Samantha Peterson

From: Samantha Peterson
Sent: Friday, May 20, 2022 11:07 AM
To: benjamin.J.mello; Key, Kathryn E (FAA)
Cc: PECK Heather; BEACH Anthony; CLARK Cathy RB; David Miller; W. Matt Rogers; Brandy Steffen; Mike Dane; Mark Steele
Subject: Aurora AMP - Working Paper #1 - Request for FAA Review
Attachments: CWE to FAA_Working Paper #1 Data Revisions (5.19.2022).pdf

Good morning Ben,

This is a formal request for FAA review of Working Paper #1 including draft Chapter 3, Aviation Activity Forecasts. We have prepared a consolidated package with a memorandum outlining the updates to Working Paper #1 based on PAC review, as well as the received PAC letters including the Planning Team's responses. Additionally, we've included the PAC and Open House meeting summaries that include PAC comments with Planning Team responses.

The attached review package will be uploaded to the project website for public information.

Please let us know if you have any questions as you review Working Paper #1.

Thank you,

CENTURY WEST
ENGINEERING
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Memo

To:	**Ben Mello, FAA SEA-ADO**
From:	**Century West Engineering**
Date:	**5/19/2022**
Project:	**Aurora Airport Master Plan**
Re:	**Corrections to Working Paper #1 (Chapters 1, 2, and 3)**

This memorandum is to acknowledge the following changes to draft Working Paper #1 and a request for official FAA review of the Aviation Activity Forecasts.

CHAPTER 2, EXISTING CONDITIONS

A summary of the 2012 Airport Master Plan study, fuel services, and emergency services was added to the draft chapter. Below is a copy of the additional sections in the draft chapter.

CHAPTER 3, AVIATION ACTIVITY FORECASTS

In a letter from the City of Wilsonville dated April 12, 2022, "RE: Comments on Draft 2022 Aurora State Airport Master Plan Chapters 1-3", the City noted a discrepancy between annual TFMSC operations numbers listed in the 2019 Constrained Operations Runway Justification Study, and those listed in Working Paper #1 of the 2022 Airport Master Plan. In response to this comment Century West investigated and identified a procedural error in how the data were queried from the TFMSC website that resulted in monthly operations totals being split between two or more records in the TFMSC data output files. The split monthly totals resulted in additional operations being generated in the data normalization calculations. We have updated our procedures, and redownloaded and renormalized the operations data.

As the preferred operations forecast is based on a 20-year trend derived from TFMSC data, that forecast model was impacted and has been revised. The revised forecast has a compound annual growth rate (CAGR) of 2.36% (rounded to 2.4% in the text and tables) compared to 2.30% as previously reported. The increased growth rate resulted in 121,253 annual operations in the year 2041, an increase of 1,344 operations (+1.1%) over the previously reported 119,909 operations.

While investigating the City's comment, the planning team also noted differences in Airport Reference Code (ARC) classifications assigned to six aircraft in the two studies. The previous version of Working Paper #1 as well as the 2019 study used a combination of the TFMSC, the FAA Aircraft Characteristics

Database (https://www.faa.gov/airports/engineering/aircraft_char_database/), and individual aircraft flight manuals to determine the ARCs of these specific aircraft. However, the two studies did not assign ARCs to these aircraft consistently. In the interest of simplicity and transparency, the planning team has elected to instead use a single data source, TFMSC, to determine the ARC of individual aircraft.

The revised historical TFMSC operations data, and forecasted operations projections impacted several tables and figures included in Chapter 2 and Chapter 3 of Working Paper #1. The tables and figures affected are listed on the following pages with the updated information provided as presented in the revised Working Paper #1. Sources and notes for the impacted tables will be maintained as previously shown in the updated working paper.

After further review, Table 3-8 was removed from the revised *Chapter 3, Aviation Activity Forecasts* in Working Paper #1, as the summary of a select list of aircraft is not pertinent to the forecast discussion which should look at the fleet as a whole. This table is relevant to the Facility Requirements discussion in *Chapter 4, Facility Goals and Requirements*, and may be included in that chapter instead. Since the table was removed, the tables previously numbered 3-9 through 3-21 have been renumbered 3-8 through 3-20 to reflect the change.

It should be noted that the above-discussed revisions do not impact the selection of the design aircraft (C-II Jet similar to Canadair 600). The revised data continue to show more than 500 annual operations by AAC C and D aircraft, and ADG II or larger aircraft.

CHAPTER 2 EXISTING CONDITIONS

2012 Aurora State Airport Master Plan Update

The 2012 Airport Master Plan Update (AMPU) updated the 2000 Airport Master Plan with the goal of assessing the Airport's role and capabilities and identifying a plan for development needed to accommodate anticipated activity levels over the 20 year planning horizon. The 2012 AMPU included analysis of the following issues:

- Runway Extension
- Air Traffic Control Tower (ATCT)
- Impact of Airport Expansion on Surrounding Areas
- Calm Wind Runway Change
- Precision Instrument Approach
- Helicopter Operations (located on public property)

The preferred alternative included the following improvements:

- Construction of an ATCT
- A 1,000' runway and parallel taxiway extension to the south
- Development of additional hangar and apron areas on ODAV property
- Property acquisitions and avigation easements

The validity of the AMPU (Aurora Master Plan Update, 2012) was recently questioned as part of a petition for review made to the Oregon Land Use Board of Appeals (LUBA). In that land use action, the petitioners sought review of a 2019 Oregon Aviation Board (OAB) Decision made pursuant to OAR 138-103-0055 in which the Board found that the AMPU was compatible with the Marion County Comprehensive Plan. Petitioners also filed in state Circuit Court as a precautionary measure in the event LUBA dismissed the matter for lack of jurisdiction. LUBA did conclude that it lacked jurisdiction to hear this matter, but was overturned on appeal on that issue. Following the instructions of the Court of Appeals, LUBA found that it did have jurisdiction and remanded the decision back to OAB, finding that it could not review the matter until certain records from the 2012 adoption process were provide to LUBA. The circuit court cases remain pending but are expected be dismissed or otherwise resolved consistent with LUBA's order of remand.

Fuel Services

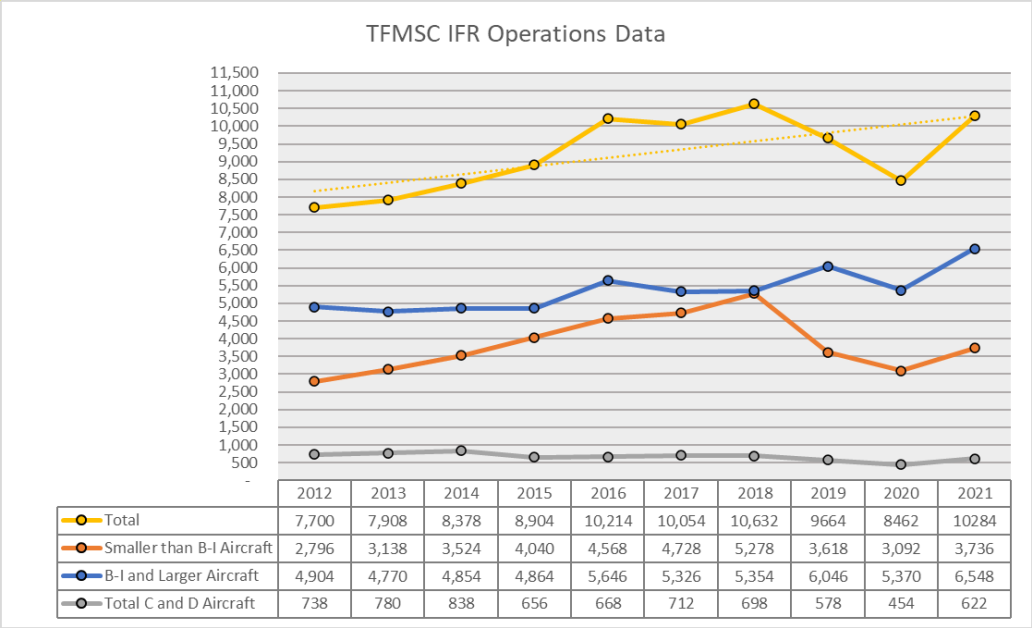
On airport fuel sales are provided by Atlantic Aviation, which has an above-ground 12,000-gallon aviation gasoline (AVGAS/100LL) tank and an above-ground 20,000-gallon Jet A tank located on leased ODAV property immediately southwest of the Atlantic Aviation building. Atlantic Aviation operates two mobile fuel trucks to ferry fuels from their tanks to aircraft parked on the apron. Additional off-airport fuel storage and service is available on surrounding private properties with TTF agreements. There are no known underground fuel storage tanks on airport property.

Emergency Services

Marion County Sheriff Department provides emergency service and response to the Aurora State Airport. A single dedicated deputy is assigned to the Aurora community, which includes the Airport. The Aurora Fire District provides fire suppression, rescue, emergency medical response, and hazardous material response. The nearest district fire station is in the City of Aurora, less than two miles from the Airport. The Aurora Airport Water Control District was formed in 2002 and installed a 247,800-gallon fire suppression system to assist the Aurora Fire District in protecting the Airport in the event of fire.

Figure 2-3 TFMSC IFR Operations Data

Updated to reflected revised TFMSC numbers



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	7,700	7,908	8,378	8,904	10,214	10,054	10,632	9664	8462	10284
Smaller than B-I Aircraft	2,796	3,138	3,524	4,040	4,568	4,728	5,278	3,618	3,092	3,736
B-I and Larger Aircraft	4,904	4,770	4,854	4,864	5,646	5,326	5,354	6,046	5,370	6,548
Total C and D Aircraft	738	780	838	656	668	712	698	578	454	622

Figure 3-5 Operations Forecast Models

Updated to reflect corrected TFMSC operations numbers used to develop growth rate.

Growth rate increased to 2.4%

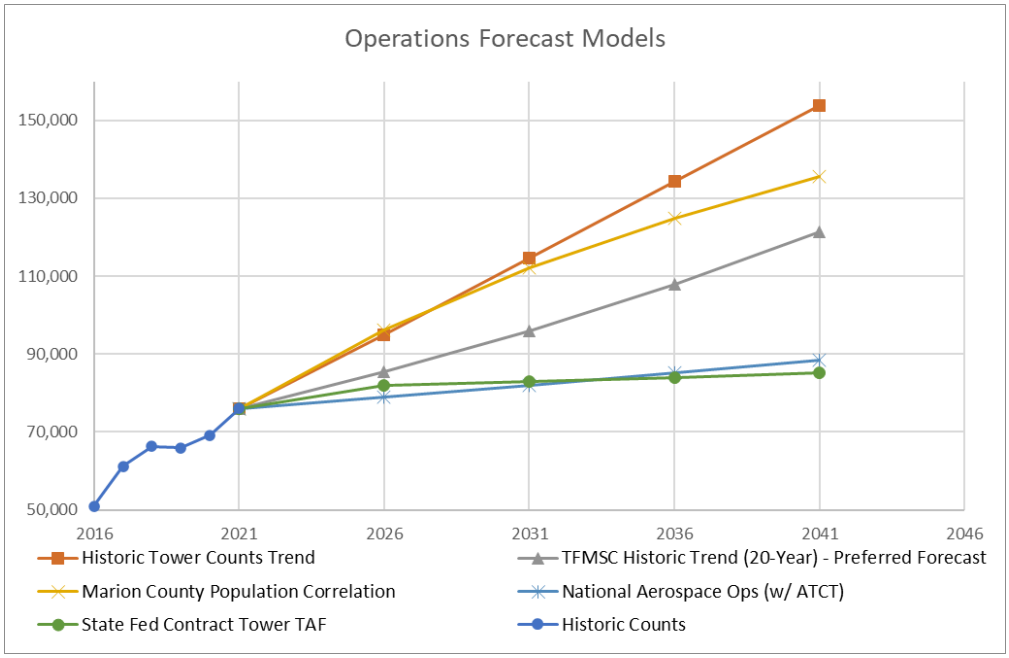


Table 3-7 Aurora State Airport Instrument Flight Operations

Updated to reflected revised TFMSC numbers and TFMSC ARC classifications

Historical operations counts for B-II, C-I, C-II, and D-III differ from counts presented in the 2019 study due to the change in ARC classification source.

Added row to summarize ADG II and larger operations

TFMSC IFR OPERATIONS BY ADG - Calendar Year Data											
Airport Reference Code (ARC)	2012 Operations	2013 Operations	2014 Operations	2015 Operations	2016 Operations	2017 Operations	2018 Operations	2019 Operations	2020 Operations	2021 Operations	Average Annual Operations
A-I	2,372	2,638	2,414	2,482	2,750	2,752	3,428	2,458	2,162	2,334	2,579
A-II	410	494	1,108	1,554	1,814	1,966	1,844	1,158	930	1,398	1,268
A-III	14	6	2	4	4	10	6	2	0	4	5
A-IV	0	0	0	0	0	0	0	0	0	0	0
B-I	1,496	1,368	1,422	1,194	1,198	1,126	1,134	1,190	1,024	1,154	1,231
B-II	2,222	2,232	2,214	2,620	3,270	3,110	3,146	3,798	3,448	4,166	3,023
B-III	0	0	0	2	0	2	4	8	2	0	2
B-IV	0	0	0	0	0	0	0	0	0	0	0
C-I	360	374	514	438	340	306	274	286	170	274	334
C-II	348	378	294	208	316	368	358	226	242	242	298
C-III	18	10	6	8	0	14	50	54	10	0	17
C-IV	0	0	0	0	0	0	2	0	0	2	0
C-V	0	0	0	0	0	0	0	0	0	0	0
D-I	2	8	16	0	4	10	8	4	2	14	7
D-II	4	0	4	0	2	6	2	8	26	84	14
D-III	6	10	4	2	6	8	4	0	4	6	5
D-IV	0	0	0	0	0	0	0	0	0	0	0
D-V	0	0	0	0	0	0	0	0	0	0	0
Unknown	448	390	380	392	510	376	372	472	442	606	439
Total	**7,700**	**7,908**	**8,378**	**8,904**	**10,214**	**10,054**	**10,632**	**9,664**	**8,462**	**10,284**	**9,220**
Operations by AAC C and D Aircraft	**738**	**780**	**838**	**656**	**668**	**712**	**698**	**578**	**454**	**622**	**674**
Operations by ADG II and Larger	**3,022**	**3,130**	**3,632**	**4,398**	**5,412**	**5,484**	**5,416**	**5,254**	**4,662**	**5,902**	**4,631**

Table 3-8 Historical TFMSC Activity by ARC (Select Jets) (REMOVED)

This table has been removed from Working Paper #1 since it does not add relevant information to the forecast discussion and the information presented fits better in the Facility Requirements discussion.

Since this table was specifically referenced in the City's comments, the updated data are presented below to demonstrate that the comments were addressed. However, it is not included in the revised Working Paper #1 and is included in this memo only for the sake of transparency and for FAA reference.

The 2018 operations for the C560 presented in the revised table show two more operations for that aircraft compared to the 2019 Study (706 vs 704). We believe this is due to a typographical error in the 2019 study, as that table column was manually updated in the report when the complete 2018-year data became available.

TFMSC IFR Data - Select Jet Aircraft with Maximum Certificated Takeoff Weight of More than 12,500 Pounds and Select Jet Aircraft over 60,000 Pounds														
	ARC	Aircraft Based at UAO	Aircraft Designator	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Average Annual Operations
Cessna 550 Citation	B-II	x	C550	210	134	162	224	260	158	212	174	138	162	183
Cessna 560 Citation	B-II	x	C560	362	496	460	580	688	772	706	618	546	622	585
Cessna 650 Citation	B-II	x	C650	90	90	118	144	118	114	98	68	66	42	95
Cessna 680 Citation	B-II	x	C680	64	52	68	72	64	90	138	150	138	250	109
Cessna 750 Citation	B-II		C750	60	74	90	94	90	94	104	92	84	38	82
Falcon 20	B-II	x	FA20	90	84	28	14	98	74	76	68	66	82	68
Falcon 2000	B-II	x	F2TH	2	14	6	4	6	4	34	130	108	346	65
Falcon 50	B-II	x	FA50	10	18	96	220	310	316	276	284	216	302	205
Falcon 900	B-II		F900	180	144	48	8	54	80	68	100	26	16	72
Hawker Horizon	B-II		HA4T	2	2	2	0	0	0	0	2	2	6	2
Phenom 300	B-II	x	E55P	14	102	96	92	86	122	56	80	256	430	133
Hawker 800	C-I	x	H25B	224	210	310	118	42	28	34	20	8	32	103
Lear 31	C-I		LJ31	4	2	0	0	6	54	92	110	32	22	32
Lear 45	C-I	x	LJ45	110	148	180	236	240	208	110	136	122	204	169
Lear 55	C-I		LJ55	0	2	0	0	2	0	4	2	0	0	1
Lear 60	C-I	x	LJ60	2	4	10	82	36	14	30	14	6	10	21
Astra 1125	C-II		ASTR	178	152	164	114	160	162	96	14	0	4	104
Challenger 300	C-II	x	CL30	32	90	64	72	78	104	88	78	62	54	72
Challenger 600	C-II	x	CL60	126	122	36	12	64	80	58	52	90	68	71
Embraer ERJ 135	C-II		E135	0	4	6	0	2	2	0	0	0	0	1
Galaxy 1126	C-II		GALX	8	10	16	0	2	4	0	4	2	2	5
Gulfstream 150	C-II		G150	2	0	0	2	2	6	80	22	4	2	12
Lear 75	C-II		LJ75	0	0	0	0	4	10	12	0	2	4	3
Bombardier Global Express*	C-III		GLEX	18	10	4	8	0	14	50	52	10	0	17
Lear 35	D-I		LJ35	2	8	16	0	4	6	8	4	0	12	6
Gulfstream IV/G400*	D-II		GLF4	4	0	4	0	2	6	2	8	26	84	14
Gulfstream V/G500*	D-III		GLF5	6	10	4	2	0	4	2	0	4	6	4
Gulfstream VI/G600*	D-III		GLF6	0	0	0	0	6	4	2	0	0	0	1
Total				**1800**	**1982**	**1988**	**2098**	**2424**	**2530**	**2436**	**2282**	**2014**	**2800**	**2235**
B-II				1084	1210	1174	1452	1774	1824	1768	1766	1646	2296	1599
B-III				0	0	0	0	0	0	0	0	0	0	0
C-I				340	366	500	436	326	304	270	282	168	268	326
C-II				346	378	286	200	312	368	334	170	160	134	269
C-III				18	10	4	8	0	14	50	52	10	0	17
D-I				2	8	16	0	4	6	8	4	0	12	6
D-II				4	0	4	0	2	6	2	8	26	84	14
D-III				6	10	4	2	6	8	4	0	4	6	5
Operations by AAC C and D Jets				716	772	814	646	650	706	668	516	368	504	636
Operations by ADG II and III Jets				1458	1608	1472	1662	2094	2220	2158	1996	1846	2520	1903

Table 3-14 Aircraft Operations Forecast Models (Previously Table 3-15)

Updated to reflect revised forecast numbers

Operations Forecasts						
	CAGR	**2021**	**2026**	**2031**	**2036**	**2041**
Historic Tower Counts Trend	3.6%	76,028	95,039	114,646	134,254	153,862
TFMSC Historic Trend (20-Year) - Preferred Forecast	**2.4%**	**76,028**	**85,438**	**96,013**	**107,898**	**121,253**
Marion County Population Correlation	2.9%	76,028	96,244	112,162	124,981	135,506
National Aerospace Ops (w/ ATCT)	0.8%	76,028	78,939	81,966	85,114	88,388
State Fed Contract Tower TAF	0.6%	76,028	81,924	82,972	84,046	85,151

Table 3-15 Operations Fleet Mix (Previously Table 3-16)

Updated to reflect revised operations forecasts

Operations Fleet Mix Forecast					
Aircraft Type	**2021**	**2026**	**2031**	**2036**	**2041**
Total Airport Operations	**76,028**	**85,438**	**96,013**	**107,898**	**121,253**
Single Engine*	60,823	67,838	75,562	84,377	93,971
Multi Engine Piston	760	769	768	647	606
Turbo Prop	3,041	3,588	4,321	5,071	6,063
Jet	5,322	6,408	7,681	9,171	10,913
Helicopter	6,082	6,835	7,681	8,632	9,700
Fleet Mix Percentages					
Single Engine*	80.0%	79.4%	78.7%	78.2%	77.5%
Multi Engine Piston	1.0%	0.9%	0.8%	0.6%	0.5%
Turbo Prop	4.0%	4.2%	4.5%	4.7%	5.0%
Jet	7.0%	7.5%	8.0%	8.5%	9.0%
Helicopter	8.0%	8.0%	8.0%	8.0%	8.0%

* *Includes Experimental/LSA*

Table 3-16 Local and Itinerant Activity (Previously Table 3-17)

Updated to reflect revised operations forecast

Local and Itinerant Activity					
Aircraft Operations	**2021**	**2026**	**2031**	**2036**	**2041**
Itinerant					
Itinerant Air Taxi	2,006	2,254	2,533	2,847	3,199
Itinerant GA	36,390	40,904	45,977	51,677	58,083
Itinerant Military	79	79	79	79	79
Itinerant Total	38,475	43,237	48,589	54,603	61,361
Local					
Local GA	37,488	42,136	47,360	53,230	59,826
Local Military	65	65	65	65	65
Local Total	37,553	42,201	47,425	53,295	59,891
Total Operations	**76,028**	**85,438**	**96,013**	**107,898**	**121,253**

Table 3-17 Aircraft Operations Peaking (Previously Table 3-18)

Updated to reflect revised operations forecast numbers

Peak Operations					
	2021	**2026**	**2031**	**2036**	**2041**
Annual Operations	76,028	85,438	96,013	107,898	121,253
Peak Month Operations (11%)	8,363	9,398	10,561	11,869	13,338
Design Day Operations (Average Day in Peak Month)	274	308	346	389	437
Busy Day Operations (Assumed 150% of design day)	411	462	519	584	656
Design Hour Operations (Assumed 20% of design day)	55	62	69	78	87

Table 3-19 Forecast Summary (Previously Table 3-20)

Updated to reflect revised operations forecast

ADG and AAC group forecasts were updated to use preferred operations forecast growth rate (2.4%).

Forecast Summary						
	CAGR	**2021**	**2026**	**2031**	**2036**	**2041**
Based Aircraft						
Single Engine*	0.9%	216	229	240	250	259
Multi Engine Piston	0.0%	6	6	6	6	6
Turbo Prop	1.1%	13	14	15	15	16
Jet	2.3%	36	40	45	50	56
Helicopter	1.4%	10	11	11	12	13
Total Based Aircraft	**1.1%**	**281**	**300**	**317**	**333**	**350**
Aircraft Operations						
Itinerant						
Itinerant Air Taxi	2.4%	2,006	2,254	2,533	2,847	3,199
Itinerant GA	2.4%	36,390	40,904	45,977	51,677	58,083
Itinerant Military	0.0%	79	79	79	79	79
Itinerant Total	2.4%	38,475	43,237	48,589	54,603	61,361
Local						
Local GA	2.4%	37,488	42,136	47,360	53,230	59,826
Local Military	0.0%	65	65	65	65	65
Local Total	2.4%	37,553	42,201	47,425	53,295	59,891
Total Operations	**2.4%**	**76,028**	**85,438**	**96,013**	**107,898**	**121,253**
Aircraft Operations Fleet Mix						
Single Engine*	2.1%	60,823	67,838	75,562	84,377	93,971
Multi Engine Piston	-1.2%	760	769	768	647	606
Turbo Prop	3.5%	3,041	3,588	4,321	5,071	6,063
Jet	3.6%	5,322	6,408	7,681	9,171	10,913
Helicopter	2.3%	6,082	6,835	7,681	8,632	9,700
Total Operations	**2.4%**	**76,028**	**85,438**	**96,013**	**107,898**	**121,253**
Operations By C-II (Critical Aircraft)	2.4%	242	272	306	343	386
Operations by AAC C & D	**2.4%**	**622**	**699**	**785**	**883**	**992**
Operations by ADG II & Larger	**2.4%**	**5,902**	**6,632**	**7,452**	**8,374**	**9,410**
Instrument Operations	**2.4%**	**9,658**	**10,853**	**12,196**	**13,390**	**15,402**

* Includes Experimental/LSA

Table 3-20 Airport Planning and TAF Forecast Comparison (Previously Table 3-21)

Updated to reflect revised operations forecast.

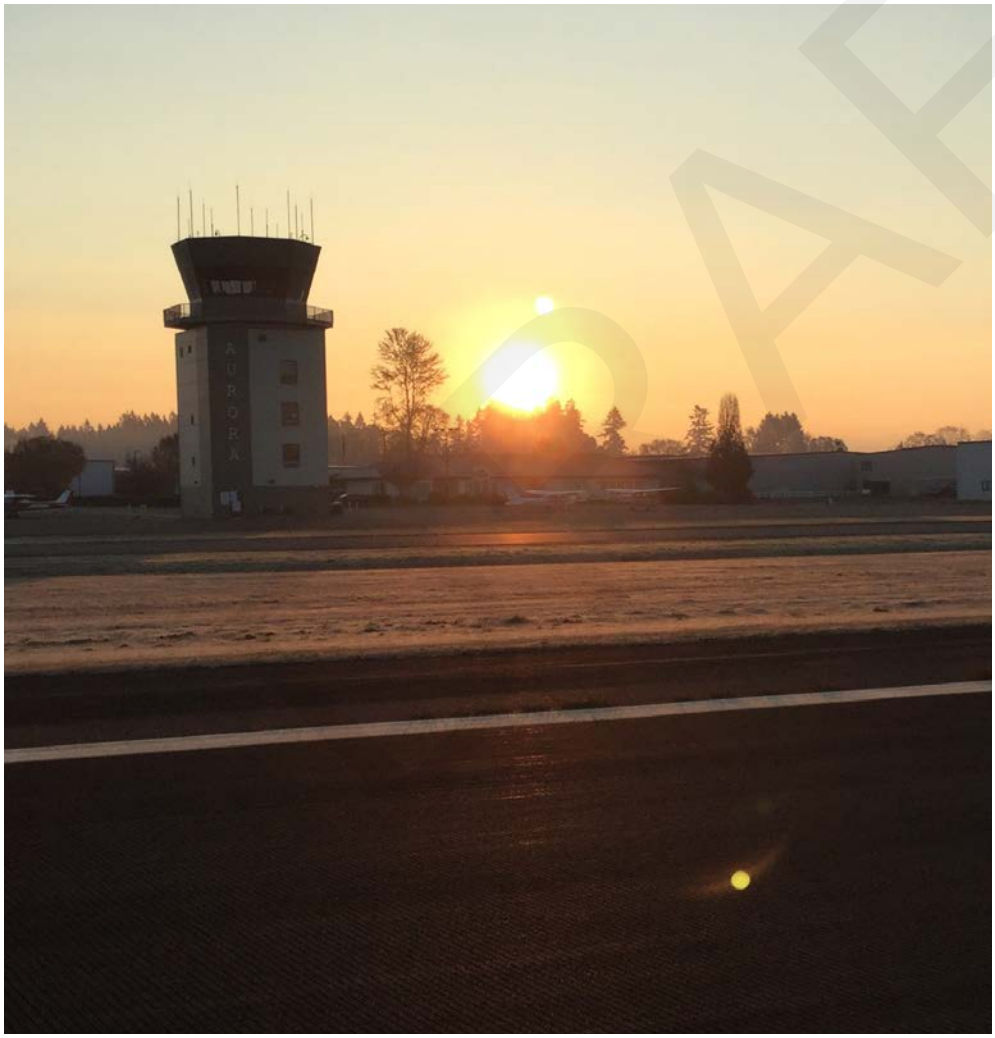
Airport Planning and TAF Forecast Comparison				
	Year	Airport Forecast	TAF	AF/TAF (% Difference)
Passenger Enplanements				
Base yr.	2021	0	0	0.0%
Base yr. + 5yrs.	2026	0	0	0.0%
Base yr. + 10yrs.	2031	0	0	0.0%
Base yr. + 15yrs.	2036	0	0	0.0%
Commercial Operations				
Base yr.	2021	2,006	1,191	68.4%
Base yr. + 5yrs.	2026	2,254	1,731	30.2%
Base yr. + 10yrs.	2031	2,533	1,848	37.1%
Base yr. + 15yrs.	2036	2,847	1,973	44.3%
Total Operations				
Base yr.	2021	76,028	64,035	18.7%
Base yr. + 5yrs.	2026	85,438	65,371	30.7%
Base yr. + 10yrs.	2031	96,013	66,303	44.8%
Base yr. + 15yrs.	2036	107,898	67,262	60.4%
Note: TAF data is on a U.S. government fiscal year basis (October through September).				

AURORA STATE AIRPORT

DRAFT AIRPORT MASTER PLAN

Aurora, OR
May 19, 2022 (Updated)

Working Paper No. 1 - Version 2



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Runway 17 Looking South – Source: Century West Engineering

Chapter 1

Introduction

The Oregon Department of Aviation (ODAV) is preparing an Airport Master Plan (AMP) for Aurora State Airport (Airport) in cooperation with the Federal Aviation Administration (FAA) to define the Airport's needs for the next 20 years. The Airport Master Plan will provide specific guidance to maintain a safe and efficient airport that is economically, environmentally, and socially sustainable.

A glossary of common aviation terminology and list of acronyms is provided in **Appendix 1**.

Project Purpose and Need

The purpose of the Airport Master Plan is to define the current, short-term, and long-term needs of the Airport through a comprehensive evaluation of facilities, conditions, and 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 of affecting the planning, development, and operation of the Airport. The FAA requires airports to maintain current planning as conditions change. This Airport Master Plan will address changing local conditions, current FAA standards, and trends within the aviation industry.

Project Funding

Funding for the Airport Master Plan is being provided through an FAA Airport Improvement Program (AIP) grant (AIP grant 3-41-004-022; $994,764). The AIP is a dedicated fund administered by FAA with the specific purpose of maintaining and improving the nation's public-use airports. The AIP is funded exclusively through fees paid by users of general aviation and commercial aviation. This project received 100% funding from the FAA, which includes COVID recovery funds. No local match was required.

100% FAA Funded Project

Total: $994,764

Goals of the Airport Master Plan

The primary goal of the master plan is to provide the framework and vision needed to define future facility needs at Aurora State Airport. The FAA sets out goals and objectives each master plan should meet to ensure future development will cost-effectively satisfy aviation demand and consider potential environmental and socioeconomic impacts.

Goal 1: Define the vision for the Airport to effectively serve airport users and the region. Assess known issues including air traffic control, runway length, ability to accommodate development, auto parking, fencing, and land use to develop a realistic, sustainable plan to improve the Airport.

Goal 2: Document existing activity, condition of airfield facilities, and policies that impact airport operations and development opportunities.

Goal 3: Forecast future activity based on accepted methodology.

Goal 4: Evaluate facilities and conformance with applicable local, state, and FAA standards.

Goal 5: Identify facility improvements to address design conformance issues and accommodate demand.

Goal 6: Identify potential environmental and land use requirements that may impact development.

Goal 7: Explore alternatives to address facility needs. Work collaboratively with all stakeholders to develop workable solutions to address needs.

Goal 8: Develop an Airport Layout Plan to graphically depict proposed improvements consistent with FAA standards as a road map to future development. Prepare a supporting Capital Improvement Plan to summarize costs and priorities.

Goal 9: Provide recommendations to improve land use and zoning oversight of the Airport to remove barriers to appropriate growth at the Airport.

Goal 10: Summarize the vision and plan for the Airport in the Airport Master Plan report.

Source: FAA with Century West airport-specific content.

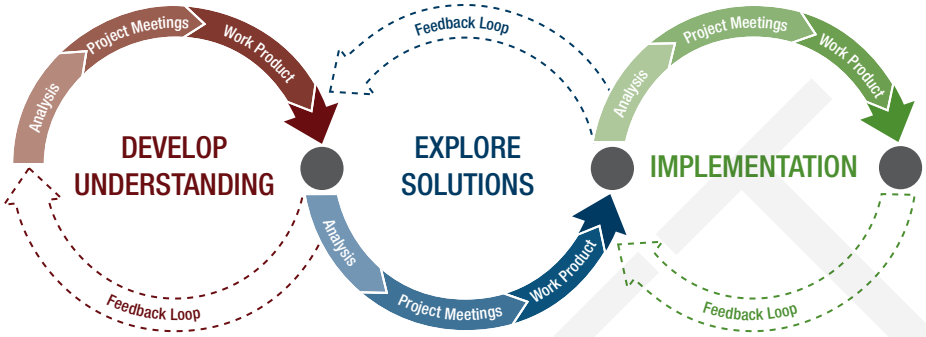
THE FAA ROLE IN THE AIRPORT MASTER PLAN

FAA *Advisory Circular (AC) 150/5070-6B Airport Master Plans* defines the specific requirements and evaluation methods established by FAA for the study. The guidance in this AC covers planning requirements for all airports, regardless of size, complexity, or role. However, each master plan study must focus on the specific needs of the airport for which a plan is being prepared.

The recommendations contained in an airport master plan represent the views, policies and development plans of the airport sponsor and do not necessarily represent the views of the FAA. Acceptance of the master plan by the FAA does not constitute a commitment on the part of the United States to participate in any development depicted in the plan, nor does it indicate that the proposed development is environmentally acceptable in accordance with appropriate public law. The FAA reviews all elements of the master plan to ensure that sound planning techniques have been applied. However, the FAA only approves the Aviation Activity Forecasts and Airport Layout Plan.

Planning Process

The three-phase planning process is designed to provide multiple feedback loops intended to maintain the flow of information and ideas among the community and project stakeholders and ultimately maximize public involvement.



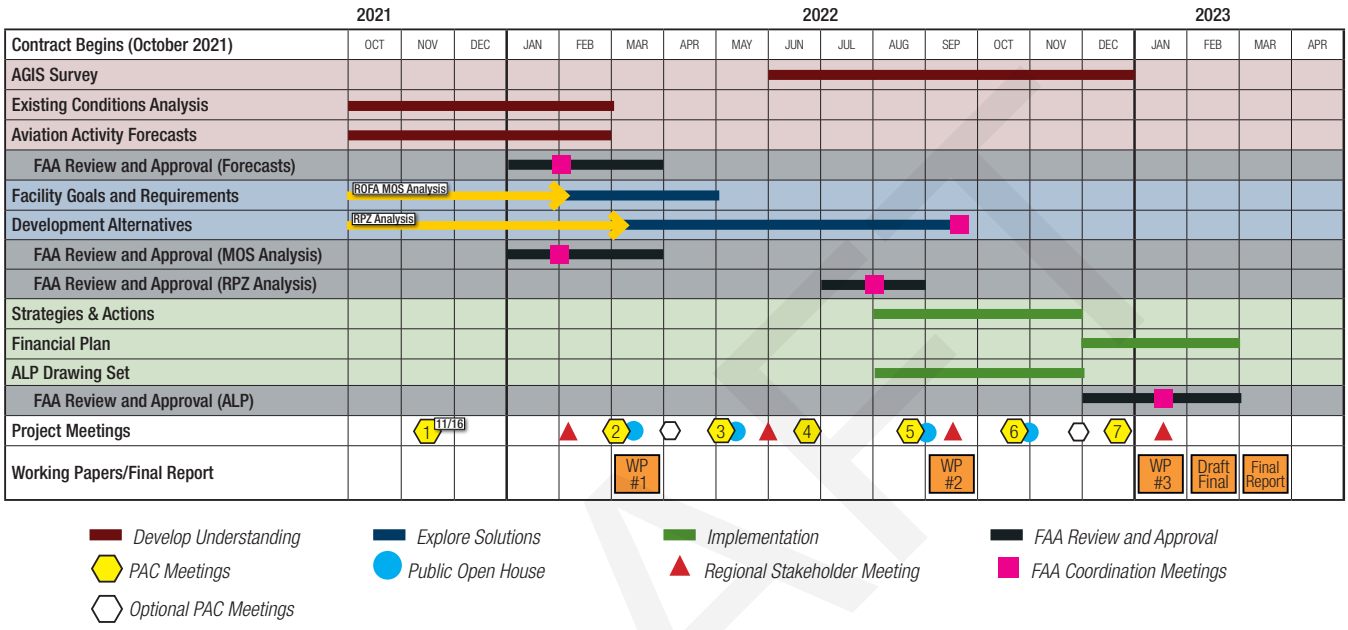
Framework of the Airport Master Plan

The framework of the Airport Master Plan provides a clear structure to inform and steer future planning decisions and serve as a tool to guide a process that allows the plan to take shape through flexibility, iteration, and adaptation. The framework is based upon an airport-urban interface model intended to analyze the regional setting of the Airport, its landside elements and airside elements, as well as the management and administration functions associated with the Airport. The framework provides guidance while being flexible enough to adapt to changing conditions to maximize opportunities to develop understanding, explore solutions, and implement the preferred development alternatives for the Airport and adjacent urban and rural environments.

	Regional Setting	Airside Elements	Landside Elements	Airport Administration
Develop Understanding	Location & Vicinity Socio-Economic Data Airport Role Airport History Area Airports Context Airport Operations Applicable Planning Studies Environmental Data Local Surface Transportation Land Use/Zoning	Area Airspace Approach Procedures FAA ATCT Runway/Helipad Taxiways/Taxilanes Aprons/Tiedowns Pavement Condition FAA Design Standards Support Facilities	General Aviation (GA) Terminal Areas Through-the-fence (TTF) Agreements Hangars Airport Surface Roads Vehicle Parking Airport Fencing Utilities	Airport Ownership & Management Airport Financials Airport Rates and Charges Local Codes and Regulations Oregon Aviation Laws FAA Compliance Overview
Explore Solutions				
Implementation				

Project Schedule

The Aurora State Airport Master Plan schedule is expected to occur over 18 months, Phase 1 – Develop Understanding will take approximately five months; Phase 2 – Explore Solutions will take approximately eight months; and Phase 3 – Implementation will take approximately five months including three months for FAA approvals, which can take from three to six months after delivery of the final draft narrative reports and drawings.



Public Involvement Process

A comprehensive and engaging public involvement process is a key element to a successful Airport Master Plan. Therefore, numerous opportunities for public input are built into the process. ODAV is completing the Aurora Airport Master Plan in accordance with the Department of Land Conservation and Development's (DLCD) State Agency Coordination (SAC) Program. Accordingly, ODAV established a Planning Advisory Committee (PAC) that includes members from all affected Federal, State, Local Special Districts, and Interested Parties. The PAC will meet nine times throughout the 18-month Aurora State AMP project timeline. All PAC meetings are open to the public.

Planning Advisory Committee Meetings

The PAC was assembled to provide input and allow for public dissemination of data. Airport tenants, pilots, local & regional economic development interests, neighbors of the airport, and staff/representatives of ODAV serve as members of the PAC. In addition to the membership composition noted above, representatives from the FAA Seattle Airports District Office (ADO) serve as ex officio members of the PAC.

