Chapter 1 – Introduction and Project Overview

The City of Ashland, in cooperation with the Federal Aviation Administration (FAA), is in the process of updating the Ashland Municipal Airport (FAA airport identifier – S03) Airport Master Plan to address the airport's needs for the next twenty years. The airport master plan will provide specific guidance in making the improvements necessary to maintain a safe and efficient airport that is economically, environmentally, and socially sustainable.

Study Purpose

The purpose of the Ashland Municipal Airport - Airport Master Plan is to define the current, short-term, and long-term needs of the airport through a comprehensive evaluation of facilities, existing facilities, site conditions, and current FAA airport planning and design standards. The study will also address elements of local planning (land use, transportation, environmental, economic development, etc.) that have the potential to affect the planning, development, and operation of the airport. This project updates the 2004 Airport Layout Plan.[1] Since the last airport layout plan was completed, the FAA has identified several areas of emphasis for airports that affect airport planning; including land use compatibility in runway protection zones (RPZ) and airfield design standards compliance.

Project Need

Ashland Municipal Airport is included in the federal airport system—the National Plan of Integrated Airport Systems (NPIAS). Inclusion in the NPIAS is limited to public use airports that meet specific FAA activity thresholds. The FAA requires all NPIAS airports to maintain current planning, with periodic updates of their master plans and airport layout plans (ALP). These updates maintain current planning

[1] Airport Layout Plan – Ashland Municipal Airport (Final Report, October 2005; Century West Engineering Inc., Aron Faegre & Associates, and Gazeley & Associates).

consistent with applicable FAA technical standards, policies, and regulations that change over time, and maintain overall funding eligibility with FAA.

There are currently 3,332 existing NPIAS facilities including airports, heliports, and seaplane bases.[2] The FAA recognizes that NPIAS airports are vital to serving the air transportation needs of the public and that access to the nation's air transportation system is not limited to commercial service airports. The majority of NPIAS airports are designated "Primary" or "Non-primary." The 382 Primary airports provide the majority of commercial air service within the system. The 2,950 Non-primary airports include General Aviation, Reliever, and Non-primary Commercial Service airports (airports that enplane 2,500 to 9,999 annual passengers). Ashland Municipal Airport is designated as a Non-primary General Aviation airport.

NPIAS airports may qualify for federal funding of eligible improvements through FAA programs such as the Airport Improvement Program (AIP). The AIP is a dedicated fund administered by the FAA with the specific purpose of maintaining and improving the nation's public use airports. The AIP is funded exclusively through general aviation and commercial aviation user fees. These funds are only available for use on AIP eligible projects.

Project Funding

Funding for the airport master plan is provided through an FAA Airport Improvement Program (AIP) grant (90%), ODA Critical Oregon Airport Relief (COAR) grant (8%), with local match (2%) provided by the airport sponsor.

Airport Ownership

The City of Ashland is the owner of Ashland Municipal Airport. As the airport owner (sponsor) of record, the City is responsible for conforming to all applicable FAA regulations, design standards, and grant assurances.

[2] 2017-2021 NPIAS Report

History of the Airport and Development[3]

1940s Local pilot Sumner Parker developed and leased an airstrip to the City of Ashland for use as a public airport. The airstrip, which is the current airport site, is located approximately 3 miles from downtown Ashland;

1963 The City established an airport committee and conducted a feasibility study to determine the best location for an airport. The leased airstrip was determined to be the most feasible location. The City then began negotiations to purchase the airstrip. This is the current airport site location;

1964 The FAA approved the airport site and the property was acquired by the City shortly after the approval. Following acquisition by the City, the airport was renamed Ashland Municipal Airport – Sumner Parker Field;

1983 Land acquisition for development, runway extension, construction and rehabilitation of the apron;

1984 Runway and taxiway extension project;

1994 Access road improvements, airport drainage improvements, installed VASIs, apron and taxiway expansion, and airport master plan update;

2004 Installed taxiway lighting and rehabilitated runway lighting;

2007 Installed Super AWOS system and rehabilitated the parking lot;

2010 Rehabilitated runway and installed PAPIs; and

2014 Constructed taxiway to access hangar area.

Study Organization

Work in progress on the airport master plan will be documented in a series of technical memoranda (presented as draft chapters). These chapters are prepared to document progress in the study, facilitate the review of preliminary results, and obtain input throughout the master planning process. The draft chapters will be updated and incorporated into the draft and final airport master plan technical report at the study's conclusion.

The draft chapters and supporting documents will be prepared over a period of approximately 18 months. Each draft chapter will be reviewed locally, by the FAA, and the Oregon Department of Aviation (ODA) for consistency with federal and state regulations, policies, and standards.

[3] 2004 Ashland Municipal Airport Layout Plan, Century West Engineering Inc., Aron Faegre & Associates, and Gazeley & Associates.

