However, there are also residential areas and other land uses within 1 mile of the Airport. Because of this, impacts to noise-sensitive land uses around CWA require consideration.

Noise is defined as any sound that is undesirable or interferes with people's ability to hear other sounds. The degree of annoyance people experience from aircraft noise varies depending on their activities at any given time. Studies by governmental agencies and private researchers, in particular those by the U.S. Department of Housing and Urban Development (HUD) and the FAA, have defined the compatibility of land uses with varying noise levels. Day-night average sound level (DNL), expressed in decibels (dB), is the standard federal metric for determining cumulative exposure of individuals to noise. The compatibility of various land uses with specific DNL thresholds is summarized in **Table 5-1** on the next page.

DNL is a 24-hour measure of total noise, with events occurring at night (10 p.m. to 7 a.m.) treated as 10 dB louder than they are. The 10 dB penalty accounts for the fact that noise events at night are often perceived as more intrusive because nighttime ambient noise is less than daytime ambient noise. The FAA, U.S. Environmental Protection Agency (EPA), and HUD have established the 65 DNL contour as the threshold indicating significant cumulative noise impacts.

Noise impact areas for an airport are identified by noise contours, whereby noise levels are indicated by a series of contour lines superimposed on a map of the airport and its environs. By creating these contours, CWA can identify areas that are most likely to be impacted by aircraft noise and can plan accordingly. Three basic noise impact areas, or "noise corridor zones," are identified by the 2011 *Wisconsin Airport Land Use Guidebook*:

- Severe Noise Impact Areas (70 DNL contour and above)
- Substantial Noise Impact Areas (65 to 70 DNL contour)
- Moderate Noise Impact Area (55 to 65 DNL contour)

FAA Order 1050.1F notes that projects at airports with 90,000 annual piston-powered aircraft operations or 700 annual jet-powered aircraft operations that involve runway relocation, runway strengthening, or a major runway expansion require a noise analysis that includes noise exposure maps. The Aviation Environmental Design Tool (AEDT) is the FAA-approved software system that dynamically models aircraft performance to produce noise estimates. Baseline (2015) and forecasted (2035) operations presented in Chapter 2 of this Master Plan were used to develop noise contours for CWA. AEDT Version 2d, the most up-to-date version of the software at the time this master plan was developed, was used to model the noise exposure contours. The resulting contours are shown in **Figure 5-1**.

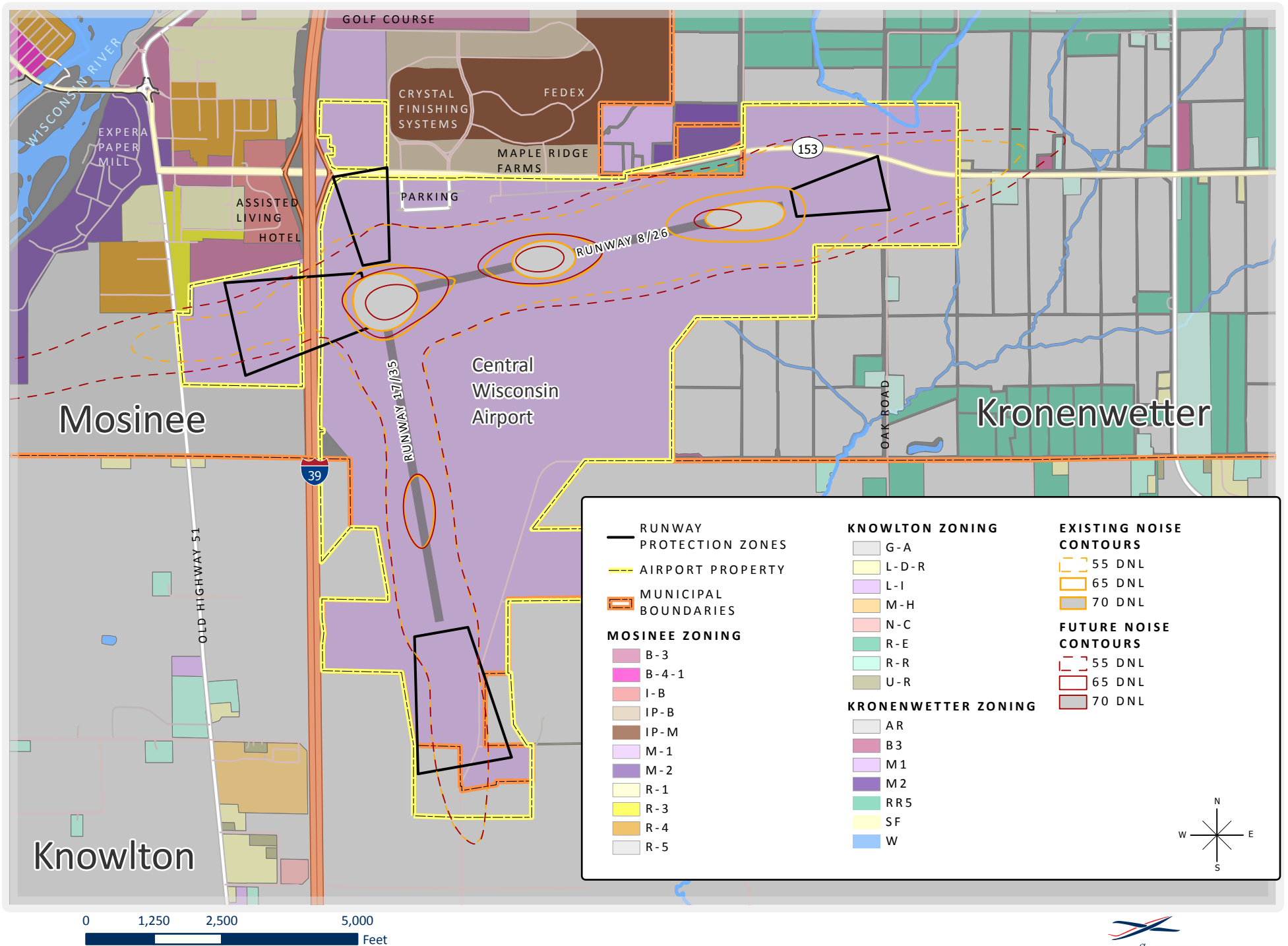


Figure 5-1: Existing Zoning, Land Use, and Noise



Table 5-1: Land Use Compatibility with Yearly Day-Night Average Sound Levels (DNL)