TABLE 1-1: PLANNING ADVISORY COMMITTEE MEMBERS

Organization	Name	Alternate
1000 Friends of Oregon	Roger Kaye	
AABC/TLM Holdings	Ted Millar	
Atlantic Aviation (formerly Lynx Aviation)	Bob Hala	
Aurora Air Traffic Control	Raul Suarez	
Aurora Airport Improvement Association	Bruce Bennett	
Aurora Butteville Barlow Community Planning Organization	Ken Ivey	
Aurora CTE, Inc	Bill Graupp	
Charbonneau Country Club	Steven P. Switzer	
City of Aurora	Brian Asher	
City of Canby	Scott Archer	
City of Wilsonville	Charlotte Lehan	Chris Neamtzu
Clackamas County	Commissioner Tootie Smith	
Columbia Helicopters	Rob Roedts	Bob Buchanan
Confederated Tribes of Siltez Indians	Robert Kentta	
Confederated Tribes of the Grand Ronde Community of Oregon	Cheryl Pouley	
Confederated Tribes of Warm Springs Reservation of Oregon	Christian Nauer	
Deer Creek Estates HOA	Matt Williams	
Friends of French Prairie	Ben Williams	Wayne Richards
Helicopter Transport Service	Robert Fournier	
Life Flight Network	Ben Clayton	
Marion County	Commissioner Danielle Bethell	
Marion County Planning Department	Austin Barnes	Brandon Reich
Oregon Dept of Aviation	Tony Beach	
Oregon Dept of Aviation Board	Cathryn Stephens	
Oregon Dept of Land Conservation and Development	Matt Crall	Nicole Mardell
Oregon Dept of Transportation	Naomi Zwerdling	
Oregon Farm Bureau	Mary Anne Cooper	
Oregon Office of Emergency Management	Bill Martin	Sarah Puls
Positive Aurora Airport Management	Tony Helbling	
Regional Solutions	Jody Christensen	
Vans Aircraft	Rian Johnson	Greg Hughes
Willamette Aviation	David Waggoner	
Wilsonville Chamber of Commerce	Patrick Donaldson	Kevin O'Malley

Air Traffic Control Tower from Hubbard Highway – Source: Century West Engineering

Chapter 2

Existing Conditions Analysis

The existing conditions analysis documents the existing airfield assets and conditions that affect the operation and development of Oregon Department of Aviation (ODAV)-owned facilities with emphasis on the Airport's regional setting, and its airside, landside, and administrative functions. The existing conditions analysis utilizes site visits, FAA and Sponsor documentation and records, and other publicly available information to support the effort. The findings documented in this chapter will be referenced to support subsequent studies and recommendations throughout the master planning process. A survey of airport stakeholders is being conducted to acquire additional information to help guide the planning process. This information will be summarized and added to the Airport Master Plan documentation.

Regional Setting

The Regional Setting section is comprised primarily of features that provide the "big-picture" context of the Airport within its local community and region. This section describes the location and vicinity of the Aurora State Airport and provides a range of information related to the operation and function of the Airport: socio-economic data, airport history, airport role, area airports context, airport activity data, environmental data, local surface transportation systems, land use on and around the Airport, and other relevant data.

LOCATION AND VICINITY

The community of Aurora, Oregon is located in the Willamette Valley in Marion County. Aurora is located about three miles east of the U.S. Interstate 5 (I-5) corridor, 23 miles south of Portland. Aurora is located within 15 miles of three other adjacent counties (Washington, Yamhill, and Multnomah).

Aurora State Airport is located approximately one mile northwest of the City of Aurora, in Northwest Marion County. The north end of the Airport is located immediately adjacent to the Clackamas County western boundary (at Arndt Road).

Marion County has a land area of approximately 1,193 square miles. The county extends east from the Willamette Valley into the Cascade Range, including Mount Jefferson. Incorporated cities include Salem, Keizer, Woodburn, Silverton, and Aurora. Salem is the county seat.

Clackamas County has a land area of approximately 1,883 square miles. The county extends east from the Willamette Valley into the Cascade Range, including Mount Hood. Incorporated cities include Barlow, Canby, Gladstone, Happy Valley, Lake Oswego, Milwaukie, Oregon City, West Linn, and Wilsonville. Oregon City is the county seat.

FIGURE 2-1: LOCATION AND VICINITY MAP

Source: Google Maps

COMMUNITY SOCIO-ECONOMIC DATA

Data from the Population Research Center (PRC) at Portland State University was reviewed to gauge recent changes in population within the Airport's service area. PRC data confirms that the areas within 30 to 60 minutes of Aurora State Airport have experienced steady growth over the past 10 years, often outpacing statewide growth rates. Sustained population growth within an airport's service area is often a general indication of broader economic conditions required increase airport activity. Historical PRC population estimates and average annual growth rates (AAGR) for these areas are presented in **Table 2-1**.

TABLE 2-1: HISTORIC POPULATION ESTIMATES

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Oregon	3,883,735	3,919,020	3,962,710	4,013,845	4,076,350	4,141,100	4,195,300	4,236,400	4,243,791	4,266,560
AAGR:	-	0.91%	1.11%	1.29%	1.56%	1.59%	1.31%	0.98%	0.17%	0.54%
Marion County	320,495	322,880	326,150	329,770	333,950	339,200	344,035	347,760	349,120	347,182
AAGR:	-	0.74%	1.01%	1.11%	1.27%	1.57%	1.43%	1.08%	0.39%	-0.56%
Clackamas County	381,680	386,080	391,525	397,385	404,980	413,000	419,425	423,420	426,515	425,316
AAGR:	-	1.15%	1.41%	1.50%	1.91%	1.98%	1.56%	0.95%	0.73%	-0.28%
Portland	601,510	592,120	587,865	613,355	627,395	639,100	648,740	657,100	664,675	658,773
AAGR:	-	-1.56%	-0.72%	4.34%	2.29%	1.87%	1.51%	1.29%	1.15%	-0.89%
Salem	156,455	157,770	159,265	160,690	162,060	163,480	165,265	167,400	168,970	177,694
AAGR:	-	0.84%	0.95%	0.89%	0.85%	0.88%	1.09%	1.29%	0.94%	5.16%
Wilsonville	20,515	21,550	21,980	22,870	23,740	24,v315	25,250	25,635	25,915	27,186
AAGR:	-	5.05%	2.00%	4.05%	3.80%	2.42%	3.85%	1.52%	1.09%	4.90%
Aurora	930	935	950	950	970	980	985	985	985	1,133
AAGR:	-	0.54%	1.60%	0.00%	2.11%	1.03%	0.51%	0.00%	0.00%	15.03%

Source: PSU Population Research Center (PRC), 2021

A review of economic data also indicates broad growth in the region over the last decade. According to Woods & Poole Economics[1] data, the gross regional products (GRP) of Marion and Clackamas counties have both experienced steady growth over the last 10 years (average annual growth of 4.28% and 3.59%, respectively).

It should be noted that the economic effects of the COVID-19 pandemic are evident in the 2020 data when GRP for both counties decreased -3.77% (Marion) and -3.19% (Clackamas). These declines are attributed to state and local restrictions put in place to slow the spread of the virus, and the corresponding economic contraction. However, data for 2021 highlights economic recovery fueled in part by federal stimulus and steps toward economic recovery.

A summary of Marion and Clackamas County GRPs over the past decade is presented in **Table 2-2**.

TABLE 2-2: HISTORIC GROSS REGIONAL PRODUCT (2012 DOLLARS)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Marion County (millions)	$11,546	$11,865	$12,287	$13,311	$14,0921	$14,6971	$15,532	$16,132	$15,523	$16,761
Percent Change	-	2.76%	3.56%	8.33%	5.87%	4.29%	5.68%	3.86%	-3.77%	7.97%
										AAGR 4.28%
Clackamas County (millions)	$15,497	$15,520	$15,505	$16,734	$17,606	$18,569	$19,613	$20,237	$19,592	$21,172
Percent Change	-	0.15%	-0.10%	7.93%	5.21%	5.47%	5.62%	3.19%	-3.19%	8.07%
										AAGR 3.59%

Source: Woods & Poole Economics, Inc. Washington, D.C. Copyright 2021. Woods & Poole does not guarantee the accuracy of this data. The use of this data and the conclusion drawn from it are solely the responsibility of Century West Engineering, Inc.

1 2021 State Profile - Woods & Poole Economics, Inc. Copyright 2021

AIRPORT HISTORY

Aurora State Airport was built by the United States Army Air Forces in 1943 and was known as the Aurora Flight Strip. From the time of construction until 1953 it was managed by the United States Bureau of Public Roads, when it was transferred to the State of Oregon's Highway Division. In 1973, the Highway Division transferred ownership to the State Aeronautics Division, which would later become ODAV. ODAV remains the owner and operator of Aurora State Airport today.

Although the general configuration of the single-runway airfield has remained largely unchanged, several notable airport facility improvements have been made during the nearly 50 years of State of Oregon ownership:

- **1976** – runway reconstructed and parallel taxiway constructed;
- **1979 and 1986** – property acquisition (22 acres, 10 acres) increased ODAV-owned property to the current 140 acres;
- **1995** – runway length increased to 5,004 feet;
- **2004** – runway reconstructed;
- **2009** – parallel taxiway shifted east, to its current location; and
- **2015** – Air Traffic Control Tower (ATCT) constructed.

During this period, aeronautical use facilities such as aircraft hangars were developed both on ODAV property and on privately-owned land parcels adjacent to the east side of the Airport. These off-airport developments have agreements with ODAV (referred to as "Through-The-Fence", or "TTF" agreements) to access the Aurora State Airport at designated points. Development of two privately-owned heliports adjacent to the east side of Airport has also occurred. However, these facilities do not have TTF access agreements and their operations are fully independent of the Aurora State Airport.

Several planning studies have been completed through the Airport's history, including FAA-funded master plans in 1976, 1988, and 2012. A Constrained Operations – Runway Justification Study was completed in 2019 to review the recommended runway improvements defined in the 2012 Airport Master Plan Update. A list of recent FAA AIP funded projects is presented below in **Table 2-3**.

TABLE 2-3: PROJECT HISTORY

Fiscal Year	Federal Grant Sequence Number	Project Description	Federal Grants/Funds	State of Oregon Grants/Funds
2005	11	Rehabilitate Runway - 17/35	$1,100,000	$0
2007	12	Construct Taxiway, Install Miscellaneous NAVAIDS, Install Taxiway Lighting	$1,959,856	$0
2007	13	Construct Taxiway, Install Miscellaneous NAVAIDS, Install Taxiway Lighting	$2,293,993	$0
2009	14	Remove Obstructions	$100,000	$0
2009	15	Conduct Miscellaneous Study (Airport Master Plan Update)	$534,431	$0
2010	16	Continued Study - Airport Master Plan Update	$64,600	$0
2013	17	Rehabilitate Apron, Rehabilitate Taxiway	$139,393	$0
2015	18	Construct Taxiway, Rehabilitate Apron, Rehabilitate Taxiway, Rehabilitate Taxiway	$1,289,561	$0
2015	—	2015 IGA/Proj Number 26906 Aurora Air Traffic Control Tower	$2,695,000	$141,852
2016	19	Rehabilitate Taxiway	$639,502	$0
2017	20	Conduct Environmental Study (Phase 1)	$189,635	$0
2017	–	SOAR-2017-ODA-S-00016, Constrained Operations Study	$0	$70,000
2017	–	SOAR-2017-SO PROJ 3, Ramp Light Repairs	$0	$13,000
2020	–	SOAR-2020-ODA-S-00002, Taxiway Repair, Obstruction Easement Survey, Obstruction Removal	$0	$ 330,000
2021	21	Environmental Assessment for Obstruction Removal (Phase 2)	$ 140,294	$0
2021	22	Airport Master Plan Study and AGIS Survey	$994,764	$0

Source: FAA AIP Grant Look Up Tool (Accessed 12/10/2021) and ODAV provided state grant information.

AIRPORT ROLE

The role of an airport may vary within the context of the National, State, or Local perspective. Understanding the existing roles of the Airport is vital to establish the long-term vision and development of the facility.

National Role

The federal airport system, referred to as the National Plan of Integrated Airport Systems (NPIAS), includes 3,304 public-use airports in all 50 states.[2] Fifty-seven of Oregon's 97 public-use airports are included in the NPIAS. Like federal highways, NPIAS airports represent a critical element of the national transportation system.

NPIAS reports are submitted every two years to Congress in accordance with title 49 United States Code (U.S.C.), section 47103. As required by the statute, the Federal Aviation Administration (FAA) *"...shall maintain the plan for developing public-use airports in the United States." The statute also requires that: "The plan shall include the kind and estimated cost of eligible airport development the Secretary of Transportation considers necessary to provide a safe, efficient, and integrated system of public-use airports adequate to anticipate and meet the needs of civil aeronautics, to meet the national defense requirements of the Secretary of Defense, and to meet identified needs of the United States Postal Service."*

NPIAS airports are grouped into two major categories: primary (commercial service) and non-primary (general aviation and limited passenger service). The majority of NPIAS airports are non-primary general aviation airports. Within the broad definition of general aviation airports, four functional categories are defined: National, Regional, Local, and Basic.

Aurora State Airport is designated a **"National" Nonprimary General Aviation** airport. The role of National airports in the NPIAS is defined as follows:

> *"National airports (84) are located in metropolitan areas near major business centers and support flying throughout the nation and the world. National airports are currently located within 31 states. They account for 13 percent of total flying at the studied general aviation airports and 35 percent of all flights that filed flight plans at the airports in the four new categories. These 84 airports support operations by the most sophisticated aircraft in the general aviation fleet. Many flights are by jet aircraft, including corporate and fractional ownership operations and air taxi services. These airports also provide pilots with an alternative to busy primary commercial service airports. There are no heliports or seaplane bases in this category.*
>
> *Criteria Used to Define the New National Category (all numbers are annualized):*
>
> *1. 5,000+ instrument operations, 11+ based jets, 20+ international flights, or 500+ interstate departures; or*
>
> *2. 10,000+ enplanements and at least one charter enplanement by a large certificated air carrier; or*
>
> *3. 500+ million pounds of landed cargo weight."*

Available data indicate that Aurora State Airport has consistently met or exceeded the FAA's "11+ based jet" and "5,000+ instrument operations" criteria established for National airports since the early 2000s. Aurora State Airport, and nearby Portland-Hillsboro Airport (19 miles northwest) are the only FAA-designated National Airports located in Oregon.

NPIAS airports are deemed significant to the air transportation in the United States, and thus are eligible for federal funding though the Airports Improvement Program (AIP), which currently covers 90% of eligible costs of planning and development projects.

State Role

The Oregon Department of Aviation has developed and periodically updates the Oregon Aviation Plan (OAP) to provide guidance on preserving the State's system of airports. The OAP presents a framework for improving the system to enhance support of local communities and regional economic development. The current OAP (OAP v6.0), completed in 2019, classified Aurora State Airport as **Category II – Urban General Aviation Airport**. The definition for Category II airports is:

2 2021-2025 NPIAS Report, Federal Aviation Administration (9/30/2020)

> *"These airports support all general aviation aircraft and accommodates corporate aviation activity, including piston and turbine engine aircraft, business jets, helicopters, gliders, and other general aviation activity. The most demanding user requirements are business-related. These airports service a large/multi-state geographic region or experience high levels of general aviation activity. The minimum runway length objective for Category II airports is 5,000 feet."*

The most demanding user requirements for Category II airports are typically related to business class aircraft since the airports do not support commercial airline service. Category II airports serve large/multi-state geographic regions and generally experience higher levels of general aviation activity.

The distribution of Category II airports throughout Oregon is a reflection of the state's physical geography, population centers, and the underlying market conditions required to support the full range of general aviation activity common to this type of airport. As documented in OAP v6.0, Oregon has a total 11 Category II airports, which includes one public-use heliport (Portland Downtown Heliport). More than half (6 of 11) of Oregon's Category II airports are located within 30 nautical miles of Aurora State Airport. The concentration of Category II airports in the Portland Metro area is consistent with the region's overall population and economic characteristics. Four of Oregon's Category II airports currently have an air traffic control tower (ATCT); three of these, including Aurora State Airport, are located in the Portland Metro area.

OAP-defined characteristics for Category II airports correspond to the business jet aircraft segment of general aviation. These airports accommodate a wide range of locally-based and transient aircraft that are designed to operate in all-weather conditions. These aircraft require increased facility capabilities for runways, taxiways, instrument approaches/departures, and airfield lighting systems.

Local Role

Aurora State Airport serves the local community in several ways. Based on data reviewed in late 2021, the Airport is currently home to 281 aircraft stored both on ODAV-owned property, and on adjacent privately-owned property with authorized airport access. A review of 2016-2021 Aurora ATCT operations data shows mostly consistent year-over-year increases during the six-year period, ranging from roughly 48,000 to 70,000 annual operations. Additional aircraft flight activity occurs outside the ATCT hours of operation between 0700 and 2000 local time (7:00 am to 8:00 pm in standard time terms). Detailed breakdowns of airport activity are provided later in this chapter and in Chapter 3 – Aviation Activity Forecasts.

The (2019) OAP v6.0[3] states that Aurora State Airport supported 2,672 direct, indirect, and induced jobs, contributing over $125 million in payroll benefits to the local economy (2014 data). The Airport accommodates several businesses including two Fixed Base Operators (FBOs), three flight schools, several aircraft manufacturing and service providers, and a restaurant. OAP v6.0 estimates a total of nearly $510 million in sales revenue/output is generated from airport businesses annually. Two examples of the numerous businesses based at Aurora State Airport include the Life Flight Network administrative office, which supports life-saving medevac services across the Pacific Northwest Region, and Vans Aircraft, a leading kit aircraft manufacturer.

AREA AIRPORT CONTEXTUAL ANALYSIS

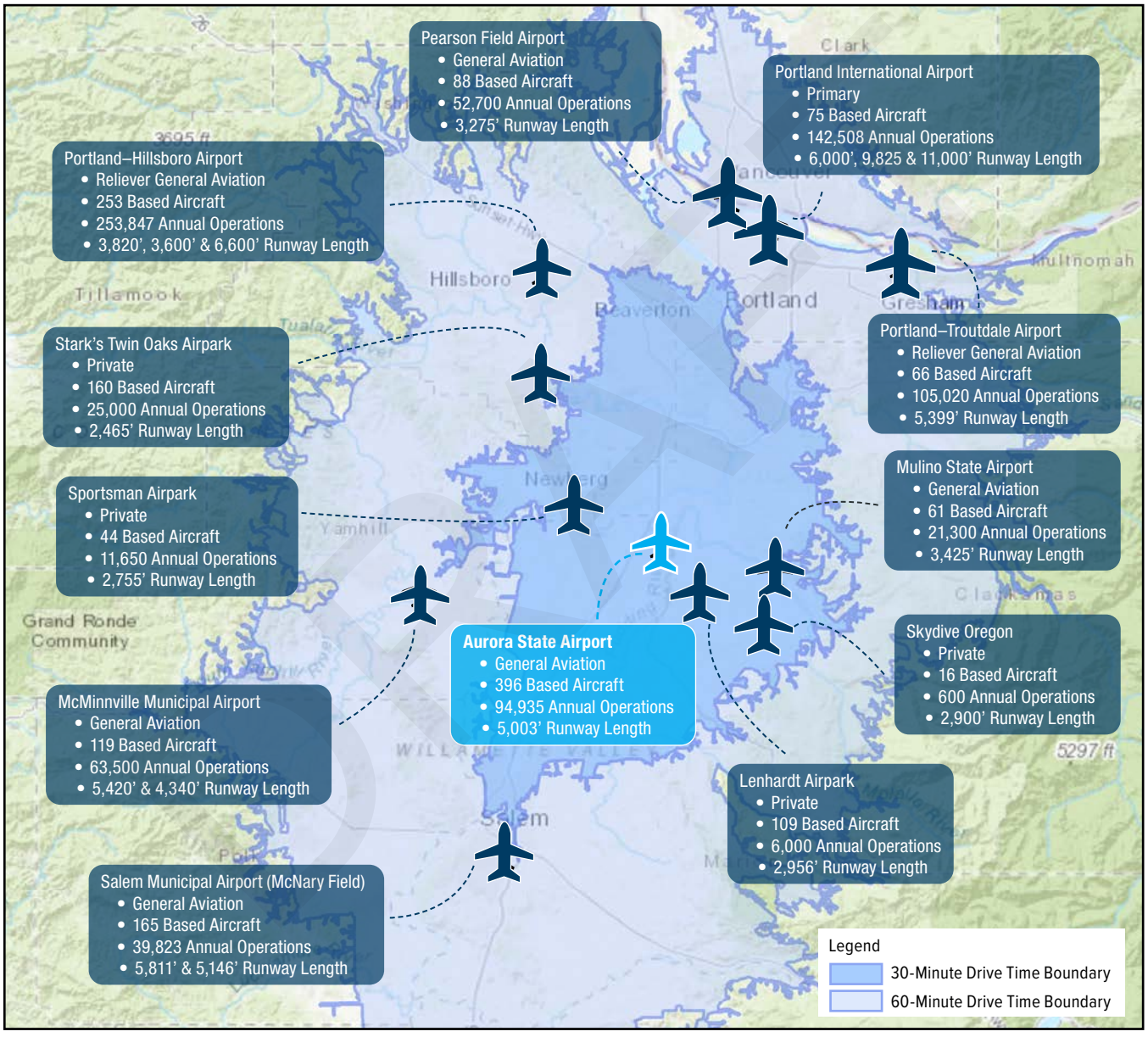
Contextual analysis of the airport service area examines the impact that the airport has on its immediate geographic area. For general aviation airports, the majority of aviation activity can be directly linked to their service area boundaries defined by 30- and 60-minute driving times surrounding the Airport. The airports and aviation activity within a defined service area may directly affect activity at any individual airport in the service area. This ranges from locally-based aircraft to transient aircraft where operators choose airports based in part on proximity to their place of business or travel destination.

Figure 2-2 (and **Table 2-4** at the end of this section) provide an overview of the public-use airports located in the service area for Aurora State Airport. These airports include both publicly-owned and privately-owned facilities. The most recent FAA Airport Master Record Form (5010) data available is presented for these airports to provide common reporting of activity. It is noted that the FAA 5010 data listed for Aurora State Airport is obsolete, but will be revised to reflect the 2021 baseline data developed in the Airport Master Plan. Current based aircraft and aircraft operations data for Aurora State Airport are provided later in this chapter and will be used to develop the aviation activity forecasts (Chapter 3).

3 OAP v6.0 Chapter 8: Economic Impact

As noted in the state airport classification system, an airport's functional role is determined primarily by facility capabilities and factors such as the size of the population it serves. The airports in the local area accommodate a wide range of general aviation activity. Aurora State Airport, Portland-Hillsboro Airport, and Portland International Airport accommodate the majority of business aviation activity in the Portland Metro area, while the smaller airports accommodate predominately smaller aircraft. Portland International Airport (PDX) is the primary commercial service airport serving the local area and region. PDX also accommodates a limited amount of general aviation activity. With the exception of PDX, the other public-use airports located within the service area for Aurora State Airport do not accommodate scheduled airline service.

FIGURE 2-2: AREA AIRPORTS



Source: AirportIQ 5010, Esri, USGS, NOAA

Portland International Airport

Portland International Airport (PDX) is located in northeast Portland, in Multnomah County on the south bank of the Columbia River. The Airport is owned and operated by the Port of Portland and is the largest commercial service airport in Oregon. It has three lighted runways with instrument approach capabilities and full range of aircraft services. The Airport is primarily focused on commercial airline service, but also supports a limited amount

of general aviation (GA) activity, 75 GA based aircraft and 10,391 annual GA operations, according to the most recent 5010 data. The Port of Portland also owns Hillsboro and Troutdale Airports, which serve as GA reliever airports to Portland International.

Portland – Hillsboro Airport

Portland-Hillsboro Airport, owned by the Port of Portland, is located in Hillsboro, 10 miles west of Portland. The Airport is a designated reliever GA airport for PDX and serves the Portland Metro Area. The Airport has three lighted runways with instrument approach capabilities, an ATCT, and weather reporting. Available services include aviation fuel, hangars and parking, aircraft repair and maintenance, flight training, aircraft rental, and air taxi (charter) services. Current FAA 5010 data lists 253 based aircraft and 253,847 annual operations.

Portland – Troutdale Airport

Portland-Troutdale Airport, also owned by Port of Portland, is in Troutdale in northern Multnomah County between Interstate 84 (I-84) and the Columbia River. The Airport is a designated GA reliever airport for Portland International. The Airport has a single lighted runway, instrument approach capabilities, an ATCT, and weather reporting. Available services include aviation fuel, hangars and parking, parking, aircraft repair and maintenance, flight training, and aircraft rental. Current FAA 5010 data lists 66 based aircraft and 105,020 annual operations.

Pearson Field Airport

Pearson Field Airport is owned by the City of Vancouver and located on the south side of the city in Clark County, Washington. The Airport is located north of the Columbia River and State Highway 14, approximately two miles northwest of Portland International Airport. The Airport has a single lighted runway with instrument approach capabilities, and weather reporting. Available services include aviation fuel, hangars and parking, aircraft repair and maintenance, flight training, and aircraft rental. Current FAA 5010 data lists 88 based aircraft and 52,700 annual operations.

McMinnville Municipal Airport

McMinnville Municipal Airport is in the City of McMinnville in Yamhill County, on the southeast side of the city. The Airport is owned and operated by the City of McMinnville. The Airport has two runways (one lighted), instrument approach capabilities, and weather reporting. Available services include aviation fuel, hangars and parking, aircraft repair and maintenance, flight training, and aircraft rental. Current FAA 5010 data lists 199 based aircraft and 63,500 annual operations.

Salem Municipal Airport (McNary Field)

Salem McNary Field is owned and operated by the City of Salem and located within the city limits two miles southeast of downtown. The Airport previously had scheduled commercial airline service, but the service ended in 2011 and current activity is limited to GA and military operations (Oregon Army National Guard). McNary Field is also the home of the ODAV offices. It has two lighted runways and a helipad, instrument approach capabilities, an ATCT, and weather reporting. Available services include aviation fuel, hangars and parking, aircraft repair and maintenance, flight training, and aircraft rental. Current FAA 5010 data list 165 based aircraft and 39,823 annual operations.

Mulino State Airport

Mulino State Airport is ODAV-owned and operated, and is located in the Hamlet of Mulino, along State Highway 213, approximately five miles north of the City of Molalla. The Airport has a single lighted runway with visual approach capabilities. Available services include aviation fuel, hangars and parking, and aircraft repair and maintenance. Current FAA 5010 data lists 61 based aircraft and 21,300 annual operations.

Stark's Twin Oaks Airpark

Stark's Twin Oaks Airpark is a privately-owned, public-use airport located south of Hillsboro, approximately 13 miles northwest of Aurora State Airport. The Airport has a single lighted runway with visual approach capabilities. Available services include aviation fuel, aircraft parking, hangars and parking, flight training, and aircraft rental. Current FAA 5010 data lists 160 based aircraft and 25,000 annual operations.

Lenhardt Airpark

Lenhardt Airpark is a privately-owned, public-use airport located east of Hubbard, approximately three and a half miles south of Aurora State Airport. The Airport has a paved lighted runway and a parallel grass strip on the west side of the runway, both with visual approach capabilities. Available services include aviation fuel, hangars and parking, aircraft maintenance, flight training, and aircraft rental. Current FAA 5010 data lists 109 based aircraft and 6,000 annual operations.

Sportsman Airpark

Sportsman Airpark is a privately-owned, public-use airport located within the city limits of Newberg, approximately eight miles northwest of Aurora State Airport. The Airport has a single lighted runway with visual approach capabilities. Available services include aviation fuel, hangars and parking, aircraft maintenance, flight training, and aircraft rental. The airpark also serves as a launching point for hot air balloon operations. Current FAA 5010 data lists 44 based aircraft and 11,650 annual operations.

Skydive Oregon

Skydive Oregon Airport is a privately-owned, private use airport located on the west side of Molalla, approximately eight miles southeast of Aurora State Airport. The Airport has a single lighted runway with visual approach capabilities. Skydive Oregon Airport facilitates skydiving operations and instruction services offered by a resident provider also called Skydive Oregon. While the airport has fuel and hangars on site, these services support the skydiving operations and are not available to the public. Current FAA 5010 data lists 16 based aircraft and 600 annual operations.

A summary of the most recent FAA 5010 data for theses airports is presented in **Table 2-4**. As note earlier, the 5010 data is provided for general reference only as a broad indication of activity. Relevant data to be updated in the aviation activity forecasts (Chapter 3).

TABLE 2-4: FAA 5010 DATA

	Aurora State	Lenhardt	Sportsman	Mulino State	Skydive Oregon	Stark's Twin Oaks	McMinnville	Hillsboro	Salem	Portland Int.	Pearson Field	Troutdale	Total
Air Carrier	0	0	0	0	0	0	0	0	0	113,737	0	0	113,737
Air Taxi	7,909	0	100	0	0	0	0	9,561	3,776	16,168	100	4,000	41,614
GA Local	32,177	1,250	3,875	13,000	400	7,000	22,000	160,261	12,043	3,517	18,375	70,000	343,898
GA Itinerant	54,569	4,750	7,675	8,300	200	18,000	40,000	83,381	20,330	6,874	34,125	29,520	307,724
Military	280	0	0	0	0	0	1,500	644	3,674	2,212	100	1,500	9,910
TOTAL OPERATIONS	**94,935**	**6000**	**11,650**	**21,300**	**600**	**25,000**	**63,500**	**253,847**	**39,823**	**142,508**	**52,700**	**105,020**	**816,883**
TOTAL BASED AIRCRAFT	**396**	**109**	**44**	**61**	**16**	**160**	**119**	**253**	**165**	**75**	**88**	**66**	**1,552**
Single Engine	287	108	31	59	15	159	94	163	141	16	83	56	1212
Multi Engine	26	1	2	2	1	1	7	26	10	39	4	3	122
Jet	34	0	0	0	0	0	3	41	6	19	0	0	103
Helicopters	49	0	11	0	0	0	15	23	8	1	1	7	115
Glider	3	0	0	2	0	0	4	5	2	0	1	0	17
Military	0	0	0	0	0	0	0	0	19	21	0	0	40
Ultra-Light	1	4	0	0	4	1	0	0	0	0	0	0	10
OPBA[1]	239	55	265	349	38	568	521	1001	219	354	598	1569	447

Source: AirportIQ 5010 Airport Master Records and Reports (AirportIQ5010.com, Accessed 12/6/2021)
1. OPBA ratio includes general aviation and air taxi operations only. This is a ratio of total aircraft takeoffs and landings divided by the number of aircraft based at the airport.

AIRPORT OPERATIONS SUMMARY

Aurora State Airport accommodates a wide variety of aeronautical activity, including small single- and multi-engine aircraft, business class turbine aircraft (business jets and turboprops), helicopters, and gliders.

Based Aircraft

In late 2021, the ODAV State Airport Manager reviewed the based aircraft count for Aurora State Airport in the FAA based aircraft registry database. The count was previously updated in 2018 (349 based aircraft). The review was completed in consultation with the FAA Seattle Airports District Office in December 2021, and resulted in a new validated count of 281 based aircraft. The reduction in the Airport's based aircraft total reflects a more precise verification of aircraft and removal of previously-counted aircraft (helicopters) located at two private heliports adjacent to the Airport. Please see Chapter 3 - Aviation Activity Forecasts, for a full description of the current based aircraft count.

Aurora State Airport is unique compared to many other airports in that the majority of its based aircraft are stored off airport property on privately-owned land parcels. These aircraft access the Airport via a TTF agreement with ODAV. The flight operations for these aircraft rely on the Airport's runway-taxiway system, lighting, and navigational aids to access area airspace in the same manner as on-airport based aircraft. As noted above, the current based aircraft count does not include helicopters located at two privately owned heliports located adjacent to the Airport. A summary of all based aircraft by type and storage location is presented in **Table 2-5**.

TABLE 2-5: BASED AIRCRAFT AND FLEET MIX

BA Type	On-Airport	TTF	Total
Single Engine	45	175	220
Multi Engine	1	14	15
Jet	3	33	36
Helicopter	1	9	10
Total	**50**	**231**	**281**

Source: National Based Aircraft Inventory – January 2022

Aircraft Operations

The ATCT at Aurora State Airport has been in service daily since October 2015. Controllers in the ATCT log aircraft contacts in the airport airspace, including arriving and departing aircraft, as well as aircraft transiting the airspace (without originating or terminating at the Airport). The resulting counts are available to the public through FAA's Operations Network (OPSNET) Traffic Counts datasets. To serve as a base for the Aurora State Airport operations estimate, the OPSNET Airport Traffic Counts dataset was downloaded for the period of 2016 through 2021, representing the six full years that the ATCT has been in service.

The Airport Traffic Counts dataset includes departure and arrival counts for itinerant aircraft (in both visual and instrument flight rules conditions)[4], local GA, and local military aircraft. The OPSNET Airport Traffic Counts for 2016-2021 are summarized in **Table 2-6**. These counts are unadjusted and provide the basis for a more detailed evaluation of aircraft operations at Aurora State Airport.

TABLE 2-6: OPSNET AIRPORT TRAFFIC COUNTS

Calendar Year	Itinerant Total	Local Total	Total Operations
2016	33,195	15,182	48,377
2017	34,641	23,511	58,152
2018	36,629	26,374	63,003
2019	34,252	28,598	62,850
2020	31,777	34,172	65,949
2021	35,566	34,176	69,742
Total:	206,060	162,013	368,073

Source: FAA OPSNET – January 2022

Aurora ATCT is in service daily between 0700 and 2000 local time. It should also be noted that in 2021 the ATCT was out of service outside of the normal schedule for portions of seven days. On February 13th, 2021 the ATCT opened 18 minutes late due to winter storm conditions, and due to a staffing shortage ATCT went to reduced hours (0800 to 1745 local time) Oct 29th - 31st, and Nov 3rd, 6th, and 10th. Total down time was 19 hours and 48 minutes, accounting for less than 0.5% of the scheduled service time scheduled for the year. These closures and their impact on the aggregated Airport Traffic Counts are not significant.

4 Visual Flight Rules (VFR) apply to aircraft operating with minimum visibility and cloud clearance requirements to maintain safe flight operations in visual meteorological conditions. Instrument Flight Rules (IFR) apply to aircraft operated under instrument flight plans, capable of meeting aircraft equipment and pilot requirements to operate exclusively with electronic guidance from ground or satellite navigational aids.

Also of note, the OPSNET traffic counts presented in **Table 2-6** include itinerant helicopter operations for two private helipads located immediately east of the Airport. These aircraft movements are captured by the ATCT since they require the same clearance to operate in the controlled airspace that surrounds the Airport. However, ATCT does not log the flight activity differently than runway-related operations. As a result, the presence of these operations in the OPSNET source data have an inflating effect on the unadjusted data presented above.

For airport master planning purposes, the evaluation of aircraft activity will be limited to aircraft physically operating on the Airport's runway-taxiway system. Since the remote facility operations do not require any physical contact with the Airport's runway-taxiway system, the flight activity (and based aircraft) will be removed from datasets.

ATCT personnel indicate that the adjacent facility helicopter operations typically account for less than 3% of itinerant traffic recorded by Aurora ATCT. Based on this guidance, the historical itinerant operation counts from the OPSNET dataset were decreased by 3% in order to remove the helicopter operations. This traffic mix assumption will also be applied to forecast aircraft operations.

After-Hour Operations Estimates

Outside of the scheduled service times, the Aurora ATCT is not staffed and aircraft operations at Aurora State Airport are not counted. After-hours operations are known to exist (see below) and they need to be estimated, and added to the Airport Traffic Counts to develop an accurate baseline operations total.

The *2019 Constrained Operations Runway Justification Study* for Aurora State Airport addressed after-hours operations hours by assuming that 95% of all airport operations occur during ATCT service hours, and inversely 5% occur outside of those hours. This is a standard method that has been employed at other airports in similar situations, and the resultant baseline counts were approved by FAA for use in the study's forecasts. However, the availability of additional flight data supports a more precise approach.

Instrument Aircraft Flight Activity

FAA Traffic Flow Management System (TFMS) records were obtained through a Freedom of Information Act (FOIA) request. These records provide Instrument Flight Rules (IFR) flight plan arrivals and departures for all airports nationwide and include information on each aircraft, departure and arrival airports, and departure and arrival dates and times, among other data. Nearly 10 years of Aurora State Airport records were available for analysis—January 1, 2012 through August 16, 2021. Consultants have requested the remaining 2021 data through the FOIA process and will incorporate the data when available to complete the 2021 counts.

Flight records where Aurora State Airport was listed as either the departing or arrival airport were queried from the TFMS dataset, resulting in 79,885 IFR operations over the 10-year period. This time period predates the period that ATCT began service. However, arrival and departure times of IFR operations are likely minimally dependent on the presence of an ATCT, and the additional data increased the sample size provides a higher level of confidence in the resultant ratios. Although the TFMS data is based on actual flight plans that are not affected by the operating hours of the ATCT, the data distributions provide a reliable record of after-hours activity at the Airport.

Each of the TFMS operations was classified as occurring either during or outside of ATCT service hours based on arrival or departure timestamps. The timestamps are provided in the 24-hour format used in Coordinated Universal Time (UTC), which does not reflect local time change due to daylight savings time. This was then accounted for in the queries based on departure and arrival dates included in each record.

The queries showed that 86.1% (68,778) of IFR operations during the period occurred during the scheduled ATCT service time, and 13.9% (11,107) occurred outside of the scheduled service hours. To simplify calculations, the splits for IFR operations were rounded (86/14) for in-service and out-of-service operations ratios.

A breakdown of annual TFMS operations data based on the on- and off-hours schedule of the ATCT is presented in **Table 2-7**. The "ATCT open/closed" periods listed in the table are intended to provide time of day consistency when comparing TFMS data, and does not reflect actual period of ATCT operation, which began in late 2015.

TABLE 2-7: TFMS OPERATIONS DATA (ORGANIZED BY ATCT HOURS)

	ATCT Open Ops	ATCT Closed Ops	Total Ops	% Closed
2012*	6,110	703	6,813	10.32%
2013*	6,417	645	7,062	9.13%
2014*	6,450	1,014	7,464	13.59%
2015*	6,838	1,242	8,080	15.37%
2016	7,882	1,436	9,318	15.41%
2017	7,771	1,406	9,177	15.32%
2018	8,265	1,476	9,741	15.15%
2019	7,676	1,238	8,914	13.89%
2020	6,649	1,071	7,720	13.87%
2021	4,720	876	5,596	15.65%
Total	**68,778**	**11,107**	**79,885**	**13.90%**

Source: Century West Engineering developed using FAA TFMS Data
* Data prior to October 2015 ATCT opening

As the ratio was derived using only IFR flight plan data, it is valid for estimating only IFR operations, but does not capture activity conducted outside of IFR flight plans. This would include aircraft operating visually, with or without visual flight rules (VFR) flight plans. While the OPSNET Traffic Counts provide hard counts of VFR traffic during ATCT service hours, off-hours traffic is not represented in the OPSNET or other available datasets. However, as previously mentioned, other studies have employed a general 5% (of total operations) estimate to approximate all traffic outside of ATCT service hours. Inversely, 95% of VFR operations were assumed to occur during ATCT service hours. It is reasonable to apply that same method to account for after-hours VFR activity at Aurora State Airport. While not as precise as the above IFR method, it is the best option available evaluating available data.

The above discussed ratios were applied to OPSNET Airport Traffic Counts (ATCT in-service) to approximate IFR and VFR operations occurring when the ATCT was closed. A summary of IFR and VFR operations by ATCT status, as well as the resulting total annual operations estimates are presented in **Table 2-8**.