The 2017-2037, Ashland Municipal Airport -Airport Master Plan will include the following chapters:

- *Chapter 1 – Introduction and Project Overview*
- *Chapter 2 –Airport Data Collection and Facilities Inventory*
- *Chapter 3 – Aeronautical Activity Forecasts and Demand Capacity Analysis*
- *Chapter 4 – Facility Requirements*
- *Chapter 5– Alternatives Analysis*
- *Chapter 6 – Airport Layout and Terminal Area Plans*
- *Chapter 7 – Airport Financial Plan and Capital Improvement Plan*
- *Chapter 8 – Compatible Land Use Planning in the Vicinity of Airports*
- *Chapter 9 –Recycling and Solid Waste Management Plan*
- *Appendix – Environmental Technical Memorandum*

Local Citizen Participation

The City of Ashland is committed to an inclusive, transparent planning process and will make all project work products available for public review. The public involvement element of the airport master plan will provide several ways for all interested individuals, organizations, or groups to participate in the project:

- All draft work products will be available for public review and comment. Links to the documents will be posted on the City's webpage to allow for convenient access, review, and comment;

- A series of public meetings will be held during the project to facilitate public participation including;

    - A local planning advisory committee (PAC) has been formed by the City of Ashland to assist the project team in reviewing draft technical working papers and to provide input into the planning process. The composition of the PAC is intended to provide an effective blend of community members, airport commission, and city and county planners. Representatives from the FAA Seattle Airports District Office and ODA will serve as ex officio members of the PAC. The PAC will meet periodically during the project, provide review and comment on draft work products, discuss key project issues, and provide local knowledge and expertise to the planning process. The PAC meetings will be open to the public.

    - Periodic study sessions and briefings with City staff, project meetings, and open houses will be conducted, as required.

Summary

The FAA-defined airport master planning process requires a sequential, systematic approach, which leads to the selection of a preferred airport development option. The preferred development option will then be integrated into the ALP and Airport Capital Improvement Program (ACIP). To meet this goal, the airport master plan will:

- *Provide an updated assessment of existing facilities and activity;*
- *Forecast airport activity measures (design aircraft, based aircraft, aircraft operations, etc.) for the current 20-year planning period;*
- *Examine previous planning recommendations (2005 Airport Layout Plan) based on ability to meet current FAA airport design standards and policies;*
- *Determine current and future facility requirements for both demand-driven development and conformance with FAA design standards;*
- *Evaluate airside and landside facility improvement options in the form of development alternatives;*
- *Provide consistency between airport planning and land use planning/zoning to promote maximum compatibility between the airport and surrounding areas;*
- *Prepare an updated Airport Layout Plan (ALP) drawing set to accurately reflect current conditions and master plan facility recommendations; and*
- *Develop an Airport Capital Improvement Program (ACIP) that prioritizes improvements and estimates project development costs and funding eligibility for the 20-year planning period.*

The preparation of this document may have been supported, in part, through the Airport Improvement Program financial assistance from the Federal Aviation Administration as provided under Title 49, United States Code, section 47104. The contents do not necessarily reflect the official views or policy of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein nor does it indicate that the proposed development is environmentally acceptable with appropriate public laws.

Chapter 2 – Inventory of Existing Conditions

The purpose of this chapter is to document the existing facilities and conditions at Ashland Municipal Airport (Airport Identifier Code: S03).

The inventory section of the Airport Master Plan summarizes existing conditions of the facilities at Ashland Municipal Airport – Sumner Parker Field (S03). The inventory also summarizes other pertinent information relating to the community, airport background, airport role, surrounding environment, various operational parameters and other significant characteristics. The information in this chapter provides a baseline for determining future facility needs at Ashland Municipal Airport. Information was obtained through site visits, consultant research, review of existing documents, and airport management input.

Airport Setting & Geography

Ashland is an incorporated city located in Jackson County, in southwest Oregon. Ashland is located near the south end of the Rogue Valley, adjacent to U.S. Interstate 5 (I-5), the primary north-south interstate highway that extends from Washington to California. Ashland is approximately 13 miles south of Medford and 21 miles north of the Oregon-California border on I-5.

Ashland Municipal Airport is located near the eastern corner of the Ashland city limits and urban growth boundary (UGB), east of I-5. The airport is located at the base of mountainous terrain that forms the eastern side of the valley. The airport is surrounded predominately by unincorporated Jackson County land, with the City of Ashland urban area located to the west. A location and vicinity map is provided in **Figure 2-1**.

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Figure 2-1: Airport Location Map

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Climate

Ashland's climate is directly affected by the mountainous terrain that forms each side of the Rogue Valley. The local area has warm, dry summers and cool, moist winters, with moderate amounts of precipitation and snowfall. Historic climatic data [1] for Ashland indicates the average maximum temperature is 86.9 degrees Fahrenheit (July) and the average minimum temperature is 29.7 degrees Fahrenheit (January). Ashland averages 19.43 inches of precipitation and 6.9 inches of snowfall annually. Prevailing winds generally follow the valley contours, which is similar to the alignment of Runway 12/30.

Soils and Geology

The airport site is composed of a combination of sandy loam and clay soils. A review of current soil survey mapping[2] identifies four soil types account for the majority of the airport:

- **31A - Central Point sandy loam (0 to 3 percent slopes)** – The majority of the runway, south apron, and main vehicle parking lot. Primary characteristics: stream terraces, sandy loam and gravely sandy loam, depth to restrictive feature more than 80 inches, well drained, high capacity to transmit water, depth to water table about 48 to 72 inches. About 40 percent of the airport area.

- **27B - Carney clay (1 to 5 percent slopes)** – The majority of the lower and uphill landside development area (Brim Hangar, T-Hangars, FBO). Primary characteristics: alluvial fans, clay and weathered bedrock, depth to restrictive feature 20 to 40 inches (paralithic bedrock), moderately well drained, very low to moderately low capacity to transmit water, depth to water table about 36 to 42 inches. About 28 percent of the airport area.