Land Use	Yearly DNL in decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
<b>Residential</b>						
Residential, other than mobile homes and transient lodgings	YES	NO (1)	NO (1)	NO	NO	NO
Mobile home parks	YES	NO	NO (1)	NO	NO	NO
Transient lodgings	YES	NO (1)	NO (1)	NO (1)	NO	NO
<b>Public Use</b>						
Schools	YES	NO (1)	NO (1)	NO	NO	NO
Hospitals and nursing homes	YES	25	30	NO	NO	NO
Churches, auditoriums, and concert halls	YES	25	30	NO	NO	NO
Government services	YES	YES	25	30	NO	NO
Transportation	YES	YES	YES (2)	YES (3)	YES (4)	YES (4)
Parking	YES	YES	YES (2)	YES (3)	YES (4)	NO
<b>Commercial Use</b>						
Offices, business, and professional	YES	YES	25	30	NO	NO
Wholesale and retail building materials, hardware, and farm equipment	YES	YES	YES (2)	YES (3)	YES (4)	NO
Retail trade (general)	YES	YES	25	30	NO	NO
Utilities	YES	YES	YES (2)	YES (3)	YES (4)	NO
Communication	YES	YES	25	30	NO	NO
<b>Manufacturing and Production</b>						
Manufacturing (general)	YES	YES	YES (2)	YES (3)	YES (4)	NO
Photographic and optical	YES	YES	25	30	NO	NO
Agriculture (except livestock) and forestry	YES	YES (6)	YES (7)	YES (8)	YES (8)	YES (8)
Livestock farming and breeding	YES	YES (6)	YES (7)	NO	NO	NO
Mining and fishing, resource production, and extraction	YES	YES	YES	YES	YES	YES

Note: Numbers in parentheses refer to notes; see continuation of Table 5-1 on the next page for notes and key.

Source: FAA Environmental Desk Reference for Airport Actions

Table 5-1 (continued): Land Use Compatibility with Yearly Day-Night Average Sound Levels (DNL)

Land Use	Yearly DNL in decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
<b>Recreational</b>						
Outdoor sports arenas and spectator sports	YES	YES (5)	YES (5)	NO	NO	NO
Outdoor music shells and amphitheaters	YES	NO	NO	NO	NO	NO
Nature exhibits and zoos	YES	YES	NO	NO	NO	NO
Amusements, parks, resorts, and camps	YES	YES	YES	NO	NO	NO
Golf courses, riding stables, and water recreation	YES	YES	25	30	NO	NO

Note: Numbers in parentheses refer to notes; see continuation of Table 5-1 on the following page for notes and key.  
 Source: FAA Environmental Desk Reference for Airport Actions

Table 5-1 (continued): Notes and Key

NOTE: The designations in this table do not constitute a federal determination that any use of land is acceptable or unacceptable under federal, state, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with local land use authorities. FAA determinations under Part 150 are guidelines and are not intended to substitute for land uses determined to be suitable by local authorities in response to locally determined needs and values in achieving noise compatible land uses.	
<b>Key to Table 5-1</b>	
YES	Land use and related structures compatible without restrictions.
NO	Land use and related structures are not compatible and should be prohibited.
NLR	Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
25, 30, or 35	Land use and related structures generally compatible; measures to achieve NLR of 25, 30, or 35 dB must be incorporated into design and construction of structure.
<b>Notes for Table 5-1</b>	
(1)	Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide an NLR of 20 dB; thus, the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year-round. However, use of NLR criteria will not eliminate outdoor noise problems.
(2)	Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
(3)	Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
(4)	Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
(5)	Land use compatible provided special sound reinforcement systems are installed.
(6)	Residential buildings require an NLR of 25.
(7)	Residential buildings require an NLR of 30.
(8)	Residential buildings not permitted.

Source: FAA Environmental Desk Reference for Airport Actions

The baseline 65 DNL and higher contours are contained on Airport property and do not overlap with sensitive land uses, while the 55 DNL contour extends beyond Airport property to the east and west on either end of Runway 8/26. Contours considered by Wisconsin guidelines to represent substantial or severe noise impacts do not change significantly in the 2035 forecast scenario. Areas within the future 55 DNL contour, considered the moderate noise impact areas in the *Wisconsin Airport Land Use Guidebook*, will extend further to the east and west off Runway 8/26 ends. This projected area does not include any high-density residential zoning or locations of public assembly.

When determining the need for NEPA review of future projects, the FAA considers a change in airport related noise to be significant if, “The action would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65dB level due to a DNL 1.5dB or greater increase, when compared to the no action alternative for the same timeframe.” While airport noise may require further study during an environmental review process related to a specific project, the 65 DNL contour is projected to remain on Airport property and is unlikely to significantly impact the community surrounding the Airport.

## 5.2 Compatible Land Use

Laws and policies at state, federal, and local levels encourage compatible land uses near airports and determine what makes a land use compatible. For CWA, policies enacted by the FAA, the Wisconsin Department of Transportation (WisDOT), and local government entities establish the rules and regulations for compatible land use near the Airport. Under the Airport and Airway Improvement Act of 1982, airport sponsors must provide assurances to the FAA to receive federal funding for airport actions. Assurances related to land use include:

- Consistency with local plans
- Mitigation and prevention of airport hazards
- Public access to project information and the planning process
- Adoption of zoning laws that increase land use compatibility.