TABLE 2-8: ANNUAL OPERATIONS (ATCT ADJUSTED)

	2016	2017	2018	2019	2020	2021
ATCT Open (86%) - IFR	9,880	10,018	10,522	7,515	6,576	7,596
ATCT Closed (14%) - IFR	1,608	1,631	1,713	1,223	1,071	1,237
Total IFR	**11,488**	**11,649**	**12,235**	**8,738**	**7,647**	**8,833**
ATCT Open (95%)- VFR	37,501	47,095	51,381	54,306	58,418	63,835
ATCT Closed (5%) - VFR	1,974	2,479	2,704	2,858	3,075	3,360
Total VFR	**39,475**	**49,574**	**54,085**	**57,164**	**61,493**	**67,195**
ATCT Open - Total	47,381	57,113	61,903	61,821	64,994	71,431
ATCT Closed - Total	3,582	4,110	4,417	4,081	4,146	4,597
Total Ops	**50,963**	**61,223**	**66,320**	**65,902**	**69,140**	**76,028**
% ATCT Closed Ops	7.56%	7.20%	7.14%	6.60%	6.38%	6.44%

Source: Century West Engineering developed using FAA TFMS Data

The adjusted operations estimates align well with the previous approved forecast developed in the 2019 *Constrained Operations Runway Justification Study*. Using a 5% after-hours estimate across the board, that study approximated 66,153 operations for the 2018 base year. Using the updated methodology, the adjusted 2018 operations count is 67,478, an increase of 0.25%. Considering the heavier weight that was placed on IFR operations occurring outside of ATCT service hours, coupled with the removal of the erroneous itinerant helicopter operations, the slight increase is reasonable.

Operations Fleet Mix

To better understand the operational demand that the Airport's fleet composition has on the facility, an operations mix analysis was completed. The OPSNET Airport Traffic Counts attribute the airport operations to individual itinerant and local aircraft classifications. These classifications include:

- Itinerant
  - » Air Taxi
  - » General Aviation
  - » Military
- Local
  - » Civil (General Aviation)
  - » Military

The percentage of operations that each classification composes of the annual totals was calculated for each year that the ATCT has been in service to create ratios for each classification for each year. The ratios for each classification were assumed to apply to all operations regardless of ATCT status. The resultant ratios were applied to the historical operations estimates described above. The results of the exercise are summarized in **Table 2-9**.

TABLE 2-9: ANNUAL OPERATIONS FLEET MIX (HISTORICAL)

	2016	2017	2018	2019	2020	2021
Itinerant						
Air Taxi	2,194	2,319	2,121	1,670	1,129	2,006
General Aviation	32,174	33,502	35,665	33,638	31,621	36,390
Military	265	199	277	107	38	79
Subtotal	**34,633**	**36,020**	**38,063**	**35,415**	**32,788**	**38,475**
Local						
General Aviation	16,191	25,075	28,011	30,453	36,333	37,488
Military	139	129	245	34	19	65
Subtotal	**16,330**	**25,204**	**28,256**	**30,487**	**36,352**	**37,553**
Total	**50,963**	**61,223**	**66,320**	**65,902**	**69,140**	**76,028**

Source: Century West Engineering developed using FAA OPSNET Data

The OPSNET Airport Traffic Count data only differentiate local and itinerant traffic for GA aircraft. Understanding the demand placed on the Airport by different sizes and types of aircraft is also important. A review of Traffic Flow Management System Counts (TFMSC) data illustrates an evolving fleet mix at the airport over the previous six-year period. Aircraft activity is primarily categorized by aircraft size (wingspan and tail height) and approach speed (during landing). The two characteristics are combined to create an "Airport Reference Code" (ARC). **Table 2-10** depicts aircraft ranging from small single-engine piston aircraft to large transport category jets. In general, larger and faster aircraft require larger operating surfaces and protected areas. The current and future ARC for Aurora State Airport will be determined following FAA approval of the aviation activity forecasts, specifically approval of the design aircraft is completed. The design aircraft represents the most demanding aircraft type that generates at least 500 annual operations.

TABLE 2-10: AIRPORT REFERENCE CODE (ARC)

Aircraft Approach Category	Aircraft Approach Speed knots	Airplane Design Group	Aircraft Wingspan
A	less than or equal to 91	I	less than or equal to 49’
B	92 to 121	II	50’ to 79’
C	122 to 141	III	80’ to 118’
D	142 to 166	IV	119’ to 171’

A-I (small) 12,500 lbs. or less

Beech Baron 55
Beech Bonanza
Cessna 182
Piper Archer

B-I (small) 12,500 lbs. or less

Beech Baron 58
Beech King Air C90
Cessna 402
Cessna 421

A-II, B-II (small) 12,500 lbs. or less

Super King Air 200
Pilatus PC-12
DCH Twin Otter
Cessna Caravan

ARC - B-II Greater than 12,500 lbs.

Super King Air 300, 350
Beech 1900
Cessna Citation
Falcon 20, 50

A-III, B-III Greater than 12,500 lbs.

DHC Dash 7, Dash 8
Q-200, Q-300
DC-3
Convair 580

C-I, D-I

Lear 25, 35, 55, 60
Israeli Westwind
HS 125-700

C-II, D-II

Gulfstream II, III, IV
Canadair 600
Canadair Regional Jet
Lockheed JetStar

C-III, D-III

Boeing Business Jet
Gulfstream 650
B 737-300 Series
MD-80, DC-9

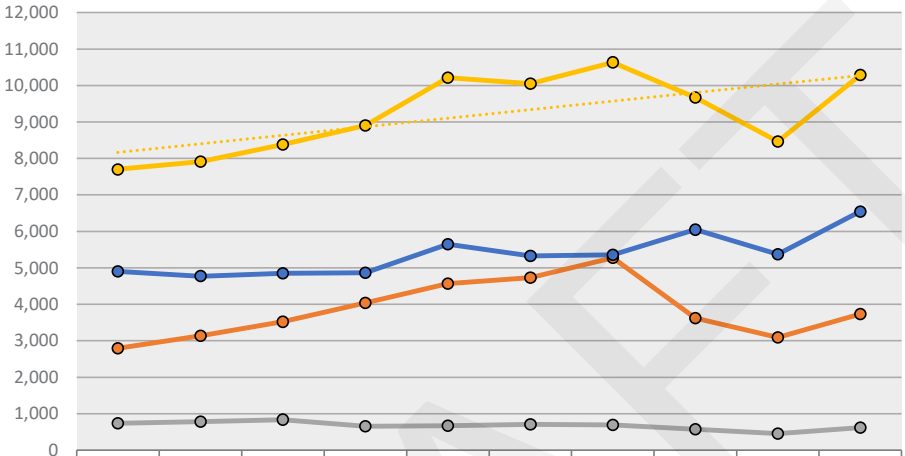
C-IV, D-IV

B - 757
B - 767
DC - 8-70
DC - 10

Source: Century West Engineering

As shown in **Figure 2-3**, while total operations are trending upward, operations by aircraft smaller than ARC B-I have declined significantly over the past three years, causing a decrease in total operations over the same period. At the same time operations by ARC B-I and larger aircraft have remained steady or increased slightly. This may indicate that the activity at the Airport, previously driven by single-engine piston aircraft, is evolving toward an environment driven increasingly by larger aircraft such as multi-engine piston, turboprops, and jets. This observation is further supported by fuel flowage data presented in **Table 2-11** below. Over the six years of available data, and accounting for decreased activity in 2020 due to the impacts of COVID-19, aviation gasoline (AVGAS) flowage has shown a decreasing trend while jet fuel flowage has increased.

FIGURE 2-3: TFMSC IFR OPERATIONS DATA



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	7,700	7,908	8,378	8,904	10,214	10,054	10,632	9,664	8,462	10,284
Smaller than B-I Aircraft	2,796	3,138	3,524	4,040	4,568	4,728	5,278	3,618	3,092	3,736
B-I and Larger Aircraft	4,904	4,770	4,854	4,864	5,646	5,326	5,354	6,046	5,370	6,548
Total C and D Aircraft	738	780	838	656	668	712	698	578	454	622

Source: Century West Engineering developed using FAA TFMSC Data

TABLE 2-11: AURORA STATE AIRPORT FUEL FLOWAGE

	2016	2017	2018	2019	2020	2021	Total
Jet Fuel gallons	933,527	896,058	1,050,306	929,453	893,989	1,055,344	3,769,806
AVGAS gallons	107,900	134,397	150,515	117,445	79,196	92,808	481,553

Source: Oregon Department of Aviation

APPLICABLE PLANNING STUDIES/DOCUMENTS

This section summarizes existing planning documents, federal advisory documents and background information directly related to the Aurora State Airport and the Aurora State Airport Master Plan. The documents in this section were utilized by Century West Engineering and the ODAV to support the production of the Aurora State Airport Master Plan. The documents included in this section represent the most comprehensive information related to the Aurora State Airport Master Plan that were available to the ODAV at the time of publication.

FAA Advisory Circulars

The FAA publishes a series of documents known as Advisory Circulars (AC) aimed at providing guidance to airports, airport users, and consultants for compliance with Code of Federal Regulations (CFR) pertaining to a variety of operational, engineering, and planning issues. While not an exhaustive list, the following ACs are commonly referenced during the airport master planning process. Additional ACs may be introduced and referenced as the plan develops.

- *AC 150/5070-6B, Airport Master Plans* – Provides guidance for the preparation of airport master plans that range in size and function from small general aviation to large commercial service facilities
- *AC 150/5300-13A, Airport Design* – Contains the Federal Aviation Administration's (FAA) standards and recommendations for the geometric layout and engineering design of runways, taxiways, aprons, and other facilities at civil airports
- *AC 150/5060-5, Airport Capacity and Delay* – Explains how to compute airport capacity and aircraft delay for airport planning and design
- *AC 150/5325-4B, Runway Length Requirements for Airport Design* – Provides guidelines for airport designers and planners to determine recommended runway lengths for new runways or extensions to existing runways

Marion County Comprehensive Plan

The Marion County Comprehensive Plan was developed for the purpose of providing a guide to development and conservation of Marion County's land resources. It is a long-range policy and land use guide that provides the basis for decisions on the physical, social, and economic development of Marion County. The Marion County Comprehensive Plan incorporates elements and policies of other Marion County planning documents through a formal process.

The following policies were identified in the Goals and Policies section of the Marion County Comprehensive Plan to address airports in the County[5]:

- *"Airports and airstrips shall be located in areas that are safe for air operations and should be compatible with surrounding uses."*
- *"The County should review and take appropriate actions to adopt State master plans for public airports in Marion County."*
- *"The County will adopt appropriate provisions (including plans, ordinances and intergovernmental agreements) to protect the public airports from incompatible structures and uses. These provisions will be consistent with Federal Aviation Administration guidelines."*
- *"The County will discourage noise-sensitive uses from locating in close proximity to public airports."*

Marion County Rural Transportation System Plan

Marion County completed the *Rural Transportation System Plan* (RTSP) in 2005 with the intent of "providing framework for developing an efficient, well-balanced, and cost-effective transportation system for the next 20 years".[6] The RTSP addresses rural transportation facilities managed by Marion County outside of Urban Growth Boundaries (UGB). Transportation planning topics for areas within UGBs are addressed in individual city transportation system plans (E.g. City of Aurora Transportation System Plan). The RTSP has been formally adopted into the Marion County Comprehensive Plan.

5 Marion County Comprehensive Plan, pg. 58
6 Marion County RTSP Page 2-1

The RTSP lists Aurora State Airport among the County's 25 airports and heliports (as of 2005), and references the projects outlined in the 1999 Aurora State Master Plan, most of which have been completed since the plan was developed. The RTSP states that the County intended to adopt the 2005 update to the Aurora State Airport Master Plan after review to ensure compatibility with County land use and zoning requirements.[7]

City of Aurora Transportation System Plan

The City of Aurora developed its 2009 Transportation System Plan (TSP) to establish the City's goals, policies, and strategies to improve the transportation system within its UGB. The primary objective of the TSP is to "... enhance the general mobility throughout the City and offer guidance on multi-modal transportation decisions over the coming decades".[8]

While Aurora State Airport is not located within the Aurora UGB, its proximity to the city and its impact on residents warranted its inclusion in the plan. The following excerpt from the plan lays out the recommendations concerning the Airport.

> *"...For planning purposes, the City needs to continue to work with the Aurora State Airport and ODAV to help maintain and improve roadway access to and from the airport, as well as understand and address the effects of increased traffic flow on Airport and Ehlen Roads caused by airport growth. The increased growth will likely impact operations at intersections under the jurisdiction of the City, County, and ODOT. Mitigation for these impacts may be required in the future to ensure safety and efficient traffic operations."*[9]

Oregon Aviation Plan

In 2019, ODAV completed an update to the *Oregon Aviation Plan* (OAP v6.0) for the state airport system which includes 95 airports, one heliport, and one seaplane base. The study area was statewide and considered both commercial service and general aviation airports.

Each airport's level generally reflects the type of aircraft and customers the airport serves as well as the characteristics of the airport's service area. In the OAP update, Aurora State Airport is classified as Category II – Urban General Aviation Airport.

As a Category II airport, the OAP has identified certain facilities and services that should ideally be in place. These objectives are considered the "minimums" to which the airport should be developed. At this time Aurora State Airport meets all of the listed requirements with the exception of a precision instrument approach.

As part of the OAP update, annual economic impacts for 97 statewide airports were also estimated. General aviation operations at Aurora State Airport accounted for an estimated 2,672 direct, indirect, and induced jobs, which contribute over $125 million in payroll. Airport businesses are estimated to generate nearly $510 million in sales revenue/output annually.[10]

Oregon Resilience Plan

The Oregon Resilience Plan was completed in 2013, and provides analysis of key challenges, including the potential impact on Oregon's infrastructure and outlines a basic strategy for post disaster response coordination following a significant Cascadia seismic event. The overall expectation is that critical infrastructure components in coastal and western areas of the affected states will suffer complete loss or significant damage during a major event. The ability to respond will require coordinated use of assets outside the areas of damage. The plan identifies 29 airports throughout the state arranged into a three-tier system to indicate the priorities for making future investments:

- Tier 1 (T1) is comprised of the essential airports that will allow access to major population centers and areas considered vital for both rescue operations and economic restoration;
- Tier 2 (T2) is a larger network of airports that provide access to most rural areas and will be needed to restore major commercial operations; and
- Tier 3 (T3) airports will provide economic and commercial restoration to the entire region after a Cascadia subduction zone event.

7 Marion County RTSP, pg. 2-7
8 Aurora Transportation System Plan, pg. 1-1
9 City of Aurora Transportation System Plan, pg. 3-21
10 OAP v6.0, Chapter 8, Tables 8-3, 8-4, 8-5

Aurora State Airport is classified as a T3 airport. As a T3 airport the plan sets goals for reaching recovery milestones after an event. For Aurora, those goals are:

- To restore a Minimal level of recovery within 1-3 days: Restore essential services primarily for use of first responders, repair crews, and vehicles transporting critical supplies;
- To restore a Functional level of recovery within 1-3 months: Although service is not yet restored to full capacity, it is sufficient to get the economy moving again—e.g. some truck/freight traffic can be accommodated. There may be fewer lanes in use, some weight restrictions, and lower speed limits; and
- To restore an Operational level of recovery within 6-12 months: Restoration is up to 90% of capacity: A full level of service has been restored and is sufficient to allow people to commute to school and to work.

The study also modeled the potential impacts of a Cascadia magnitude 9.0 earthquake on the region using models from the United States Geological Survey (USGS) to simulate strong shaking that is likely to occur in such an event. The resulting simulated shaking map was then used to estimate the amount of ground failure due to liquefaction and landsliding that would occur. Liquefaction susceptibility values were assigned and then categorized into Low, Moderate, and High susceptibility categories. The results of the model scenario are publicly available via the Oregon Department of Geology and Mineral Industries (DOGAMI) Oregon HazVu: Statewide Geohazards Viewer website (https://gis.dogami.oregon.gov/maps/hazvu/). The HazVu viewer shows that the southern half of the airfield is classified as a Moderate hazard area and the north half is classified as a High hazard area.

2012 Aurora State Airport Master Plan Update

The validity of the AMPU (Aurora Master Plan Update, 2012) was recently questioned as part of a petition for review made to the Oregon Land Use Board of Appeals (LUBA). In that land use action, the petitioners sought review of a 2019 Oregon Aviation Board (OAB) Decision made pursuant to OAR 138-103-0055 in which the Board found that the AMPU was compatible with the Marion County Comprehensive Plan. Petitioners also filed in state Circuit Court as a precautionary measure in the event LUBA dismissed the matter for lack of jurisdiction. LUBA did conclude that it lacked jurisdiction to hear this matter, but was overturned on appeal on that issue. Following the instructions of the Court of Appeals, LUBA found that it did have jurisdiction and remanded the decision back to OAB, finding that it could not review the matter until certain records from the 2012 adoption process were provide to LUBA. The circuit court cases remain pending but are expected be dismissed or otherwise resolved consistent with LUBA's order of remand.

2019 Constrained Operations Runway Justification Study

In 2019, the ODAV completed a study to review the runway length requirements and activity at Aurora State Airport to consider if the eligibility threshold for a runway extension has been met. A constrained operations Airport user survey was distributed as part of this study. The survey identified 645 constrained annual operations from a variety of aircraft and aircraft operators. Additional analysis of TFMSC data and the airport user surveys indicated in excess of 500 annual operations by aircraft to/from destinations beyond 1,000 nm of Aurora State Airport. The study concluded that a runway length of 7,888 feet was justified by FAA methodologies (AC 150/5325-4B). However, consultants recommended a future runway length of 6,002 feet as it was identified in the 2012 Airport Master Plan and depicted on the ALP.

ENVIRONMENTAL DATA

Aurora has a warm-summer Mediterranean climate as classified by the Köppen climate classification system. The climate is characterized by cool, rainy winters, and warm, dry summers. The fall, winter, and spring seasons often have overcast, wet, and changing conditions, while the summers are warm and dry.

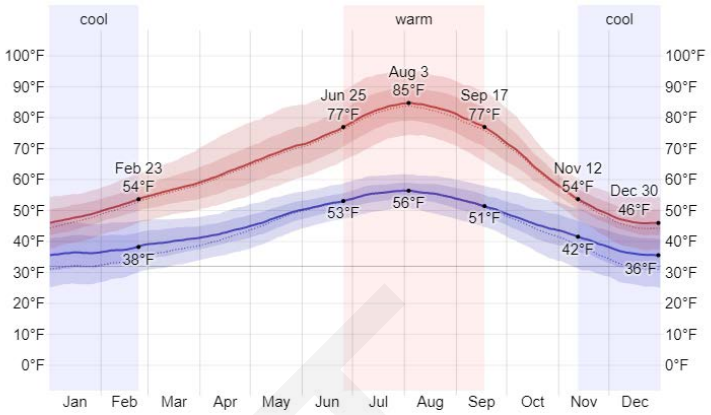
Average daily temperatures in Aurora range from a low of 40 degrees in December to a high of 68 degrees in July and August. The maximum average high temperature of the hottest month is 83 degrees in August, and the minimum average low temperature of the coldest month is 36 degrees in January and December. Annual temperature data are presented in **Figure 2-4**.

Precipitation at the Airport varies significantly throughout the year, as shown in **Figure 2-5**. The wet season lasts approximately seven months from mid-October to early-May. Inversely the dry season last approximately five months from early-May to mid-October. The airport receives an average of 52.3 inches of rainfall annually. The wettest month is December with an average of 8.7 inches; the driest month is July with an average of 0.5 inches of precipitation.

Sky conditions at the Airport, shown in **Figure 2-6**, vary significantly by season and are consistent with precipitation distributions. In general, the Airport experiences more instrument meteorological conditions (IMC) during the wetter months. The wetter, cloudy season generally begins in October and runs into early summer. The summer months are predominately partly cloudy, mostly clear, or clear—conditions that correspond to visual meteorological conditions (VMC).

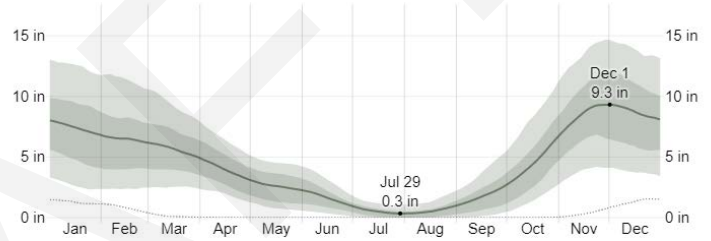
Wind data for the Airport indicates that prevailing wind directions vary by season. Spring and summer are characterized by north and west winds, while the fall and winter months observe winds from the south and east. See **Figure 2-7**. The FAA wind analysis computer program (Airport Data and Information Portal - Windrose Generator) confirms that the existing orientation of Runway 17/35 satisfies the FAA's minimum threshold of 95% crosswind coverage for all categories of aircraft.

FIGURE 2-4: ANNUAL TEMPERATURES



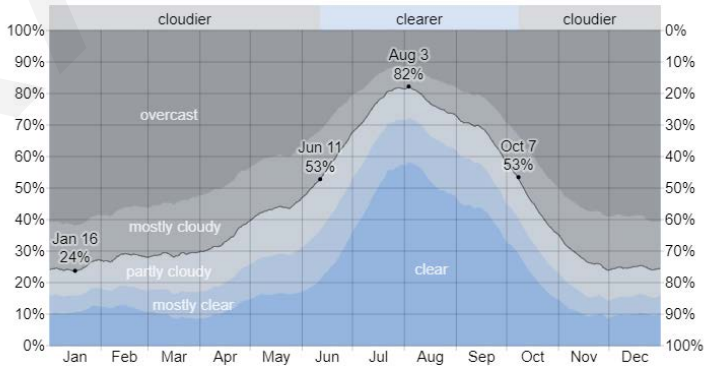
Source: www.weatherspark.com

FIGURE 2-5: ANNUAL RAINFALL



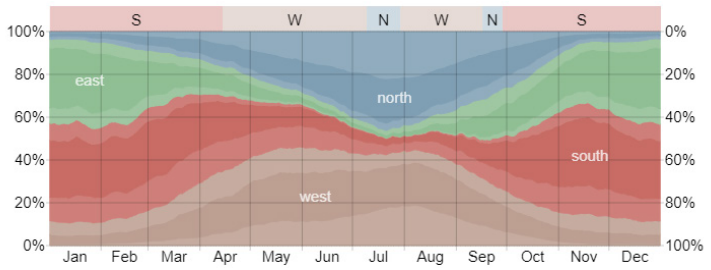
Source: www.weatherspark.com

FIGURE 2-6: ANNUAL CLOUD COVER



Source: www.weatherspark.com

FIGURE 2-7: ANNUAL WIND DATA



Source: www.weatherspark.com

ENVIRONMENTAL SCREENING/NEPA CATEGORIES

An environmental screening for the following environmental impact categories were included as part of the Airport Master Plan.

- Air Quality;
- Biological Resources (including fish, wildlife, and plants);
- Department of Transportation Act, Section 4(f);
- Hazardous Materials, Solid Waste, and Pollution Prevention;
- Natural Resources and Energy Supply;
- Visual Effects; and
- Water Resources (including wetlands, floodplains, surface waters, water quality, stormwater, groundwater, and wild and scenic rivers).

A summary of significant findings is below. The full environmental screening report is provided in **Appendix 2.**

Air Quality

The Aurora State Airport property falls within a census block where all air quality-related environmental hazard indexes are between the 24th and 73rd percentile nationwide. The Airport property scores within the 51st percentile for diesel particulate matter, the 73rd percentile for PM2.5 levels, the 24th percentile for ozone summer seasonal average of daily maximum eight-hour concentrations in the air, the 51st percentile for cancer risk from the inhalation of air toxics, and the 69th percentile nationwide for other respiratory hazards exposure.

Biological Resources

A review of available data yielded no records of species observed on the Airport listed by state, or federally as endangered or threatened, nor were any species listed as candidates for listing reported. However, the Molalla River (three miles northeast of the Airport), the Pudding River (0.85 mile east of the Airport), and Mill Creek (0.75 mile southeast of the Airport) are designated as habitat for Chinook salmon (federally threatened; state classified sensitive critical), Pacific lamprey (federal species of concern; state classified sensitive vulnerable), and steelhead (federally threatened; state classified sensitive vulnerable) based on records of historic sightings.

There are no designated critical habitats on the Airport property. However, sub-watersheds surrounding the Airport are considered Essential Fish Habitat (EFH) for Chinook and coho salmon. Federal agencies are required to consult with the National Oceanic and Atmospheric Administration (NOAA) Fisheries regarding any action authorized, funded, or undertaken that may adversely affect EFH. Stormwater runoff from the Airport property flows into the Chinook and steelhead critical habitat areas as well as the Chinook and coho EFH areas.

Hazardous Materials, Solid Waste and Pollution Prevention

An EPA hazardous waste treatment, storage, and disposal facility (TSDF) was reported at Columbia Helicopters Inc., adjacent to the Airport's northeast property boundary. This TSDF is recorded as addressing the handling and prevention of releases of hazardous materials into the environment from wastes generated on site at the property, as well as wastes received from off-site facilities. In addition to this TSDF, Columbia Helicopters Inc. also holds a National Pollutant Discharge Elimination System (NPDES) permit for water discharges and is identified by the EPA Cleanups in My Community Map as having been a Resource Conservation and Recovery Act (RCRA) corrective action site. Aurora State Airport also holds an NPDES permit (also referred to in Oregon as a 1200-Z Stormwater Discharge General Permit), as do 12 other properties within 12 miles of the Airport.

There is one aboveground storage tank fueling facility and one recently decommissioned fueling facility with underground storage tanks located on ODAV-owned property that are planned to be removed. There are also other privately-owned facilities surrounding the Airport property that have their own fueling facilities.

Natural Resources and Energy Supply

A Water Control District has been formed at the Airport to provide water for fire protection for properties at the Airport. Two wells are located on Airport property, in addition to a pumphouse and underground water storage tanks that provide water to fire hydrants across the Airport property.

Water testing has revealed the presence of arsenic above the maximum contamination level set by the EPA in wells located on and surrounding the Airport property. Mitigation measures in the form of pump and filtration systems were recommended to be implemented to provide adequate flow and water quality.

Water Resources

Wetlands

Several non-jurisdictional wetlands have been identified on Airport property. These wetlands were products of man-made drainage swales that are located in historic uplands with non-hydric soils. According to Oregon Department of State Lands Rule 141-085-0515 Removal-Fill Jurisdiction by Type of Water, these swales with wetland hydrology, vegetation, and soils are not considered waters of the state because they are artificially created for the purposes of stormwater detention and/or treatment.

Floodplains

The Airport property lies in a FEMA Zone X, which is considered an area of minimal flood hazard. The Airport is located outside of the 500-year floodplain. The closest 100-year floodplain is located approximately 0.55 miles east of the Airport and is associated with the Pudding River.

Water Quality

Many of the surface waters in the vicinity of the Aurora State Airport property are contaminated and listed on the DEQ 303(d) list. Contaminated surface waters in the vicinity of the Airport include:

- A segment of the Pudding River east of the Airport is on the 303(d) list of impaired waterways for guthion, water temperatures, and dieldrin. It is impaired for fish and aquatic life, fishing, and public and private domestic water supplies.
- The entire Mill Creek-Pudding River sub-watershed (1st–4th order streams) is listed on the 303(d) list for benthic macroinvertebrates bioassessments and inorganic arsenic. It is considered impaired habitat for fish and aquatic life, fishing, public and private domestic water supplies, and recreational contact with the water.
- A segment of the Molalla River that intersects the Pudding River east of the Airport is not a 303(d)-listed waterway but is listed by the EPA's "How's My Waterway" tool as impaired for fishing due to flow regime modification.
- The segment of the Willamette River that the Molalla River flows into north of the Airport is also a 303(d)-listed waterway. It is listed for the following factors: noxious aquatic plants, aldrin, benthic macroinvertebrates bioassessments, temperatures, 4,4'-DDE, 4,4'DDT, dieldrin, and PCBs. It is considered impaired for aesthetic quality, boating, fish and aquatic life, fishing, and public and private domestic water supply.

Compromised waters in the vicinity of the Airport property include critical habitat for federally threatened Upper Willamette River Chinook and steelhead populations. These waters also flow downstream to additional critical habitat areas for other species of federally listed fish species in the Columbia River.

LOCAL SURFACE TRANSPORTATION

The Airport is located between Interstate 5 and State Highway 99E. Interstate 5, which is an essential north-south commerce link for the western United States, runs west of the Airport providing access to the Portland metro area. Access to the Airport is also provided by Highway 551 (Canby-Hubbard Highway) from the north and south, Arndt Road from the east and west, and Airport Road from Aurora. Keil Road is located south of the Airport and provides additional airport business access from Highway 551 and Airport Road. State Highway 99E, accessible to the Airport via Ehlen Road off of Highway 551 and Airport Road, provides access to the nearby communities of Canby, and Oregon City.

AREA LAND USE/ZONING

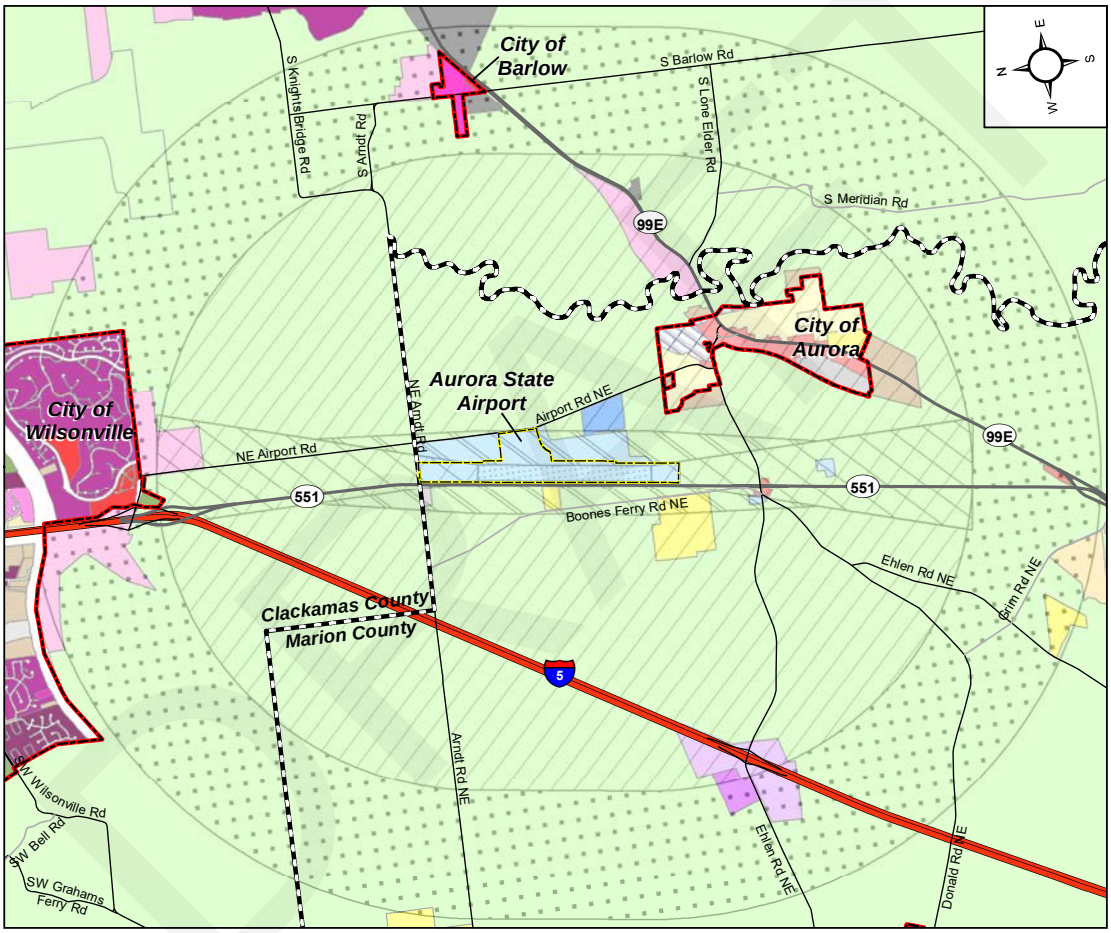
Aurora State Airport is located outside of the Aurora UGB. Land use actions related to the airport property and its immediate surroundings are under the exclusive jurisdiction of Marion County. The applicable zoning ordinance articles associated with the Airport are summarized below and provided in full in **Appendix 3**.

The Airport's FAR Part 77 airspace extends over areas of Marion and Clackamas County, and the City of Aurora. Each of these jurisdictions is responsible for protecting the areas of airport airspace that fall within their boundaries, and each employs overlay zoning districts as a mechanism to do so. The overlay districts are discussed in more detail below. The zoning around the airport property is shown in **Figure 2-8**.

Existing Airport Base Zone

The existing airport property is zoned as **Public (P)** as defined in Marion County Code 17.171. The intent of the P zone is "to provide regulations governing the development of lands appropriate for specific public and semi-public uses and to ensure their compatibility with adjacent uses." Airports are regulated by Chapter 17.171, Section 030 - Conditional Uses, which states that "Airport and airport related commercial and industrial uses" are authorized under the procedure provided for conditional uses and are permitted in the P zone.

FIGURE 2-8: ZONING MAP



Marion County Zoning[1]		Clackamas County and City of Wilsonville Zoning[2]			City of Aurora Zoning[3]	FAR Part 77 Overlay[4]
AR	ID-LU	CN	PF	SFR3	C	Primary Surface
C	P	EFU	RI	SFR5	FH	Appproach Surface
EFU	P-LU	FUD	RRFU	SFR7	I	Transitional Surface
I	RS	IC	SFR10		R1	Horizontal Surface
ID	UT-20	MFR1	SFR2		R2	Conical Surface

Note: The Cities of Wilsonville and Barlow have not adopted overlay zoning districts to protect FAR Part 77 airspace surfaces. The conical surface over these jurisdictions has been excluded.

Compiled by Century West Engineering from the following data sources:

[1] Marion County GIS Open Data (https://marioncounty.maps.arcgis.com)
[2] Metro RLIS Discovery (https://rlisdiscovery.oregonmetro.gov)
[3] City of Aurora Planning (https://www.ci.aurora.or.us/planning/page/zoning-maps)

Airport Vicinity Zoning/Land Use

The Airport is generally surrounded by Marion County **Exclusive Farm Use (EFU**) districts, and a few parcels of **Acreage Residential (AR)** and **Industrial (I)** located in the immediate vicinity of the property.

The intent of the EFU zone (Marion County Code 17.136) is to provide and preserve the continued practice of commercial agriculture. It is intended to be applied in areas composed of tracts that are predominantly high-value farm soils. EFU zone generally prohibits the construction, use, or design of buildings and structures except for facilities used in agricultural or forestry operations, replacing or restoring a lawfully established dwellings, supporting exploration of geothermal or mineral resources, or supporting agri-tourism destinations and events. EFU zone also permits the construction of public roads, establishment or enhancement of wetlands, and the operation of composting facilities.

The AR zone (Marion County Code 17.128) facilitates the division and development of property suitable for development of acreage homesites. Allowed uses include single-family dwellings, agricultural development, planned developments, public parks and recreation facilities, religious organization use (less than 20,000 square feet in area), or replacement of an existing lawfully established dwelling.

The I zone (Marion County Code 17.165) is intended to provide for the location of needed industrial uses which are not dependent upon urban services. The I zone encourages orderly and compatible development of industrial uses, including agricultural related industry, on rural lands. Permitted uses include agricultural services and forestry; contracting and service facilities; the processing and manufacture of various commercial products; coal and wood fuel dealers; fire stations, utility facilities, and dwellings intended for facility caretakers.

The closest City of Aurora zoning district to the airport is an area of **Low Density Residential (R-1)** located approximately one-third of a mile southeast of the property.

The LDR zone (Aurora Municipal Code 16.10) is intended to provide a minimum standard for residential uses in areas of low population density. The municipal code allows LDR zoned areas to be used for single-family dwellings, public support facilities, childcare facilities, residential home care, public parks and recreation areas, two-family dwellings, city-owned structures, accessory buildings including accessory dwelling units (ADU), and some agricultural buildings.

Marion County, Clackamas County, and the City of Aurora have adopted airport overlay zoning districts intended to enhance the protection of airport airspace, and compatible land use planning. The City of Wilsonville has not adopted an overlay zoning district.

The airport overlay zones based on FAR Part 77 imaginary surfaces, applicable within each jurisdictional boundary, are included in the following codes:

- Marion County Code (Chapter 17.177)
- Clackamas County Code (Chapter 713)
- City of Aurora Municipal Code (Chapter 16.24)

The language contained in the zoning codes addresses permitted and conditional uses within each of the designated overlay zones to address land use compatibilities and height restrictions intended to protect aircraft operating in the airspace, as well as persons and property on the ground. **Figure 2-8**, presented earlier, depicts the overlay zones based on FAR Part 77 imaginary surfaces established for Aurora State Airport.

The Oregon Department of Aviation Land Use Compatibility Guidebook recommends guidance for determining land use compatibility with overlaying FAR Part 77 surfaces. The guidance suggests that areas of residential land use should not be located under primary, approach, or transitional surfaces. At Aurora State Airport, two areas of residential property are located beneath the west transitional surface and another area of residential use is located south of the Willamette River near the end of the Runway 17 approach surface. Additionally, while the above discussed Public zone lists airports as a conditional use for the zone, the Land Use Compatibility Guidebook recommends establishing an airport-specific zone for airport properties.

Airside Elements

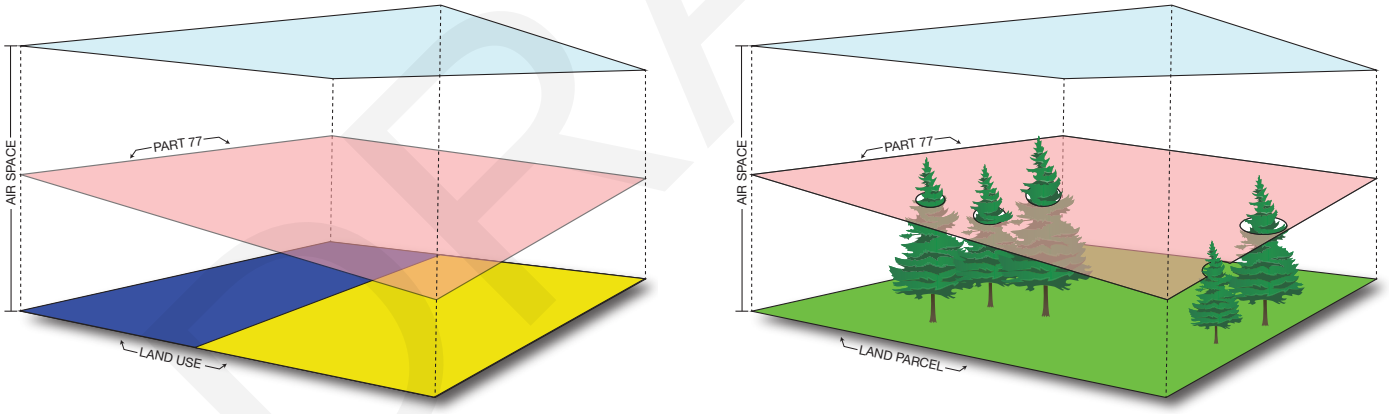
The Airside Elements (depicted in the existing conditions **Figure 2-12**) section is comprised of the facilities that facilitate the movement and operation of aircraft on the ground and in the air around Aurora State Airport. This section of the existing conditions analysis includes a discussion of the area airspace, instrument flight procedures, runways, taxiways/taxilanes, aprons/tiedowns/aircraft parking, airfield pavement condition, and airside support facilities.