- **23A - Camas-Newberg-Evans complex (0 to 3 percent slopes)** – Neil Creek and Emigrant Creek drainages, portions of south runway safety area and runway end, portions of north section of parallel taxiway and aircraft hold area. Primary characteristics: flood plains, gravely sandy loam and extremely gravelly coarse sand, depth to restrictive feature 9 to 17 inches (to strongly contrasting textural stratification), excessively drained, high capacity to transmit water, depth to water table more than 80 inches. About 17 percent of the airport area.

- **127A - Medford silty clay loam (0 to 3 percent slopes)** – Middle section of parallel taxiway, segmented circle, north section of apron, and aircraft fuel area. Primary characteristics: alluvial fans and stream terraces, silty lay loam and silty clay, depth to restrictive feature more than 80 inches, moderately well drained, moderately high capacity to transmit water, depth to water table about 48 to 72 inches. About 12 percent of the airport area.

[1] Western Regional Climatic Center, Observation Station 350304 (1948-2005)
[2] Natural Resources Conservation Service, Web Soil Survey (11/16/17)

Airport Activity

The primary measures of aviation activity at Ashland Municipal Airport include aircraft operations (takeoffs and landings) and based aircraft. An aircraft operation is defined as either a takeoff or landing. A "touch-and-go" is counted as two operations. Operations are categorized as local and itinerant.

According to the FAA, local operations are defined as operations performed by aircraft that:

- Operate in the local traffic pattern or within sight of the airport, or
- Are known to be departing for, or arriving from, flight in local practice areas located within a 20-mile radius of the airport, or
- Execute simulated instrument approaches or low passes at the airport.

Itinerant operations are all aircraft operations, other than local operations.

The FAA's 5010-1 Airport Master Record is the official record kept by the FAA for public-use airport activity and facility conditions. The 5010 based aircraft data are populated by periodic airport management reporting through the FAA's www.basedaircraft.com database. Aircraft operations at non-towered airports are periodically estimated by FAA through reference to the FAA's Terminal Area Forecast (TAF).

The most recent FAA Airport Master Record (5010) for Ashland Municipal Airport lists a total of 28 based aircraft, including 23 single-engine, 1 multi-engine aircraft, and four ultra-lights.[3] It is evident that the 5010 based aircraft total is not accurate based on the airport's current hangar and aircraft tiedown occupancy, and current tenants, including Brim Aviation, which bases helicopters and fixed wing aircraft at the airport. An updated airport management based aircraft count is being developed and will be used in preparing the updated forecasts of aviation activity. The 5010 lists 26,050 aircraft operations (estimate) for the 12 months ending 3/17/15.

Table 2-1 summarizes the airport's based aircraft and operations, as indicated on the current FAA 5010 form.

[3] FAA 5010-1 Airport Master Record (8/17/2017)

TABLE 2-1: BASED AIRCRAFT AND OPERATIONS

Activity Type	Activity Level		
Based Aircraft	Updated Airport Count[1] (2017)	Airport Master Record[2] *(12 months ending 3/17/15)*	2004 Airport Master Plan Update[3] (2004 Base Year)
Single-Engine Piston	64	23	79
Multi-Engine Piston	2	1	5
Turboprop	0	0	0
Turbojet	1	0	0
Rotorcraft	5	0	2
Glider	0	0	0
Ultra-Light	2	4	3
Total Based Aircraft	74	**28**	**89**
Annual Aircraft Operations	**An updated operations estimate will be included in the Forecast Chapter.**	**26,050**	**20,878 (2004 Base Year)**

1. Airport Management Records, as of December 2017
2. Airport Master Record (5010) August 17, 2017
3. Airport Layout Plan Report – Ashland Municipal Airport (Final Report, October 2005., Century West Engineering, Aron Faegre & Associates, Gazeley & Associates)

Airfield Facilities

Ashland Municipal Airport has historically served a variety of general aviation users, including business, commercial, government and recreational. The airport can accommodate day and night operations in visual flight rules (VFR) conditions.

The airport has one paved (asphalt) and lighted runway (Runway 12/30) that is oriented in a northwest-southeast alignment. Runway 12/30 has a full-length parallel taxiway/taxilane on its north side. Additional taxiways and taxilanes provide access to aircraft hangars and aircraft parking aprons on the north side of the parallel taxiway.

Figure 2-2 and **2-3** depict the existing airfield facilities. **Table 2-2** summarizes airport data.

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Figure 2-2: Existing Airport Facilities

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Figure 2-3: Terminal View

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TABLE 2-2: AIRPORT DATA

Airport Name/Designation	Ashland Municipal Airport (S03)
Airport Owner	City of Ashland
Date Established	1940s
Airport Category	National Plan of Integrated Airport Systems (NPIAS): Non-primary Local Service, General Aviation Airport Oregon Aviation Plan (2007): Category III – Regional General Aviation Airports FAA Airport Reference Code: B-I Small (as depicted on 2004 ALP)
Airport Acreage	94 Acres (1989 Exhibit A)
Airport Reference Point (ARP) Coordinates	N 42° 11' 25.02" W 122° 39' 33.26"
Airport Elevation	1,884.8 feet MSL (surveyed)
Airport Traffic Pattern Configuration/Altitude	Left Traffic: Runway 12 & 30 Traffic Pattern Altitude: 2,899.8 feet MSL (1,015 feet AGL)
Airport Communication	Common Traffic Advisory Frequency (CTAF) 122.8 MHz
Airport Weather	SuperAWOS – Pilot Controlled Automated Unicom 122.8 MHz

Runway

Runway 12/30 is 3,603 feet long and 75 feet wide with an asphalt surface. The runway has a 190-foot displaced threshold at the Runway 30 end to improve obstruction clearance (road, trees, and structures). The runway pavement has a published weight bearing capacity of 15,000 pounds for aircraft with single-wheel landing gear configurations.[4] The runway has an effective gradient of 1.1 percent with a high point at the Runway 30 end. The runway pavement is in good condition. The most recent crack filling project was completed in 2014, and last rehabilitation project (3" asphalt overlay, reconstructed sections of pavement, an installation of underdrains) was completed in 2011.