According to the 2011 *Wisconsin Airport Land Use Guidebook*, incompatible land uses are those that hinder safe and efficient airport operations or those that expose people living or working nearby to noise or other aviation hazards. Land uses that are least compatible with airports include densely populated residential or office buildings, streetlamps and structures that emit bright light, dust-producing smokestacks that cause visual and physical obstructions, and ponds and large wetlands that attract wildlife. Other incompatible land uses include farmland, residential developments, and places where people gather in large numbers. This section discusses land uses near CWA, such as residences, factories, parks, and places where people assemble in groups, floodplains, farmlands, and wildlife attractants.

### 5.2.1 Types and Locations of Nearby Land Use

Land uses within a 1-mile radius of the Airport were analyzed to assess their compatibility with long-term development recommended by this Master Plan. Sources of land use information include city and county zoning classifications, county and municipal land use plans, and recent aerial photography of the area.

**Figure 5-1** shows existing uses and zoning for all land in the airport vicinity (1 mile beyond each runway end and ½ mile parallel to the sides of the runway).

CWA is located within the southeast corner of the Mosinee city limits. The Airport borders the Town of Knowlton to the south and the Village of Kronenwetter to the east and northeast. Built up districts can be found north and northwest of the Airport, but the areas surrounding the Airport are primarily undeveloped forest and woodlands, some grassland, and agricultural vegetation with occasional rural residences. Most development in the city of Mosinee is located more than 1 mile from the Airport on the west side of the Wisconsin River.

Acceptable compatible land uses in Runway Protections Zones (RPZ) are more limited than in other areas to enhance safety for aircraft and people on the ground. The RPZs at CWA are primarily located on airport property in open grassy areas. However, the Runway 17 and 26 RPZs cross over portions of Wisconsin State Highway 153, and the Runway 8 RPZ crosses over Interstate Highway 39 (I-39). The Runway 26 and 35 RPZs also overlap several local roads.

The preferred runway intersection alternative presented in Chapter 4, *Alternatives*, makes changes to Runway 8/26 RPZ locations, shifting the Runway 8 end 400 feet east along the runway's centerline, and the Runway 26 end RPZ 445 feet in the same direction. This will result in changes to land uses within the RPZ boundaries.

- I-39 will have a small increase in road length within the Runway 8 RPZ.
- A portion of State Highway 153 and a longer segment of Oak Road will be located within the Runway 26 RPZ.
- A storage facility on Airport property will be located within the Runway 26 RPZ.

Because the changes to the RPZs result in changes to land uses within the RPZs, the Airport will need to submit an RPZ Alternatives Analysis to the FAA for approval before proceeding with the project. Other land uses near the Airport are described below.

### **Residential**

Most of the residential parcels near CWA are rural residential farmsteads and scattered development on the south and west sides of the Airport. There are residential districts within the city limits of Mosinee to the west of Airport property between I-39 and the Wisconsin River. Acorn Hill Assisted Living Facility is the only residential use in Mosinee that borders Airport property, located across I-39. A mobile home park is located in Knowlton south of the Airport. Other scattered residential parcels are found along Old Highway 51.

### **Industrial**

The area north of the Airport across Wisconsin Highway 153 is zoned and used for industrial purposes within a designated airport industrial park. Businesses within this park include Maple Ridge Farms, Mekong Fresh Meat, FedEx, WOW Logistics, IROW waste services, and Crystal Finishing Systems, a metal fabricator. Some of these businesses, such as FedEx, benefit from proximity to the Airport. Another nearby industrial use is the Expera Specialty Solutions Paper Mill along the Wisconsin River approximately  $\frac{3}{4}$  mile from the Airport.

### **Commercial**

Commercial uses are most prominent near the intersection of Wisconsin Highway 153 and I-39. Several restaurants and gas stations are west of I-39, and a hotel is south of 153 along a frontage road. Auto-oriented uses are found in this area as well, including a car wash and car repair services. Wisconsin 153 north of the Airport also hosts farm implement and small motor sales, fireworks sales, and liquor wholesale businesses.



### Recreation

Outdoor recreation is a significant element of Marathon County land use, and the county's tourism industry is dependent on lake and river recreation opportunities found nearby. While many of these recreation areas are outside of the Airport vicinity, Riedel Redmond Nature Preserve and Indianhead Golf Course are nearby to the northeast and north of airport property, respectively. The Wisconsin River provides recreation in the form of boating and canoeing in this area as well.

### Public Assembly Use

There are no significant places of public assembly, such as churches, schools, and hospitals, located within 1 mile of the runway ends at CWA.

### 5.2.2 Zoning

The City of Mosinee has zoning jurisdiction on Airport property. Airport land is zoned as Limited Industrial (M-1), a district that is intended for industrial activities that do not create significant nuisance or hazards. Airports are a conditional use within this district, subject to the approval of the plan commission and the Mosinee City Council.

Zoning districts are illustrated previously in **Figure 5-1**. Large portions of surrounding lands are zoned for agricultural and low-density residential use. Within the City of Mosinee, this is the Agriculture and Estate district (R-5), in Knowlton it is General Agriculture (G-A), and in Kronenwetter it is Agriculture and Residential (AR). Kronenwetter has other types of rural residential zones in the Airport vicinity, including Rural Residential 2 (RR2) and Rural Residential 5 (RR5). Both Rural Residential zones also mandate low density for permitted residences; RR 2 requires minimum 2-acre lots, while RR 5 requires minimum 5-acre lots.

Northwest of the airport are several zones within the city of Mosinee:

- General Commercial District (B-3)
- Interchange Business District (I-B): meant to host highway service facilities and related uses
- Single-Family Residence District (R-1): single family residences with garages, recreational and social facilities, and religious institutions
- Single-Family Residence District (R-3): Permitted uses in R-1 and duplexes
- General Residence District (R-4): Single-family dwellings, duplexes, multi-family dwellings, apartment hotels, lodging houses, educational institutions, and religious institutions.