AIRSPACE – FAR PART 77, TERPS, AND RUNWAY END SITING SURFACES

In addition to the airspace classifications and operating environment with which pilots are more familiar with there are a variety of rules, regulations, design standards, and policies associated with the protection of airspace, evaluation of proposed objects on and near airports, and their effects on navigable airspace. Airport Cooperative Research Program (ACRP) Report 38 - *Understanding Airspace, Objects, and Their Effects on Airports* provides a comprehensive description of the regulations, standards, evaluation criteria, and processes designed to protect the airspace environments surrounding airports and is summarized below for additional context of airspace evaluation and design to serve Aurora State Airport.

FAR Part 77 – Object Affecting Navigable Airspace

Federal Air Regulation (FAR) Part 77.19 defines airspace surfaces for civil airports and establishes the central regulation governing airspace protection, with cross-references to many other criteria documents. It sets forth the requirements for notifying the FAA of proposed construction; defines obstruction criteria; and describes aeronautical studies required to assess hazard status. The FAR Part 77 surfaces associated with Aurora State Airport have been codified by the local jurisdictions through airport overlay zones discussed above. **Figure 2-9** depicts the existing FAR Part 77 airspace defined for Runway 17/35 at Aurora State Airport. The graphics below illustrate the relationship between an invisible airspace surface (these surfaces are also referred to as “imaginary” surfaces) defined in Part 77 and the underlying land use and objects.



Source: Century West Engineering

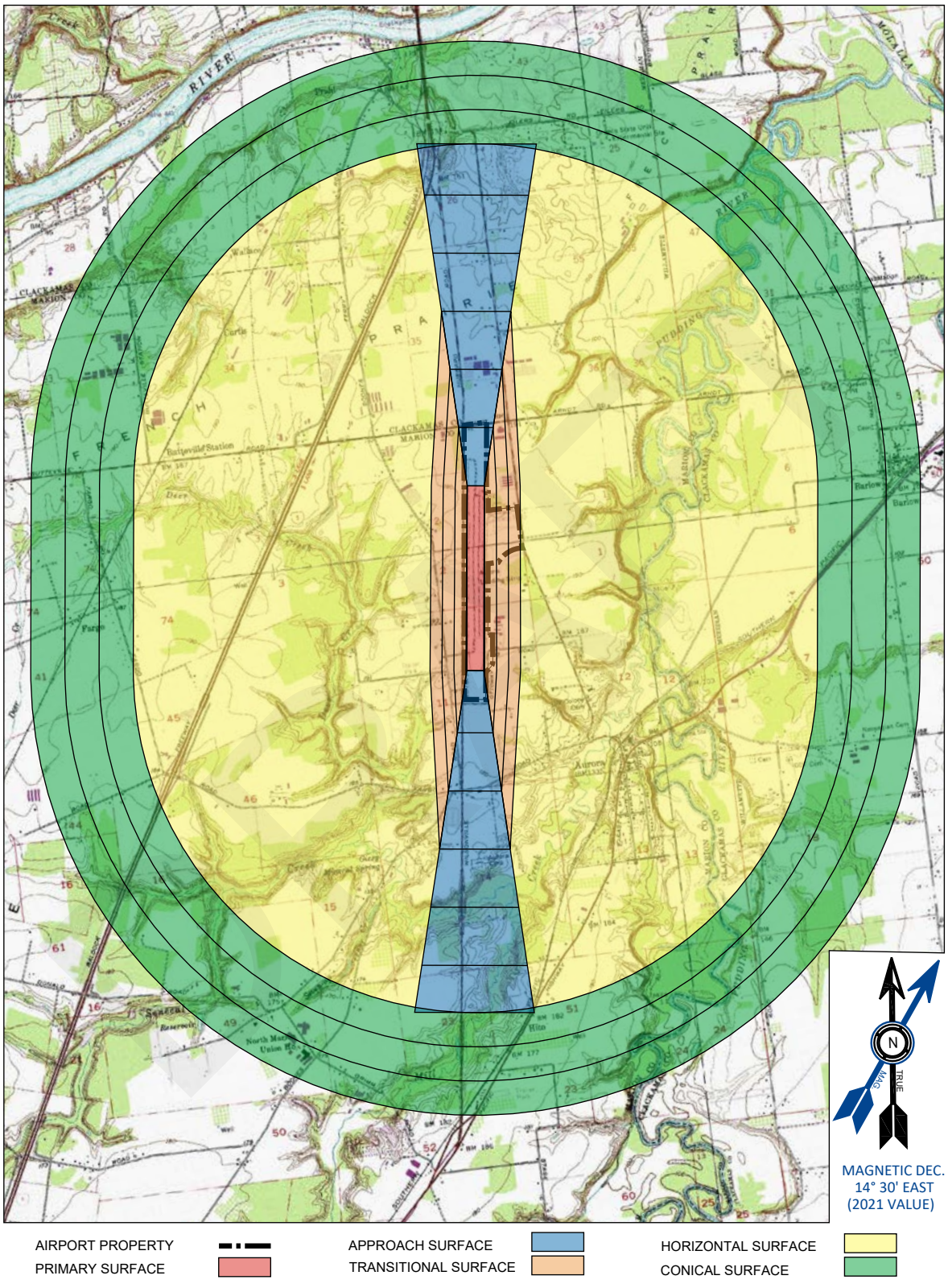
FAA Order 8260.3E – United States Standard for Terminal Instrument Procedures (TERPS)

This FAA Order, along with several derivative orders in the 8260 series and other related orders, define criteria that FAA flight procedure designers utilize when designing instrument flight procedures. Airspace protection requirements for instrument flight procedures are similar to those defined in FAR Part 77, although they also define protected airspace requirements for instrument approach and departure routes connecting the terminal and enroute airspace. Obstruction mitigation (obstacles to protected airspace) defined in FAA aeronautical studies may be required for TERPS surfaces, in addition FAR Part 77 surfaces.

FAA AC 150/5300-13A – Airport Design

This Advisory Circular (AC) is the principal document utilized by the FAA, airport sponsors, and consultants when planning and designing new airports or modifications to airports. Airspace clearances for key runway end features are defined in the AC’s discussion of Runway End Siting Surfaces.

FIGURE 2-9: FAR PART 77 AIRSPACE



For Aurora State Airport, the approach surfaces for the runway extend 10,000 feet beyond each runway (beginning 200 beyond the runway end).

Source: Century West Engineering

AIRSPACE CLASSIFICATIONS (Figure 2-10)

Airspace within the United States is classified by the FAA 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 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.

LOCAL AREA AIRSPACE STRUCTURE (Figure 2-11)

The Seattle Sectional Aeronautical Chart depicts nearby airports, notable obstructions, and special airspace designations in the vicinity of Aurora State Airport. Low-altitude instrument airways are also depicted for general reference because pilots use them for both visual and instrument flight planning. The blue airways are identified as "Victor" or Area Navigation ("T routes") airways.

Additional definition of the low altitude airways is provided on FAA IFR Enroute Low Altitude – U.S. Chart L-1.[11] The chart is used exclusively for instrument flight planning and provides additional detail for pilots. As is common in busy air traffic areas, Aurora State Airport is surrounded by low altitude instrument airways in all directions. However, the minimum flight altitudes assigned to the nearby airway segments are well above the traffic pattern altitude (1,200 feet above mean sea level; 1,000 feet above ground level) for the Airport, which avoids operational conflicts between local and enroute air traffic. The proximity of several instrument airways, combined with VFR activity generated by nearby airports causes overflights from aircraft not departing or arriving at Aurora State Airport.

The nearest low altitude enroute airways to Aurora State Airport pass along the west and south sides of the Airport. These airways connect to ground-based electronic navigational aids (very high frequency (VHF) transmitters) located in Newberg, Bend, Eugene, and Battleground, Washington.

The airspace designation surrounding Aurora State Airport is dependent on the operational status of the ATCT. When the ATCT is operating, the surrounding airspace is Class D from the surface up to 2,500 feet AGL and extends outward in a four-mile radius. Aircraft operating in Class D airspace are required to establish contact with the ATCT before entering Class D airspace. When the ATCT is not operating, Class E airspace is in effect, extending from the surface upward and pilots are responsible for monitoring the assigned Common Traffic Advisory Frequency (CTAF).

Special Use Airspace

Special Use Airspace (SUA) is airspace where activities are confined due to their nature or where limitations are placed on aircraft operations that are not part of those activities. SUAs also include warning areas, military operations areas (MOA), alert areas, controlled firing areas (CFA), and national security areas (NSA).

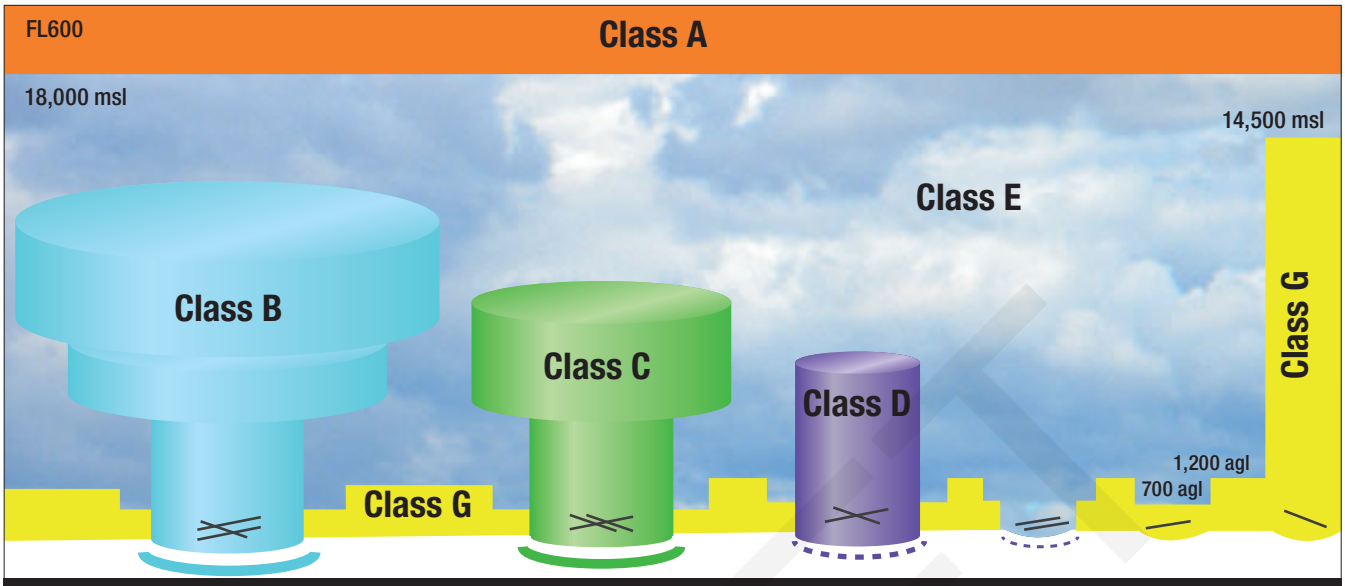
There are no SUAs in the immediate area of Aurora State Airport, with the closest example being the EEL C and EEL D MOAs located on the Oregon and Washington Coast.

Controlled and Uncontrolled Airspace

As mentioned previously, Aurora State Airport operates in controlled Class D airspace during the hours of ATCT operations. During these times pilots contact Aurora ATCT upon arrivals and departures. Outside of the hours of ATCT operations, the Airport operates as Class E airspace, at which times pilots use the CTAF for communications with ground facilities and other aircraft operating in the vicinity of the airport.

11 United States Government Flight Information Publication

FIGURE 2-10: AIRSPACE CLASSIFICATIONS



COMMUNICATION REQUIREMENTS AND WEATHER MINIMUMS

	Class A	Class B	Class C	Class D	Class E	Class G
Airspace Class Definition	Generally airspace above 18,000 feet MSL up to and including FL 600.	Generally multi-layered airspace from the surface up to 10,000 feet MSL surrounding the nation's busiest airports	Generally airspace from the surface to 4,000 feet AGL surrounding towered airports with service by radar approach control	Generally airspace from the surface to 2,500 feet AGL surrounding towered airports	Generally controlled airspace that is not Class A, Class B, Class C, or Class D	Generally uncontrolled airspace that is not Class A, Class B, Class C, Class D, or Class E
Minimum Pilot Qualifications	Instrument Rating	Student*	Student*	Student*	Student*	Student*
Entry Requirements	IFR: ATC Clearance VFR: Operations Prohibited	ATC Clearance	IFR: ATC Clearance VFR: Two-Way Communication w/ ATC	IFR: ATC Clearance VFR: Two-Way Communication w/ ATC	IFR: ATC Clearance VFR: None	None
VFR Visibility Below 10,000 msl**	N/A	3 Statute Miles	3 Statute Miles	3 Statute Miles	3 Statute Miles	Day: 1 Statute Mile Night: 3 Statute Miles
VFR Cloud Clearance Below 10,000 msl***	N/A	Clear of Clouds	500 Below 1,000 Above 2,000 Horizontal	500 Below 1,000 Above 2,000 Horizontal	500 Below 1,000 Above 2,000 Horizontal	500 Below 1,000 Above 2,000 Horizontal***
VFR Visibility 10,000 msl and Above**	N/A	3 Statute Miles	3 Statute Miles	3 Statute Miles	5 Statute Miles	5 Statute Miles
VFR Cloud Clearance 10,000 msl and Above	N/A	Clear of Clouds	500 Below 1,000 Above 2,000 Horizontal	500 Below 1,000 Above 2,000 Horizontal	1,000 Below 1,000 Above 1 Statute Mile Horizontal	1,000 Below 1,000 Above 1 Statute Mile Horizontal

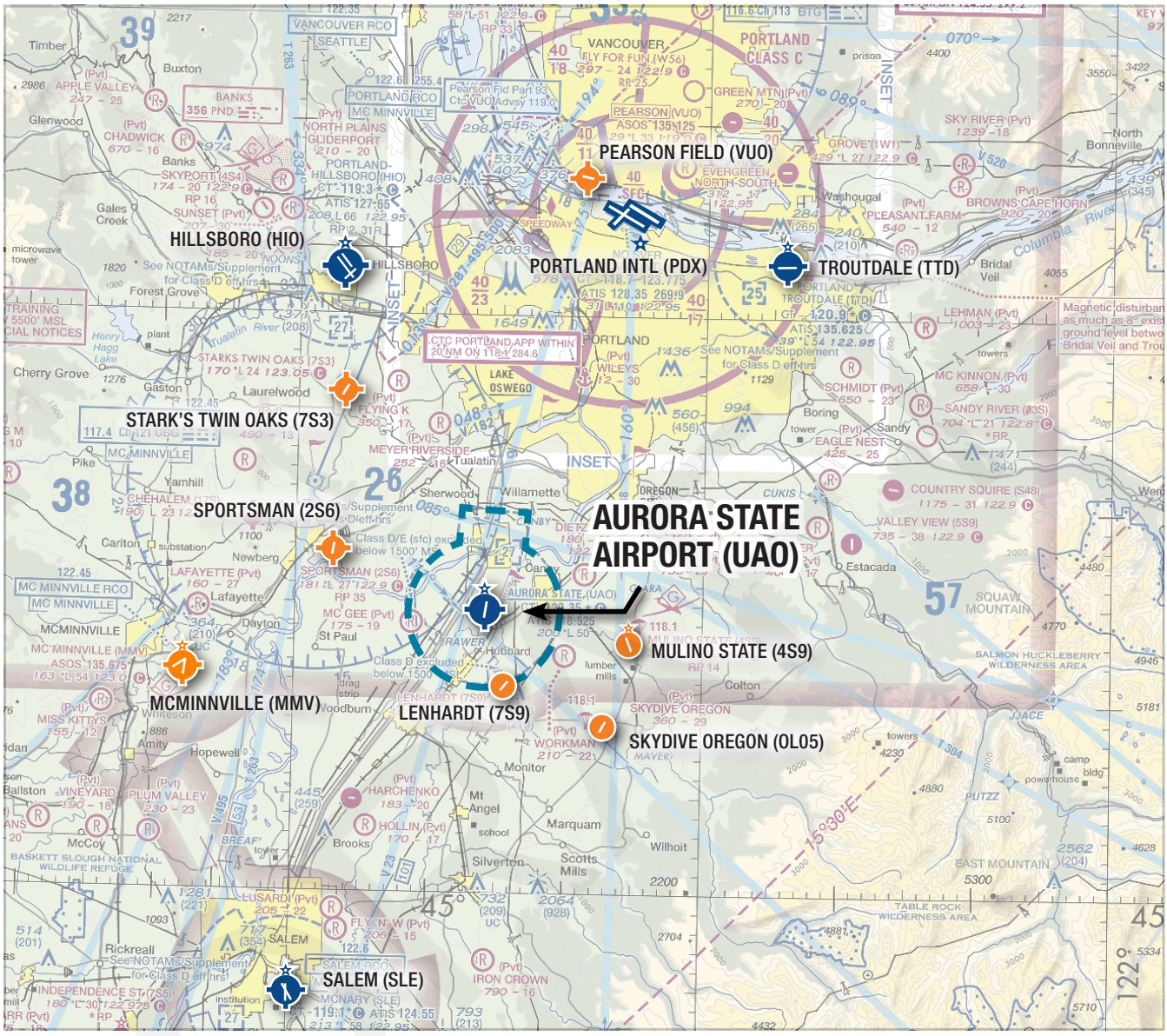
* Prior to operating within Class B, C, or D airspace (or Class E airspace with an operating control tower), student, sport, and recreational pilots must meet the applicable FAR Part 61 training and endorsement requirements. Solo student, sport, and recreational pilot operations are prohibited at those airports listed in FAR Part 91, appendix D, section 4.

** Student pilot operations require at least 3 statute miles visibility during the day and 5 statute miles visibility at night.

*** Class G VFR cloud clearance at 1,200 agl and below (day); clear of clouds.

Source: Century West Engineering

FIGURE 2-11: AREA AIRSPACE – SEATTLE SECTIONAL CHART



LEGEND			
○	Airports with other than hard-surface runways		Compass Rose (VOR/DME or VORTAC)
⊙	Airports with hard-surfaced runways 1,500 ft. to 8,069 ft.		VOR or RNAV Airways
✈	Airports with hard-surfaced runways greater than 8,069 ft. or some multiple runways less than 8069 ft.		Class D Airspace (surface)
			Class E Airspace with floor 700' above surface
⬡	VOR/ VORTAC		National Wilderness Area

Source: SkyVector.com

INSTRUMENT FLIGHT PROCEDURES

Instrument approach and departure procedures are developed by the FAA using electronic navigational aids and satellite navigation (SATNAV) to guide aircraft through a series of prescribed maneuvers in and out of an airport's terminal airspace. The procedures are designed to enable continued airport operation during instrument meteorological conditions (IMC), but are also used during visual conditions, particularly in conjunction with an instrument flight plan. The capabilities of each instrument approach are defined by the technical performance of the procedure platform (ground based navigational aids or satellite navigational aids) and the presence of nearby obstructions, which may affect the cloud ceiling and visibility minimums for the approach, and the routing for both the approach and missed approach procedure segments. The aircraft approach speed and corresponding descent rate may also affect approach minimums for different types of aircraft.

Aurora State Airport currently has three instrument approaches, two global positioning system (GPS) approaches to Runways 17 and 35, and a single localizer (LOC) approach to Runway 17. LOC RWY 17 approach presents separate minimums for approaching aircraft that are equipped to obtain a fix on FIDOV intersection. The GPS approaches provide vertical guidance to approaching aircraft. All published approach procedures provide electronic course guidance to either runway end and are authorized for category A-D aircraft (varying aircraft approach speeds) with approach minimums for both straight-in and circling procedures. Approach minimums are for each procedure are summarized in **Table 2-12** and the approach plates are provided in **Appendix 4**.

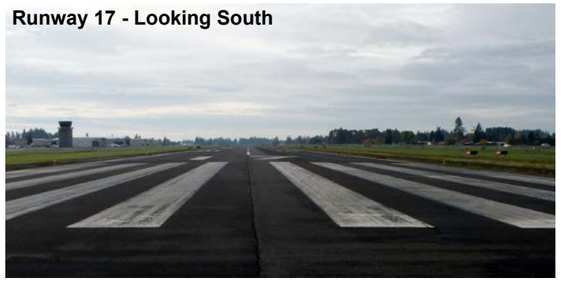
TABLE 2-12: INSTRUMENT APPROACH PROCEDURES – AURORA STATE AIRPORT

	MINIMUM ALTITUDE (MSL)	MINIMUM VISIBILITY (SM)	AIRCRAFT CATEGORY
RNAV (GPS) RWY 17			
LPV DA	511	7/8	A,B,C,D
LNAV/VNAV MDA	661	1 1/4	A,B,C,D
LNAV MDA	660	1	A,B
	660	1 1/8	C,D
Circling	700	1	A,B
	700	1 1/2	C
	940	2 1/4	D
RNAV (GPS) RWY 35			
LPV DA	453	7/8	A,B,C,D
LNAV/VNAV MDA	515	1	A,B,C,D
LNAV MDA	620	1	A,B
	620	1 1/4	C,D
Circling	700	1	A,B
	700	1 1/2	C
	940	2 1/4	D
LOC RWY 17			
S-17	1000	3/4*	A
	1000	1	B
	1000	2	C,D
Circling	1000	1	A
	1000	1 1/4	B
	1000	2 1/2	C,D
LOC RWY 17 (FIDOV FIX)			
S-17	580	3/4*	A,B
	580	1	C,D
Circling	700	1	A,B
	700	1 1/2	C
	940	2 1/4	D

Source: Federal Aviation Administration
* Visibility minimums increased to 7/8-mile via NOTAM 1/5229

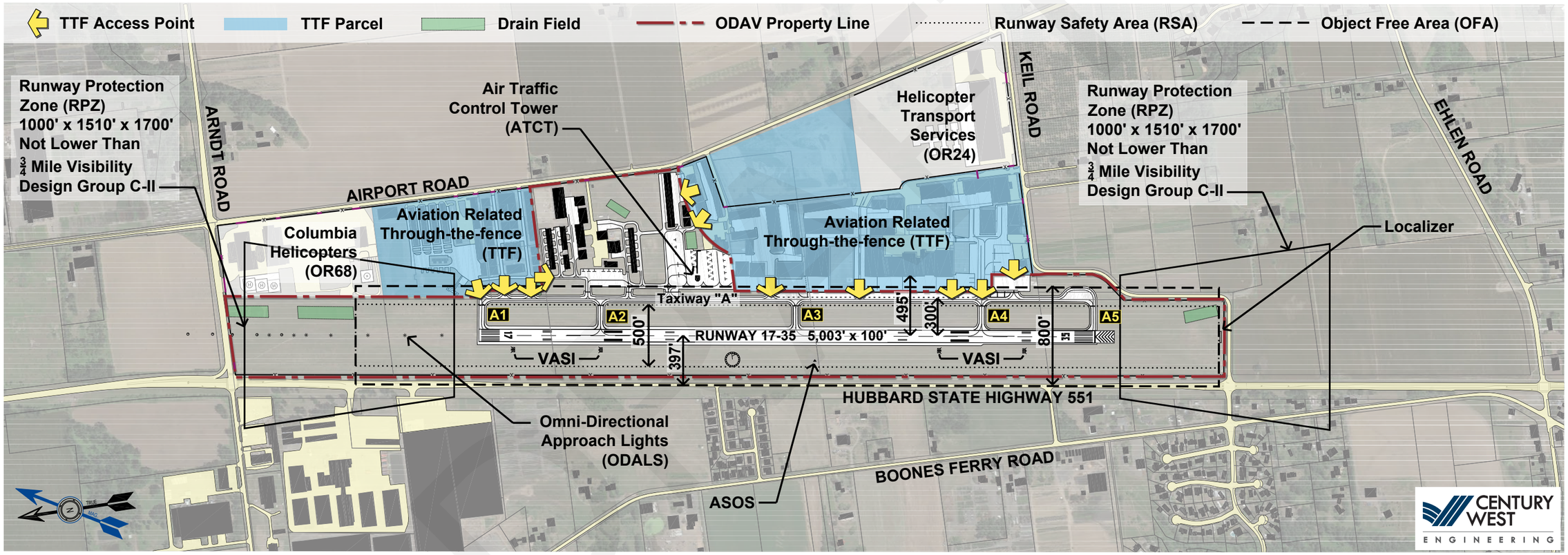
There are three departure procedures published for the Airport. GLARA TWO instructs aircraft departing from Runway 17 to climb to 1,000 feet then make a climbing left turn direct to GLARA, crossing at 4,000 feet, and aircraft departing Runway 35 to climb to 700 feet then make a climbing right turn to GLARA, also crossing at 4000 feet. GNNET TWO instructs aircraft departing from Runway 17 to climb to 1,000 feet then make a climbing right turn direct to GNNET, crossing at 5,000 feet, and aircraft departing Runway 35 to climb to 700 feet then make a climbing left turn to GLARA, crossing at 5,000 feet. NEWBERG TWO directs aircraft departing from Runway 17 to climb to 1000 feet then make a climbing right turn direct to the URG VOR/ DME and aircraft departing Runway 35 to climb to 700 feet then make a climbing left turn to URG VOR/DME, then traffic from either runway should continue climb in URG VOR/DME holding pattern to cross the waypoint at or above 4,000 feet before proceeding on course. Copies of the departure procedure plates are available in **Appendix 4**.


Taxiway "A"


Runway 17 - Looking South


Air Traffic Control Tower (ATCT)


Atlantic Aviation Fuel Tanks - Leased ODAV Property




Hangars on ODAV Property

Hubbard Highway at Arndt Road

Piper Road at Hubbard Highway

Runway Distance Markers and VASI

RUNWAY

Runway 17/35 is 5,003 feet long and 100 feet wide and is oriented in a north-south direction (187°/007° true bearing). Both runway ends employ left-hand traffic patterns with a traffic pattern altitude of 1,200 feet MSL. The runway is lighted and has a full-length parallel taxiway. The runway slopes downward from the 17 end (elevation 199.7 feet MSL) to the 35 end (elevation 196.3 feet MSL) resulting in an effective runway gradient of 0.06%.

The current runway pavement is comprised of two main sections. The largest being the 4,100-foot northern portion which was originally constructed in 1943. The southern 900 feet of the runway was constructed as an extension in 1993. The most recent runway paving work was a 2- to 3-inch asphalt overlay for the entire runway length, completed in 2005. The runway surface is grooved asphalt with a published single-wheel gear strength rating of 30,000 pounds and a dual-wheel gear strength rating of 45,000 pounds.

The runway has precision markings on each end to accommodate vertical guidance associated with the LPV[12] minimums. Precision markings include threshold bars, edge and centerline striping, aiming point markings, and touchdown zone markings, and runway designation markings. The markings were observed in good condition during a recent field visit to the facility. All markings are consistent with FAA standards.

Runway 35 Looking North – Source: Century West Engineering

TAXIWAYS AND TAXILANES

Runway 17/35 has a full length, 35-foot wide parallel taxiway (Taxiway A) that is offset 300 feet east of the runway (centerline to centerline). Taxiway A has five 90-degree connector taxiways accessing the runway (A1 – A5). The numbered taxiway connectors begin at the Runway 17 end (A1) and end at the Runway 35 end (A5). There are also 10 taxilanes branching off Taxiway A to provide access to apron and hangar areas, as well as the three defined GA development areas with landside aviation facilities at the Airport. These include:

- Northern TTF Development Area;
- ODAV Terminal Development Area near the center of the airfield; and
- Southern TTF Development Area.

Additional taxilanes are located in and around hangar areas. Taxiway A and connector taxiways are equipped with blue medium intensity edge lights and yellow markings. Taxiway pavement conditions range from "Good" to "Poor" according to the ODAV's 2018 Pavement Evaluation Program (PEP) report (**Appendix 5**). Pavement condition is discussed in more detail in the Pavement Condition section below.

APRONS AND TIEDOWNS

Within the ODAV-owned property, there is a total of 316,434 square feet of apron space available, primarily on two apron areas. The largest terminal apron area is located at the center of the property east of Taxiway A, adjacent to the ATCT and measures 143,546 square feet. A smaller aircraft parking apron is located near the northern end of ODAV landside property at Taxiway A and Taxiway A2. This apron space is used primarily by Aurora Flight Training. The remaining apron area is on the south end of the airport adjacent to Atlantic Aviation.

12 LPV = "Localizer Performance with Vertical guidance." Satellite-based instrument approach procedure

The ODAV-owned airport property has a total of 34 tiedown locations. Of the 34 tiedowns, 27 are located near the ATCT, including two configured as pull-through parking intended for large business aircraft. The remaining 25 tiedowns on the main apron are configured for small aircraft. The smaller north apron has seven tiedown locations for small aircraft. Neighboring tenants with airport TTF agreements also provide additional apron space and aircraft parking on their privately-owned land parcels.

Taxiway A Looking South – Source: Century West Engineering

Apron Looking East – Source: Century West Engineering

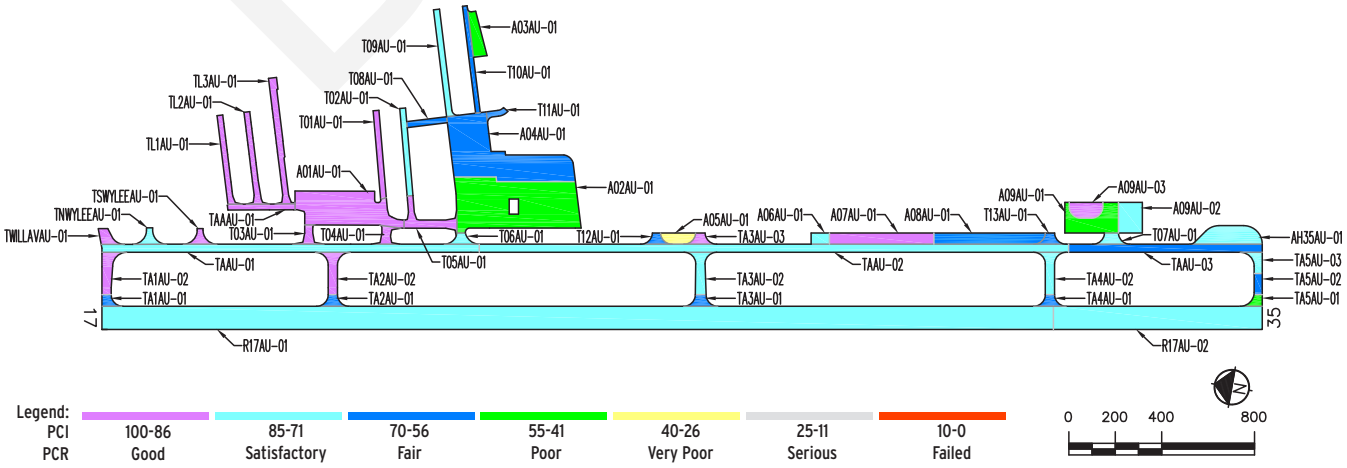
AIRFIELD PAVEMENT CONDITION

The ODAV PEP systematically evaluates surface conditions, and identifies maintenance, repair, and rehabilitation projects needed to sustain functional pavements at Oregon airports. The PEP provides each paved, public-use airport in Oregon a thorough "snapshot in time" evaluation of surface conditions and provides projections of future surface condition for all eligible pavements in terms of pavement condition index (PCI). For NPIAS airports like Aurora State Airport that receive federal funding, the PEP report is a critical tool for prioritizing airfield pavement needs and meeting FAA grant assurances.

PCI evaluations were performed as part of the PEP at Aurora State Airport in July 2018. The PEP was performed using the PCI methodology developed by the U.S. Army Corps of Engineers and outlined in the current edition of ASTM D-5340, Standard Test Method for Airport Condition Index Surveys. The 2018 PEP report for the Aurora State Airport is included in **Appendix 5**.

The PEP results (**Figure 2-13**) show that the runway pavement surface was in "satisfactory" condition with a weighted average PCI of 81 at that time. The primary distresses present on the runway were low- to medium-severity longitudinal cracking, low-severity weathering, and isolated low-severity alligator cracking. The longitudinal cracking was located primarily at paving joints created during the 2005 overlay project and sealed most recently in August of 2020. The alligator cracking was located primarily in areas aligning with the gear paths for typical business jet aircraft using the airport.

FIGURE 2-13: PAVEMENT CONDITIONS (2018 INSPECTION)



Source: 2018 ODAV Pavement Evaluation/Maintenance Management Program

Most of the taxiway pavements were rated “Satisfactory” or “Good.” Notable exceptions being the south 900 feet of Taxiway A and west fillets of connector taxiways A1 – A4, which received ratings of “Fair,” and the west fillet of connector taxiway A5 that was rated as “Poor.” The Taxilanes accessing hangar areas were rated as “Good” to “Fair.”

The apron pavements conditions were more varied. The west half of the main apron was rated as “Poor”, the east half was rated as “Fair,” and the north parking apron received a rating of “Good.” Most of the remaining apron pavements were rated as “Fair” or better. However, there was a single small area of apron located north of A3 between two access taxilanes rated “Very Poor.”

The 2018 PEP report recommended a variety of treatments to address the findings of the inspection, ranging from crack and slurry sealing to asphalt overlays and pavement reconstruction. The recommended treatment projects will be completed according to priority and funding availability, and ultimately included in the airport master plan’s capital improvement program (CIP).

In August of 2019, the ODAV commissioned GRI to conducted a Runway 17/35 pavement evaluation (included in **Appendix 5**) to determine the existing Pavement Classification Number (PCN). PCN is an International Civil Aviation Organization (ICAO) standard used to indicate the strength of a runway, taxiway or apron. That assessment included review of ODAV historical pavement records, falling weight deflectometer testing, pavement cores, and related analysis. The guidance provided in FAA Advisory Circular 150/5335-5C, Standardized Method of Reporting Airport Pavement Strength – PCN, was used to calculate the final PCN.

The results of the evaluation suggested that based on calculated PCN, individual operations of up to 102,000 pounds for single-wheel and 143,000 pounds for dual-wheel could theoretically be accommodated. The evaluation hypothesized that a higher than expected PCN number for these isolated operations may have resulted from additional structural capacity added by the 2005 overlay. Conversely, the study also identified low-severity top-down alligator cracking and delamination of the top layer of pavement within the gear paths that would limit the ability of larger aircraft to use the runway. This type of cracking and delamination results from shear stresses at the pavement surface from aircraft wheel loading during landing and hard braking. These shear stresses are greater when larger aircraft with larger tire contact patches are in use, potentially resulting in catastrophic runway pavement damage if operations of larger aircraft were allowed.

Century West Engineering produced an additional memorandum for ODAV in September of 2020 that summarized the findings of the GRI pavement evaluation. The memorandum, entitled “Runway Pavement Considerations for Overweight Landings” (included in **Appendix 5**), also provided recommendations on evaluation of future requests by operators of aircraft exceeding the published Runway 17/35 weight limitations. The memorandum recommended that cumulative operations and their effects on pavement structural life be considered when operations exceeding weight limitations are requested. Since PCN is a measure only of whether individual operations may cause pavement failure, analysis that includes changes in overall fleet mix should be conducted for any reoccurring overweight operations. Also, the memorandum discussed pavement surface distresses and overlay delamination that were noted (and discussed above) that should be carefully considered as an indicator of increased chance of catastrophic pavement failure in the affected areas due to overweight landings and takeoffs. More frequent pavement inspections in areas of concern were also recommended. Finally, the memorandum provided recommendations on response planning should a pavement failure occur.

In May of 2021, GRI completed one additional evaluation for the ODAV that examined the remaining structural life of the Runway 17/35 pavement (included in **Appendix 5**). This evaluation calculated the remaining structural pavement life under a variety of fleet mix scenarios including the existing fleet mix and with the addition of varying numbers of overweight aircraft operations. The assessment concluded that repeated stresses put on the Runway by overweight aircraft would likely result in further damage, a shortened structural life of the pavement, and increased the likelihood of a catastrophic pavement failure. GRI also recommended a rehabilitation of the existing Runway pavement within the next 10 years due to the distresses noted previously.

FAA DESIGN STANDARDS

The FAA defines several recommended standards for airport design in *AC 150/5300-13A, Airport Design*. Some of the most critical standards are those related to the design of runways and taxiways and will be described in more detail in subsequent chapters of this planning study. At this stage of the planning process, it is relevant to summarize existing non-standard conditions previously identified by the FAA for consideration throughout the planning process.

Runway Safety Area (RSA) – The RSA is a defined surface surrounding the runway that is prepared or suitable for reducing the risk of damage to airplanes in the event of an airplane undershoot, overshoot, or an excursion from the runway.

Object Free Area (OFA) –The OFA is an area on the ground centered on the runway, taxiway, or taxilane centerline that is provided to enhance the safety of aircraft operations. No above ground objects are allowed except for those that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes.

Object Free Zone (OFZ) – The OFZ is a volume of airspace that is required to be clear of obstacles, except for frangible items required for the navigation of aircraft. It is centered along the runway and extended runway centerline.

Runway Protection Zone (RPZ) – The Runway Protection Zone (RPZ) is a trapezoidal area off each runway end intended to enhance the protection of people and property on the ground. The dimensions of an RPZ are a function of the critical aircraft and approach visibility minimums. The FAA recommends that RPZs be clear of all residences and places of public assembly (churches, schools, hospitals, etc.) and that airports own the land within the RPZs.

At Aurora State Airport, there are several known existing non-standard conditions to be analyzed in detail in the Facility Goals and Requirements and Development Alternatives Chapters:

- RPZs are encroached by various public roadways and contain properties that are not directly controlled by the Airport. “Interim Guidance on Land Uses Within Runway Protection Zone (2012)” generally identifies a public roadway as an incompatible land use within the RPZ. It also states that it is preferred that all property within RPZs be held by the airport in fee simple so the Airport sponsor can completely control the land use within.
- The runway OFA along its entire length is obstructed by Hubbard State Highway 551.
- There are several taxiway/taxilane design standard issues that should also be addressed at the Airport. The FAA recommends that taxiways/taxilanes not lead directly from an apron to the runway without requiring a turn. There are two direct runway access points on the Airport at Taxiways A3 and A4.
- The intersection of Taxiway A at A4 has been designated as a hotspot by the FAA. A hot spot is defined as a location on an airport movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots and drivers is necessary.

AIRPORT SUPPORT SERVICES

Support facilities generally include airside support facilities such as airfield lighting, signage, weather reporting equipment, ground-based navigational aids (NAVAIDS), and fueling facilities.

Air Traffic Control Tower

Aurora State Airport has an FAA Contract Air Traffic Control Tower (ATCT) on the main apron. Contract towers are ATCTs that are staffed by employees of private companies rather than by FAA employees. The ATCT was constructed in 2015 and began operations in October of that year. The tower is in operation daily between 0700 and 2000 local time (7:00 am to 8:00 pm in standard time terms).

Runway/Taxiway Lighting

Airfield edge lighting is classified as low, medium, or high intensity systems. Aurora State Airport’s runway has a medium intensity runway lighting (MIRL) which are white in color. The parallel taxiway and connector taxiways have medium intensity taxiway lighting (MITL) which are blue in color. Both systems are pilot-activated by keying the microphone from their aircraft. Apron edges are marked by blue edge reflectors.

Airfield Lighting

The Airport accommodates day and night operations in visual and instrument meteorological conditions. The runway is equipped with lighting systems that meet the standards for the current instrument approach requirements and runway use.