The runway has visual instrument (VIS) markings on both ends. The runway markings (white paint) include runway designation numbers and centerline stripe. The Runway 30 displaced threshold markings include one centerline arrow, three arrowheads, and a threshold bar. Yellow taxiway lead-in/lead-off lines are painted on all the entrance/exit taxiways. The runway markings meet FAA standards for configuration, color, and approach type. The markings were observed to be in generally good condition during a recent site visit.

Runway 12/30 is lighted and equipped with visual guidance indicators at both ends. There are no runway or taxiway hold position signs, runway distance remaining signs, or taxiway location signs on the airport. The runway is served by a full-length east parallel taxiway with six 90-degree exit taxiway connections.

[4] FAA 5010-1 Airport Master Record (8/17/2017);

Table 2-3 summarizes the characteristics of the runway.

TABLE 2-3: RUNWAY DATA

Runway 12/30	
Dimensions	3,603' x 75'; Runway 30: 190' Displaced Threshold
Bearing	N38° 42' 50"W
Effective Gradient	1.1%
Surface/Condition	Asphalt (Good)
Pavement Strength	SW 15,000lbs
Markings	Visual (VIS)
Lighting	Medium Intensity Runway Lighting (MIRL)

Runway Wind Coverage

It is generally preferable for aircraft to land and takeoff directly into the wind, although varying wind conditions may require crosswind operations. Use of the crosswind runway may be preferable when prevailing winds exceed the capabilities of a specific aircraft. At airports with single runways, occasional periods of strong crosswinds can limit operations until conditions improve.

The FAA recommended planning standard is that primary runways should be capable of accommodating at least 95 percent of wind conditions within the prescribed crosswind component. The crosswind component is based on a direct crosswind (90 degrees perpendicular to the direction of flight) with varying speeds depending on the aircraft type: 10.5 knots (12 miles per hour) for small aircraft in Design Group I; and 13 knots (15 miles per hour) for general aviation aircraft in Design Group II. Transport and larger military aircraft are typically designed to accommodate even higher crosswind components. Aircraft are able to tolerate increasingly higher wind speeds as the crosswind angle is reduced and aligns more closely with the direction of flight.

Tabulated wind data is not available for Ashland Municipal Airport. In cases when on-site wind data does not exist, the FAA recommends using data from a nearby airport. It is recognized that this technique provides a general indication of wind conditions, but may not provide an accurate on-site assessment. **Table 2-4** summarizes the recent wind data collected at Rogue Valley International Airport-Medford Airport, located 15 nautical miles northwest, that is applied to the runway alignment at Ashland Municipal Airport.[5] The data is presented for all-weather, visual (VFR), and instrument (IFR) conditions for small and large aircraft.

[5] National Climate Data Center – MFR Data from Automated Surface Observation System (ASOS) (2007-2016)

The data indicates prevailing winds predominately follow a northwest-southeasterly pattern, which is generally aligned with the runway. As noted earlier, the general alignment of the runway and valley in Ashland is similar, which suggests reasonably good wind coverage and terrain avoidance during takeoff and landing. Available data indicates that Runway 12/30 has adequate wind coverage (≥95%) to meet FAA standards for airports with one runway.

TABLE 2-4: RUNWAY WIND COVERAGE

Weather Conditions	Wind Speed	Runway 12/30
All WX	12 MPH (10.5 Knots)	99.4%
	15 MPH (13 Knots)	99.73%
VFR	12 MPH (10.5 Knots)	96.11%
	15 MPH (13 Knots)	97.78%
IFR	12 MPH (10.5 Knots)	99.82%
	15 MPH (13 Knots)	99.82%

Runway 12/30
Source: NOAA National Climatic Center Data for MFR
Period: 2007-2016 with a total of 132,083 (All WX), 94,613 (VFR), and 20,511 (IFR) observations.

Taxiways and Taxilanes

Taxiways are a crucial airport element because they expedite the safe and efficient flow of traffic to and from the runway and can reduce the amount of time aircraft are on the runway. Taxiways also provide an important link between airside and landside facilities. Taxilanes provide access within aircraft apron areas and hangar developments.

The taxiway system at Ashland Municipal Airport is depicted on **Figure 2-2,** presented earlier in this chapter. Runway 12/30 has a full-length east parallel taxiway/taxilane with six 90-degree exit taxiways. The parallel taxilane is located on the outer section of the main apron (south end). For identification purposes, the parallel taxiway is designated "Taxiway A" and the exit taxiways are designated A1-A6, with A1 located at the Runway 30 end.

The airport taxiways are equipped with edge reflectors. Taxiway markings include (yellow) centerline and runway hold position lines on exit taxiways, which are in good to fair condition. The aircraft hold lines are located 125 feet from runway centerline, which coincides with the outer edge of the runway obstacle free zone (OFZ).