City of Mosinee industrial land use zoning north of the Airport is broken into several categories:

- Limited Industrial (M-1)
- General Industrial (M-2)
- A business park broken into two distinct zones:
  - Industrial Park Business (IP-B)
  - Industrial Park Manufacturing (IP-M).

The preferred runway intersection alternative will not affect land use near the Airport. New RPZs associated with shifting Runway 8/26 will remain in an M-1 district.

### 5.2.3 Landfills and Sewage Treatment Lagoons

Landfills and sewage treatment facilities are incompatible land uses near airports due to their potential to attract wildlife. Specifically, the FAA notes in Advisory Circular (AC) 150/5200-33B, *Hazardous Wildlife Attractants On or Near Airports*, that solid waste landfills and water management facilities attract increased populations of birds, which can pose a hazard for wildlife strikes. Because of this, “The FAA recommends a separation distance of 10,000 feet for new airport development projects meant to accommodate aircraft movement” from municipal solid waste or water management facilities.

There are no operating municipal solid waste facilities within a 10,000-foot range of airport facilities at CWA. The county operated landfill is approximately 15 miles away, outside of the town of Ringle. A private landfill operated by Expera Specialty Solutions is located approximately 8,000 feet west of Runway 8. This landfill, associated with the nearby paper mill, is licensed to handle asbestos, ash, bark/brush, and paper mill sludge. Aerial imagery shows evidence of sludge as well as a treatment lagoon in this location west of the Airport between Old Highway 51 and the Wisconsin River.

A municipal wastewater treatment plant, shared by several area municipalities, is approximately 5 miles north of the Airport in the town of Rib Mountain.

### 5.2.4 Potential Section 4 (f) Resources

Airport development can in some circumstances be incompatible with park or recreation land uses due to impacts from noise or other airport activity. Because of this, it is necessary to consider nearby publicly owned parks, recreation areas, or wildlife preserves in the context of Section 4(f) requirements. Section 4(f) of the Department of Transportation Act of 1966 states that, subject to exceptions for *de minimis* impacts, the Secretary of Transportation may approve a transportation program or project requiring the use of publicly owned land of a park, recreational area, or wildlife and waterfowl refuge of national, state, or local significance, or land of a historic site of national, state, or local significance, only if:

- There is no prudent or feasible alternative that would avoid using these resources, and
- The program or project includes all possible planning to minimize harm resulting from the use.

A radius of 1 mile from Airport property was used to locate potential 4(f) resources. A cursory review of wildlife and waterfowl refuges did not identify such resources near the Airport. No state or county parks, forests, or recreation areas were found within 1 mile of the Airport. The City of Mosinee operates several public parks, a few of which are near the Airport. These potential 4(f) resources are listed below and shown in **Figure 5-2**.

- Chuck’s Boat Landing is approximately 0.4 acres on the west side of the Wisconsin River. It includes two boat landing areas that allow access to the Wisconsin River below the Mosinee Dam. The landing areas are regionally important for fishing access in this area.
- Canoe Portage Park is approximately 1.4 acres and includes a picnic area, a small canoe portage, and a boat landing on the east side of the Wisconsin River.
- Ranger Park is approximately 0.8 acres, and includes open play space, playground equipment, and a picnic area. This park is one of the few park facilities in the 6<sup>th</sup> Ward of the City of Mosinee.
- Riedel-Redmond Nature Preserve is a wooded neighborhood nature park covering approximately 9.0 acres near I-39. Facilities consist of a nature trail.