Exterior building and pole-mounted overhead lighting is installed at various locations around the airfield in some parking lots and on airport buildings.

The airfield lighting was observed to be in good working condition and fully operational during recent site visits.

Airfield Signage

The runway-taxiway system has lighted mandatory instruction signs (red background with white text) marking the aircraft holding positions at each of the taxiway connections with the runway [17-35, 17, 35, etc.]; the signs also include taxiway direction/designations [A1, A2, etc.] with yellow background and black numbers/letters. The signs are located to coincide with the painted aircraft hold lines on each taxiway that connects to the runway.

Weather Reporting

Aurora State Airport has an Automated Surface Observation System (ASOS) that provides 24-hour weather information. The ASOS sensor array is located west of the runway, near midfield. The system reports the following readings:

- Sky conditions such as cloud height and cloud coverage up to 12,000 feet;
- Surface visibility up to at least 10 statute miles;
- Basic present weather information such as the type and intensity for rain, snow, and freezing rain;
- Obstructions to vision like fog, haze, and/or dust;
- Sea-level pressure and altimeter settings;
- Air and dew point temperatures;
- Wind direction, speed and character (gusts, squalls);
- Precipitation accumulation; and
- Selected significant remarks including variable cloud height, variable visibility, precipitation beginning/ending times, rapid pressure changes, pressure change tendency, wind shift, peak wind.

When the ATCT is operating, weather reports are broadcast via the Automated Terminal Information System (ATIS). ATIS reports weather conditions and other information relevant to the airport hourly at 55 minutes past the hour on frequency 118.525 MHz. When the ATCT is not in service, the system reverts to the default ASOS information broadcast on the same frequency. The ASOS weather information is also available by telephone (503) 678-3011.

Taxiway Light and Air Traffic Control Tower

Willamette Aviation Fuel Tanks

Medium Intensity Runway Lighting (MIRL)

VASI and Windsock

Source: Century West Engineering

NAVAIDs

Navigational Aids (NAVAIDS) provide navigational assistance to approaching aircraft. They are classified as either Visual or Electronic. Visual NAVAIDs provide visual cues to pilots, usually through lights. Electronic NAVAIDs aid the pilot on approach by interacting with electronic instruments onboard the aircraft.

Visual NAVAIDs

Aurora State Airport has four types of visual NAVAIDs:

Visual Approach Slope Indicators (VASI). Two-box VASIs are located at both runway ends. VASIs give pilots visual cues regarding their angle of final approach by displaying different colored lights based on where they are in relation to the published glide slope angle. The Runway 17 VASI has a 3.5-degree glide path; the Runway 35 VASI has a 3.0-degree glide path. VASIs allow a limited range of adjustment above the standard 3.0-degree glide path angle to increase clearance over close-in obstructions to the runway approach.

Runway End Indicator Lights (REIL). Runway 17 is equipped with a REIL. REILs mark runway ends with sequenced strobe lights positioned on each corner of the runway end. REILS increase a pilot's ability to identify the runway end in darkness or poor visibility conditions.

Omnidirectional Approach Lighting System (ODALS). Runway 17 is equipped with an ODALS. ODALSs are normally associated with runways with published instrument approach procedures. They consist of a series of lights extending out from the runway end flashing in sequence guiding the aircraft to the runway end.

Airport Rotating Beacon (APBN). APBNs are used to indicate the location of an airport to pilots in darkness or during reduced visibility. For land airports, the APBN provides sequenced white and green flashing lights that rotate 360-degrees to allow pilots to identify the airport from all directions, from several miles. The beacon operates on a dusk-dawn photocell automatic switch and reportedly functions normally.

Electronic NAVAIDs

Localizer (LOC) with Distance Measuring Equipment (DME). The LOC and DME work in conjunction to provide lateral course guidance and distance information to aircraft on approach to Runway 17.

Newberg (URG) Very High Frequency Omnidirectional Range with DME (VOR/DME). The NAVAID is located 10.8 miles northwest of the Airport and supports nearby enroute navigational routes and instrument procedures to several airports in the area. Nine separate instrument airways converge in the area surrounding Aurora State Airport. Air traffic on these airways includes aircraft from throughout the instrument enroute system, including aircraft operating at airports throughout the region and aircraft that are simply transiting the area enroute to more distant airports.

FBO and Flight Training Services

There are two businesses offering fixed base operator (FBO) services at the Airport. Atlantic Aviation (formerly Lynx FBO) provides fueling and oxygen services, aircraft parking, hangar rentals, aircraft maintenance, and avionics sales and service. Willamette Aviation Services provides aircraft fuel, aircraft parking, hangar leasing and sales, and aircraft rental and maintenance services. Flight training service are offered by Willamette Aviation Services and Aurora Flight Training (formerly Aurora Aviation), which is a non-FBO business.

Fuel Services

On airport fuel sales are provided by Atlantic Aviation, which has an above-ground 12,000-gallon aviation gasoline (AVGAS/100LL) tank and an above-ground 20,000-gallon Jet A tank located on leased ODAV property immediately southwest of the Atlantic Aviation building. Atlantic Aviation operates two mobile fuel trucks to ferry fuels from their tanks to aircraft parked on the apron. Additional off-airport fuel storage and service is available on surrounding private properties with TTF agreements. There are no known underground fuel storage tanks on airport property.

Emergency Services

Marion County Sheriff Department provides emergency service and response to the Aurora State Airport. A single dedicated deputy is assigned to the Aurora community, which includes the Airport. The Aurora Fire District provides fire suppression, rescue, emergency medical response, and hazardous material response. The nearest district fire station is in the City of Aurora, less than two miles from the Airport. The Aurora Airport Water Control District was formed in 2002 and installed a 247,800-gallon fire suppression system to assist the Aurora Fire District in protecting the Airport in the event of fire.

Landside Facilities

The landside elements section includes the landside facilities (depicted in **Figure 2-12**) designed to support airport operations, including aircraft storage and maintenance. This section of the existing conditions analysis includes a discussion of General Aviation (GA) Terminal Areas and "Through-The-Fence" (TTF) development, hangars/airport buildings, airport surface roads, vehicle parking, airport fencing, and utilities.

GENERAL AVIATION (GA) TERMINAL AREAS AND "THROUGH-THE-FENCE" (TTF) AGREEMENTS

As depicted in **Figure 2-14**, there are three discernible GA development areas with landside aviation facilities at the Airport. All of the existing landside facilities are located on the east side of the runway:

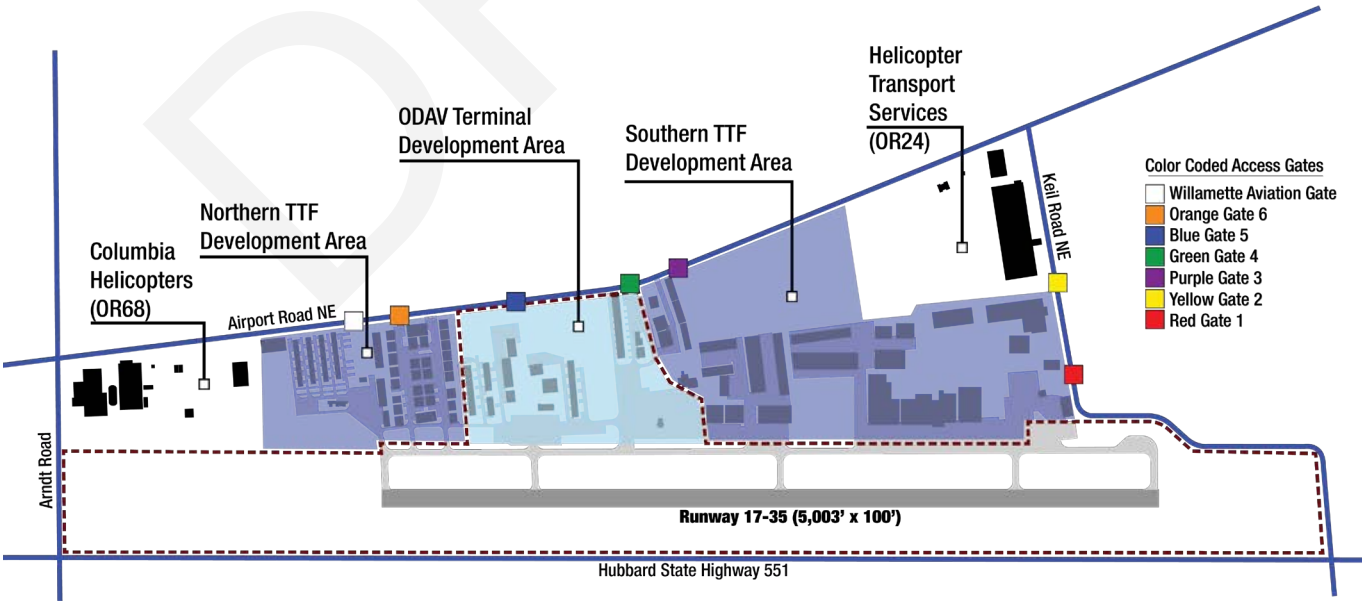
- **Terminal Development Area** – ODAV-owned property near the center of the airfield
- **North TTF Development Area** – privately-owned aeronautical use areas with ODAV-approved TTF access agreements
- **South TTF Development Area** – privately-owned aeronautical use areas with ODAV-approved TTF access agreements

The focus of the Airport Master Plan are the public facilities located on ODAV property and the eleven designated TTF access points on the airport property line. As noted earlier, the nearby Columbia Helicopters and Helicopter Transport Services (HTS) facilities are privately-owned helipads that are fully independent from Aurora State Airport operations and facilities. These facilities will not be included in the airport master plan evaluations.

Therefore, from a landside development standpoint, attention will be given to the facilities within the ODAV Terminal Development Area. In certain instances, appurtenant facilities in the North and South TTF Development Areas may be included to provide necessary context.

The ODAV Terminal Development Area is comprised of numerous hangars for storing general aviation aircraft, airport businesses like Aurora Flight Training, Aurora Aviation; an apron for itinerant traffic, and the FAA Air Traffic Control Tower (ATCT). The specific airfield facilities within this area of the Airport have been discussed within the relevant sections of this existing conditions analysis.

FIGURE 2-14: AURORA STATE AIRPORT DEVELOPMENT AREAS



Source: Developed by Century West Engineering

HANGARS/AIRPORT BUILDINGS

Within the ODAV Terminal Development Area there are six T-hangar buildings, eight conventional / multiple-aircraft hangars, and three other buildings (fixed base operator and fire suppression facility). On the remaining TTF and private development areas there are 76 buildings: seven T-hangar buildings, 54 conventional / multiple-aircraft hangars, and fifteen other buildings.

Table 2-13 summarizes the existing buildings, ownership, and general usage.

TABLE 2-13: HANGARS/AIRPORT BUILDINGS

	T-Hangar Buildings	T-Hangar Buildings SF	Conventional / Multiple-Aircraft	Conventional / Multiple-Aircraft SF	Other (business, office, etc)	Other (business, office, etc) SF	Total	Total SF
Northern TTF Development Area	5	47,300	33	163,100	1	1,500	35	211,900
ODAV Terminal Development Area	5	64,400	10	73,300	3	6,000	17	143,700
Southern TTF Development Area	-	-	28	623,000	2	14,500	30	637,500
Total	**10**	**111,700**	**71**	**859,400**	**6**	**22,000**	**82**	**993,100**

Source: Century West Engineering - Aerial photo based analysis

The 2019 *Constrained Operations Runway Justification Study* included a hangar/building analysis to identify new construction:

> *"Since 2012, most of the new hangar construction at the Airport has occurred in the South TTF Development Area. Approximately 30,650 SF of T-hangars were removed to accommodate construction of new larger conventional and corporate aircraft storage hangars. Overall, in the South TTF Development Area, including the HTS building, new construction amounted to approximately 223,000 SF of new aviation commercial and corporate aircraft storage space. Further expansion in the South TTF Development Area is ongoing.*
>
> *Within the ODAV Terminal Development Area no hangars had been removed since 2012 and new construction included one hangar at approximately 6,200 SF. There is approximately 8.1 acres of developable land within the ODAV Terminal Development Area. In the north end Columbia Helicopters development area, new construction included approximately 3,500 SF of new storage buildings that appear to have been constructed to replace steel shipping/storage containers. No changes were identified in the Wiley or Willamette development areas within the North TTF Development Area."*

AIRPORT SURFACE ROADS

There are multiple access points to the Airport that coincide with a colored gate system to clearly delineate Airport access and assist in emergency response and advertisement (see **Figure 2-14**). Stenbock Way NE access is located at the Purple Gate at Airport Road NE and is considered to be the major entry point to ODAV property due to the access provided to the ATCT. However, the Purple Gate entry on Stenbock Way NE provides access directly on to privately-owned land on the South TTF Development Area and provides access to numerous private hangars and buildings like the Columbia Aviation Association meeting facility.

Access to the ODAV Terminal Development Area is also provided at the unnamed access roads identified by the Green and Blue Gates on Airport Road, slightly north of the Purple Gate. The access road at the Blue Gate is the only public access point that is located entirely on public land. The road is approximately 700' long and provides vehicle access to Aurora Flight Training, a large vehicle parking lot, and most of the hangars located on public property.

VEHICLE PARKING

On the public land within the ODAV Terminal Development Area, several joint use parking lots are available near the public tiedown area, air traffic control tower, adjacent hangars, and airport related businesses. The parking areas on state-owned land provides parking for approximately 60 vehicles. The majority of the vehicle parking positions are located adjacent to Aurora Flight Training and is accessible from the Blue Gate. Several more parking positions located next to the ATCT are typically reserved for FAA ATCT and ODAV maintenance staff.

On the adjacent privately held land, airport businesses offer parking for employees and customers based on Marion County zoning and development standards. Individual hangar tenants typically park adjacent to or in their hangars while flying; some parking lots are available for their use, as well.

AIRPORT FENCING

Approximately four miles of security fencing and access gates surround the entire Airport inclusive of the public and private properties. The perimeter fencing was constructed in 1999 and funded with private funds on private land and FAA grant money on the publicly owned land. All access points are gated, although not all are automated.

The non-automated gates sometimes remain open during normal business hours. The Airport gate signage and color system (Red, Yellow, Purple, Blue, Orange, Green, and Yellow) was installed at access points along Canby-Hubbard Highway, Keil Road, Arndt Road, and Airport Road. The design, construction, and installation of the access gates was funded with private money. ODAV maintains the gates and pays for lighting and electricity.

UTILITIES

The developed areas of Aurora State Airport have water, sewer, storm water drainage, natural gas, and electric. The following text describes the major utilities serving the Airport.

Water

Water at the Airport is provided from a system of wells. In the early 2000s, with the assistance of Marion County, the Aurora Airport Water Control District was created to address major fire and life safety needs for privately-owned land adjacent to ODAV property at the Airport. The system included an underground tank system, a pump house, underground water pipes, fire hydrants, and numerous connections for fire sprinkler systems.

Sewer

Sanitary sewer is provided by individual and shared drain field/septic tank systems. There are six individual drain fields located on ODAV owned property, with three more proposed for the south end of the RSA near the existing one used by the South End Airpark. The drain fields are shared for both aviation related uses on both private and publicly owned land.

Stormwater

The Airport's stormwater system is made up of a network of edge drain, culverts and surface drainage features which generally flow to the east, west, and south sides of the Airport. Most of the stormwater runoff originating on ODAV-owned property and airfield facilities like the runway, taxiway, and apron flows to the west side of the Airport.

Electric

Electric service is provided by Portland General Electric (PGE).

Gas

Natural gas service is provided NW Natural.

Airport Administration

The Airport Administration section provides a summary of Airport Ownership and Management, Airport Finance, Rates and Charges, and overview of FAA Grant Assurances and Compliance.

AIRPORT OWNERSHIP AND MANAGEMENT

Aurora State Airport is owned and operated by the Oregon Department of Aviation. ODAV manages Aurora State Airport among a group of 28 state-owned or operated airports from its office in Salem. The department has approximately 15 ½ full-time employees with one State Airports Manager, who is responsible for the day-to-day management of the airports. Airport management staff oversees grant administration, construction management, airport finance and leasing, as well as operations and maintenance of the Aurora State Airport. Airport tenants are responsible for managing their facilities and leased areas to meet the requirements defined in their leases.

AIRPORT FINANCE

ODAV operates Aurora State Airport within its group of state-owned airports as an enterprise fund. All revenue generated by the airports remains within the airport operating budget. This is a standard FAA requirement for all airports to prevent revenue diversion from airport operations to general services or non-airport operations.

The primary revenue generating sources for Aurora State Airport includes improved and unimproved ground lease rents, access fees from through-the-fence users, and fuel flowage fees. The primary expenditures for the Airport include airport legal fees, property taxes, maintenance and operation expenses, and personnel services. The Airport's capital improvement projects are typically funded through FAA grants with a local match that may be provided by ODAV grants. Based on a review of the airport's revenues and expenses for 2021, the airport's revenues exceed its expenses for normal operations and maintenance. A summary of the airports revenues and expenses are included in **Tables 2-14** and **2-15**.

TABLE 2-14: AIRPORT REVENUE/EXPENSE SUMMARY (2021)

AIRPORT REVENUE	
Leases, Tiedowns, Property Tax, Utilities	$83,203.15
Access Fees (Through-the-Fence)	$40,000.00
Fuel Flowage Fees	$92,114.00
TOTAL AIRPORT REVENUES	**$215,317.15**
AIRPORT EXPENSES	
Airport Personnel Services	$19,101.96
Transit Tax	$63.28
Utilities	$28,547.38
Maintenance & Inspections	$30,359.68
Supplies	$5,834.80
Legal Fees	$83,166.70
Reporting & Monitoring Charges	$14,050.00
Property Taxes	$33,009.73
TOTAL AIRPORT OPERATING EXPENSES	**$214,133.53**
NET OPERATING INCOME	**$1,183.62**

Source: ODAV Budget FY2021 Actuals

TABLE 2-15: AIRPORT RATES AND CHARGES DATA

RATES AND CHARGES	
FBO Tiedown Fees (Monthly)	$10.00
Non-Commercial Tiedown Fees (By Category) (Per Month)	
Category II	$20.00
Category III & IV	$17.50
Category V	$15.00
Access Fees (shall be the greater of the two (1) weight range or (2) minimum guarantee)	
(1) Weight Range (Per Month)	
Class 1 Aircraft (up to 5,000 lbs)	$15.00
Class 2 Aircraft (5,001 to 10,000 lbs)	$24.00
Class 3 Aircraft (10,001 to 20,000 lbs)	$44.00
Class 4 Aircraft (20,001 to 30,000 lbs)	$66.00
Class 5 Aircraft (30,001 to 40,000 lbs)	$88.00
Class 6 Aircraft (40,001 lbs and over)	$120.00
(2) Minimum Guarantee (Per Month)	
Category II	$275.00
Category III & IV	$175.00
Category V	$75.00
Fuel Flowage Fee (Per Gallon)	$0.08
Improved Ground Lease Rates (Sq/Ft) (Per Month)	$0.3256
Unimproved Ground Lease Rates (Sq/Ft) (Per Month)	$0.05

Source: ODAV State Airport Rates 2021

FAA COMPLIANCE OVERVIEW

A management program based on the FAA's "Planning for Compliance" guidance and the adoption of additional airport management "Best Practices" is recommended to address FAA compliance requirements and avoid noncompliance, which could have significant consequences.

Airport management "Best Practices" are developed to provide timely information and guidance related to good management practices and safe airport operations for airport managers and sponsors. The practices outlined herein are designed for use by ODAV for evaluating and improving their current and future operation and management program.

Airport sponsors must comply with various federal obligations through agreements and/or property conveyances, outlined in *FAA Order 5190.6B, Airport Compliance Manual*. The contractual federal obligations a sponsor accepts when receiving federal grant funds or transfer of federal property can be found in a variety of documents including:

- Grant agreements issued under the Federal Airport Act of 1946, the Airport and Airway Development Act of 1970, and Airport Improvement Act of 1982. Included in these agreements are the requirement for airport sponsors to comply with:
  - » Grant Assurances;
  - » Advisory Circulars;
  - » Application commitments;
  - » FAR procedures and submittals; and
  - » Special conditions.
- Surplus airport property instruments of transfer;
- Deeds of conveyance;
- Commitments in environmental documents prepared in accordance with FAA requirements; and
- Separate written requirements between a sponsor and the FAA.

OREGON AVIATION LAWS

The Oregon Department of Aviation (ODAV) has created both the Oregon Administrative Rules (OAR) and Oregon Revised Statutes (ORS) to govern airports within the state.

Oregon Administrative Rules (OAR)

- OAR Chapter 660, Division 13 – Airport Planning
- OAR Chapter 660, Division 13 – Exhibits
- OAR Chapter 738 – ODAV
- Non-Commercial Leasing Policy
- Commercial Leasing Policy
- Category II Minimum Standards Policy
- Category IV Minimum Standards Policy
- Category V Minimum Standards Policy
- Insurance Requirements

Oregon Revised Statutes (ORS)

- ORS 197 – Land Use Planning I
- ORS 197A – Land Use Planning II
- ORS 319 – Aviation Fuel Tax
- ORS 835 – Aviation Administration
- ORS 836 – Airports and Landing Fields
- ORS 837 – Aircraft Operations
- ORS 838 – Airport Districts

Airport Compliance with Grant Assurances

As a recipient of both federal and state airport improvement grant funds, the airport sponsor is contractually bound to various sponsor obligations referred to as "Grant Assurances", developed by FAA and the State of Oregon. These obligations, presented in detail in federal and state statute and administrative codes, document the commitments made by the airport sponsor to fulfill the intent of the grantor (FAA or state) required when accepting federal and/or state funding for airport improvements. Failure to comply with the grant assurances may result in a finding of noncompliance and/or forfeiture of future funding. Grant assurances and their associated requirements are intended to protect the significant investment made by the FAA or State of Oregon to preserve and maintain public-use airports as valuable transportation assets.

FAA Grant Assurances

The FAA's Airport Compliance Program defines the interpretation, administration, and oversight of federal sponsor obligations contained in grant assurances. The Airport Compliance Manual defines policies and procedures for the Airport Compliance Program. Although it is not regulatory or controlling with regard to airport sponsor conduct, it establishes the policies and procedures for FAA personnel to follow in carrying out the FAA's responsibilities for ensuring compliance by the sponsor.

The *Airport Compliance Manual* states the FAA Airport Compliance Program is: "...designed to monitor and enforce obligations agreed to by airport sponsors in exchange for valuable benefits and rights granted by the United States in return for substantial direct grants of funds and for conveyances of federal property for airport purposes. The Airport Compliance Program is designed to protect the public interest in civil aviation. Grants and property conveyances are made in exchange for binding commitments (federal obligations) designed to ensure that the public interest in civil aviation will be served. The FAA bears the important responsibility of seeing that these commitments are met. This order addresses the types of commitments, how they apply to airports, and what FAA personnel are required to do to enforce them."

According to the FAA, cooperation between the FAA, state, and local agencies should result in an airport system with the following attributes:

- Airports should be safe and efficient, located at optimum sites, and be developed and maintained to appropriate standards;
- Airports should be operated efficiently both for aeronautical users and the government, relying primarily on user fees and placing minimal burden on the general revenues of the local, state, and federal governments;
- Airports should be flexible and expandable, able to meet increased demand and accommodate new aircraft types;
- Airports should be permanent, with assurance that they will remain open for aeronautical use over the long-term;
- Airports should be compatible with surrounding communities, maintaining a balance between the needs of aviation and the requirements of residents in neighboring areas;
- Airports should be developed in concert with improvements to the air traffic control system;
- The airport system should support national objectives for defense, emergency readiness, and postal delivery;
- The airport system should be extensive, providing as many people as possible with convenient access to air transportation, typically not more than 20 miles of travel to the nearest NPIAS airport; and
- The airport system should help air transportation contribute to a productive national economy and international competitiveness.

The airport sponsor should have a clear understanding of and comply with all assurances. The following sections describe the selected assurances in more detail.

Project Planning, Design, and Contracting

Sponsor Fund Availability (Assurance #3)

Once a grant is given to the airport sponsor, the sponsor commits to providing the funding to cover their portion of the total project cost. Currently this amount is 10% of the total eligible project cost, although it may be higher depending on the particular project components or makeup. Once the project has been completed, the receiving

airport also commits to having adequate funds to maintain and operate the airport in the appropriate manner to protect the investment in accordance with the terms of the assurances attached to and made a part of the grant agreement. It is noted that this Airport Master Plan project is 100% FAA funded due to the availability of grants associated with COVID-19 pandemic recovery.

Consistency with Local Plans (Assurance #6)

All projects must be consistent with city and county comprehensive plans, transportation plans, zoning ordinances, development codes, and hazard mitigation plans. The airport sponsor should familiarize themselves with local planning documents before a project is considered to ensure that all projects follow local plans and ordinances.

Accounting System Audit and Record Keeping (Assurance #13)

All project accounts and records must be made available at any time. Records should include documentation of cost, how monies were actually spent, funds paid by other sources, and any other financial records associated with the project at hand. Any books, records, documents, or papers that pertain to the project should be available at all times for an audit or examination.

General Airport Assurances

Good title (Assurance #4)

The airport sponsor must have a Good Title to affected property when considering projects associated with land, building, or equipment. Good Title means the sponsor can show complete ownership of the property without any legal questions, or show it will soon be acquired.

Preserving Rights and Powers (Assurance #5)

No actions are allowed, which might take away any rights or powers from the sponsor, which are necessary for the sponsor to perform or fulfill any condition set forth by the assurance included as part of the grant agreement.

Airport Layout Plan (ALP) (Assurance #29)

The airport sponsor should maintain an up-to-date ALP, which should include current and future property boundaries, existing facilities/structures, locations of non-aviation areas, and existing and proposed improvements. FAA requires proposed improvements to be depicted on the ALP in order to be eligible for FAA funding. If changes are made to the airport without authorization from the FAA, the FAA may require the airport to change the alteration back to the original condition or jeopardize future grant funding.

Disposal of Land (Assurance #31)

Land purchased with the financial participation of an FAA Grant cannot be sold or disposed of by the airport sponsor at their sole discretion. Disposal of such lands are subject to FAA approval and a definitive process established by the FAA. If airport land is no longer considered necessary for airport purposes, and the sale is authorized by the FAA, the land must be sold at fair market value. Proceeds from the sale of the land must either be repaid to the FAA, or reinvested in another eligible airport improvement project.

Airport Operations and Land Use

Pavement Preventative Maintenance (Assurance #11)

Since January 1995, the FAA has mandated that it will only give a grant for airport pavement replacement or reconstruction projects if an effective airport pavement maintenance-management program is in place. The Oregon Department of Aviation prepares and updates pavement reports for the airport. These reports identify the maintenance of all pavements funded with federal financial assistance and provides a pavement condition index (PCI) rating (0 to 100) for various sections of aprons, runways, and taxiways; including, a score for overall airport pavements.

Operations and Maintenance (Assurance #19)

All federally funded airport facilities must operate at all times in a safe and serviceable manner and in accordance with the minimum standards as may be required or prescribed by applicable Federal, State, and Local agencies for maintenance and operations.

Compatible Land Use (Assurance #21)

Land uses around an airport should be planned and implemented in a manner that ensures surrounding development and activities are compatible with the airport. Aurora State Airport is located in unincorporated Marion County. The airport sponsor should work with the county and adjacent land use jurisdictions to ensure that zoning and land use controls are in place to protect the airport from incompatible land uses. Incompatible land uses around airports represents one of the greatest threats to the future viability of airports.

Day-To-Day Airport Management

Economic Non-Discrimination (Assurance #22)

Any reasonable aeronautical activity offering service to the public should be permitted to operate at the airport as long as the activity complies with airport established standards for that activity. Any contractor agreement made with the airport will have provisions making certain the person, firm, or corporation will not be discriminatory when it comes to services rendered including rates or prices charged to customers.

Exclusive Rights (Assurance #23)

No exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services to the public. However, an exception may be made if the airport sponsor can prove that permitting a similar business would be unreasonably costly, impractical, or result in a safety concern, the sponsor may consider granting an exclusive right.

Leases And Finances

Fee and Rental Structure (Assurance #24)

An airport's fee and rental structure should be implemented with the goal of generating enough revenue from airport related fees and rents to become self-sufficient in funding the day-to-day operational needs. Airports should update their fees and rents on a regular basis to meet fair market value, often done through an appraisal or fee survey of nearby similar airports. Common fees charged by airports include fuel flowage fees, tiedown fees, landing fees, and hangar or ground lease rents.

Airport Revenue (Assurance #25)

Revenue generated by airport activities must be used to support the continued operation and maintenance of the airport. Use of airport revenue to support or subsidize non-aviation activities or to fund other departments who are not using the funds for airport specific purposes is not allowed and is considered revenue diversion. Revenue diversion is a significant compliance issue for FAA.

For additional information on FAA Grant Assurances, please visit: https://www.faa.gov/airports/aip/grant_assurances/#current-assurances

Taxiway A at A4 – Source: Century West Engineering

Chapter 3
Aviation Activity Forecasts

COVID-19 STATEMENT (JANUARY 2022)

This forecast was prepared at the end of the second full year of the COVID-19 pandemic. The disruption of airport activity experienced throughout the U.S. airport system related to COVID-19 since 2020 is unprecedented and has led to significant declines in activity that are not consistent with recent historical trends. It is acknowledged that not all elements of general aviation activity have been affected equally. Some segments of personal air travel have demonstrated resilience, partly in response to the heavily impacted commercial airline industry.

Although the limits of the current industry-wide disruption have yet to be defined, it is believed that the underlying elements of demand within general aviation will remain largely intact until all public health constraints are fully addressed and economic conditions gradually return to normal.

Federal Aviation Administration (FAA) forecast approval will be based in reference to the data and methodologies used and the conclusions at the time the document was prepared. However, consideration must still be given to the significant impacts of COVID-19 on aviation activity. As a result, there is lower than normal confidence in future growth projections.

FAA approval of the forecast does not provide justification to begin airport development. Justification for future projects will be made based on activity levels at the time the project is requested for development, rather than this forecast approval. Further documentation of actual activity levels reaching the planning activity levels will be needed prior to FAA participation in funding for eligible projects.

Introduction and Overview

This chapter provides a summary of historical aviation activity and new aviation activity forecasts for the 2021-2041 Aurora State Airport (Airport) - Airport Master Plan. The most recent aviation activity forecasts approved by the Federal Aviation Administration (FAA) for Aurora State Airport were developed in the 2012 Airport Master Plan and the 2019 Constrained Operations Runway Justification Study.

The aviation activity forecasts have a base year of 2021 (calendar year), the last year of complete data available when the forecasts were prepared. The forecast covers a 20-year period with reporting intervals at every five years. Multiple forecasting methodologies are used in this analysis and the models that provide the most valid outlooks are presented for comparison.

Aviation activity forecasts help determine if existing airport facilities are sufficient or will need to be modified to handle future demand (aircraft operations and based aircraft). The FAA Seattle Airports District Office (ADO) reviews the preliminary forecasts for rationality and comparison to the FAA Terminal Area Forecast (TAF). FAA forecast approval is a critical step in the airport master planning process since the projected activity will determine applicable design standards and other planning criteria.

The chapter is organized around the following sections:

- Introduction/Overview, FAA Forecasting Process;
- Key Activity Elements;
- Historical Data, Historical Forecasts, and Airport Events;
- Based Aircraft Forecasts;
- Aircraft Operations Forecasts;
- Peak Activity Forecasts;
- Design Aircraft; and
- Forecast Summary.

The overall goal is to prepare forecasts that accurately reflect current conditions, relevant historical trends, and provide reasonable projections of future activity, which can be translated into specific airport facility needs anticipated during the next 20 years and beyond. Aurora State Airport is currently capable of accommodating a full range of general aviation (GA) activity in both Visual Meteorological Conditions (VMC) and Instrument Meteorological Conditions (IMC). Aircraft use includes business class jets and turboprops, a wide variety of piston-engine aircraft, and helicopters.

The forecast methodologies presented in this chapter are consistent with the Airport's role as an urban general aviation airport and they do not anticipate a change in the Airport's functional role, such as the initiation of commercial passenger or cargo service.

The forecasts are unconstrained and assume the Oregon Department of Aviation (ODAV) will be able to make the facility improvements necessary to accommodate the anticipated demand, unless specifically noted. ODAV will consider if any unconstrained demand will not or cannot be reasonably met through the evaluation of airport development alternatives later in the airport master plan.

The historical development of landside facilities at Aurora State Airport, including aircraft hangars, has occurred both on and off ODAV-owned property. These facilities and the based aircraft they accommodate are identified as "inside the fence" or "Through-The-Fence (TTF)." All off-airport facilities/users with direct access to the runway-taxiway system have TTF access agreements with ODAV.

This Airport Master Plan will address needs for existing and future facilities that are, or would be under the direct ownership and management of ODAV. However, the activity generated by all aircraft that rely on TTF access to airfield facilities, are included in the Airport's based aircraft count and the aircraft operations data compiled by the air traffic control tower (ATCT). This activity will be included when evaluating runway-taxiway and related facility needs.

FEDERAL AIRPORT SYSTEM

As described in Chapter 2, Aurora State Airport is included in the federal airport system, referred to as the National Plan of Integrated Airport Systems (NPIAS). The NPIAS currently includes 3,304 public-use airports in all 50 states. Fifty-seven of Oregon's 97 public-use airports are included in the NPIAS.

Aurora State Airport is designated a **"National" Nonprimary General Aviation** airport. The role of National airports in the NPIAS is defined as follows:[1]

> *"National airports (84) are located in metropolitan areas near major business centers and support flying throughout the nation and the world. National airports are currently located within 31 states. They account for 13 percent of total flying at the studied general aviation airports and 35 percent of all flights that filed flight plans at the airports in the four new categories. These 84 airports support operations by the most sophisticated aircraft in the general aviation fleet. Many flights are by jet aircraft, including corporate and fractional ownership operations and air taxi services. These airports also provide pilots with an alternative to busy primary commercial service airports. There are no heliports or seaplane bases in this category.*
>
> *Criteria Used to Define the New National Category (all numbers are annualized):*
>
> *1) 5,000+ instrument operations, 11+ based jets, 20+ international flights, or 500+ interstate departures; or*
> *2) 10,000+ enplanements and at least one charter enplanement by a large certificated air carrier; or*
> *3) 500+ million pounds of landed cargo weight."*

Available data indicate that Aurora State Airport has consistently met or exceeded the FAA's "11+ based jet" and around 5,000+ instrument operations criterion established for National airports since the early 2000s.

Aurora State Airport, and nearby Portland-Hillsboro Airport (19 miles northwest) are the only FAA-designated National Airports located in Oregon.

STATE AIRPORT SYSTEM

As described in Chapter 2, Aurora State Airport is designated a **Category II – Urban General Aviation Airport** in the 2019 Oregon Aviation Plan (OAP v6.0). The definition for Category II airports is:

> *"These airports support all general aviation aircraft and accommodate corporate aviation activity, including piston and turbine engine aircraft, business jets, helicopters, gliders, and other general aviation activity. The most demanding user requirements are business-related. These airports service a large/multi-state geographic region or experience high levels of general aviation activity. The minimum runway length objective for Category II airports is 5,000 feet."*

Oregon currently has a total of 11 Category II airports, which includes one public-use heliport (Portland Downtown Heliport). The distribution of Category II airports throughout Oregon is a reflection of the state's physical geography, population centers, and the underlying market conditions required to support the full range of GA activity common to this type of airport.

More than half (6 of 11) of Oregon's Category II airports are located within 30 nautical miles of Aurora State Airport. The concentration of Category II airports in the Portland Metro area is consistent with the region's overall population and economic characteristics.

1 2021-2025 NPIAS Report, Federal Aviation Administration (9/30/2020)

FAA Forecasting Process

The FAA provides aviation activity forecasting guidance for airport master planning projects. *FAA Advisory Circular (AC) 150/5070-6B, Airport Master Plans*, outlines seven standard steps involved in the forecast process:

1. Identify Aviation Activity Measures: The level and type of aviation activities likely to impact facility needs. For general aviation, this typically includes based aircraft and operations.
2. Previous Airport Forecasts: May include the FAA Terminal Area Forecast (TAF), state or regional system plans, and previous master plans.
3. Gather Data: Determine what data are required to prepare the forecasts, identify data sources, and collect historical and forecast data.
4. Select Forecast Methods: There are several appropriate methodologies and techniques available, including regression analysis, trend analysis, market share or ratio analysis, exponential smoothing, econometric modeling, comparison with other airports, survey techniques, cohort analysis, choice and distribution models, range projections, and professional judgment.
5. Apply Forecast Methods and Evaluate Results: Prepare the actual forecasts and evaluate for reasonableness.
6. Summarize and Document Results: Provide supporting text and tables as necessary.
7. Compare Forecast Results with FAA's TAF: Follow guidance in FAA Order 5090.5, *Field Formulation of the National Plan of Integrated Airport Systems and Airport Capital Improvement Program*. In part, the Order indicates that forecasts should not vary significantly (more than 10%) from the TAF. When there is a greater than 10% variance, supporting documentation should be supplied to the FAA. The aviation demand forecasts are then submitted to the FAA for their approval.

Key Activity Elements

As noted above, GA airport activity forecasting focuses on two key activity segments: based aircraft and aircraft operations (takeoffs & landings). Detailed breakdowns of these activity segments include:

- Aircraft fleet mix;
- Peak activity;
- Distribution of local and itinerant operations; and
- Determination of the design aircraft (also referred to as the critical aircraft).

The design aircraft represents the most demanding aircraft type or family of aircraft that uses an airport on a regular basis (a minimum of 500 annual takeoffs & landings per year). The design aircraft is used to establish a variety of FAA design categories, which then establish design standards for airfield facilities. FAA airport design standard groupings reflect the physical requirements of specific aircraft types and sizes. Design items, such as runway length evaluations, are determined by the requirements of current/future design aircraft. The activity forecasts also support the evaluation of several demand-based facility requirements including runway and taxiway capacity, aircraft parking, and hangar capacity.

Table 3-1 describes the data sources used in this chapter.

FAA Forecast Terminology

Aircraft Operation
A count of a takeoff, landing, or touch-and-go. Each time an aircraft touches the runway to takeoff or land, it counts as an operation.

Aircraft Approach Category (AAC)
Classification of an aircraft by approach speed, with A being the slowest and E being the fastest.

Airplane Design Group (ADG)
Classification of an aircraft by its size (wingspan and tail height) with I being the smallest and VI being the largest.

Airport Reference Code (ARC)
Used to determine facility size and setback requirements. The ARC is a composite of the AAC and ADG of the critical aircraft.

Based Aircraft
Aircraft that are stored at the Airport,[1] either full-time or seasonally (more than half a calendar year).

Design Aircraft
The most demanding aircraft, or family of aircraft (in terms of size and/or speed) generating at least 500 annual operations at an airport. The design aircraft is used to establish the applicable ARC (for existing and forecast activity).

General Aviation (GA)
Aviation activities conducted by recreational, business, and charter users not operating as airlines under FAR Part 121, Part 135, or military regulations.

Air Taxi
Aviation activities conducted by on-demand or scheduled operators certified under FAR Part 135. The majority of air taxi activity is conducted with aircraft also operated by general aviation users.

Itinerant Operation
An operation that originates at one airport and terminates at a different airport. For example, an aircraft flying from the Airport to another airport.

Local Operation
An operation that originates and terminates at the same airport. For example, an aircraft takes off from the Airport, remains near the airport to practice flight maneuvers, and then lands at the Airport. Touch-and-go operations occur in the airport traffic pattern and they are categorized as local operations.