RUNWAY 12/30 PARALLEL TAXIWAY/TAXILANE

Taxiway A is full-length parallel taxiway/taxilane for Runway 12/30. Taxiway A is 30 feet wide and constructed of asphalt. It has six exit taxiway connectors to Runway 12/30. Taxiway A provides access to all landside areas on the east side of Runway 12/30. An aircraft hold area is located adjacent to the Runway 12 end and Taxiway A6. A compass rose is painted on the north aircraft hold area.

The parallel taxiway has a runway centerline separation of 162.5 feet. The parallel taxilane has a runway centerline separation of 150 feet. The taxiway/taxilane centerline shift is located adjacent to Taxiway A3. A dashed yellow line is painted along the inside edge of the parallel taxilane to distinguish the taxilane and apron areas.

EXIT TAXIWAYS (RUNWAY 12/30)

The runway has six 90-degree exit taxiways. The exit taxiways are 30 feet wide and constructed of asphalt. The runway exit taxiways include:

- Taxiway A1 - located at the Runway 30 end (at south end of runway - displaced threshold);
- Taxiway A2 - located at the Runway 30 displaced threshold;
- Taxiway A3 - located approximately 775 feet from the Runway 30 end;
- Taxiway A4- located approximately mid-runway;
- Taxiway A5 - located approximately 660 feet from Runway 12 end; and
- Taxiway A6 -located at the Runway 12 end.

TAXILANES

The aircraft parking aprons and hangar areas at Ashland Municipal Airport are served by taxilanes that connect to Taxiway A. The main apron has eleven east-west taxilanes with direct connections to Taxiway A. The apron taxilanes access adjacent aircraft tiedowns, hangars, and the fueling area. An east-west taxilane extending from the north section of the main apron accesses three T-hangars and two conventional hangars located east of the FBO and airport access road.

Main Apron

The main apron at Ashland Municipal Airport supports aircraft parking, FBO operations, aircraft fueling, the aircraft wash rack, and provides access to adjacent tenant hangars. The main apron is located on the east side of the runway near the Runway 30 end and is approximately 1,500 feet long and 150 to 200 feet wide (varies). The main apron directly abuts approximately 1,200 feet of the south parallel taxilane and has two taxilane connections to the adjacent parallel taxiway (north end of apron). One of the north taxilane connections provides access through the apron to aircraft storage hangars that cannot be directly accessed from the main apron. The apron is constructed of asphalt and the pavement is in fair or satisfactory condition.

Airfield Pavement Condition

The Oregon Department of Aviation (ODA) manages the Pavement Evaluation/Maintenance Management Program (commonly referred to as the "PMP"), a program of pavement evaluation and maintenance for Oregon's general aviation airports. The PMP conducts on-site inspections on 3- to 4-year intervals. The PMP inspections assign a pavement condition index (PCI) for each pavement section using a scale of 0-100 (new pavement) based on a variety of visual assessment factors, pavement type, age, etc. The PCI is intended provide a general indication of pavement condition, where "0" is the worst (failed) and 100 is the best (good).

The airfield pavements at Ashland Municipal Airport reflect numerous projects dating back to approximately 1967. The entire runway received an asphalt overlay in 2011. Portions of the runway base and subbase were reconstructed during that project. The parallel taxiway, taxilane, and aprons are among the older pavements requiring rehabilitation. Based on the historical work detail contained in the PMP, the pavement thickness on the runway ranges from 3 to 5 inches; the parallel taxiway varies between 2 to 4 inches; and the aprons range from 3 to 4.5 inches.

The most recent PMP airfield pavement inspection for Ashland Municipal Airport was conducted in 2016. This inspection reflects recent airfield pavement maintenance or rehabilitation work, including a 2014 runway and parallel taxiway crack seal project and a 2011 runway rehabilitation project (3-inch asphalt overlay). The results from the 2016 on-site inspection are summarized in **Table 2-5** and depicted in **Figure 2-4**.

TABLE 2-5: SUMMARY OF AIRFIELD PAVEMENT CONDITION (2016 INPSECTION)

Section	Date	Work	2016 PCI	Condition
Runway 12/30				
R12AS (Sections 1-4)	2014 2011	Crack Seal 3" AC	94/96/94/93	Excellent
Taxiway A				
TAAS (Sections 1-5)	2014 2003	Crack Seal Slurry Seal	75/72/71/80/75	Fair
Exit Taxiways (Taxiways A1-A6)				
TA1AS (Sections 1-2)	2011	Crack Seal 1.25" AC	96/83	Excellent/Good
TA2AS (Sections 1-2)	2011	1.25" AC	91/56	Excellent/Fair
TA3AS (Sections 1-3)	2011	1.25" to 3" AC	83/90/14	Good/Poor
TA4AS (Sections 1-3)	2011	1.25" AC	88/98/75	Excellent/Fair
TA5AS (Sections 1-3)	2011	1.25" AC	91/100/72	Excellent/Fair
TA6AS (Sections 1-2)	2011	3" AC	92/70	Excellent/Fair
Main Apron				
A01AS-01	2014	Crack Seal	75	Fair
A01AS-02	2014	Crack Seal & Patching	70	Fair
A01AS-03	2014	Crack Seal & Patching	69	Fair
A01AS-04	2014	Crack Seal & Patching	60	Fair
Source: Oregon Department of Aviation, Pavement Evaluation/Maintenance Management Program 2016, Ashland Municipal Airport				

Figure 2-4: PCI Map

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Airport Lighting & Visual Navigational Aids

Table 2-6 summarizes airport lighting and visual aids at Ashland Municipal Airport.