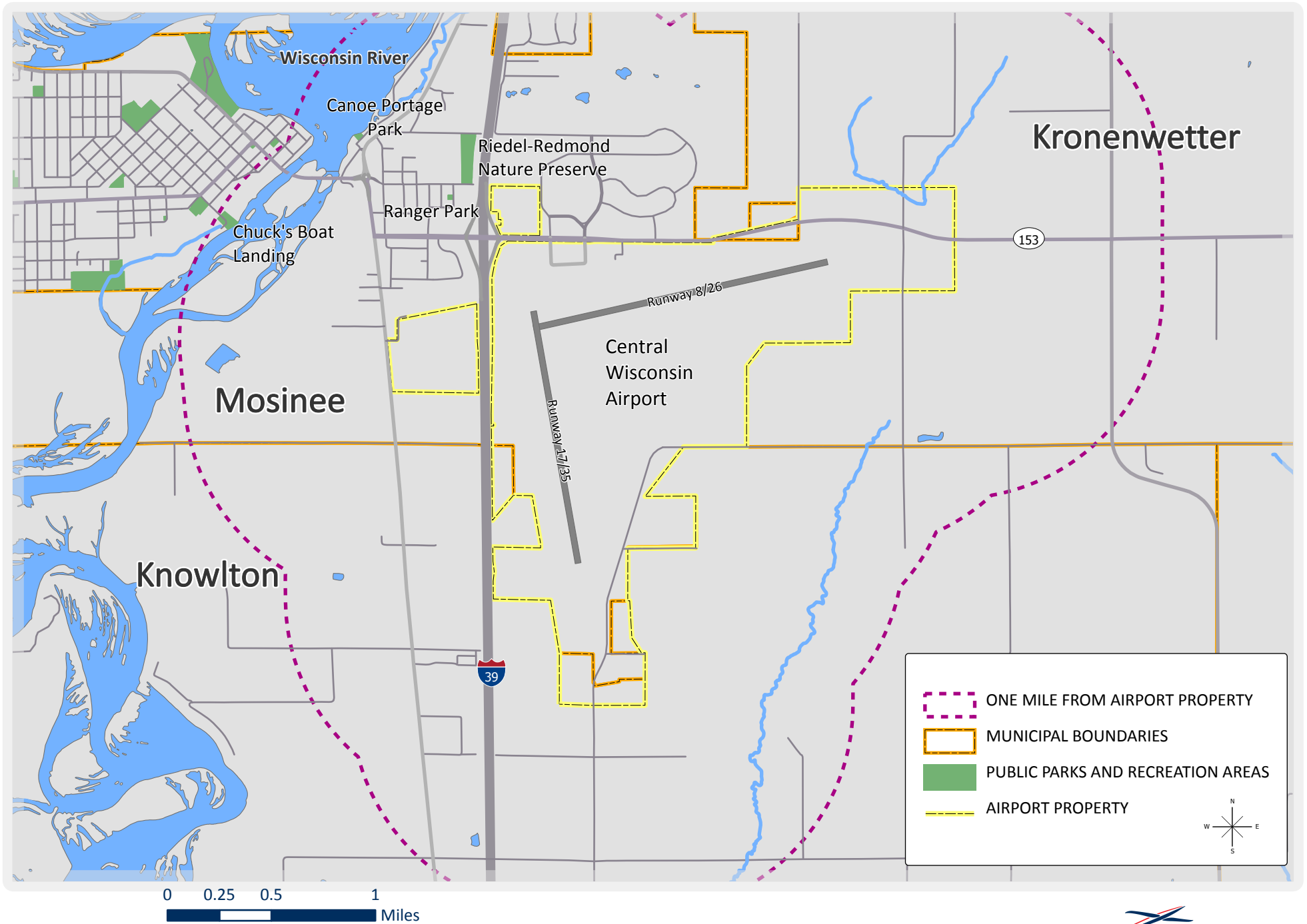


Figure 5-2: Potential Section 4(f) Resources



For Section 4(f) to apply, an affected resource must be considered significant. Significance is determined by the entity with jurisdiction over the resource. In this case, the City of Mosinee has jurisdiction over all of the potential resources in the Airport vicinity. For a 4(f) resource to be protected from an action, the project needs to constitute a use of the resource. This is either a physical taking of the property, or a constructive use where project impacts would impair or reduce the value of the resource or restrict access in a way that limits public use. None of the proposed projects or preferred alternatives would likely constitute a use of these potential 4(f) resources because:

- Projects are limited to existing Airport property.
- Increases in other impacts such as significant noise that would constitute constructive use do not reach the potential 4(f) properties.

Significance and impacts to 4(f) resources would be examined further in NEPA documentation relating to specific Airport projects.

### 5.2.5 Floodways and Floodplains

Most areas within the boundaries of the Airport are considered a minimal flood hazard, according to the most up-to-date Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panels, which are effective as of July 2010. An area subject to a 1% annual chance flood (FEMA Zone A) directly borders the eastern edge of the property along Peplin Creek, and an area of less than 0.5 acre of this floodplain is located on Airport property. Floodplains are shown in **Figure 5-3**.

### 5.2.6 Farmland

The Farmland Protection Policy Act (FPPA) 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. The FPPA classifies farmland as prime farmland, unique farmland, or farmland of statewide or local importance. Prime farmland has the best combination of physical and chemical characteristics for producing food, forage, fiber, and oilseed crops. Unique farmland is land other than prime farmland used to produce specific high-value food and fiber crops such as citrus, tree nuts, olives, cranberries, fruits, and vegetables. Farmland of statewide or local importance includes soils that do not meet prime farmland criteria, but economically produce high yields of crops when treated and managed.

A federal action that may result in conversion of farmland to non-agricultural use requires coordination with the U.S. Department of Agriculture (USDA) Natural Resource Conservation Services (NRCS). There is currently agricultural use on Airport property, including southeast of Runway 8/26, east of Runway 17/35, and south of Runway 35 across Ridge Road. According to the USDA NRCS Web Soil Survey, most of the land under current agricultural use is soil classification MsB, Mosinee sandy loam, a farmland of statewide importance. The Airport also has some soil that is prime farmland if drained, including Meadland loam. However, the majority of the current airfield is not prime farmland or farmland of state importance. As a result, proposed development alternatives do not disrupt or result in conversion of land currently under agricultural use.

### 5.2.7 Land Use Summary

Local zoning and development patterns have avoided major land use conflicts with CWA. Dense residential development is not located near the Airport, and complementary industrial uses and open land primarily border the Airport site. Appropriate separation is maintained from publicly owned landfills currently in operation, and land uses that may attract groups of people are not found near the Airport. The airport is within 1 mile of potential Section 4(f) resources; however, the proposed projects and preferred alternatives are not likely to adversely impact these resources. Changes to RPZ locations associated with the proposed projects will require FAA approval due to changes in land uses, including roads, within the RPZs.

## 5.3 Local Land Use Controls

This section discusses local land use controls enacted by the City of Mosinee and Marathon County that govern land use on Airport property. The purpose of this discussion is to identify proposed facilities within the context of City and County code to determine which of these are approved by code as it is written, which will require special use permits or oversight, and which will require further government review.

### 5.3.1 Airport Height Restriction Zones

Marathon County has an Airport Approach Protection Overlay District that applies to the areas surrounding CWA. Zones established on a September 7, 1999, map illustrate the allowed elevation of structures and trees in the vicinity of the Airport. No structure is allowed on the airfield, and building heights are limited on the rest of Airport property and in the approach paths of each runway end beyond Airport property. Aerial images show these areas to be largely undeveloped. Buildings outside of the approach paths are restricted to an elevation of 1,376 feet above mean sea level within a radius of 3 miles from the Airport. In addition to height restriction, the county designates that land uses within these zones may not interfere with aircraft and Airport radio communication, make it difficult to distinguish between Airport and other lights, or otherwise endanger aircraft operations. In addition, “no zoning permit for new, altered, or enlarged principle structures will be issued for any property located in any zone [within the district] unless the provisions of the ‘Noise and Avigation Easement and Non-suit Covenant’ are incorporated into such zoning permit.” Accessory structures less than 20 feet high within ½ mile of the Airport and less than 50 feet high between ½ mile and 3 miles away are exempted from the permitting process associated with this ordinance. Permits are administered through the Marathon County Zoning Administrator.