Touch-and-Go
A maneuver where an aircraft lands and takes off without leaving the runway. A touch-and-go is counted as two aircraft operations.

1 Includes aircraft located on ODAV-owned property and aircraft located on privately-owned property that have TTF access.
Source: Century West Engineering, FAA and industry terminology.

TABLE 3-1: FORECASTING DATA SOURCES

Source	Description
Air Traffic Control Tower (ATCT) Airport Operations Data	The FAA database provides aircraft operations counts for equipped airports. For Aurora State Airport, ATCT reports are available from late 2015 through 2021. The 6-year period (2016-2021) of full year data provides a reliable historical indication of basic activity, adjusted to reflect specific conditions, to provide a baseline for new aircraft operations forecasts at the Airport. The FAA standard ATCT activity categories are not specific to aircraft types, but do break out local and itinerant operations. Itinerant operation counts are logged for air carrier, general aviation, air taxi, and military aircraft. Local operation counts are logged for civil and military aircraft. The Aurora ATCT manager also provided additional first-hand observations about the mix of air traffic, and common operational factors not captured in ATCT data for the Airport.
FAA National Based Aircraft Inventory Program	The FAA National Based Aircraft Inventory Program database assigns all eligible active civilian aircraft to individual airports, as reported and verified by airport owners. Aircraft reported by more than one airport are researched by airport management, with the final resolution approved by FAA. Inactive and other aircraft that do not meet FAA criteria may be listed, but they are not included in the airport's current "validated count." The FAA requires airport owners to update their counts periodically to reflect changes in activity. The accuracy of based aircraft counts at individual airports has improved significantly with more consistent airport verification and reporting. The current level of verification was not common in previous airport master plan data.

(Continued)

TABLE 3-1: FORECASTING DATA SOURCES

Source	Description
FAA Terminal Area Forecast (TAF)	The current FAA TAF, published in May 2021, provides forecasts for operations and based aircraft at the Airport. The forecasts are based on overall growth rates assigned by FAA and do not necessarily correspond to the previous airport master plan, or other existing forecasts. The airport master plan's recommended based aircraft and operations forecasts will be compared to the TAF as part of the FAA forecast review/approval process.
FAA National Aerospace Forecast	The 2021-2041 Aerospace Forecast is a national-level forecast of aviation activity. The Aerospace Forecast helps guide local forecasts by serving as a point of comparison between local and national trends.
Traffic Flow Management System Counts (TFMSC)	The TFMSC includes data collected from FAA instrument flight rules (IFR) flight plan filings. This activity is categorized by aircraft type and it provides airport origin-destination and time of day information for all flights, including flights that occur when the Aurora State Airport control tower is closed. The advantage of the TFMSC data is its degree of detail and insights into the more demanding aircraft operating at the Airport, such as jets and turboprops, that regularly file IFR flight plans. TFMSC data is the most reliable indicator of business aviation activity at the Airport, which is critical in documenting activity required for design aircraft designation and the operations fleet mix.
Socioeconomic Data	Socioeconomic data is provided by data vendor Woods & Poole, Inc. (W&P). Population data are provided by the Portland State University - Population Research Center (PRC). The PRC produces the annual population estimates and long term forecasts for Oregon and its counties and cities, as well as the estimates by age and sex for the state and its counties. These estimates are used by the state and local governments, various organizations, and agencies for revenue sharing, funds allocation, and planning purposes. The 2020-2065 PRC population forecast is the primary resource for evaluating changes in local area population during the airport master plan 20-year planning horizon. The W&P datasets for Marion and Clackamas Counties were used for this analysis. The W&P data provides 124 data categories with historical records from 1970 to 2019 and forecasts through 2050. Data categories considered include population, employment, earnings and income, and gross regional product.
State Aviation System Plans	The Oregon Aviation Plan (OAP v6.0) is the current state aviation system plan for Oregon, adopted in 2019. OAP v6.0 includes facility data, activity forecasts, system-wide minimum standards and performance measures for Oregon's public-use airports.
Previous Airport Planning	The 2012 Aurora State Airport Master Plan Update provides is the most recent FAA-approved airport layout plan (ALP) drawing for the Airport. The 2019 Constrained Operations Runway Justification Study provided updated aviation activity forecasts and airside facility requirements assessments related to the critical aircraft. Both planning documents were prepared prior to the COVID-19 pandemic.
Fixed Base Operator (FBO)	Historical fuel flowage data provided to airport management by the Airport tenants providing aircraft services was reviewed. This information was consulted when developing aircraft operations forecasts.

Source: Century West Engineering

National General Aviation Activity Trends

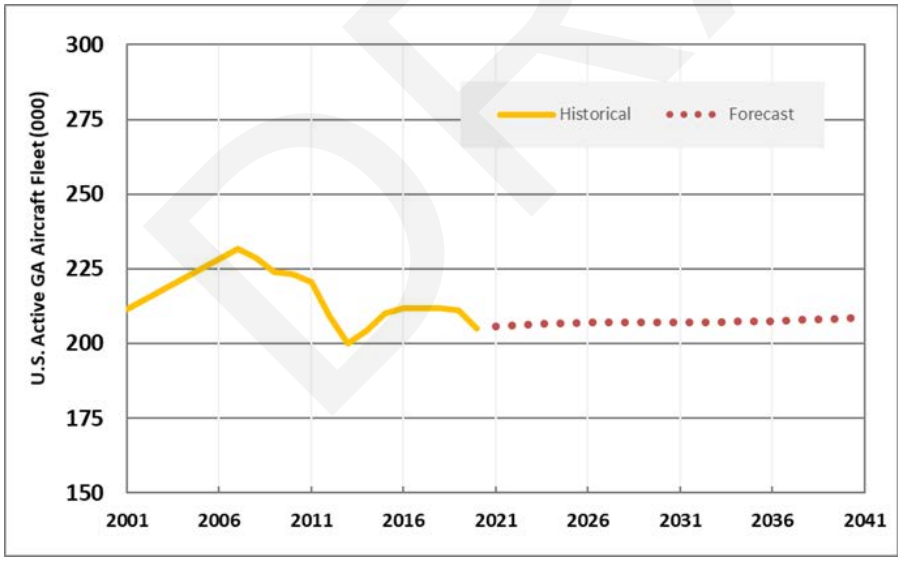
The first two decades of the 21st Century have presented numerous challenges for the GA industry. On a national level, most measures of GA activity declined sharply during the Great Recession, rebounded, then declined again at the outset of the COVID-19 pandemic.

Aircraft manufacturing, for example, hit a low point in 2010 after several years of growth, then rebounded and experienced relatively stable year-over-year growth through 2019. The COVID-19 pandemic abruptly slowed worldwide deliveries of GA aircraft in 2020 (-9.7%) compared to 2019. Deliveries of business jets, turboprops and helicopters in 2020 experienced double-digit declines, while piston airplanes declined by less than 1%. 2021 year-to-date deliveries (through the third quarter) are showing signs of recovery: year-to-date, third quarter deliveries are up 13% above 2020 totals for the same period.

The FAA performs an annual assessment of U.S. civil aviation through its FAA Aerospace Forecast. The 20-year forecasts are updated annually by evaluating recent events and established trends affecting a wide range of commercial and GA segments. Broad economic conditions and current forecasts are examined in order to provide reasonable expectations for aviation within the broader U.S. and global economy. The FAA forecasts examine in detail several key aviation industry indicators including fuel prices, production and supply; aircraft manufacturing trends; aircraft ownership trends; fleet and pilot attrition; flight training trends; advances in fuel, engine, avionics, and airspace technology (ADS-B NextGen, etc.); and on-demand air travel. This array of factors is reflected in the FAA's overall assessment of future U.S. aviation activity. The most recent forecast (released in 2021) has factored in the impacts of the COVID-19 pandemic in both historical data and forecasts.

As depicted in **Figure 3-1**, the active U.S. GA fleet has fluctuated within a slight overall decline since 2001. This trend coincides with other GA industry trends including annual aviation fuel consumption, hours flown, IFR enroute air traffic, operations at towered airports, active pilots, etc. The most recent downward trend, attributed to the pandemic, reflects a sharp decline in 2019 and 2020 data. The FAA 2021-2041 forecast predicts that the active GA aircraft fleet will grow at an average annual rate of approximately 0.1% between 2020 and 2041 (forecast assumptions summarized below).

FIGURE 3-1: U.S. GA FLEET



Source: FAA Long Range Aerospace Forecasts (FY 2021-2041)

Although the FAA maintains a modestly favorable long-term outlook for general aviation, many of the activity segments associated with piston engine aircraft and aviation gasoline (AVGAS) consumption are not projected to return to "pre-Great Recession" levels within the 20-year forecast.

Key takeaways from the FAA 2021-2041 Aerospace Forecast Highlights are summarized below:

Positive Activity Indicators

- Turbine aircraft (turboprop, turbojet, helicopter) fleet and hours flown will grow;
- Sport and Experimental aircraft fleet and hours flown will grow;
- Piston Rotorcraft fleet and hours flown will grow;
- Jet fuel consumption will grow;
- The number of active Sport, Airline Transport, Rotorcraft Only, and Instrument rated pilots will grow;
- GA Enroute IFR air traffic will grow; and
- GA Operations at towered airports will grow.

Negative Activity Indicators

- Fixed-wing Piston aircraft fleet and hours flown will decline;
- AVGAS consumption will decline; and
- The number of active Private and Commercial pilots will decline.

Neutral Activity Indicators

- Overall GA fleet net growth is nearly flat over the next 20 years.

The cited measures of national general aviation activity (positive, negative, neutral) are intended to reflect the broad expectations defined by FAA, which have varying relevancy to Aurora State Airport. For example, Van's Aircraft, a leading aircraft kit manufacturer located at the Airport, reports nearly 11,000 aircraft kits have been completed and flown, with thousands more kits currently under construction. It is apparent that this manufacturing activity has directly affected activity at Aurora State Airport. A significant, and growing percentage of the single-engine aircraft based at the Aurora State Airport are kit aircraft, certified by FAA in the experimental category.

It is recognized that trends experienced at individual airports often deviate from system wide trends, and generally reflect localized factors. In its current forecast, the FAA expects general aviation to experience modest growth overall. The FAA's annual growth assumptions for individual general aviation activity segments are summarized in **Table 3-2**.

TABLE 3-2: FAA LONG RANGE FORECAST ASSUMPTIONS (U.S. GENERAL AVIATION)

ACTIVITY COMPONENT	FORECAST AVERAGE ANNUAL GROWTH RATE (2021-2041)
Aircraft in U.S. Fleet	
Single Engine Piston Aircraft in U.S. Fleet	-0.9%
Multi-Engine Piston Aircraft in U.S. Fleet	-0.4%
Turboprop Aircraft in U.S. Fleet	0.6%
Turbojet Aircraft in U.S. Fleet	2.3%
Experimental Aircraft in U.S. Fleet	1.4%
Sport Aircraft in U.S. Fleet	4.0%
Piston Helicopters in U.S. Fleet	0.9%
Turbine Helicopters in U.S. Fleet	1.6%
Active GA Fleet (# of Aircraft)	0.1%
Active Pilots in U.S.	
Sport Pilots	2.7%
Private Pilots	-0.4%
Commercial Pilots	-0.1%
Airline Transport Pilots	0.7%
Instrument Rated Pilots	0.4%
Student Pilots (Indicator of flight training activity)	-- (See note 1)
Active GA Pilots (All Ratings, Excluding Student Pilots)	0.2%
Hours Flown in U.S.	
Fixed Wing Piston Aircraft	-0.7%
Fixed Wing Turbine Aircraft	2.6%
Rotorcraft Piston Aircraft	1.9%
Rotorcraft Turbine Aircraft	2.1%
Experimental Aircraft	2.7%
Light Sport Aircraft	4.5%
Total GA Fleet Hours	1.0%
Fuel Consumption in U.S.	
AVGAS (Gallons consumed - GA only)	-0.3%
Jet Fuel (Gallons consumed – GA only)	2.4%

Source: FAA Long Range Aerospace Forecasts (FY 2021-2041)
1. Change in FAA certificate expiration; now excluded from forecast

Recent Events Summary

This following section briefly summarizes several events that contribute to the current airport activity levels and the development of new forecasts.

HANGAR CONSTRUCTION

Aurora State Airport has experienced significant growth in aircraft hangars and support facilities over the last 10 years. The majority of this activity has occurred off airport property with developments that have TTF access agreements with ODAV.

TABLE 3-3: HANGAR DEVELOPMENT SUMMARY

Hangar Inventory (Square Feet) Includes On-Airport and Off-Airport (TTF) Development	
2012	833,000
2021	971,100
Net Change	138,100 (+17%)
CAGR	1.72%

Century West Engineering using Google Earth Imagery
CAGR: Compounded Annual Growth Rate

Historical aerial photography was reviewed to approximate the net increase in building square footage based on visible roof area. Most of the activity involved new construction, although removal of older hangars also occurred. The net increase in hangar square footage between 2012 and 2021 translates into a compound annual growth rate (CAGR) of 1.7%. This indicator verifies physical improvements that have contributed directly to airport activity since the last airport master plan. A summary of the hangar evaluation is provided in **Table 3-3**.

AVIATION FUEL VOLUMES

Operator-reported fuel delivery data for aviation gasoline (AVGAS) and jet fuel flowage fees reported to ODAV, were reviewed for the 2016-2021 period. As indicated in **Table 3-4**, annual volumes for both fuel grades have fluctuated over the six-year period, which appears to be related to a combination of factors. As with other indicators influenced by COVID-19 and other transitional events, the fluctuations do not reveal a reliable trend that can be used to predict future activity. However, the recent historical fuel data does confirm the significant activity generated by (locally-based and transient) turbine aircraft at Aurora State Airport.

The data demonstrates a relatively consistent split between jet fuel and AVGAS volumes. During this period AVGAS, fluctuated between 8 and 13% of total fueling volume at Aurora State Airport. The Airport's recent proportional splits between fuel grades are consistent with current national aviation fuel consumption trends, which reflects typical piston and turbine aircraft utilization and common aircraft requirements (e.g., fuel consumption rates, varying aircraft fuel capacities, aircraft range, etc.).

TABLE 3-4: FUEL FLOWAGE (GALLONS)

	2016	2017	2018	2019	2020	2021	Total
Jet Fuel	933,527	896,058	1,050,306	929,453	893,989	1,055,344	3,769,806
AVGAS	107,900	134,397	150,515	117,445	79,196	92,808	481,553

Source: Oregon Department of Aviation

FLIGHT TRAINING

Aurora State Airport currently accommodates two locally-based flight schools (Willamette Aviation and Aurora Flight Training Academy) with a combined fleet of 20 piston fixed-wing aircraft for training and rental.

The Aurora ATCT manager estimates that 40 to 45% of the total aircraft operations at Aurora State Airport are related to flight training, noting that "Aurora State is so dynamic in its day-to-day operations and highly dependent upon the weather. This percentage may be higher in the summer months." Flight training activity is recorded as either local and itinerant operations by the ATCT. The activity mix is consistent with historical ATCT operations counts and is reflected in the 2021 baseline operations total.

In addition to the locally-based flight training fleet, flight training operators from other airports, both in the Portland Metro region and beyond the local area, routinely operate at Aurora State Airport. A search of pilot schools on the FAA.gov webpage (https://av-info.faa.gov/PilotSchool.asp) identifies four flights schools at three nearby airports (Hillsboro, Troutdale, and Newberg).

FIXED BASE OPERATORS (FBO)

Aurora State Airport currently has two full service fixed base operators (Atlantic Aviation and Willamette Aviation Services) offering fuel, aircraft hangar and parking space, and aircraft maintenance services for a full range of general aviation and business aviation users. The current level of service reflects the Airport's ability to support the local based aircraft fleet and attract transient aircraft, including business aviation users in a highly competitive market.

CHANGES IN DATA SOURCES AND METHODOLOGY

Several improvements in data sources, verification and methodology have occurred since 2012. The changes provide a more accurate definition of airport activity than presented previously. These changes, described below and previously in Chapter 2, are incorporated into the 2021 airport activity data that is the baseline for new 20-year aviation activity forecasts.

The updated data provides a more accurate picture of current activity at Aurora State Airport, and therefore the ability to develop more reliable long-term aviation activity forecasts. However, it is important to recognize that the recent improvements in data accuracy reduces the ability to draw definitive conclusions when comparing to previously-reported estimates or forecasts. As a result, it is recommended that the new aviation activity forecasts be reviewed using consistent data sources and the assumptions defined in each forecast model, rather than a comparison to previous forecasts.

BASED AIRCRAFT COUNTING METHODOLOGY

The FAA's method of monitoring an airport's based aircraft fleet has improved in recent years. Airport owners are now required by FAA to regularly update their locally-based aircraft totals through verification and submittal of validated counts through the FAA National Based Aircraft Inventory Program (www.basedaircraft.com). The coordinated reporting eliminates duplicated (aircraft counted at more than one airport) and inactive aircraft. The regular reporting also allows more opportunities to review and validate aircraft. Inactive aircraft can be added to an airport's validated count when reactivated in the FAA's system.

In late 2021, the ODAV State Airport Manager reviewed the based aircraft count for Aurora State Airport, previously updated in 2018. The evaluation was completed in consultation with the FAA Seattle Airports District Office in December 2021, and resulted in a new validated count of 281 based aircraft. The previous count was 349 based aircraft 2018. The reduction in the Airport's based aircraft total reflects a more precise verification of aircraft and removal of previously-counted aircraft located at two private heliports adjacent to Aurora State Airport.

The 2022 validated based aircraft count included the following adjustments to the previous inventory:

- Added new aircraft not previously entered (or assigned to the Airport) in the database;
- Removed aircraft that could not be physically verified on site;
- Removed aircraft that were also reported by other airports and could not be verified on site for 6+ months per year;
- Removed aircraft without current FAA registrations or airworthiness certificates; and
- Removed aircraft (21 helicopters) located at the nearby Columbia Helicopters Heliport (FAA Identifier: OR68) and the HTS Aurora Heliport (FAA Identifier: OR24).

Based on FAA facility criteria, it was determined that the two private heliports operate independently from Aurora State Airport since their aircraft do not require access to the runway-taxiway facilities. Historically, these aircraft have been included in previous airport master plan forecasts and data sets. Based on current FAA guidance, the off-airport aircraft at OR68 and OR24 will not be reflected in baseline data or new airport master plan forecasts for Aurora State Airport. In addition to the adjustment in based aircraft numbers, the Airport's ATCT aircraft operation counts were adjusted to reflect the separation of on- and off-airport activity. Additional information on ATCT operations adjustments is provided later in this chapter.

The current split between aircraft located on airport property and on adjacent privately-owned property with TTF access agreements was verified in the updated validated count. Both on-airport and TTF aircraft are included the Airport's FAA validated counts since they all rely on the runway-taxiway system for their flight operations.

The new validated based aircraft count for the Airport was approved and accepted by FAA in January 2022. The FAA requires the January 2022 validated count (281) to serve as the common baseline for all based aircraft forecast models in the Airport Master Plan. Other existing FAA data sources reporting based aircraft (5010-1 Airport Record Form, Terminal Area Forecast, etc.) will be updated for consistency with the current validated count.

TABLE 3-5: BASED AIRCRAFT AND FLEET MIX

Aircraft Type	On-Airport	TTF	Total
Single Engine	45	175	220
Multi Engine	1	14	15
Jet	3	33	36
Helicopter	1	9	10
Total	**50**	**231**	**281**

Source: National Based Aircraft Inventory – January 2022

The January 2022 validated based aircraft count for Aurora State Airport is summarized in **Table 3-5**. The summary includes a breakdown of aircraft by types, consistent with FAA data reporting. Additional information on aircraft types and categories is provided on the following page. The FAA National Based Aircraft Inventory Program report (January 2022) for the Airport is provided in **Appendix 6**.

Single-Engine Piston (SEP) and Turboprop (SETP)

SEP aircraft have one piston-powered engine. SETP aircraft have one turbine powered engine used to drive the aircraft's propeller. Both or these types of aircraft are generally smaller and often used for flight training and recreational flying but may be used for municipal business trips. Depending on weight and operator certification, these aircraft generally require only one pilot. Single-engine piston and turboprop aircraft are included in the "Single Engine" category on the FAA 5010-1 Airport Master Record Form and the FAA National Based Aircraft Inventory Program.

Multi-Engine Piston (MEP) and Turboprop (METP)

MEP/METP aircraft have two or more engines and are typically larger than SEP/SETP aircraft. Multiple engines make the aircraft more capable and require additional flight instruction beyond what is needed to operate an SEP/SETP aircraft. MEP aircraft are primarily used for personal travel, flight training, and business aviation. METP aircraft are used extensively in business aviation. Most MEP/METP aircraft may be operated with one pilot, but some larger aircraft may require two pilots. MEP/METP aircraft are included in the "Multi Engine" category on the FAA 5010-1 Airport Master Record Form and the FAA National Based Aircraft Inventory Program.

Jets

Jet aircraft have one or more turbofan/turbojet engines instead of a piston or turboprop engine. These aircraft range in size from small, four-passenger business jets to the largest airliners. They can generally fly faster and at higher altitudes than piston and turboprop aircraft, providing service capabilities (range, speed) comparable to commercial airliners. Some civilian jets are certified for single-pilot operation, although the majority of jet models require two pilots.

Helicopter

Helicopters have one or more rotors mounted above the cabin for lift and propulsion. Helicopters are commonly used for aerial firefighting, law enforcement, emergency response, medical evacuation (MEDVAC), flight training, and aerial inspection (pipeline, forestry, aerial agriculture, etc.). Helicopters may be piston- or turbine-powered, and depending on the complexity of the model, can be operated by one pilot or two.

Other

Some aircraft that are included in the categories noted above may further categorized by FAA based on their design category or type certificate.

- Experimental aircraft refer to kit airplanes built by users or third parties other than the original manufacturer. Experimental aircraft share many characteristics with SEP aircraft; the key differentiator is how and where the aircraft is assembled. These aircraft are commonly included in the "Single Engine" category in FAA airport records (5010, Based Aircraft Inventory), rather than "Other."
- Sport aircraft (also referred to as Light Sport Aircraft, or LSA) are airplanes that have a specific weight and maximum speed in level flight. Sport aircraft require less training and a less strict medical certificate to pilot the aircraft. These aircraft are listed in the "Single Engine" category in FAA 5010 airport records.
- Gliders are unpowered aircraft that are towed into flight and use thermal uplift to sustain altitude. Powered gliders are equipped with engines and are capable of takeoff without the aid of tow plane. These aircraft are listed in the "Gliders" category in FAA 5010 airport records.
- Ultralight aircraft weigh less than 155 pounds and do not require the pilot operating the aircraft to have a private pilot's license or medical certificate. These aircraft are listed in the "Ultralights" category in FAA 5010 airport records.

Source: Century West Engineering, FAA and industry terminology.

ANNUAL AIRCRAFT OPERATIONS

The addition of an ATCT at Aurora State Airport in October 2015 provides actual counts of aircraft takeoffs and landings during the 13 hours (0700 to 2000 hours) of daily operation. Overall aircraft operations data presented in the last Airport Master Plan were estimated and supplemented with limited instrument flight plan data. The ability to accurately estimate aircraft operations is greatly improved with actual data accounting for the majority of flight activity.

As described in Chapter 2, the 2021 baseline aircraft operations total was developed using actual air traffic control tower counts, with two specific adjustments. First, an adjustment was made to account for aircraft activity occurring during non-ATCT operating hours (2000 to 0700). Based on methods described in Chapter 2, off-hours IFR activity was estimated to account for 14% of annual operations, and off-hours and supplemented with activity was estimated to be 5% of annual operations. Combined, total estimated off-hours operations accounted for 6.4% of 2021 activity.

A second adjustment was made to eliminate helicopter operations for the two adjacent private heliports. The movement of these aircraft in and out of the Airport's controlled airspace is captured in the operations counts for the Aurora State Airport, although they do not actually takeoff or land on the Airport. ATCT operations counts do not distinguish between fixed-wing aircraft and helicopters. However, based on ATCT manager estimates, the off-airport helicopter activity accounts for 2 to 3% of total ATCT-logged operations for the Airport. A reduction of 3% was applied to the ATCT operations counts to account for the helicopter flight activity associated with the two adjacent heliports.

Detailed breakdowns of VFR and IFR operational splits were developed from these data, for use in forecasting future activity.

Table 3-6 summarizes adjusted annual aircraft operations for Aurora State Airport for the historical period (2016-2021). For consistency in data, the adjustments described above were applied retroactively to the historical years coinciding with the operation of the air traffic control tower.

TABLE 3-6: AURORA STATE AIRPORT HISTORICAL ATCT DATA (ADJUSTED)

	Annual Aircraft Operations					
	2016	2017	2018	2019	2020	2021
Itinerant						
Air Taxi	2,194	2,319	2,121	1,670	1,129	2,006
General Aviation	32,174	33,502	35,665	33,638	31,621	36,390
Military	265	199	277	107	38	79
Subtotal	**34,633**	**36,020**	**38,063**	**35,415**	**32,788**	**38,475**
Local						
General Aviation	16,191	25,075	28,011	30,453	36,333	37,488
Military	139	129	245	34	19	65
Subtotal	**16,330**	**25,204**	**28,256**	**30,487**	**36,352**	**37,553**
Total	**50,963**	**61,223**	**66,320**	**65,902**	**69,140**	**76,028**

Source: Century West Engineering developed using FAA OPSNET Data

INSTRUMENT FLIGHT PLAN (TFMSC) DATA

A 10-year summary of instrument flight plan data at Aurora State Airport is provided in **Table 3-7**. The FAA TFMSC provides detailed, aircraft-specific data for flight plan filings and aircraft movements. While air traffic control tower data is the best gauge of overall airport activity, the TFMSC data provides a reliable measure of flight activity needed to document the Airport's design aircraft operations. The 2012 Airport Master Plan update identified the current and future design aircraft to be a high performance jet included in Airport Reference Code C-II (ARC-C-II). This finding was confirmed in the data review contained in the 2019 Constrained Operations Runway Justification Study, and it continues to be justified based on the review of current TFMSC aircraft operations data.

TABLE 3-7: AURORA STATE AIRPORT INSTRUMENT FLIGHT OPERATIONS

TFMSC IFR Operations by ADG - Calendar Year Data											
ARC	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Average Annual Operations
A-I	2,372	2,638	2,414	2,482	2,750	2,752	3,428	2,458	2,162	2,334	2,579
A-II	410	494	1,108	1,554	1,814	1,966	1,844	1,158	930	1,398	1,268
A-III	14	6	2	4	4	10	6	2	0	4	5
A-IV	0	0	0	0	0	0	0	0	0	0	0
B-I	1,496	1,368	1,422	1,194	1,198	1,126	1,134	1,190	1,024	1,154	1,231
B-II	2,222	2,232	2,214	2,620	3,270	3,110	3,146	3,798	3,448	4,166	3,023
B-III	0	0	0	2	0	2	4	8	2	0	2
B-IV	0	0	0	0	0	0	0	0	0	0	0
C-I	360	374	514	438	340	306	274	286	170	274	334
C-II	348	378	294	208	316	368	358	226	242	242	298
C-III	18	10	6	8	0	14	50	54	10	0	17
C-IV	0	0	0	0	0	0	2	0	0	2	0
C-V	0	0	0	0	0	0	0	0	0	0	0
D-I	2	8	16	0	4	10	8	4	2	14	7
D-II	4	0	4	0	2	6	2	8	26	84	14
D-III	6	10	4	2	6	8	4	0	4	6	5
D-IV	0	0	0	0	0	0	0	0	0	0	0
D-V	0	0	0	0	0	0	0	0	0	0	0
Unknown	448	390	380	392	510	376	372	472	442	606	439
Total	**7,700**	**7,908**	**8,378**	**8,904**	**10,214**	**10,054**	**10,632**	**9,664**	**8,462**	**10,284**	**9,220**
Operations by AAC C and D Aircraft	**738**	**780**	**838**	**656**	**668**	**712**	**698**	**578**	**454**	**622**	**674**
Operations by ADG II and Larger	**3,022**	**3,130**	**3,632**	**4,398**	**5,412**	**5,484**	**5,416**	**5,254**	**4,662**	**5,902**	**4,631**

Source: FAA TFMSC Report - 4/14/2022 (Aurora State Airport)

TERMINAL AREA FORECAST

The current FAA Terminal Area Forecast (TAF) for Aurora State Airport, published May 2021, provides historical and forecast data for the period 1990-2045. Current and historical TAF based aircraft and operations data for the Airport share many of the data collection issues described earlier. Accordingly, the historical TAF activity data for Aurora State Airport are not considered accurate enough to draw reliable conclusions related to current activity data. Historical (2000-2020) TAF based aircraft and annual aircraft operations data are presented in **Figures 3-2 and 3-3**. The 2021 baseline activity levels for based aircraft and operations are depicted for reference.

FIGURE 3-2: HISTORICAL TAF – BASED AIRCRAFT

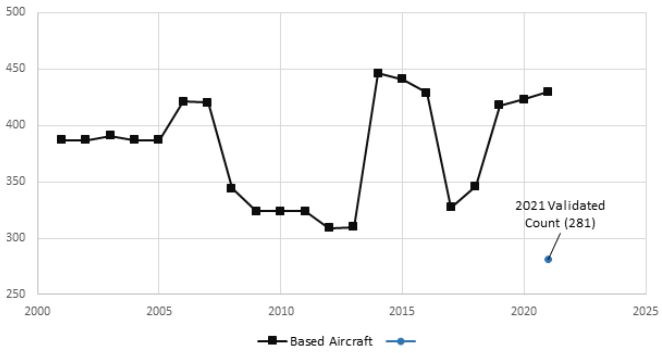
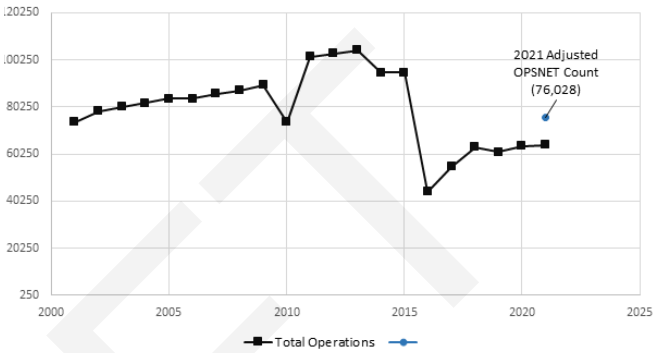


FIGURE 3-3: HISTORICAL TAF – ANNUAL AIRCRAFT OPERATIONS



Source: FAA TAF 2000-2045 (Aurora State Airport) www.taf.faa.gov

SUMMARY OF RECENT ACTIVITY FORECASTS

The two most recent aviation activity forecasting efforts specific to Aurora State Airport were prepared in the 2012 Airport Master Plan Update and the 2019 Constrained Operations Runway Justification study. The 2012 Airport Master Plan used a 2010 base year with forecasts extending to 2030. The 2019 runway study used a 2018 base year with forecasts extending to 2038. The 2019 forecast was designed to be a minor update of the Airport Master Plan forecast with updated evaluations focused on the design aircraft and its associated runway length requirements. The 2019 forecast was also the first forecast supported by actual air traffic control tower operations counts. Both forecasts were prepared in the pre-COVID era. Understanding these previous forecasting efforts provides context for the forecasting efforts to be developed as part of this planning process.

2012 Aurora State Airport – Airport Master Plan Update

The preferred based aircraft forecast projected an increase from 354 to 464 aircraft over the 20-year planning period. This forecast translates into a 1.36% average annual growth rate and a net increase of 110 aircraft. The preferred aircraft operations forecast projected an increase from 90,909 to 124,386 annual operations over the 20-year planning period. This forecast translates into a 1.58% average annual growth rate for the forecast period. The forecast identified the existing and future design aircraft as high performance medium business jets (IAI Astra and Cessna Citation X), both of which have Airport Reference Code C-II (ARC C-II) designations.

2019 Aurora State Airport – Constrained Operations Runway Justification Study

The preferred based aircraft forecast projected an increase from 349 to 561 aircraft over the 20-year planning period. This forecast translates into a 2.4% average annual growth rate and a net increase of 212 aircraft. The preferred aircraft operations forecast projected an increase from 66,153 to 112,200 annual operations over the 20-year planning period. This forecast translates into a 2.68% average annual growth rate for the forecast period. The forecast identified the existing and future design aircraft as ARC C-II medium business jet.

FAA Terminal Area Forecast

The 2020-2045 Terminal Area Forecast (TAF) of based aircraft and aircraft operations for the Airport was described earlier in the chapter. The TAF based aircraft forecast projects an increase from 346 to 554 aircraft over the 26-year forecast period (2019-2045). This forecast translates into a 1.09% average annual growth rate and a net increase of 208 aircraft. The TAF aircraft operations forecast projects an increase from 61,127 to 69,063 annual operations over the 26-year period. This forecast translates into a 0.47% average annual growth rate for the forecast period. The recommended airport master plan forecasts will be compared to the current TAF as part of the FAA review and approval process. Significant deviations from the TAF must be adequately documented for FAA forecast approval.

Oregon Aviation Plan V6.0 Model

The current Oregon Aviation Plan (OAP v6.0) was adopted in 2019 and provided long term aviation activity forecasts for all general aviation airports in the state. The OAP v6.0 relied on FAA TAF data for the 2015 baseline and its forecast horizon was 2015-2035.

The OAP v6.0 preferred based aircraft forecast annual growth rate was 1.1%. For Aurora State Airport, this model translated into increase from 346 to 421 based aircraft over the 20-year forecast period (+75 aircraft). The preferred aircraft operations forecast annual growth rate was 0.9%. For Aurora State Airport, this model translated into increase from 94,935 to 113,231 annual operations over the 20-year forecast period.

COMMUNITY PROFILE

Historical population and economic data for the region was presented in Chapter Two. Long term population and economic forecasts are summarized in **Tables 3-8 and 3-9**. These data are used by local government to project future demand for services, housing, and to effectively manage growth as required by the State of Oregon land use planning law. The forecast population and economic growth within the service area for Aurora State Airport is expected to contribute to increased aviation demand the master planning horizon.

Table 3-8 summarizes the 2021 Portland State University - Population Research Center (PRC) population forecast for the 2021-2041 period that corresponds to the Airport Master Plan. The county and statewide population forecasts for the local area generally project higher rates of annual growth over the next five years, followed by a slowing that accelerates near the end of the forecast horizon. The PRC forecast growth in Clackamas County and in Aurora exceed the projected statewide growth rate; the forecast growth in Marion County trails the forecast statewide growth rate. The Aurora urban growth boundary (UGB) population forecast projects annual growth averaging above 2% over the 20-year forecast.

TABLE 3-8 : FORECAST POPULATION

	2021	2026	2031	2036	2041
Oregon	4,266,560	4,542,741	4,761,243	4,960,026	5,130,713
CAGR:	-	1.26%	0.94%	0.82%	0.68%
Marion County	347,182	373,010	387,806	399,722	409,506
CAGR:	-	1.45%	0.78%	0.61%	0.48%
Clackamas County	425,316	441,763	464,902	487,724	509,796
CAGR:	-	0.76%	1.03%	0.96%	0.89%
Aurora UGB	1,133	1,193	1,357	1,524	1,695
CAGR:	-	1.04%	2.61%	2.35%	2.15%

Source: PSU Population Research Center (PRC), 2021

Table 3-9 summarizes the current Woods & Poole Economics forecast gross regional product (GRP) for Marion and Clackamas County for the 2021-2041 period that corresponds to the Airport Master Plan. GRP measures the market value of all goods and services produced in the defined region. As indicated in the data, strong GRP growth is forecast over the long term, with a similar slowing near the end of the forecast horizon.

TABLE 3-9: FORECAST GROSS REGIONAL PRODUCT

	2021	2026	2031	2036	2041
Marion County (millions)	$16,761	$18,397	$20,107	$21,874	$23,688
Percent Change	-	9.76%	9.29%	8.79%	8.29%
					CAGR: 1.7%
Clackamas County (millions)	$21,172	$23,348	$25,652	$28,067	$30,590
Percent Change	-	10.28%	9.87%	9.42%	8.99%
					CAGR 1.9%

Source: Woods & Poole Economics, Inc. Washington, D.C. Copyright 2021. Woods & Poole does not guarantee the accuracy of this data. The use of this data and the conclusion drawn from it are solely the responsibility of Century West Engineering, Inc.

Current Aviation Activity

Current based aircraft and annual aircraft operations data for use in developing new aviation activity forecasts are presented in **Tables 3-10 and 3-11**. The 2021 baseline totals will be applied to all 2021-2041 airport master plan forecast models.

TABLE 3-10: BASELINE BASED AIRCRAFT (JANUARY 2022)

Aircraft Type	On-Airport	TTF	Total
Single Engine	45	175	220
Multi Engine	1	14	15
Jet	3	33	36
Helicopter	1	9	10
Total	**50**	**231**	**281**

Source: National Based Aircraft Inventory – January 2022

TABLE 3-11: BASELINE AIRCRAFT OPERATIONS (2021)

	2021
Itinerant	
Air Taxi	2,006
General Aviation	36,390
Military	79
Subtotal	**38,475**
Local	
General Aviation	37,488
Military	65
Subtotal	**37,553**
Total	**76,028**

Source: Century West Engineering developed using FAA OPSNET Data

2021-2041 Aviation Activity Forecasts

BASED AIRCRAFT

Seven based aircraft forecasts were developed based on a variety of models. The average annual growth rates for the models ranged from 0.1% to 1.7%. Four of the models were discarded after review and additional analysis determined limited applicability. The remaining three models were determined appropriate for comparison. These models are presented in **Table 3-11** and depicted in **Figure 3-4**. These forecast models are applied to the 2021 based aircraft baseline data presented earlier in the chapter.

Historical Hangar Development Trend Model – This model was developed based on an assessment of the Airport's hangar development trend since the last airport master plan was completed. The evaluation was performed by measuring the total area of on-airport and TTF hangar building footprints in August 2012 and June 2021 as observed in Google Earth imagery. Hangars were measured as whole; non aircraft storage spaces (operations, aircraft maintenance, equipment storage, etc.) located within the structures have not been removed from the measurements. A linear rate (1.7% CAGR) of increase in hangar space was calculated for the nine-year period. Details of the net change in airport hangar area are described in Chapter 2. The rate was applied to baseline based aircraft total and projected out for the 20-year planning period. The model assumes that actual hangar development was demand driven, not speculative and that the buildings constructed as hangars are used for aircraft storage, not general storage. The model results in a CAGR of 1.7%.

Federal Contract Tower (Oregon) TAF Model – The FAA TAF forecast presented in the "Summary of Recent Activity Forecasts" section of the chapter was developed specifically for the Aurora State Airport facility. This model also uses the FAA TAF Query Data, but reflects the forecast for the larger group of Oregon airports with federal contract air traffic control towers. The operational similarities of this group of Oregon airports provides a broader assessment of activity.

This model applies the Oregon Federal Contract Tower TAF forecast annual growth rates for total based aircraft to the Airport's baseline based aircraft count, and projected out for the 20-year planning period. The model is non-linear and year-over-year growth rates vary. The model assumes that the Airport's based aircraft fleet growth will be in line with state growth for airports with FAA contract air traffic control towers. The model results in an average annual growth rate of 1.1%.