TABLE 2-6: ASHLAND VISUAL NAVIGATIONAL AIDS (NAVAIDS)

General	
UNICOM/Common Traffic Advisory (CTAF) - 122.8 MHz	
Rotating Beacon (clear & green; Photocell Activated)	
(1) Lighted Wind Cone (Photocell Activated); (2) Unlighted Wind Cones	
SuperAWOS™ - 122.8 MHz	
Lighting/Visual NAVAIDs	**Runway 12/30**
MIRL	Yes - Pilot Controlled – CTAF
REIL	RWY 30 - Pilot Controlled – CTAF
PAPI	2-light - Operate Continuously Rwy 12 (P2L: 3.75 degree glide path) Rwy 30 (P2R: 4.00 degree glide path)

AIRPORT LIGHTING

Runway 12/30 is equipped with medium intensity runway edge lighting (MIRL) that includes edge fixtures and threshold lighting at both runway ends, and on the Runway 30 displaced threshold. Runway 30 is equipped with runway end identifier lights (REIL), which consist of two high intensity strobes that flash at a fixed interval when activated. The REIL is installed adjacent to the Runway 30 displaced threshold.

Both runway ends are equipped with visual guidance indicators (VGI) that project an unobstructed approach path to the runway threshold. The VGIs are two-bar precision approach slope indicators (PAPI). The PAPIs were installed in 2011 as part of a runway rehabilitation project and are located between the runway and parallel taxiway/taxilane.

The MIRL and REIL are controlled through a pilot controlled lighting (PCL) system, which is activated via the common traffic advisory frequency (CTAF) 122.8 MHz. The PAPIs operate continuously.

A white-green rotating beacon is located east of the runway adjacent to the FBO building. The beacon operates on a photocell switch between dusk and dawn and during other low-light conditions.

The airport has one lighted wind cone located in the segmented circle on the east side of the runway, near midfield. The wind cone lighting is activated by a photocell switch. Two unlighted wind cones are installed near the runway ends, on the east side.

AIRPORT WEATHER OBSERVATION

Ashland Municipal Airport has an on-site Super Automated Weather Observation System (SuperAWOS™) that provides 24-hour weather information. The SuperAWOS is located on the east side of the runway in the segmented circle. The SuperAWOS provides altimeter setting and visibility. The SuperAWOS is operated on an Automatic Unicom using frequency 122.8 MHz.

Landside Facilities

Ashland accommodates a variety of landside facilities on the east side of Runway 12/30 including aircraft storage and mixed-use hangars, the FBO building, aircraft fueling, aircraft parking, and the aircraft wash rack. **Figure 2-2** and **2-3**, presented earlier in this chapter depicts the existing airport buildings. **Table 2-7** summarizes existing aviation use buildings located at the airport.

TABLE 2-7: AIRPORT BUILDINGS

Building # as identified on Figure 2-3	Building Type	Building Ownership
395	T-hangar	Private
399	Hangar	Private*
403	FBO Building	City
405	Hangar	Private
407	Hangar	Private*
409	Hangar	Private*
411	Hangar	Private*
413	Hangar	Private*
415	Hangar	Private*
417	Hangar	Private*
419	Hangar	Private*
421	Hangar	Private*
423	Electrical Building	City
425	FBO Hangar	City
429	Commercial Hangar	Private
439	Commercial Hangar	Private
431	T-hangar (open door)	City
433	T-hangar/1 Commercial Hangar Unit	City
437	T-hangar	City

Note: *Reversionary became property of the city at the end of the initial lease term.

Figure 2-5 Airspace Classifications

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Airspace and Navigational Aids

AIRSPACE CLASSIFICATIONS

The FAA classifies airspace within the United States as "controlled" or "uncontrolled" with altitudes extending from the surface upward to 60,000 feet above mean sea level (MSL). Controlled airspace classifications include Class A, B, C, D, and E. Class G airspace is uncontrolled.

Aircraft operating within controlled airspace are subject to varying levels of positive air traffic control that are unique to each airspace classification. Requirements to operate within controlled airspace vary, with the most stringent requirements associated with very large commercial service airports in high traffic areas. Uncontrolled airspace is typically found in remote areas or is limited to a 700 or 1,200-foot AGL layer above the surface and below controlled airspace.

Figure 2-5 illustrates and describes the characteristics of FAA airspace classifications.

NAVIGATIONAL AIDS

A Navigational Aid (NAVAID) is defined by the FAA as "*any facility used in the aid of air navigation, including landing areas, lights, any apparatus or equipment for disseminating weather information, for signaling, for radio direction-finding, or for radio or other electronic communication, and any other structure or mechanism having similar purpose and controlling flight in the air or the landing or takeoff of aircraft.*"

Visual NAVAIDs located at Ashland Municipal Airport are described in a previous section of this chapter. There are no electronic NAVAIDs located on-site or in the immediate vicinity of Ashland Municipal Airport. The nearest electronic NAVAIDs in the area include the Medford NDB, located 15.5 NM northwest; the Rogue Valley VORTAC located 20.7 NM northwest; and the Montague NDB (Yreka) located 28.9 NM south-southeast. **Table 2-7** summarizes electronic navigational aids in the vicinity of Ashland Municipal Airport.