The City of Mosinee follows the same height restrictions set by the County. Their city code states, “Heights of buildings and structures in areas surrounding the boundaries of airports having an [approved] established approach plan... shall be in accordance with requirements set forth in the approach plan and/or adopted airport zoning regulations.”

The preferred runway intersection alternative will result in changes to the Runway 8/26 approaches. Because of this, the allowed elevations of buildings and vegetation may need to be updated in the Marathon County and Mosinee City Codes.

### 5.3.2 Shoreland Zoning

The City of Mosinee, the Village of Kronenwetter, and Marathon County each have Shoreland-Wetland zoning. These zones are shown in **Figure 5-3**. Wisconsin law mandates counties to adopt and administer a zoning ordinance that regulates land use in shorelands, wetlands, and floodplain areas outside of villages and cities. With limited exceptions, this ordinance supersedes any town ordinance.

The Marathon County Code applies to unincorporated shoreland areas, including the Town of Knowlton south of Airport property. The County ordinance regulates lands within 1,000 feet of the ordinary high-water mark (OHWM) of navigable lakes, ponds, or flowages, as listed by the Wisconsin Department of Natural Resources (DNR) or shown on United States Geological Survey quadrangle maps, or to the landward side of the floodplain, whichever is greater. The ordinance also includes lands within 300 feet of the OHWM of navigable rivers or streams, or to the landward side of the floodplain, whichever is greater. Uses allowed within these areas include:

- Recreation, such as hiking, hunting, and boating.
- Some types of agriculture.
- Some types of temporary water level stabilization.
- Maintenance and repair of existing agricultural drainage systems.
- Piers, docks, or walkways built on pilings.
- Maintenance of existing town and county highways and bridges.

Uses allowed within these areas that require a zoning permit include:

- Roads necessary for agriculture or silviculture if they cannot be located outside the wetland.
- Nonresidential buildings if they are essential for and used solely in conjunction with a use permitted in the shoreland-wetland district, in some circumstances.
- Public and private park, recreation, and wildlife areas.
- Public utilities and railroad lines, in some circumstances.

Structures within these designated areas require a 75-foot setback from the OHWM of any navigable waters, and the owner of the property must establish, preserve, or restore a vegetative buffer zone that covers at least 70 percent of the half of the shoreland setback area that is nearest to the water. The plan must be approved by the Marathon County Conservation, Planning, and Zoning Department.

The City of Mosinee Shoreland-Wetland district applies the same buffer areas around navigable waters as the Marathon County ordinance. Additional allowable non-permitted uses include the installation and maintenance of sealed tiles for the purpose of draining lands outside the shoreland-wetland zoning district if it is done in a way that minimizes the adverse impact on the wetland. Additional uses that require a conditional use permit include roads that are necessary for the continuity of the municipal street system, the provision of essential utility and emergency services, or to provide access to uses permitted in the wetland zone. Permits are administered by the City of Mosinee Zoning Administrator.