National Aerospace Forecast (Weighted Airport Fleet Mix) Model – This model applies the National Aerospace forecast growth rates for each aircraft type to the Airport's existing fleet mix and projects out for the 20-year planning period. The linear projection assumes steady growth that does not change year-over-year during the 20-year forecast. The models accounts for growth differences between aircraft types by weighting rates with the Airport's fleet mix distribution. Aircraft types were summed to get total projected counts for each forecast year. The model assumes that the Airport's based aircraft fleet will grow in parallel to the national fleet. The model results in an average annual growth rate of 0.2%.

RECOMMENDED BASED AIRCRAFT FORECAST SUMMARY

The recommended based aircraft forecast for the 2021-2041 Aurora State Airport Master Plan is the **Oregon Federal Contract Tower TAF Model**. The model provides a reasonable projection of growth that also aligns toward recent hangar construction trends at the Airport, while outpacing very modest national general aviation fleet growth expectations.

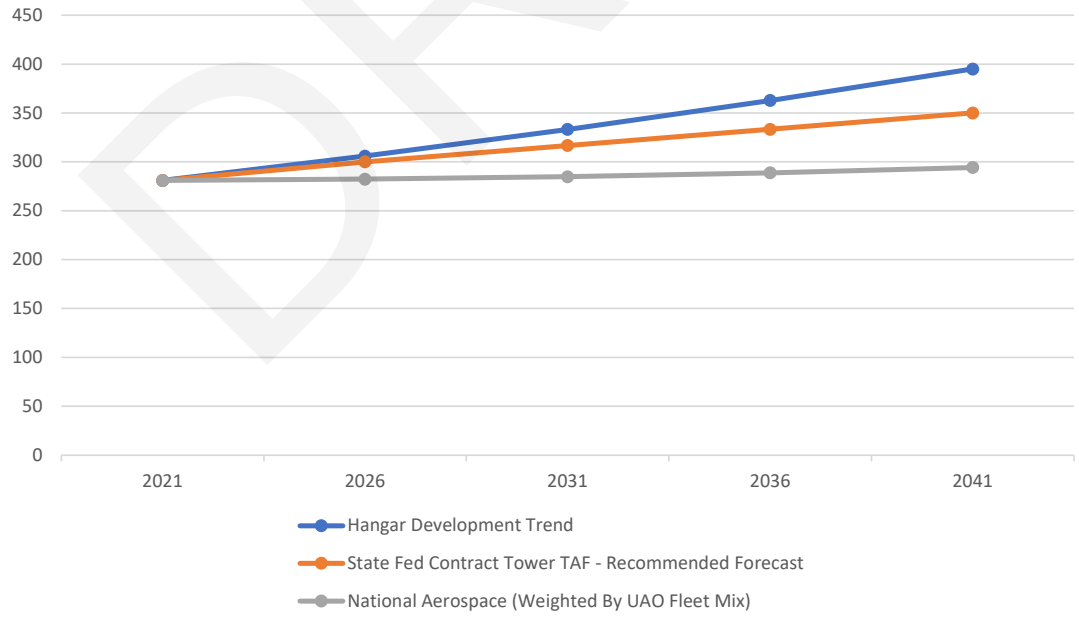
The recommended forecast results in a net increase of 69 based aircraft over the planning period, which reflects an average annual growth rate of **1.1%**. The forecast exceeds the FAA's most recent NPIAS forecast for the region (0.9% CAGR) and the OAP v6.0 long-term forecast rates for Oregon's based aircraft fleet (1.1% CAGR). The based aircraft forecast models presented for consideration, including the recommended model, are summarized in **Table 3-12** and depicted on **Figure 3-4**.

TABLE 3-12: FORECASTS OF BASED AIRCRAFT

Based Aircraft Forecast Models	CAGR	2021	2026	2031	2036	2041
Historical Hangar Development Trend Model	1.7%	281	306	333	363	395
Federal Contract Tower (Oregon) TAF Model - Recommended Forecast	**1.1%**	**281**	**300**	**317**	**333**	**350**
National Aerospace Forecast (Weighted By the Aurora State Airport Fleet Mix) Model	0.2%	281	282	285	289	294

Source: Century West Engineering

FIGURE 3-4: BASED AIRCRAFT FORECASTS



Source: Century West Engineering developed using FAA TFMSC Data

Discarded Models

National Aerospace Forecast (Combined Rate) Model – This model applies the *National Aerospace Forecast FY 2021-2041* growth rate for entire fleet to the Airport's baseline based aircraft count, and projected out for the 20-year planning period. The linear projection assumes steady growth that does not change year-over-year during the 20-year forecast. The model projects fleet growth as a whole, not by individual aircraft type. The model results in an average annual growth rate of 0.1%. The model was discarded in favor of a weighted version of the National Aerospace forecast, as it does not account for aircraft fleet mix.

Northwest Mountain Region Federal Contract Tower TAF Model – This model also uses the FAA TAF Query Data subsets for federal contract air traffic control towers described earlier. The model is based on the TAF forecast for the group of airports located in the FAA's Northwest Mountain Region. As with the Oregon contract tower model, the operational similarities of this group of airports provides a broad assessment of activity. This model applies the FAA's Northwest Mountain Region Federal Contract Tower TAF forecast annual growth rates for aircraft classifications to the Airport's baseline based aircraft counts (using the same classifications) over the 20-year period. The model uses the same assumptions as State TAF contract tower models, but uses regional forecast rates. The model results in an average annual growth rate of 1.1%. This model was discarded in favor of the similar and more locally-based state TAF model.

National Federal Contract Tower TAF Model – This model also uses the FAA TAF Query Data subsets for federal contract air traffic control towers. The model is based on the TAF forecast for all similarly grouped airports in the federal contract tower system. As with the other FAA contract tower models, the operational similarities of this group of airports provides a broad assessment of activity. This model applies the FAA's National Federal Contract Tower TAF forecast annual growth rates for aircraft classifications to the Airport's baseline based aircraft counts (using the same classifications) over the 20-year period. The model uses the same assumptions as State TAF contract tower models but uses national TAF forecast rates. The model results in an average annual growth rate of 1.3%. This model was discarded in favor of the similar and more locally-based state TAF model.

Oregon Aviation Plan v6.0 Model – This model applies OAP v.6.0 operations growth rate to the Airport's baseline based aircraft count and projects out 20 years. The linear projection assumes steady growth that does not change year-over-year during the 20-year forecast. The model results in an average annual growth rate of 1.1%. This model was discarded based on its reliance on historical TAF data and pre-COVID activity assumptions in place when the forecast was created.

Based Aircraft Fleet Mix

Table 3-13 summarizes the current and forecast fleet mix for the planning period. The based aircraft fleet mix at Aurora State Airport is expected to become slightly more diverse as it is anticipated that as single-engine piston aircraft are retired over time, a portion are likely be replaced by LSA or experimental kit aircraft, following national trends. The addition of locally based turbine-engine aircraft (turboprop, jet, helicopter, etc.) is also anticipated based on the FAA's long term general aviation fleet forecast which reflects continued adoption of turbine engine technology.

TABLE 3-13: FORECAST BASED AIRCRAFT FLEET MIX

	CAGR	2021	2026	2031	2036	2041
Single Engine*	0.9%	216	229	240	250	259
Multi Engine Piston	0.0%	6	6	6	6	6
Turbo Prop	1.1%	13	14	15	15	16
Jet	2.3%	36	40	45	50	56
Helicopter	1.4%	10	11	11	12	13
Total Based Aircraft	**1.1%**	**281**	**300**	**317**	**333**	**350**

Source: Century West Engineering
*Includes Experimental/LSA

AIRCRAFT OPERATIONS

Eleven aircraft operations forecasts were developed based on a variety of models. The average annual growth rates for the models ranged from 0.5% to 3.6%. Five of the models were discarded after review; the remaining models are presented in **Table 3-14** and depicted in **Figure 3-5**. These forecast models are applied to the 2021 aircraft operations baseline data presented earlier in the chapter.

Historical Tower Counts Trend – This model uses the full six years (2016-2021) of adjusted ATCT airport operations data available to establish a best-fit linear trend line for the period. The model assumes steady linear growth year-over-year. Itinerant and local splits were based on 2021 operations counts. The model is limited by the short period from which to develop meaningful trend and operational events experienced during the COVID-19 pandemic may be disproportionately reflected in the resulting trend projection. The model results in an average annual growth rate of 3.6%.

TFMSC Historical Trend (20-year) – This model uses 20 years (2001-2021) of TFMSC instrument flight plan data for the Airport to establish a trend line for the period. Itinerant and local splits were based on 2021 operations counts. Operational impacts experienced during the COVID-19 pandemic appear to dampen the overall trend. This model yields a reasonable correlation between the historical data to the derived trend line (R-squared = 0.72). The model results in an average annual growth rate of 2.3%.

Marion County Population Correlation – Socio-economic indicators (population, employment, and gross regional product) for several local defined areas were compared to the Airport's adjusted ATCT operations counts (2016-2021). Ultimately Marion County Population was chosen as the most representative model as the county showed good correlation across the three indicators (population being the highest at R-squared = 0.93) and is the most focused area in which the airport is located. Clackamas County Population was also 0.93, but the airport isn't located in the county and employment correlation was on the low end of the range, so it wasn't chosen over Marion County. PSU PRC population forecast annual growth rates were applied to baseline operation counts for the 20-year period. The model assumes that operations will continue to mirror population growth in Marion County. Itinerant and Local split based on 2021 operations counts. The model results in an average annual growth rate of 2.9%.

National Aerospace Forecast Operations (Airports with ATCT) – This model applies the *National Aerospace Forecast FY2021-2041* "Total Combined Aircraft Operations at Airports with FAA and Contract Traffic Control Service" forecast 2021-2041 growth rates for all aircraft categories to the Airport's baseline operation counts and projects out 20 years. Resulting operations by aircraft type were summed to get total operations for each year in the forecast. Aircraft categories were combined into Local and Itinerant totals based on the splits from baseline. The model assumes that the Airport operations will mirror national trends. The model results in an average annual growth rate of 0.8%.

Federal Contract Tower TAF Non-Hub Models – The FAA TAF for non-hub airports with federal contract air traffic control towers provides a reasonable model for projecting annual aircraft operations at Aurora State Airport based on the model's focus on airports with similar facilities and operational characteristics. The TAF models for general aviation operations are primarily based on time-series analysis. The FAA notes that the average decrease in 2020 general aviation operations was significantly less than commercial operations or commercial enplaned passengers. Three models were developed for varying geographic levels (national, regional, and state). Based on the review of each model, the projection for Oregon contract towers was determined to be most applicable for further consideration (see below). The national and regional federal contract tower models, although producing similar growth rates, were discarded in favor of the Oregon model. The TAF model based on Oregon contract tower airports is recommended for further consideration, and it is summarized below.

Federal Contract Tower TAF State (Oregon) Model – This model applies the Oregon Federal Contract Tower TAF forecast annual growth rates for aircraft classifications to Aurora State Airport's baseline operations counts (using the same classifications) over the 20-year period. The model is non-linear and year-over-year growth rates vary. The model assumes that the Airport's operations will mirror state trends. The model results in an average annual growth rate of 0.6%.

Discarded Models

National Aerospace Forecast (Hours Flown) Model – This model applies the "Active General Aviation and Air Taxi Hours Flown" forecast 2021-2041 single growth rate to the Airport's baseline operation counts and projects out 20 years. Aircraft categories were combined into Local and Itinerant totals based on the splits from baseline. The model assumes that the Airport operations will mirror national trends. The model results in an average annual growth rate of 1.0%. This model was discarded since the individual aircraft categories presented in the FAA forecast are not detailed in ATCT activity counts used to develop the baseline aircraft operations total.

Northwest Mountain Region Federal Contract Tower TAF Model – This model applies the FAA's NW-Mountain Region Federal Contract Tower TAF forecast annual growth rates for aircraft classifications to the Airport's baseline operations counts (using the same classifications) over the 20-year period. The model uses the same assumptions as State TAF contract tower models but uses Northwest Mountain Region TAF forecast rates. The model results in an average annual growth rate of 0.5%. This model was discarded in favor of the similar and more locally based state TAF model.

National Federal Contract Tower TAF Model – This model applies the FAA's National Federal Contract Tower TAF forecast annual growth rates for aircraft classifications to the Airport's baseline operations counts (using the same classifications) over the 20-year period. The model uses the same assumptions as State TAF contract tower models but uses national TAF forecast rates. The model results in an average annual growth rate of 0.7%. This model was discarded in favor of the similar and more locally-based state TAF model.

National Aerospace Forecast (Hours Flown) Model – This model applies the "Active General Aviation and Air Taxi Hours Flown" forecast 2021-2041 single growth rate to the Airport's baseline operation counts and projects out 20 years. Aircraft categories were combined into Local and Itinerant totals based on the splits from baseline. The model assumes that the Airport operations will mirror national trends. The model results in an average annual growth rate of 1.0%. This model was discarded since the individual aircraft categories presented in the FAA forecast are not detailed in ATCT activity counts used to develop the baseline aircraft operations total.

Oregon Aviation Plan v6.0 Model – This model applies OAP v.6.0 operations growth rate to the Airport's baseline operations count and projects out 20 years. The linear projection assumes steady growth that does not change year-over-year during the 20-year forecast. The model results in an average annual growth rate of 0.9%. This model was discarded based on its reliance on historical TAF data and pre-COVID-19 activity assumptions in place when the forecast was created.

RECOMMENDED AIRCRAFT OPERATIONS FORECASTS SUMMARY

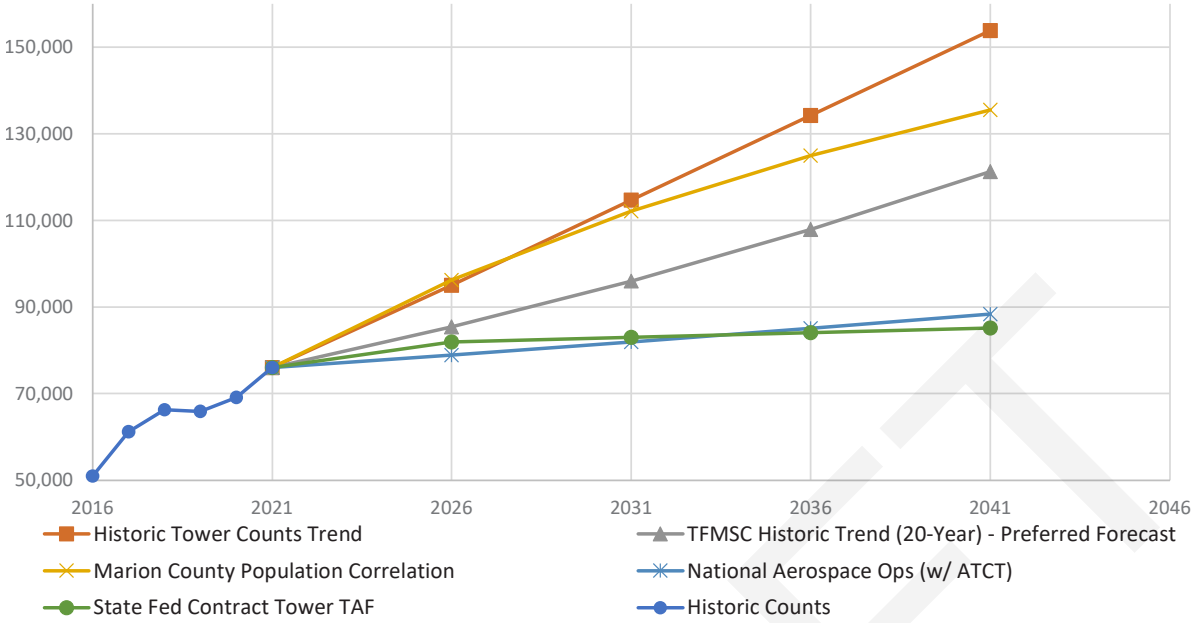
The FAA TFMSC Historical Trend Model is the recommended aircraft operations forecast for the 2021-2041 Aurora State Airport Master Plan. The extended period of TFMSC data provides a reliable indication of the Airport's growth in flight activity that is not exceedingly influenced by intermittent events. The TFMSC data also provides a stable measure of activity that is not affected by adjustments to baseline activity data. This model projects an average annual growth rate in operations of 2.3% over the planning period. The aircraft operations forecast models are included in **Table 3-14** and depicted in **Figure 3-5**.

TABLE 3-14: OPERATIONS FORECAST

	CAGR	2021	2026	2031	2036	2041
Historic Tower Counts Trend	3.6%	76,028	95,039	114,646	134,254	153,862
TFMSC Historic Trend (20-Year) - Preferred Forecast	**2.4%**	**76,028**	**85,438**	**96,013**	**107,898**	**121,253**
Marion County Population Correlation	2.9%	76,028	96,244	112,162	124,981	135,506
National Aerospace Ops (w/ ATCT)	0.8%	76,028	78,939	81,966	85,114	88,388
State Fed Contract Tower TAF	0.6%	76,028	81,924	82,972	84,046	85,151

Source: Century West Engineering developed using FAA TFMSC Data

FIGURE 3-5: OPERATIONS FORECAST MODELS



Source: Century West Engineering developed using FAA TFMSC Data

AIRCRAFT OPERATIONS FLEET MIX AND SPLITS

Single-engine piston aircraft currently account for approximately 80% of airport operations, followed by helicopters, jets, turboprops, and multi-engine piston aircraft. It is expected that the mix of air traffic at Aurora State Airport will shift slightly during the 20-year planning period to include more turbine aircraft (jets, turboprops, and helicopters) based on current trends in aircraft manufacturing and the composition of airport users.

It is anticipated that the expected decline in older conventional single-engine piston aircraft will be partly offset by growth in experimental and sport aircraft. The aircraft operations fleet mix forecast is summarized in **Table 3-15**. Activity splits (local, itinerant, etc.) for forecast operations are summarized in **Table 3-16**.

TABLE 3-15: OPERATIONS FLEET MIX

Aircraft Type	2021	2026	2031	2036	2041
Total Airport Operations	**76,028**	**85,438**	**96,013**	**107,898**	**121,253**
Single Engine*	60,823	67,838	75,562	84,377	93,971
Multi Engine Piston	760	769	768	647	606
Turbo Prop	3,041	3,588	4,321	5,071	6,063
Jet	5,322	6,408	7,681	9,171	10,913
Helicopter	6,082	6,835	7,681	8,632	9,700
Fleet Mix Percentages					
Single Engine*	80.0%	79.4%	78.7%	78.2%	77.5%
Multi Engine Piston	1.0%	0.9%	0.8%	0.6%	0.5%
Turbo Prop	4.0%	4.2%	4.5%	4.7%	5.0%
Jet	7.0%	7.5%	8.0%	8.5%	9.0%
Helicopter	8.0%	8.0%	8.0%	8.0%	8.0%

Source: Century West Engineering
*Includes LSA/Experimental Operations Fleet Mix

TABLE 3-16: LOCAL AND ITINERANT ACTIVITY

Aircraft Operations	2021	2026	2031	2036	2041
Itinerant					
Itinerant Air Taxi	2,006	2,254	2,533	2,847	3,199
Itinerant GA	36,390	40,904	45,977	51,677	58,083
Itinerant Military	79	79	79	79	79
Itinerant Total	**38,475**	**43,237**	**48,589**	**54,603**	**61,361**
Local					
Local GA	37,488	42,136	47,360	53,230	59,826
Local Military	65	65	65	65	65
Local Total	**37,553**	**42,201**	**47,425**	**53,295**	**59,891**
Total Operations	**76,028**	**85,438**	**96,013**	**107,898**	**121,253**

Source: Century West Engineering developed using FAA ATCT Data

Operational Peaks

Activity peaking is evaluated to identify potential capacity related issues that may need to be addressed through facility improvements or operational changes. The Peak Month represents the month of the year with the greatest number of aircraft operations (takeoffs and landings). The peak month for most general aviation airports occurs during the summer when weather conditions and daylight are optimal. This also coincides with the busiest time of year for flight training and recreational flying. This level of peaking is consistent with recent fuel delivery records for the Airport and the annual distribution of TFMSC data.

Peak Day operations are defined by the average day in the peak month (Design Day) and the busy day in the typical week during peak month (Busy Day). The Design Day is calculated by dividing peak month operations by 30.5. For planning purposes, the Busy Day is estimated to be 50% higher than the average day in the peak month (Design Day x 1.5), based on common activities generating significant surges in flight activity.

The peak activity period in the Design Day is the Design Hour. For planning purposes, the Design Hour operations are estimated to account for 20% of Design Day operations (Design Day x 0.20).

The operational peaks for each forecast year are summarized in **Table 3-17**. This level of peaking is consistent with the mix of airport traffic and is expected to remain relatively unchanged during the planning period. These measures of activity are considered in the facility requirements analyses when calculating runway/taxiway capacity and transient aircraft parking requirements.

TABLE 3-17: PEAK OPERATIONS

	2021	2026	2031	2036	2041
Annual Operations	**76,028**	**85,438**	**96,013**	**107,898**	**121,253**
Peak Month Operations (11%)	8,363	9,398	10,561	11,869	13,338
Design Day Operations (Average Day in Peak Month)	274	308	346	389	437
Busy Day Operations (Assumed 150% of design day)	411	462	519	584	656
Design Hour Operations (Assumed 20% of design day)	55	62	69	78	87

Source: Century West Engineering

Design Aircraft

The design aircraft (or critical aircraft) represents the most demanding aircraft, or family of aircraft, using an airport on a regular basis and determines the appropriate Airport Reference Code (ARC) and airport design standards for airport development.

The existing and future design aircraft identified in the aviation activity forecasts corresponds to Airport Reference Code C-II (ARC C-II)

- 2021 TFMSC data indicates that Approach Category C and D aircraft operations exceeded the minimum of 500 annual operations required for Design Aircraft designation. While neither approach category alone reached the operations threshold, collectively they exceed the threshold and represent the most demanding family of high performance jet aircraft.
- Airplane Design Group II or larger aircraft operations also exceeded the 500 operations threshold required for Design Aircraft designation.
- Each element of the ARC is independently justified through current activity levels, and the ARC C-II designation most accurately represents this segment of aircraft activity.
- Specific facility requirements, such as runway length requirements will be derived from the composite of Approach Category C and D jet aircraft reflected in FAA runway length planning tables.

Table 3-18 summarizes FAA technical criteria used to determine the applicable ARC for aircraft based on physical characteristics; representative aircraft are also depicted.

TABLE 3-18: AIRPORT REFERENCE CODE (ARC)

Aircraft Approach Category	Aircraft Approach Speed knots	Airplane Design Group	Aircraft Wingspan
A	less than or equal to 91	I	less than or equal to 49’
B	92 to 121	II	50’ to 79’
C	122 to 141	III	80’ to 118’
D	142 to 166	IV	119’ to 171’

A-I (small) 12,500 lbs. or less

Beech Baron 55
Beech Bonanza
Cessna 182
Piper Archer

B-I (small) 12,500 lbs. or less

Beech Baron 58
Beech King Air C90
Cessna 402
Cessna 421

A-II, B-II (small) 12,500 lbs. or less

Super King Air 200
Pilatus PC-12
DCH Twin Otter
Cessna Caravan

ARC - B-II Greater than 12,500 lbs.

Super King Air 300, 350
Beech 1900
Cessna Citation
Falcon 20, 50

A-III, B-III Greater than 12,500 lbs.

DHC Dash 7, Dash 8
Q-200, Q-300
DC-3
Convair 580

C-I, D-I

Lear 25, 35, 55, 60
Israeli Westwind
HS 125-700

C-II, D-II

Gulfstream II, III, IV
Canadair 600
Canadair Regional Jet
Lockheed JetStar

C-III, D-III

Boeing Business Jet
Gulfstream 650
B 737-300 Series
MD-80, DC-9

C-IV, D-IV

B - 757
B - 767
DC - 8-70
DC - 10

Source: Century West Engineering

Military Activity

Air traffic control tower counts for the Airport average 248 annual military operations since 2016, although the volume has decreased to less than 150 annual operations over the last two years. Occasional military use with helicopters or small fixed-wing aircraft in support of emergency response, search and rescue, and flight training activities would be consistent with activity (Oregon Army National Guard, etc.) experienced at other Oregon general aviation airports. Military flight activity at the Airport is projected to remain at current levels, with a static projection of 144 annual operations during the planning period. Forecast military activity is included in **Table 3-19**.

Air Taxi Activity

Air taxi activity includes for-hire charter flights, medevac flights, and some scheduled commercial air carriers operating under FAR Part 135. Air taxi activity at Aurora State Airport is forecast to increase at the same rate as itinerant general aviation operations. Forecast air taxi activity is included in **Table 3-19** (forecast summary).

Forecast Summary

A summary of the based aircraft and annual aircraft operations is presented in **Table 3-19**. These forecasts project slight to modest growth over the 20-year planning period that is consistent with FAA's long-term expectations for general aviation in the region. Based aircraft are forecast to increase at an average annual rate of 1.1% between 2021 and 2041. Aircraft operations are forecast to increase at an average annual rate of 2.3% between 2021 and 2041. The forecasts reflect the Airport's ability to attract and accommodate both locally based and transient aeronautical activity from a diverse group of users, including flight training, recreational aviation, personal travel, and business aviation.

TABLE 3-19: FORECAST SUMMARY

Activity	CAGR	2021	2026	2031	2036	2041
Based Aircraft						
Single Engine*	0.9%	216	229	240	250	259
Multi Engine Piston	0.0%	6	6	6	6	6
Turbo Prop	1.1%	13	14	15	15	16
Jet	2.3%	36	40	45	50	56
Helicopter	1.4%	10	11	11	12	13
Total Based Aircraft	**1.1%**	**281**	**300**	**317**	**333**	**350**
Aircraft Operations						
Itinerant						
Itinerant Air Taxi	2.4%	2,006	2,254	2,533	2,847	3,199
Itinerant GA	2.4%	36,390	40,904	45,977	51,677	58,083
Itinerant Military	0.0%	79	79	79	79	79
Itinerant Total	**2.4%**	**38,475**	**43,237**	**48,589**	**54,603**	**61,361**
Local						
Local GA	2.4%	37,488	42,136	47,360	53,230	59,826
Local Military	0.0%	65	65	65	65	65
Local Total	2.4%	37,553	42,201	47,425	53,295	59,891
Total Operations	**2.4%**	**76,028**	**85,438**	**96,013**	**107,898**	**121,253**
Aircraft Operations Fleet Mix						
Single Engine*	2.1%	60,823	67,838	75,562	84,377	93,971
Multi Engine Piston	-1.2%	760	769	768	647	606
Turbo Prop	3.5%	3,041	3,588	4,321	5,071	6,063
Jet	3.6%	5,322	6,408	7,681	9,171	10,913
Helicopter	2.3%	6,082	6,835	7,681	8,632	9,700
Total Operations	2.4%	76,028	85,438	96,013	107,898	121,253
Operations By C-II (Critical Aircraft)	2.4%	242	272	306	343	386
Operations by AAC C & D	2.4%	622	699	785	883	992
Operations by ADG II & Larger	2.4%	5,902	6,632	7,452	8,374	9,410
Instrument Operations	2.4%	9,658	10,853	12,196	13,390	15,402

Source: Century West Engineering
*Includes Experimental/LSA

TERMINAL AREA FORECAST (TAF) COMPARISON

The recommended based aircraft and aircraft operations forecasts are compared to the current TAF as required for FAA review in **Table 3-20**.

TABLE 3-20: AIRPORT PLANNING AND TAF FORECAST COMPARISON

Activity	Year	Airport Forecast	TAF	"AF/TAF (% Difference)"
Passenger Enplanements				
Base yr.	2021	0	0	0.0%
Base yr. + 5yrs.	2026	0	0	0.0%
Base yr. + 10yrs.	2031	0	0	0.0%
Base yr. + 15yrs.	2036	0	0	0.0%
Commercial Operations				
Base yr.	2021	2,006	1,191	68.4%
Base yr. + 5yrs.	2026	2,254	1,731	30.2%
Base yr. + 10yrs.	2031	2,533	1,848	37.1%
Base yr. + 15yrs.	2036	2,847	1,973	44.3%
Total Operations				
Base yr.	2021	76,028	64,035	18.7%
Base yr. + 5yrs.	2026	85,438	65,371	30.7%
Base yr. + 10yrs.	2031	96,013	66,303	44.8%
Base yr. + 15yrs.	2036	107,898	67,262	60.4%

Source: Century West Engineering
Note: TAF data is on a U.S. government fiscal year basis (October through September).

Next Steps

The draft aviation activity forecasts will be submitted to the FAA Seattle Airports District Office (ADO) for formal review following presentation and discussion of the chapter in Planning Advisory Committee (PAC) Meeting 2.

Upon FAA approval of the forecasts, the current and future design aircraft will be used in subsequent airport master plan technical evaluations and definition of airport design standards and airspace planning standards. These designations will include the appropriate design criteria, including Airport Reference Code (ARC) and Taxiway Design Group (TDG) to be used in the 2021-2041 Airport Master Plan.

The approved aviation activity forecasts will be used to evaluate the aeronautical facility requirements for the Airport in the following chapter (Chapter 4 – Facility Requirements). The facility requirements evaluation will quantify current and future facility needs in general terms and volume.

OREGON
BEND
PORTLAND

WASHINGTON
SPOKANE
ELLENSBURG
FEDERAL WAY
BOTHELL

IDAHO
COEUR d'ALENE
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ENGINEERING

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PLANNING ADVISORY COMMITTEE (PAC) COMMENTS & PLANNING TEAM RESPONSES SECTION

April 5, 2022

TO: Brandy Steffen, Senior Program Manager
JLA PUBLIC INVOLVEMENT
EMAIL: brandy.steffen@jla.us.com

RE: Question of Legal Validity of 2012 Master Plan

My comments are about the propriety and legality of the data presented in the Draft chapters. Chapter 3 is titled ***Aviation Activity Forecasts***, and beginning on page 8 is a section titled ***Recent Events Summary***. No mention is made of the 2021 Final Judgment by the Oregon Court of Appeals, later ratified by the Oregon Supreme Court, that the 2012 Aurora Airport Master Plan is invalid because it was never legally approved or adopted by the Oregon Aviation Board, and it was never adopted into the Marion County Comprehensive plan. Certainly, this qualifies as a "recent event!" This matters because the Forecast chapter and the data therein are built on data from the 2***019 Aurora State Airport Constrained Operations Runway Justification Study*** and the unapproved ***2012 Aurora State Airport Master Plan***.

The Constrained Operations study references the 2012 master plan 99 times and includes such statements as "intended to supplement the 2012 AMP document," and "the current 2012 Airport Master Plan should be consulted for specific plans related to airport development and protection," and finally, *The primary purpose of the forecast update associated with the Aurora State Airport Constrained Operations Runway Justification Study is to evaluate the forecasts of aviation activity (2010-2030) contained in the 2012 Aurora State Airport Master Plan (AMP), which supported the planned runway extension depicted on the 2012 Airport Layout Plan (ALP).*

On top of that, the Draft Chapters for the current master planning processes are not only based on the Constrained Operations Study, but directly refer back to the 2012 Master Plan and include 18 references to it. This linkage and dependency is confirmed in the ***Previous Airport Planning*** section of Chapter 3 that states *The 2012 Aurora State Airport Master Plan Update provides the most recent FAA-approved airport layout plan (ALP) drawing for the Airport. The 2019 Constrained Operations Runway Justification Study provided updated aviation activity forecasts and airside facility requirements assessment related to the critical aircraft.*

The Court of Appeals ruling on the 2012 Master Plan raises real legal questions about the Forecast chapter in as much as the data is built on the Constrained Operations study which in turn is dependent on the unapproved 2012 master plan. Last week's Court of Appeals ruling on a private development next to the Aurora Airport makes clear that expanding the Aurora Airport must comply with Oregon's land use laws and requires it being adopted into the Marion County comprehensive plan, something that hasn't happened since 1976.

Roger Kaye,Pres.
Friends of Marion County
rkaye2@gmail.com
(503)743-4567

c: Andrew Mulkey, Rural Lands Attorney
1000 Friends of Oregon
andrew@friends.org
(971) 420-0916

Century West Engineering Response:

The references to prior planning studies are for information only and are intended to provide historical context. Historical FAA activity data for the Airport cited in previous studies may be repeated, as appropriate for context. However, the assessments of current and forecast aviation activity presented in Chapter 3 (Working Paper No. 1) were developed independently for this master plan. These data are not affected by previous plan adoption or previous forecast FAA approvals. The ALP drawing completed in the 2012 AMP is the current FAA-approved ALP drawing of record on file with the FAA Seattle Airports District Office.

A note will be added to Working Paper No. 1 regarding the recent court ruling related to the 2012 Airport Master Plan. The 2021-2041 Aurora State Airport Master Plan is a new master plan, and it has no formal linkage to previous plans completed for the Airport, adopted or otherwise.

April 5, 2022

By electronic mail

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Re: Aurora State Airport Master Plan, Preliminary Aviation Activity Forecasts and Selection of critical aircraft or design aircraft for ARC and runway length.

On behalf of 1000 Friends of Oregon, please accept the following statement for the record in the proceedings for the draft airport master plan and the FAA's forecast review for the Aurora State Airport master planning process.

Introduction

The Oregon Department of Aviation is in the process of preparing a new airport master plan for the Aurora State Airport in Marion County, Oregon. To that end the ODA has prepared draft chapters for the new airport master plan (draft AMP), and is expected to send its forecast and selection of design aircraft to the FAA for review and approval. In the draft AMP, the ODA discusses a prior 2019 constrained operations runway justification study (hereinafter 2019 Study) and appears to use the 2019 Study as the basis for its current selection of the design aircraft for Airport Reference Code and the group of critical design airplanes for runway length. The analysis provided in the 2019 Study and the draft AMP are flawed, and the draft AMP lacks any

of the explanation and analysis required to select the existing or forecast group of critical design airplanes used to determine runway length.

Century West Engineering Response:

The assessments of current and forecast aviation activity presented in Chapter 3 (Working Paper No. 1) were developed independently for this master plan. These data are not influenced by previous forecasts or FAA forecast approvals. The historical and forecast activity required by FAA to define the current and future design aircraft are summarized in Chapter 3.

The draft aviation activity forecasts were submitted to FAA for formal review following the PAC review and comment period for Working Paper No. 1. Coordination with FAA will be ongoing to address any issues identified during its forecast review.

The draft AMP chapter 3 and the 2019 Study fail to follow the appropriate methodology for identifying the critical aircraft or design aircraft for runway length. Draft AMP 2-18. As discussed in more detail below, the draft AMP attempts to use the Aircraft Approach Category component of the Airport Reference Code for the purpose of determining the critical design aircraft for runway length. Notably, the Airport Reference Code (ARC) and Runway Design Code (RDC) are not used to determine runway length. The 2019 study incorrectly states that "critical aircraft operations are used to establish the corresponding [ARC] and [RDC] designations for Runway 17/35 *that define the applicable FAA design standards and length requirements*." 2019 Study at 2-1 (emphasis added). The draft AMP appears to duplicate that error, stating "runway length requirements will be derived from the composite of Approach Category C and D jet aircraft reflected in the FAA runway length planning tables." Draft AMP at 3-24. As explained in various Advisory Circulars, the ARC and RDC refer to characteristics of aircraft used to determine taxiway and runway separation distances. However, they are not used to determine runway length.

Century West Engineering Response:

The selection of the design aircraft is based solely on existing/forecast aircraft operations levels within the 20-year planning period. The applicable Airport Reference Code (ARC) for the design aircraft is based on aircraft approach category (AAC) and airplane design group (ADG). As indicated in Chapter 3, the current and future design aircraft corresponds to ARC C-II. This designation combines the most demanding combination of aircraft categories generating at least 500 annual operations (UAO currently generates > 500 annual operations of Approach Category C and D aircraft and > 500 annual operations of ADG II operations).

The draft aviation activity forecasts were submitted to FAA for formal review following the PAC review and comment period for Working Paper No. 1. Coordination with FAA will be ongoing to address any issues identified during its forecast review, including any issues related to your comments.

The evaluation of runway length requirements is a separate evaluation that correlates the design aircraft

and the appropriate FAA aircraft category (e.g., small airplanes less than 12,500 pounds, large airplanes 12,500-60,00 pounds, etc.). This evaluation will be presented in Chapter 4, Facility Requirements Analysis.

The following comments briefly discuss the method for determining the critical design aircraft for runway length. Next, the comments discuss the flaws and errors of the 2019 Study. Finally the comments explain the failure of the draft AMP to comply with the requirements for determining the design aircraft for ARC and the critical design aircraft for runway length.

Method of Selecting the Critical Design Aircraft for Runway Length

Century West Engineering Response:

The evaluation of runway length requirements based on the appropriate runway length curves (% of fleet, % of useful load) will be presented in Chapter 4, Facility Requirements Analysis, based on the FAA-approved aviation activity forecasts. As with the aviation activity forecasts, the facility requirements evaluations are conducted independently and will not rely on prior plan assessments.

The RDC contains three components, the Aircraft Approach Category (AAC), which refers to aircraft approach speed listed in groups A to E; the Airplane Design Group (ADG), which groups aircraft by tail height and wingspan in groups I to VI; and aircraft approach visibility minimums or Runway Visual Range (RVR) listed in feet. AC 150/5300-13A at 105.c (Airport Design). The ARC contains the first two components of the RDC, the AAC and ADG. *Id.* at 102.i. Together, the RDC, ARC, and a third designation, the Taxiway Design Group (TDG), determine separation standards for taxiways and runways. *Id.* at 105.c., 105.d. None of these design categories are used to design runway length.

The Advisory Circular for Airport Design refers the reader to a different Advisory Circular to determine runway length, AC 150/5325-4 (Runway Length). AC 150/5300-13A at 302.a, 304.a. The Airport Design Advisory Circular explains that "[t]akeoff distances are often longer than landing distances." *Id.* at 302.a. The ARC and RDC are design standards related to landing requirements of the design aircraft.

For aircraft weighing between 12,500 pounds and 60,000 pounds, the Runway Length Advisory Circular relies on maximum certified takeoff weight (MTOW) to determine runway length. "MTOW is used because of the significant role played by airplane operating weights in determining runway lengths." AC 150/5325-4B at 102.b.3. The design and funding standards for runway length require the designer to identify the "critical design airplanes" that have at least 500 or more annual itinerant operations at the airport. *Id.* at 102.a.2, 102.a.8. Note that landings and takeoffs are considered separate operations. *Id.* at 102.a.8. The critical design airplane or airplanes are a list of airplanes that result in the longest recommended runway length. *Id.* at
102.a.2. The circular explains that "listed airplanes will be evaluated either individually or as a

single family grouping to obtain a recommended runway length." *Id.* For airplanes that weigh between 12,000 and 60,000 pounds, "the recommended runway length is determined according to a *family grouping of airplanes* having similar performance characteristics and operating weights." *Id.* at 102.b.2. The only exception is for regional jets that weigh less than 60,000 pounds. Regional jets are subject to a different methodology that relies on the characteristics of the individual airplane. *Id.* at 102.b.2.

Flaws in the 2019 Constrained Operations Runway Justification Study

Century West Engineering Response (comments related to the 2019 Constrained Operations Study):

The assessments of current and forecast aviation activity presented in Chapter 3 (Working Paper No. 1) were developed independently for this master plan. These data are not influenced by previous forecasts or FAA forecast approvals.

The draft aviation activity forecasts were submitted to FAA for formal review following the PAC review and comment period for Working Paper No. 1. Coordination with FAA will be ongoing to address any issues identified during its forecast review, including your comments regarding the methodology used to define the design aircraft and the interpretation of the "family grouping of aircraft."