TABLE 2-7: NEARBY GROUND BASED NAVIGATION AIDS

Type	Name/Identifier	Frequency	Distance	Radial
NDB	Medford/MEF	356 kHz	15.5 NM	125°
VORTAC	Rogue Valley/OED	113.6 MHz	20.7 NM	128°
NDB	Montague/MOG	404 kHz	28.9 NM	329°

LOCAL AREA AIRSPACE STRUCTURE

Figure 2-6 depicts nearby airports, notable obstructions, special airspace designations, and instrument flight rules (IFR) routes in the vicinity of Ashland Municipal Airport, as identified on current FAA aeronautical charts.[6]

The nearest Low Altitude Enroute Instrument (Victor) Airway in the vicinity of Ashland Municipal Airport is V287, which passes north-south, approximately 2 nautical miles west of the airport (the Klama reporting point). The section of V287 north of Klama has a Minimum Enroute Altitude (MEA) of 8,000 feet above mean sea level (MSL) between Ashland and Medford. V287 south of Klama has a MEA of 12,000 feet MSL and a Minimum Obstruction Clearance Altitude (MOCA) of 9,800 feet MSL.

The instrument airways are designed to provide defined paths (fixed courses and minimum altitudes) for enroute aircraft that are clear of terrain and other potential hazards for aircraft operating without the benefit of visual contact. Aircraft transition between enroute and terminal airspace through the use of defined instrument approach and departure procedures.

Ashland is located in an area of Class G airspace that begins at the surface and extends upward to 700 feet MSL where it then becomes Class E airspace. An area of Class E that extends from the surface upward is located approximately 1.5 nautical miles west of Ashland Municipal Airport. These sections of Class E airspace are associated with Rogue Valley International – Medford Airport. Radio communication is not required for VFR operations in Class E airspace, although pilots are encouraged to use the common traffic advisory frequency (CTAF) when operating at the airport. Aircraft are required to obtain an ATC clearance prior to operating in Class E airspace during IFR conditions.

Instrument Procedures

There are no published instrument approach procedures at Ashland.

VFR TRAFFIC PATTERN

Runway 12 and 30 have standard left traffic patterns with a pattern altitude of 2,899.8 feet above mean sea level (MSL), which is approximately 1,015 feet above ground level (AGL). The runway traffic patterns at Ashland are depicted in **Figure 2-7**.

[6] Klamath Falls Sectional Chart and the IFR Enroute Low Altitude Chart (L-1/L-2)

Figure 2-6 Area Airspace

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Figure 2-7 Traffic Pattern

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Airport Support Facilities and Services

AIRCRAFT FUEL

The City of Ashland owns two aboveground double-wall aviation fuel tanks. These tanks provide storage for 100 low lead (100LL) aviation gasoline (AVGAS) and Jet-A (jet fuel). The tanks are equipped with a dispensing system which provides 24-hour credit card self-service access. The FBO manages the fueling operations, fuel purchases, and fuel sales. An airport tenant (Brim Aviation) owns and operates three mobile fuel storage tanks for 100LL and Jet-A. **Table 2-8** summarizes the aviation fuel storage tanks at the airport.

TABLE 2-8: AVIATION FUEL TANKS

Fuel Type	Tank Capacity (Gallons)	Location	Tank Ownership
100LL	12,000	Fuel Apron	City
Jet-A	10,000	Fuel Apron	City
Jet-A	6,000	Brim Aviation	Private
Jet-A	4,000	Brim Aviation	Private
Jet-A	3,800	Brim Aviation	Private
Note: Brim Aviation purchases 100LL through the FBO.			

FIXED BASE OPERATOR (FBO)

Ashland Municipal Airport has one FBO (Skinner Aviation) who leases the FBO building, apron, and fuel facilities from the City of Ashland. The FBO provides aircraft fuel, tiedowns, aircraft maintenance services, restrooms, and flight planning facilities. The FBO owner, Robert Skinner, also provides on-site airport management services to the City of Ashland.

PUBLIC RESTROOMS

Public restrooms are located in the FBO building. Several airport tenants also have restroom facilities in their hangars.

FENCING

Portions of the airport's property line is fenced with 6-foot chain link fencing. The section of fencing that extends along the east property line abutting Dead Indian Memorial Highway also has 3-strand barbed wire along the top. Additional chain link fencing is located along the airport entrance access road to the FBO building and vehicle parking area. Other portions of the airport property line have wire field fencing.

Two vehicle swing gates are located adjacent to access roads serving adjacent hangar areas. Pedestrian gates are located along the fence between the vehicle parking lot and the FBO building, and the main apron. There are no electronic or combination lock controls on the existing gates.

Vehicle Access and Parking

Vehicle access to Ashland Municipal Airport is provided by Ashland Street/Green Springs Highway 66 (OR-66) and Dead Indian Memorial Road, with two paved airport access road connections. U.S. Interstate 5 (I-5) Exit 14 (north and south) connects to Ashland Street. The main airport entrance road provides access to the FBO building, terminal area, public vehicle parking lot, and hangars. The second airport access road is located approximately 700 feet north of the main airport entrance and provides access to landside facilities and two adjacent residences (easements).

Public Protection

POLICE

The City of Ashland provides public safety protection for the airport. The City Police Department is located in downtown Ashland, approximately 3.3 miles northeast of the airport.