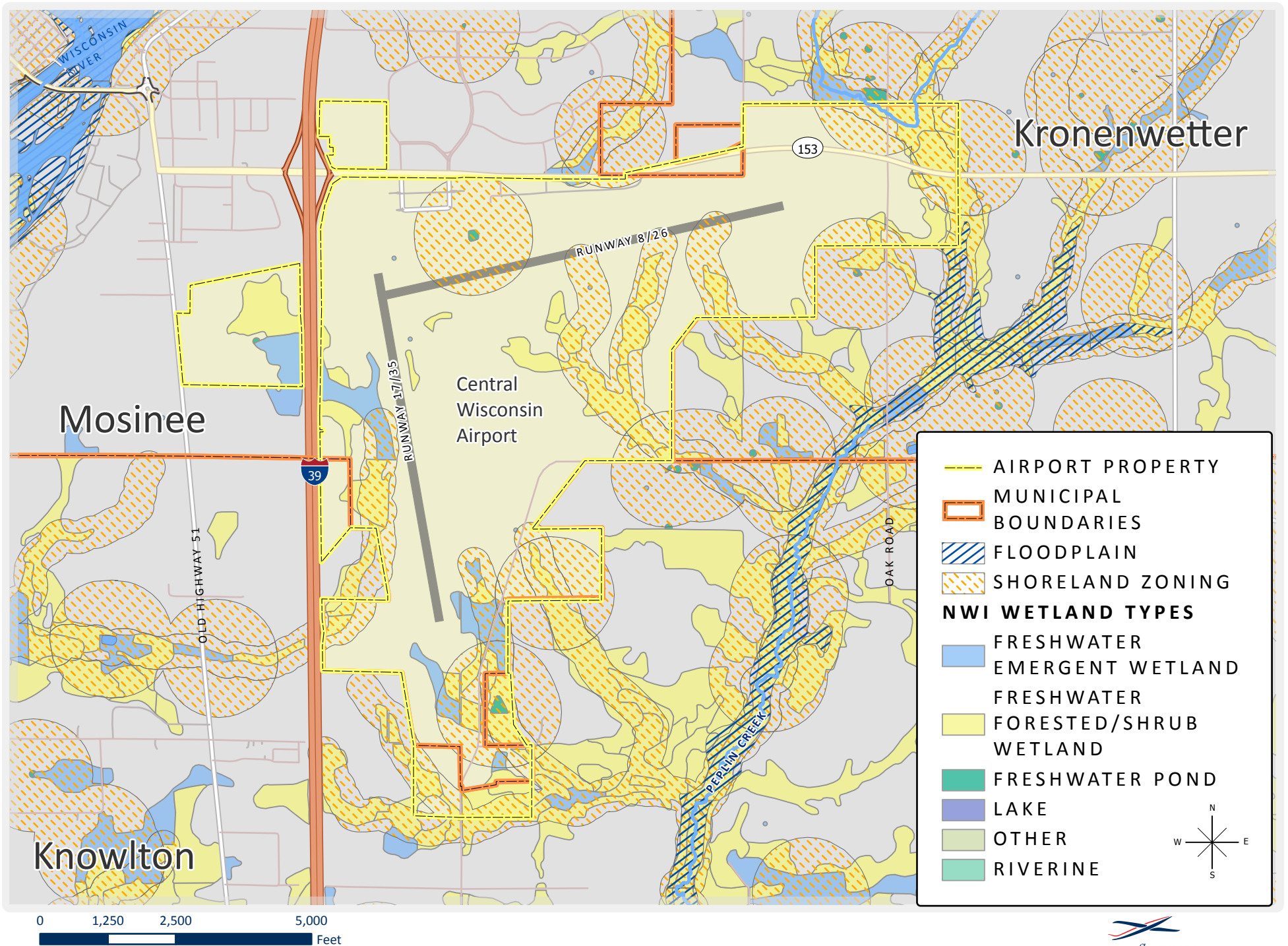


Figure 5-3: Wetlands, Floodplain, and Shoreland Zoning

Source: Marathon County Department of Conservation, Planning, and Zoning, 2017; U.S. Fish and Wildlife Service National Wetlands Inventory, accessed 2018.

There are designated shoreland districts on Airport property. One of these areas intersects Runway 8/26 in three places. There are also designated shoreland areas south of Runway 35, close Taxiway B, and just west of Runway 17/35 between the runway and I-39. The Airport's terminal building and apron are located within a shoreland district as displayed on the Marathon County official map, as are small portions of Runway 8/26, which may affect projects within this area. However, there are no apparent DNR designated wetlands within this area at this time. The City and the County have processes for amending or rezoning the shoreland-wetland districts if the proposed rezoning does not result in adverse impacts on any of the following:

- Storm and floodwater storage capacity,
- Maintenance of dry season stream flow,
- Groundwater discharge and recharge,
- Filtering of sediments and other contaminants that would otherwise drain into navigable waters,
- Protection from shoreline erosion,
- Fish and wildlife habitat, or
- Wetlands within a special natural resource interest area.

Shoreland zoning amendments are processed through the Marathon County Conservation, Planning and Zoning Department, or, in the City of Mosinee, the appropriate district office.

#### 5.4 Environmental Resources

This section provides an overview of environmental resources at CWA that might impose constraints on future Airport development. The purpose of this analysis is to assist in avoidance, minimization, and mitigation of environmental effects associated with proposed Airport projects. The resources discussed in this section may require additional review as part of NEPA documentation for these projects.

Environmental resources discussed in this section were determined by researching and analyzing publicly available literature, information databases, previous studies, aerial photography, and maps. No field studies were conducted as part of this analysis. This overview is not intended to satisfy environmental clearance requirements outlined in FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, nor is it intended to fulfill the regulatory requirements of NEPA. NEPA requires that an action involving federal funding or permit approval, such as an airport project funded with federal grants, must undergo a separate environmental analysis to evaluate and document proposed effects.

The following environmental resources are discussed below:

- Historic and Archeological Resources
- Water Resources and Wetlands
- Fish, Wildlife, and Plants
- Solid Waste and Hazardous Materials



#### 5.4.1 Historic and Archeological Resources

According to the National Register of Historic Places (the Register) database, Marathon County has 27 properties on the Register. Two of these properties are in Mosinee: the Earl Mathie house is located at 202 Water Street more than 1 mile northwest of Runway 17, and the Joseph Dessert Library is located at 123 Main Street more than 1 mile northwest of Runway 17 and Runway 8. These properties are outside the area of impacts for the projects proposed in this Master Plan.

Mead & Hunt completed an archeological and history survey for the Airport related to the 2010 Environmental Assessment (EA) for the passenger terminal renovation project and concluded that there were no historic structures or archeological sites located in the area of study. Because much of the Airport area has been cultivated, excavated, or graded, the likelihood of finding cultural artifacts is also low. However, further evaluation may be needed for any undisturbed areas used for future projects.

According to the Wisconsin Department of Administration Division of Intergovernmental Relations, there are 11 federally recognized American Indian nations and tribal communities in Wisconsin. According to the Great Lakes Inter-Tribal Council Tribal Map and the Wisconsin State Tribal Relations Initiative, the Ho-Chunk Nation has Trust Lands within Marathon County, but they are not located within the Airport area. No other tribal lands are located near CWA.

#### 5.4.2 Water Resources and Wetlands

National policy provides guidelines for some water resources based on their value as cultural or recreational assets via the Wild and Scenic Rivers and Nationwide Rivers Inventory programs. Laws and regulations including the Clean Water Act (CWA) address water quality and wetlands from an environmental perspective.

According to the U.S. National Park Service, the Wisconsin River is included in the Nationwide Rivers Inventory, which is a listing of rivers or river segments considered to be nationally significant cultural resources. The Wisconsin River bisects Marathon County from north to south and passes approximately 1 mile west of the Airport. Two rivers on the National Wild and Scenic Rivers System are in Wisconsin; however, neither are located near the Airport.

Impacts to tributaries within a watershed can affect the quality of rivers and other water resources. The Airport is part of the Johnson and Peplin Creek watershed. This 63-square-mile watershed includes approximately 30 miles of Federal Clean Water Act 303(d) impaired waters on the Wisconsin River that are affected by mercury and polychlorinated biphenyl (PCB) contaminants. The watershed also includes one impaired lake, Lake DuBay, that lies approximately 5 miles directly south of the Airport and is impaired due to total phosphorous. Thirty-five acres of the northern edge of airport property are located within the Bull Junior Creek watershed. Both watersheds are within the Central Wisconsin unit of the Mississippi River Basin.