FIRE AND RESCUE

City of Ashland Fire District provides airport fire protection to the airport and has two fire stations located around the city. The nearest fire station is Fire Station 2 located 2.4 miles west of the airport on Ashland Street (OR-66). Fire Station 1 is located 3.8 miles west of the airport on Siskiyou Blvd (OR-99).

Utilities

Several utility providers serve the developed areas at Ashland Municipal Airport. The airport has water, sewer, electrical, natural gas, and telephone service. Refuse and recycling services are provided at the airport by Recology Ashland Sanitary Service. **Table 2-9** summarizes the current utilities and service providers at Ashland. **Figure 2-8** depicts the utility service on, and in the vicinity of the airport.

TABLE 2-9: AIRPORT UTILITIES AND SERVICE PROVIDERS

Utility	Service Provider
Water	City of Ashland
Sewer	City of Ashland
Electricity	Ashland Municipal Electric Utility
Natural Gas	Avista Natural Gas
Phone	Spectrum
Internet	Spectrum
Refuse	Recology Ashland Sanitary Service

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Figure 2-8 Utilities Map

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Population and Socioeconomic Data

Preliminary July, 1, 2017 population estimates prepared by Portland State University (PSU) indicate that Jackson County population is 216,900, up 1.5 percent from 2016. PSU estimates City of Ashland population is 20,700, up 0.4 percent from 2016. Jackson County includes 11 incorporated cities and 34 unincorporated communities. The county seat is Medford.

The top employment sectors for Jackson County include Health Care, Retail and Manufacturing, and Government.[7] The top employment sectors in Ashland are Health Care & Social Assistance, Leisure & Hospitality, and Retail Trade.[8]

Additional population and economic data will be presented in the updated Aviation Activity Forecasts chapter to support the analysis.

Land Use Planning and Zoning

The City of Ashland has land use jurisdiction for the airport; however, some of the runway protection areas and the Part 77 surfaces extend beyond city limits and the Ashland urban growth boundary into unincorporated Jackson County. The City of Ashland Part 18 Land Use Code establishes the zoning guidelines for airport land. The airport is zoned Employment District (E-I).[9] The Employment District is "*designed to provide for a variety of uses such as office, retail, or manufacturing in an aesthetic environment and having a minimal impact on surrounding uses.*" The airport has been zoned E-I since prior to the 2001 Airport Layout Plan Report, but has no specific references to airport activities found in the description.

Both the City of Ashland and Jackson County have created Airport Overlay Zoning to protect Ashland Municipal Airport. The City of Ashland Airport Overlay (A)[10] protects the FAR Part 77 surfaces for the runway and provides regulations and controls on buildings or development within the zone. Jackson County has established an Airport Approach (AA) and Airport Concern (AC) overlay for airports and heliports in the county. It establishes protective zones and height limitations to protect the FAR Part 77 surfaces of the runway.

A detailed description of current zoning, airport overlay zoning, and land use will be presented in the Airport Land Use (Chapter 8). **Figure 2-9** depicts the current zoning for the City of Ashland. **Figure 2-10** illustrates local land use jurisdictions with responsibilities to protect the FAR Part 77 airspace associated with Runway 12/30 at Ashland Municipal Airport.

[7] Jackson County Economy (http://jacksoncountyor.org/County/About-Us).
[8] Ashland Economic Opportunities Analysis (April 2007) ECONorthwest
[9] City of Ashland - Part 18 Land Use Code (Employment District)
[10] City of Ashland - Part 18 Land Use Code (Section 18.3.7 Airport Overlay)

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Figure 2-9 City of Ashland Zoning Map

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Figure 2-10 Land Use Jurisdiction (Part 77 Coverage) Map

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Airport Environmental Inventory

INTRODUCTION

An environmental review was conducted as a component of the master plan to identify physical or environmental conditions of record, which may affect the recommended improvements at Ashland Municipal Airport. This review included land use, water resources (wetlands, stormwater), species of concern, federal lands, and essential fish habitat.

The scope of work for this element is limited to compiling, reviewing, and briefly summarizing information of record from applicable local, federal, and state sources for the airport site and its environs. The environmental memorandum is included in **Appendix A** and is briefly summarized below.

PROTECTED SPECIES AND HABITAT

The U.S. Fish and Wildlife (USFWS) and the National Marine Fisheries Service websites were queried to determine any species or critical habitat that is protected under the Endangered Species Act could occur in the vicinity of the airport. The gray wolf (endangered), the northern spotted owl (threatened) and the gentner's fritillary (endangered) have potential to occur within or near the airport.

WETLANDS

Wetlands are under the jurisdiction of both Oregon Department of State Lands (DSL) and the US Army Corps of Engineers (Corps) and are protected under the State of Oregon Removal Fill Law and Section 404 of the Clean Water Act.

A wetland inventory was conducted for the City of Ashland and adopted by DSL in 2005. The LWI indicates that one potential wetland could occur on the northeast corner of airport property, on the east side of Emigrant Creek. The LWI also identified Emigrant Creek and Neil Creek as occurring on airport property.

FLOODPLAINS

The airport is located within the floodplains of both Emigrant Creek and Neil Creek. The development standards for floodplains are regulated under Chapter 18.3.10.080 of the Ashland Municipal code. According to the City's Flood Insurance Rate Map (FIRM), there is approximately seven percent of airport property is located in flood zone AE, the regulatory floodway of Emigrant Creek, which is an area determined by base flood elevations to have a one percent annual chance of flooding. In addition, a small portion of the airport's western boundary is within the FEMA floodplain of Neil Creek.