The Clean Water Act provides the authority to establish water quality standards, control discharges into surface and subsurface waters, develop waste treatment management plans and practices, and issue permits for discharges (section 402) and for dredged or fill material (section 404). The Fish and Wildlife Coordination Act (FWCA) applies to proposed federal actions that would impound, divert, drain, control, or otherwise modify the waters of a stream or body of water, unless the project is for the impoundment of water covering an area of less than 10 acres. The FWCA requires consultation with the U.S. Fish and Wildlife Service (FWS) and applicable state agencies to identify means to prevent loss and damage to wildlife resources resulting from airport improvements. Future projects at CWA that increase the amount of impervious surface and stormwater runoff volume will need to include stormwater management measures to accommodate or treat any potential discharge. No actions that fall under the FWCA are anticipated.

The Clean Water Act defines wetlands as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” Federal regulations require that proposed actions avoid, to the greatest extent possible, long-term and short-term impacts to wetlands, including the destruction and alteration of wetland functions and values.

There are wetland areas on and around airport property. Mead & Hunt conducted a wetland delineation in 2016 associated with the potential southward shift of Runway 17/35. The area of study (also called the Area of Interest [AOI]) was situated at the southern end of the runway. The AOI is approximately 1,000 feet wide and 3,100 feet long, aligned with the centerline of Runway 17/35. It is bounded on the south by woody vegetation and encloses two small farm fields outside of the perimeter fence. A total of five wetlands were delineated within the area of study; three are within the perimeter fence and two are outside the fence.

Previous wetland study within Airport property occurred over three field seasons from 2007 to 2009. Wetlands delineated in this study included a long drainage ditch between the perimeter fence and Balsam Road, a large hardwood swamp with a constructed berm at its southern end, an area of shrubby wet meadow north of Cessna Road, and a shrubby wet meadow further along Balsam Road, which was partially delineated along the southern edge of the adjacent farm field.

The National Wetland Inventory and the Wisconsin DNR currently show forested and emergent wetland areas between Runway 17/35 and I-39 and forested wetland areas southeast of Runway 8/26. The wetland areas near Runway 8/26 are connected to Peplin Creek. Known wetland areas are not close enough to Runway 8/26 to be affected by the preferred runway intersection alternative, but further study may be required during the environmental review process. National Wetland Inventory wetlands are shown on **Figure 5-3**.

### 5.4.3 Fish, Wildlife, and Plants

According to the U.S. FWS, there is one federally listed threatened species (the northern long-eared bat) and one federally listed endangered species (the gray wolf, **Figure 5-4**) in Marathon County. Four bird species protected under the Migratory Bird Treaty Act, the golden-winged warbler, the bobolink, rusty blackbird, and the wood thrush (**Figure 5-5**), can be found in the region seasonally. Bald eagles and golden eagles (**Figures 5-6 and 5-7**), protected under the Bald and Golden Eagle Protection Act, have been observed near the Airport.

Lands surrounding the Airport are scattered tracts of pine and northern hardwoods mixed with planted crop land in flatter areas. The area within the Airport perimeter fence is short grass that is consistently mowed.

Airport property and adjacent land may provide habitat for these species, and impacts of future projects on wooded areas should be evaluated for habitat quality or presence of the wolf or bat. Airport property also may provide habitat for many species of plants and animals, including other migratory birds, deer, trees, plants and others. Evaluation of impacts to animals and plants may be needed for future projects.

### 5.4.4 Hazardous Materials and Solid Waste

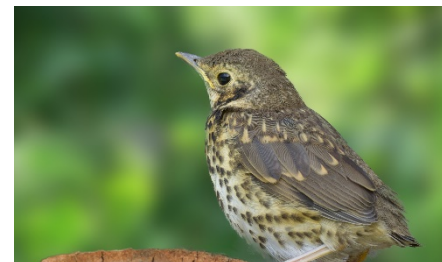
Airport activities generate solid waste and hazardous materials. Municipal solid waste (a form of non-hazardous waste) is discussed in greater detail in **Appendix B: Recycling, Reuse, and Waste Reduction Plan**.

A Phase 1 Hazardous Materials Assessment was completed in 2009 by Becher-Hoppe Associates, Inc. Several locations on or near airport property have experienced historic fuel spills and leaking underground storage tanks. These sites have been closed, and there are no active sites undergoing contamination remediation. The assessment concluded that one site located near the midfield terminal area has been identified as a potential site of environmental contamination. Airport property includes a fuel farm where all tanks are located within a spill containment area designed to prevent environmental damage if a tank leaks or fails. The Transportation Safety Authority, CWA, and the Fixed-Base Operator are all registered with the State of Wisconsin as small quantity generators of hazardous materials.

**Figure 5-4: Gray wolf**



**Figure 5-5: Wood thrush**



**Figure 5-6: Bald eagle**



**Figure 5-7: Golden eagle**



Caution should be used when demolishing existing structures to ensure that debris is disposed of properly, as there may be asbestos in shingles, insulation, caulk, and siding, and there may be lead in paints and pipes.

## 5.5 Environmental Overview Summary

This chapter provided an overview of land use, zoning, and high-profile environmental resources on and surrounding the Airport that should be considered during the scoping process for projects that will require environmental review. This section summarizes the findings and recommendations of this Environmental Overview for CWA.

- Land uses near the airport are largely compatible with Airport activity, comprised largely of undeveloped land and complementary industrial use. There are few residential or public gathering places near the Airport, and the areas where these uses occur are not adjacent to Airport property.
- Projects proposed in this Master Plan do not conflict with current or planned use of nearby, off-Airport land.
- Significant noise impact areas are projected to remain on Airport property.
- No significant impacts to environmental features are anticipated, but further study may be required during NEPA environmental review for specific projects.

Future improvements at the Airport will require environmental processes and documentation prior to implementation. Consideration and coordination with agencies and regulation prior to development activities will allow CWA to continue to be a good steward of the environment.