The evaluation of runway length requirements, including FAA-required aircraft specific inputs will be presented in Chapter 4, Facility Requirements Analysis, based on the FAA-approved aviation activity forecasts. As with the aviation activity forecasts, the facility requirements evaluations are conducted independently and will not rely on prior plan assessments.

In this case, the 2019 Study fails to use a "family grouping of airplanes" that have "similar performance characteristics and operating weights" to identify the critical design airplanes for runway length that meet the "substantial use" or "regular use" threshold of 500 annual itinerant operations. Instead of grouping airplanes by their performance characteristics and operating weights, the 2019 Study groups airplanes by whether or not their MTOW exceeds the current runway length of 5,003 feet. Using this methodology, the 2019 Study groups dissimilar airplanes that do *not* share similar performance characteristics and operating weights. It appears that only by grouping dissimilar airplanes can the 2019 Study achieve a 500 annual itinerant operations threshold that justifies a longer runway length. The 2019 Study fails to use the methodology required by the FAA's Runway Length Advisory Circular. AC 150/5325-4B.

For example, the 2019 Study groups planes with vastly different operating weights. The Study includes the Astra 1125 (ASTR) which has a 24,650 MTOW in the same list as the Falcon 900 (F900) which has a 45,503 MTOW. *See* 2019 Study at 1-16. These aircraft do not share similar "operating weights." Moreover, the 2019 Study also groups planes with dissimilar "performance characteristics." The Study lists the Falcon 900 (FA90) which has a minimum takeoff distance at MTOW of 5,215 feet with a Challenger 600 (CL60) which has a minimum

takeoff distance at MTOW of 6,544 feet. *Id.* Note that the table listing MTOW and takeoff distances at MTOW contains takeoff distances for a number of planes that do not match the distances published by the manufacturer. The table lists the takeoff distance for the Falcon 900 at MTOW as 5,723 feet. Aircraft that require more than 500 feet (or 1,000 feet in this case) of runway distance at MTOW do not share "similar performance characteristics." The 2019 Study's analysis groups itinerant operations of planes that require vastly different takeoff distances at MTOW. For that reason, the 2019 Study fails to comply with the methodology required in Advisory Circular 150/5325-4B.

The 2019 Study also fails to adequately identify the "existing" group of critical design airplanes. This methodological shortcoming applies to the critical design aircraft for runway length as well as the critical design aircraft for other design categories such as AAC and ADG. The Study averages the itinerant operations for each type of airplane over a span of multiple years. However, to determine the "existing" critical design aircraft for a particular design category, the guidelines require "an operations count by aircraft make and model… for the most recent 12-month period of activity that is available." AC 15/5000-17 (Critical Aircraft and Regular Use) at 2.1.1. The 2019 Study only presents data up to 2018, and it averages the operations counts over multiple years. For that reason, the Oregon Department of Aviation cannot rely on the 2019 Study to determine the *existing* critical design aircraft for any design criteria for a 2022 airport master plan.

Finally, the analysis conducted in the 2019 Study fails to correctly determine the "percentage of fleet and useful load factor" used for runway length determinations. AC 150/5325-4B at 303. The design guidelines require the selection of "the critical design airplanes under evaluation with their respective useful loads." *Id.* at 301. "Once obtained," the guidelines explain, the airport must "apply either figure 3-1 or figure 3-2 to obtain a single runway length for the entire group of airplanes under evaluation." *Id.* "To determine which of the two figures apply, first use tables 3-1 and 3-2 to determine which one of the two 'percentage of fleet' categories represents the critical design airplanes under evaluation." *Id.* at 302.

The 2019 Study makes a number of methodological errors in its selection and application of figures 3-1 and 3-2. The 2019 Study appears to select a different group of critical design airplanes as a way of arriving at a predetermined outcome. For example, the table on page 1-16 appears to show one grouping of 28 airplanes with an average of 1,954 annual itinerant operations. The table on page 3-2 contains a larger group of more than 28 airplanes with an average of 2,491 annual itinerant operations. The table on page 3-2 of the Study does not list the takeoff distance at MTOW or other performance characteristics for the listed airplanes.

Assuming the 2019 Study correctly selected a family grouping of airplanes, the Study uses the wrong table and load curves. The Study fails to demonstrate that its family grouping of airplanes with 500 itinerant operations actually includes the type of airplanes listed in table 3-2. It is not clear that the Study correctly selects the 25 percent of fleet curve based on Table 3-2 as

opposed to the 75 percent of fleet curve based on Table 3-1. *See* AC 150/5325-4B at 303.a.2. (requiring use of "figure 3-1 when the airplanes *under evaluation* are not listed in table 3-2.")

Given the airplanes listed in the Study, the two tables in the Advisory Circular appear to have overlapping airplane types. For example, both tables 3-1 and 3-2 list the Falcon 900, the Learjet 45, and the Cessna 650. Based on the information provided in the Study, it is not clear under which table the itinerant operations for the aircraft listed in the Study should be grouped. For example, the Study's listing of itinerant operations for a Falcon 900 does not distinguish between the Falcon 900 and 900B listed in Table 3-1 and the Falcon 900C and 900EX listed in table 3-2. Removing the overlapping aircraft types from the 25 percent calculations reduces that category below 500 itinerant operations.

Ultimately, the 2019 Study fails to justify its selection of the 90 percent useful load curve over the 60 percent useful load curve. Selection between the 60 percent and 90 percent useful load curves depends on "the haul lengths and service needs of the critical design airplanes." AC 150/5325-4B at 302. The "useful load factor" "is considered to be the difference between the maximum allowable structural gross weight and the operating empty weight," and in practical terms the useful load "consists of passengers, cargo, and usable fuel." *Id.* at 303.b.1. In this case, the 2019 Study fails to describe or evaluate the actual haul lengths and service needs of the "family grouping of airplanes" selected for runway length. The Study fails to demonstrate that the airport receives 500 itinerant operations that meet the 90 percent useful load threshold for the critical design aircraft that would determine runway length.

The Study admits that TFMSC data only "identifies 197 verified annual operations to/from airports beyond 1,000 nm." The Study does not, however, provide the aircraft types responsible for those operations. The Study also fails to demonstrate that 1,000 nm represents a 90 percent useful load threshold for the critical design aircraft, many of which are capable of ranges significantly longer than 1,000 nm. For instance, the study fails to identify how many of those 197 annual operations met the 90 percent threshold of the aircraft's useful load.

The 2019 Study attempts to add itinerant operations to the existing 197 annual operations by determining the number of operations that it considers to be constrained by existing runway length. 2019 Study 3-4. The Advisory Circular does not define or otherwise rely on "constrained operations" to determine the group of existing critical design aircraft for runway length. Even if the 2019 Study's methodology were allowed, the Study fails to include the actual survey data used to determine the number of constrained operations that it concludes would have traveled longer than 1,000 nm from the airport if the runway were longer. By failing to include the actual survey information and flight plans, the Study fails to demonstrate that the extent to which the constrained operations met or would have met the 90 percent useful load threshold. Notably, the number of constrained operations listed for some of the aircraft exceed the total operations for that aircraft type as shown by the TFMSC data. For those reasons, the 2019 Study fails to determine "the haul lengths and service needs" of the existing and forecast critical design aircraft

for runway length. The Study fails to adequately justify its selection of the 90 percent useful load threshold over the 60 percent useful load threshold in figure.

Flaws in the Draft Airport Master Plan Chapter 3

The draft airport master plan (draft AMP) includes many of the errors contained in the 2019 Study. For clarification, the AMP cannot rely on the 2019 Study to determine the existing critical design aircraft for the various airport design categories (e.g. AAC, ADG, runway length). As explained above, the airport master plan must make that determination through "an operations count by aircraft make and model for the most recent 12-month period of activity that is available." AC 15/5000-17 at 2.1.1. The 2019 Study only includes information through 2018. For that reason, the draft airport master plan cannot rely on the findings "in the data review contained in the 2019 Constrained Operations Runway Justification Study" for either the existing or forecast design aircraft for any airport design category. AMP 3-13. Instead, the AMP must make those determinations based "on the review of current… aircraft operations data." *Id.*, Table 3-8.

Century West Engineering Response:

The assessments of current and forecast aviation activity presented in Chapter 3 (Working Paper No. 1) were developed independently for this master plan. These data are not influenced by previous forecasts or FAA forecast approvals.

ARC Design Aircraft

The most recent data shown in Table 3-8 show fewer than 500 itinerant operations for AAC category C airplanes in 2021. The table also only shows only 96 total operations among three category D airplanes, some of which have low numbers of operations within the most recent 12-month period of activity. AMP 3-14. The draft AMP uses the AAC category D airplanes as the basis for its AAC category C-II critical aircraft determination. Given the low number of operations for the Lear 35 (D-1) and the Gulfstream V/G500 (D-III) it is not clear that operations from these two airplanes are "indicative of sustained operations." AC 15/5000-17 at B.8.3. The same can be said of the Gulfstream IV/G400 which shows a large jump in operations between 2020 and 2021, and it is not clear that those numbers will continue into the future. The AMP and the 2019 Study also recognize that TFMSC activity are based on flight plans, which do not always correspond to actual flight activity. 2019 Study at 1-15 ("not every flight plan results in an operation"). Under these circumstances, the guidance provided by the Advisory Circulars do not justify selecting C-II over B-II as the existing critical aircraft for runway and taxiway separation determined by ARC or RDC. AC 15/5000-17 at B.8.3.

Century West Engineering Response:

The current and future design aircraft ARC C-II designation combines the most demanding AAC and ADG aircraft categories, with each category independently generating at least 500 annual operations.

UAO currently generates > 500 annual operations of Approach Category C and above and > 500 annual operations of ADG II and above aircraft. FAA will review the design aircraft assumptions outlined in the draft aviation activity forecasts for consistency with FAA forecasting guidance.

The draft aviation activity forecasts were submitted to FAA for formal review following the PAC review and comment period for Working Paper No. 1. Coordination with FAA will be ongoing to address any issues identified during its forecast review, including your comments regarding the methodology used to define the design aircraft.

The evaluation of runway requirements, taxiway separations, etc., will be presented in Chapter 4, Facility Requirements Analysis. As with the aviation activity forecasts, the facility requirements evaluations are conducted independently and will not rely on prior plan assessments.

Critical Design Airplanes for Runway Length

The draft AMP fails to justify or even explain its use of "the composite of Approach Category C and D jet aircraft" as the critical design airplanes for runway length. Draft AMP at 3-24. First, runway length is determined in part by MTOW, not AAC. AC 150/5325-4B at 102.b.3 (explaining use of MTOW). Next, three of the four AAC category D aircraft shown in Table 3-8 are over 60,000 pounds and cannot be used to determine runway length using the methods for aircraft between 12,000 and 60,000 pounds in Chapter 3 of Advisory Circular 150/5325-4B. The decision in the draft AMP to select the critical design aircraft for runway length based on a composite of AAC category C and D aircraft does not comply with the methodology explained in Advisory Circular 150/5325-4B.

Second, the draft AMP does not contain any analysis of operations count by aircraft make and model for the purpose of determining the existing (or forecast) critical aircraft for runway length based "a family grouping of airplanes" that have "similar performance characteristics and operating weights." AC 150/5325-4B at 102.b.2. The AAC category C and D aircraft listed in the itinerant operations tables (Table 3-8) do not represent a family grouping of airplanes with similar performance characteristics and operating weights. Those categories include aircraft with widely varying "operating weights" as well as widely ranging "performance characteristics" in terms of runway length. The draft AMP fails to identify the family grouping of airplanes with 500 annual itinerant operations required to determine the critical design aircraft for runway length.

Third, the draft AMP does not provide any information on "haul lengths and service needs of the critical design airplanes." AC 150/5325-4B at 302. For that reason, the draft AMP does not present the information needed to determine whether to use a 60 percent and 90 percent useful load factor to determine runway length. Simply put, the draft AMP fails to provide any analysis or explanation of its selection, nor does it follow the methodology required by Advisory Circular 150/5325-4B for determining the critical design aircraft used for existing and forecast runway length determinations.

Finally, the AMP cannot rely on the outdated information included in the 2019 study. Draft AMP 2-18 (explaining conclusions of the 2019 Study). Not only does the 2019 Study not provide information required to determine the existing critical design aircraft for runway length, it also fails to provide the basis for a forecast for a 2022 airport master plan. Circumstances have changed since 2018. As an example, the Study identified the Astra 1125 and Cessna 750 Citation as potential "design aircraft" for the master planning process. However, more recent operations data shows that operations for both of those aircraft had declined significantly since 2016. Draft AMP 3-14, Table 3-8. The draft AMP must provide updated analysis and information.

Century West Engineering Response:

The draft aviation activity forecasts were submitted to FAA for formal review following the PAC review and comment period for Working Paper No. 1. Coordination with FAA will be ongoing to address any issues identified during its forecast review, including your comments regarding the methodology used to define the design aircraft.

The evaluation of runway length requirements, haul lengths, appropriate runway length curves (% of fleet, % of useful load), and any identified operational constraints will be presented in Chapter 4, Facility Requirements Analysis, based on the FAA-approved aviation activity forecasts. As with the aviation activity forecasts, the facility requirements evaluations are conducted independently and will not rely on prior plan assessments.

Conclusion

Both the 2019 Study and the draft AMP are flawed. However, the draft AMP fails to include *any* relevant information or analysis for the purpose of selecting a critical design aircraft for runway length. The draft AMP simply does not provide the information required to determine the existing critical design aircraft for runway length, much less the information required for a forecast for runway length. The draft AMP's selection of a design aircraft for ARC is also flawed. For those reasons, 1000 Friends requests that the Oregon Aviation Department update the draft AMP to provide the required analysis and requests that the FAA decline to approve the draft AMPs selection of the design aircraft for ARC and runway length.

Century West Engineering Response:

See previous response.

Sincerely,

Andrew Mulkey, Staff Attorney
1000 Friends of Oregon
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1000 Friends of Oregon is a non-profit organization founded by Governor Tom McCall shortly after the Legislature passed Senate Bill 100, which created the land use planning rules that shape Oregon's communities. Since its founding in 1975, 1000 Friends has served Oregon by defending Oregon's land use system—a system of rules that creates livable communities, protects family farms and forestlands, and conserves the natural resources and scenic areas that make Oregon such an extraordinary place to live. 1000 Friends accomplishes this mission by monitoring local and statewide land use issues, enforcing state land use laws, and working with state agencies and the Legislature to uphold the integrity of the land use system.

April 5, 2022

Brandy Steffen, JLA Public Involvement,

First, it should be noted that the Aurora State Airport runway is 5,003 feet and has a strength rating of 45,000 pounds. As we now know from a Public Records Request submitted to the Oregon Dept. of Aviation, there is over a decade-long history of granting overweight waivers to large jets.

This not only includes what most of the public think of as corporate jets, such as Gulfstream or Citation or Falcon jet aircraft, but also the much heavier Bombardier Global Express. The larger Gulfstreams have manufacturer specified minimum runway lengths at maximum takeoff weight that exceed 6,000 feet and have a maximum takeoff weight of 70,000 pounds. However, the most eye-opening aircraft receiving regular overweight waivers is the Global Express that has a maximum takeoff weight of 92,500 pounds, a minimum take off distance of 6,170 feet and weighs 50,200 pounds when empty.

These facts are important because much of Chapter 3, Aviation Activity Forecasts is based on the ***2019 Aurora State Airport Constrained Operations Runway Justification Study*** which determined that aircraft operating at Aurora experienced 645 constrained operations in 2018. It should be noted that this number was based on pilot surveys which were not validated against flight plans, and did not take into consideration that the practice of allowing more and more oversized aircraft to operate at Aurora was the major factor driving the number of constrained operations. Further, that number of 645 was a 33% increase over that reported in the unapproved 2012 master plan, in spite of there being a 24% reduction in Total Operations since 2010. That increase can only be attributed to allowing more and more oversize jets to operate at Aurora which drives the increase in constrained operations.

That though is not the most troubling fact about the Constrained Operations study. What is most troubling are facts illustrating a faulty methodology and inaccuracy. For instance, the Minimum Takeoff Distances listed for the four jets with the most constrained operations are higher than the published Minimum Takeoff Distances from the manufacturers. For instance, the Falcon 50 which had the single largest number of constrained operations in 2018 at 160, is shown on Page 16 of Chapter 1 to have a Minimum Takeoff Distance of 5,413 feet when, in fact, the published manufacturer's spec is 4,935 feet.

On top of that, in the data listing annual operations and constrained operations, the Falcon 50 is shown to have had 226 operations at Aurora in 2018, of which 160 were constrained. That is almost 71% constrained operations for a jet with manufacturer's minimum takeoff distance shorter than the runway at Aurora.

To make matters worse, though, and to question the accuracy of the data presented in the entire study, the Falcon 900 was listed as having 68 operations at Aurora in 2018, of which 75 were constrained. That is to say, they had 110% of their operations constrained, which seems to be mathematically impossible.

The number of Falcon 900 constrained ops of 75 (from the survey) is found on page 3-18. The actual operations of 68 for the Falcon 900 is found in TFMSC IFR Data table on page 1-16 of the Constrained Operations Study.

Charlotte Lehan, Wilsonville City Councilor
503-313-8040

Century West Engineering Response:

The assessments of current and forecast aviation activity presented in Chapter 3 (Working Paper No. 1) were developed independently for this master plan. These data are not influenced by previous forecasts or FAA forecast approvals. References to prior planning studies are for information only and are intended to provide historical context. Historical FAA activity data for the Airport cited in previous studies may be repeated, as appropriate for context.

The draft aviation activity forecasts were submitted to FAA for formal review following the PAC review and comment period for Working Paper No. 1. Coordination with FAA will be ongoing to address any issues identified during its forecast review.

The evaluation of runway length requirements and any identified operational constraints will be presented in Chapter 4, Facility Requirements Analysis, based on the FAA-approved aviation activity forecasts. As with the aviation activity forecasts, the facility requirements evaluations are conducted independently and will not rely on prior assessments.

FLAWED METHODOLOGIES AND DATA ERRORS IN THE DRAFT MASTER PLAN CHAPTERS AND THE UNDERLYING 2019 AURORA STATE AIRPORT CONSTRAINED OPERATIONS RUNWAY JUSTIFICATION STUDY

Prepared by Friends of French Prairie, April 5, 2022

Draft chapters 1, 2 and 3 were presented to the Public Advisory Committee for the current Aurora Airport Master Plan process on March 1, 2022. It included data on Based Aircraft and Total Operations as well as preliminary data about constrained operations. Regular references are made to the 2012 Aurora Airport Master Plan and the 2019 Aurora Airport Constrained Study.

Century West Engineering Response:

The references to prior planning studies are for information only and are intended to provide historical context. Historical FAA activity data for the Airport cited in previous studies may be repeated, as appropriate for context.

***

The 2012 Aurora Airport Master Plan, which was never approved or adopted by the Oregon Aviation Board and has been the basis of a decade long legal dispute, included data about Based Aircraft, Total Operations and Constrained Operations that became the basis for a call to expand the Aurora State Airport—a $37 million expansion requiring 55 acres of EFU land Per the Airport Layout Plan in the unapproved 2012 Aurora Airport Master Plan.

Among the data assessed in a master plan are the inventory of aircraft based at an airport and the total operations taking place, and from these, growth is forecasted or the coming decades. Comparing prior master plan data and forecasts to current data and forecasts is important to assess overall need and is not being done in the current master planning process. This was not done in 2021-2041 Aviation Activity Forecasts (Draft Chp. 2) of the current master plan process.

Century West Engineering Response:

The assessments of current and forecast aviation activity presented in Chapter 3 (Working Paper No. 1) were developed independently for this master plan. These data are not influenced by previous forecasts or FAA forecast approvals.

As noted in Chapter 3, several factors are identified that make direct comparisons of current and previous analyses unreliable and would render any resulting conclusions unsound. Improved data accuracy has been achieved through use of six years of actual ATCT aircraft operations counts, 20 years of instrument flight plan (TFMSC) data, and a detailed verification of based aircraft at Aurora State Airport by ODAV airport management. In addition, based on FAA guidance, based aircraft and operations associated with the two privately owned adjacent helicopter facilities are no longer included in Aurora State Airport data, since the facilities operate independently.

The cited references (below) to previous forecasts are not relevant to the current airport master plan, although they are part of the historical record.

BASED AIRCRAFT

The Based Aircraft inventories and forecasts for the 2012 and present Master Plan processes are:

2012 Master Plan

Table 3J. Based Aircraft and Fleet Mix Forecast

Year	Jet	Turboprop (Multi-engine)	Multi-engine Piston	Single Engine	Helicopter	Other	Total
2010	23	16	24	261	25	5	354
2015	27	19	24	276	28	5	379
2020	33	20	25	288	34	5	405
2030	47	26	27	316	43	5	464

Table 3J from Chapter Two: Inventory, 2012 Aurora State Airport Master Plan, Pg. 3-21

2022 Aurora Airport Master Plan – Draft Chapters for PAC

TABLE 3-14: FORECAST BASED AIRCRAFT FLEET MIX

	CAGR	2021	2026	2031	2036	2041
Single Engine*	0.9%	216	229	240	250	259
Multi Engine Piston	0.0%	6	6	6	6	6
Turbo Prop	1.1%	13	14	15	15	16
Jet	2.3%	36	40	45	50	56
Helicopter	1.4%	10	11	11	12	13
Total Based Aircraft	1.1%	281	300	317	333	350

Source: Century West Engineering
*Includes Experimental/LSA

Table 3-14: Forecast Based Aircraft Fleet Mix, Draft Chapter 3 of current master plan process

Based Aircraft growth was forecast in the unapproved 2012 Master Plan to increase from 354 to 464 in 2030. The Draft Chapter of the current master plan process is forecasting Based Aircraft in 2031 to only be 317. That is a **lowering of forecast for that year by 31.6 percent when compared to 2012.**

What has occurred in the last ten years though, is an increase in the corporate jet fleet which has increased from 23 to 36 (at the expense of general aviation aircraft) and is forecast to further increase to 45 by 2031.

Century West Engineering Response:

Improved accuracy of based aircraft counts (and the 2021-2041 forecasts) has been achieved through a detailed verification of based aircraft at Aurora State Airport by ODAV airport management, including elimination of helicopters based at the two privately owned heliports, that were previously included in the based aircraft count for Aurora State Airport.

TOTAL OPERATIONS

Correspondingly both master plans have Total Operations and forecast increases. The 2010 Total Operations number was an estimate based on adjusting the 2009 number for year-on-year growth.

Aurora Airport 2012 Master Plan

Table 3L. Aircraft Operations Forecast

Year	Itinerant Air Taxi	Itinerant GA	Itinerant Military	Total Itinerant	Local GA	Total Operations
2009 Historical	9,788	42,592	250	52,630	36,865	89,495
2010 Estimated	10,000	48,395	250	58,645	32,264	90,909
2015	10,815	52,354	250	63,419	34,902	98,321
~~2020~~	11,697	56,635	250	68,582	37,756	~~106,338~~
2030	13,682	66,272	250	80,205	44,181	124,386

Source: WHPacific, Inc., except Terminal Area Forecast for 2009.

Table 3J from Chapter Two: Inventory, 2012 Aurora State Airport Master Plan, Pg. 3-25

2022 Aurora Airport Master Plan – Draft Chapters for PAC

TABLE 3-15: AIRCRAFT OPERATIONS FORECAST MODELS

	CAGR	2021	2026	2031	2036	2041
Historical Tower Counts Trend	3.6%	76,028	95,039	114,646	134,254	153,862
TFMSC Historical Trend (20-Year) - Recommended Forecast	**2.3%**	**76,028**	**85,201**	**95,480**	**107,000**	**119,909**
Marion County Population Correlation	2.9%	76,028	96,244	112,162	124,981	135,506
National Aerospace Forecast Operations (w/ ATCT)	0.8%	76,028	78,939	81,966	85,114	88,388
Federal Contract Tower (Oregon) TAF	0.6%	76,028	81,924	82,972	84,046	85,151

Source: Century West Engineering developed using FAA TFMSC Data

Table 3-15: Aircraft Operations Forecast Models, Draft Chapter 3 of current master plan process

Total Operations was forecasted in the unapproved 2012 Master Plan to increase from 90,909 to 124,386 by 2030. The Draft Chapter of the current master plan process is forecasting Total Operations in 2031 to only be 94,480. That is a **lowering of the operations forecast for that year by 24 percent when compared to 2012.**

Dramatic reductions in these two forecast numbers call into question the entire premise of need to lengthen the runway and expand the Aurora Airport.

Century West Engineering Response:

See previous response related to comparisons between 2021-2041 draft aviation activity forecasts and previous forecasts. The purpose of the aviation activity forecasts is to provide a reasonable indication of future airport activity, including the definition of the current and future design aircraft. The forecasts are subject to detailed FAA review prior to approval. The approved forecasts will support subsequent facility requirements assessments, and the evaluation of airport development alternatives. A wide range of factors are considered when evaluating airport improvements. The technical analyses of activity and corresponding design standards provide the foundation required to conduct the evaluations but do not presume a particular outcome.

However, in order to support the need for an extended runway and expanded airport, the focus is moved from the failure to come close to the previously forecasted numbers and instead has been placed on forecasted year-on-year increases in based aircraft and total operations from 2021 to 2026, etc.

Century West Engineering Response:

Airport master plan aviation forecasts are intended to provide a reasonable indication of long-term activity to guide facility planning. Actual activity levels will vary based on a wide range of factors, many of which are beyond the control of an airport. Airport master plans that contain overly optimistic forecasts have limited relevance and normally require replacement earlier in their 20-year planning horizon. FAA funding for airfield construction projects typically requires additional verification of activity (compared to forecast).

CONSTRAINED OPERATIONS

Century West Engineering Response (to Constrained Operations section of letter):

See previous response related to comparisons between 2021-2041 draft aviation activity forecasts and previous forecasts.

The evaluation of runway length requirements and any identified operational constraints will be presented in Chapter 4, Facility Requirements Analysis, based on the FAA-approved aviation activity forecasts. As with the aviation activity forecasts, the facility requirements evaluations are conducted independently and will not rely on prior assessments.

The draft aviation activity forecasts were submitted to FAA for formal review following the PAC review and comment period for Working Paper No. 1. Coordination with FAA will be ongoing to address any issues identified during its forecast review.

According to the FAA, a constraint is "anything that interferes with the normal flow of air traffic. Common constraints are weather, excess volume, and runway limitations," and a constrained operation is a takeoff or landing in which the aircraft is forced to reduce freight, passenger or fuel load because of these conditions.

As part of the 2012 Aurora Airport master planning process:

> *…aircraft operators were surveyed to quantify operations that are constrained by the current runway length at Aurora State Airport (Pg. 4-9). The runway length survey (Appendix I) identified the number of aircraft operations constrained at the Airport annually total 473, using only existing aircraft with N numbers and operators' names identified,* (Pg. 4-13).

A documented illustration of how growth in constrained operations is built into the system is found in the 2012 Master Plan on page 4-13 where it states:

> *One operator based at the Airport, RJ2/DB Aviation, plans to replace its 650 Citation III/VI with a 750 Citation X, which would be constrained by runway length more often (an estimated 40 times per year compared to 30 for the existing aircraft).*

That is to say, this operator knowing full well that a 750 Citation X is oversized for the current airport specifications is going to upgrade to that aircraft and virtually all, if not all, of its operations will qualify as "constrained." It is doing so with the full knowledge and support of Oregon Dept. of Aviation!

Additionally, ODA has regularly granted weight waivers to larger and larger corporate jets, many of which exceed the weight rating of the runway, and require longer minimum runway lengths based on manufacturer's specifications. These approvals in turn result in constrained operations for virtually all flights by these oversized aircraft.

2019 Aurora Airport Constrained Operations Study

The Constrained Operations Study commissioned by the Dept. of Aviation in February 2018, and approved by the FAA in 2019, stated the following in the Scope of Work document which was titled "Aurora State Airport (UAO) Constrained Operations Runway Justification Study":

PROJECT INTENT

> *The Oregon Department of Aviation (ODA) has selected Century West Engineering (Consultant) to complete a focused planning effort to provide FAA requested justification for a constrained operations study to determine if a runway extension at the Aurora State Airport (UAO) that is currently identified on the ALP is justified.* ***This Constrained Operations Runway Justification Study scope identifies the planning efforts and supporting justification for the planned runway extension and appurtenant facilities.*** *The study will utilize the current 2012 Airport Master Plan (AMP) and updated Airport Layout Plan revised July 25, 2016 as the foundation documents upon which additional justification and modifications (as needed) are required to satisfy the FAA for funding eligibility and confirm project configuration, work elements, and agency approval requirements. The study will be self-funded by ODA, but will be coordinated with the FAA Seattle Airports District Office (ADO) to obtain concurrence on the scope, forecast approval, funding justification for relevant projects, and approval of the updated Airport Layout Plan, if required.*

It should be noted then, that the purpose of the study was to document constrained operations in order to justify the **planned** runway extension.

Thus, it comes as no surprise that the Final 2019 Constrained Operations Study, approved by the FAA begins in the Executive Summary by stating:

> *The purpose of this study is to review the current runway length requirements and activity at the Aurora State Airport compared to the assumptions made in the approved 2012 Airport Master Plan to consider if the eligibility threshold for a runway extension has been met. An analysis of aviation activity at the Airport has identified 349 based aircraft. 10.8% of the aircraft based at the Airport are jet aircraft. The Air Traffic Control Tower (ATCT) began*

collecting data in October 2015 and has identified 48,459 Airport operations in 2016 and 58,597 Airport operations in 2017. The confirmed TAF numbers are 44,292 and 54,999 respectively. FAA Traffic Flow Management Systems Counts (TFMSC) operations data presented by Aircraft Design Group identified at least 860 annual operations by C and D aircraft on average from 2009 to 2018. A constrained operations Airport user survey was distributed as part of this study. The survey identified 645 constrained annual operations from a variety of aircraft and aircraft operators. Additional analysis of the TFMSC data and the airport user surveys indicates there have been in excess of 500 annual operations by aircraft to/from destinations beyond 1,000 nm of Aurora State Airport which justifies the use of the 100% Fleet Group at 90% Useful Load curve identified in FAA Advisory Circular (AC) 150-5325-4B, Runway Length Requirements for Airport Design.

As demonstrated by Airport activity data and user surveys obtained as part of this study, a minimum runway length of 7,888' is justified based on the FAA substantial use threshold of 500 annual operations and the runway length methodologies defined by AC 150-5325-4B. However, given the future runway length of 6,002' identified in the 2012 Airport Master Plan and depicted in the current ALP, it is recommended that the runway only be extended by 1,000'.

[It should be noted that while this quotation references the "approved 2012 Master Plan, that master plan was never properly approved and adopted by the Oregon Aviation Board, as found by the Oregon Court of Appeals in 2021]

Constrained Operations - 2018 ODA Constrained Operations Study				
Cited Jets with Constrained Operations				
	Total	645		

The majority of constrained operations are being experienced by oversize aircraft that are either too heavy for the current runway strength rating (45,000 pounds) or carry manufacturer requirements for a longer runway. Yet more and more of these oversized aircraft are being lured into use of Aurora State Airport.

Further, almost half of the reported constrained operations (315 out of 645) come from four aircraft (Astra 1125, Bombardier Global Express, Dassault Falcon 50 and Dassault Falcon 900).

Comparing the 2012 survey with that conducted in 2018 shows a 33% increase in Constrained Operations, in spite of the fact that actual Total Operations are running an average of 24% below that forecast in 2012, and based aircraft are down by 31% compared to that forecast in 2012. This increase is driven by the change in fleet mix from general aviation to large corporate jets.

The Constrained Operations Study does not include any data indicating that the constrained operations claimed by pilots were validated with actual flight data. This is particularly questionable when these two elements are considered:

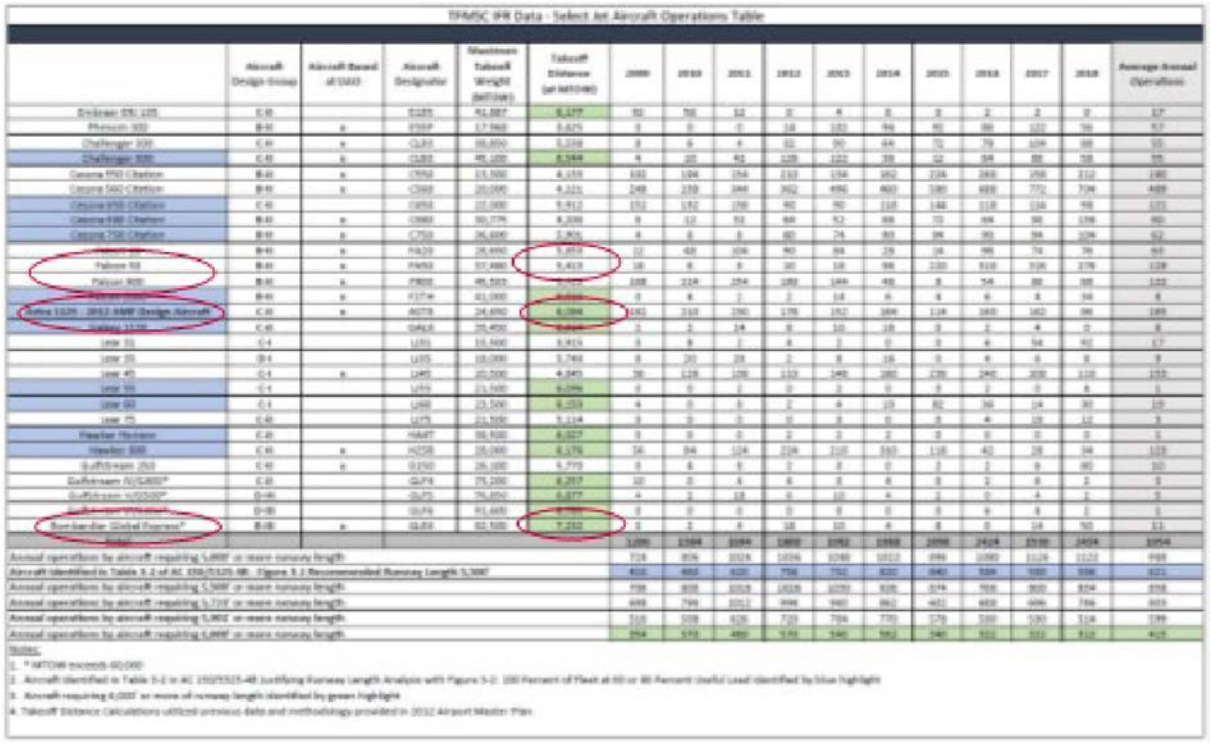
1. Seven of the 16 corporate jets reporting constrained operations reported a specific "typical stage length" on their survey, and that Stage Length is less than half of the Manufacturer Stated Maximum Range for the aircraft. For example:

	Reported CO's	Typical Stage Length Reported (nm)	Manufacturer Stated Range (nm)
Falcon 50	160	1,000-1,5000	3,200

2. In other words, what was done to assure that a 1,500 mile flight which only requires a 50% fuel load was not counted as a constrained operation? Fifty percent of the jets reporting Constrained Operations gave identical Reported Reasons for the experienced Constrained Operations, for example:

Reported reason for experienced Constrained Operations
Unable to depart with enough fuel to accomplish mission due to inadequate runway length

In the Final study, the following table of select jets shows those requiring 6,000 feet or more of runway highlighted in green. It also shows the four jets identified above that claimed to experience almost half of the constrained operations (circled in red).



The table (reproduced full size on last page) also shows the Minimum Runway Length required by those aircraft at Maximum Takeoff Weight (MTOW). It should be noted that for the four jets experiencing almost half of the constrained operations, the Minimum Runway Length shown in the table for this study is longer than the length found in published manufacturer specifications, as follows:

Aircraft	No. Const Ops	Aircraft Design Group	Manufacturer Stated Range (nm)	Minimum Takeoff Distance (at MTOW) In Const Ops Study	Minimum Takeoff Distance (at MTOW) in published Mfg or reseller literature	Empty or Operating Weight	Max Landing Weight	Maximum Takeoff Weight (MTOW)
Astra 1125	40	B-II	3,110	6,084	5,250	12,670	20,700	24,650
Bombardier Global Express	40	B-III	5,960	7,232	6,170	50,300	78,600	92,500
Falcon 50	160	B-II	3,260	5,413	4,935	22,250	35,715	37,480
Falcon 900	75	B-II	3,960	5,273	5,215	24,683	42,000	45,503

In addition, the table also shows annual and average annual operations. Again, if we look closely at the four aircraft identified above, and compare 2018 operations to the claimed constrained operations during the 2018 study period, we see the following:

	2018 Operations	2018 Reported Constrained Ops	% of Operations Constrained
Falcon 50	226	160	70.8%
Falcon 900	68	75	110.3%
Astra 1125	96	40	41.7%
Bombardier Global Express	50	40	80.0%

Credulity is stretched that a single aircraft (the one with the most annual constrained operations) which has a manufacturer's minimum takeoff distance shorter than the runway at Aurora should experience almost 71% of its operations as constrained. It is further stretched beyond belief for the Falcon 900 whose rate of constrained operations is 110% because it reported MORE constrained operations than actual operations at Aurora Airport during 2018!

These errors may be the result of a transposition during creation of the table, but given the weight the number of constrained operations comprise of the total, at a minimum it implies careless work, and maximally a manipulation of the data to give the appearance of regularity.

If Dept. of Aviation and its consultant Century West, to say nothing of the FAA, who approved the Constrained Operations Study are serious about the numbers of constrained operations

being claimed by pilots, the questionable survey results should have been validated against filed flight plans and flight logs, not just accepted at face value.

For example, on listed aircraft, the Bombardier Global Express has a Minimum Takeoff Distance of 6,179 feet and an empty weight of 50,300 pounds. Aurora Airport has a 5,004 foot runway with a strength rating of 45,000 pounds and aspirations of 6,000 feet and 60,000 pounds. Not only will a lengthened runway not meet Bombardier's minimum specifications for the aircraft, this aircraft has received a Permanent Waiver from ODA, and many takeoffs and landings count as constrained operations.

Conclusion

As stated above, based on surveys about constrained operations the Constrained Operations Study show a 33% increase in Constrained Operations since 2012, in spite of the fact that actual Total Operations are 24% below the number forecast in 2012, and based aircraft are down by 31% compared to the 2012 forecast.

In the Aviation Activity Forecasts section of the Constrained Operations Study, the following is stated:

> ***AVIATION ACTIVITY FORECASTS***
>
> *The primary purpose of the forecast update associated with the Aurora State Airport Constrained Operations Runway Justification Study is to evaluate the forecasts of aviation activity (2010-2030) contained in the 2012 Aurora State Airport Master Plan (AMP), which supported the planned runway extension depicted on the 2012 Airport Layout Plan (ALP). This forecast update focuses on the activity generated by the critical aircraft, or group of aircraft, required to support the runway length justification study, but also updates other elements of the 2012 AMP forecast, per FAA requirements for aviation activity forecast approval. This interim forecast update will rely on existing master plan data where appropriate, and supplement with more recent data, where available.*
>
> *The primary tasks supporting the runway justification study include verifying current year activity (2018 based aircraft and aircraft operations, including critical aircraft) and updating key forecasts for the next twenty years (2018-2038). Events occurring at UAO since the AMP was completed in 2012 will be reviewed to evaluate the accuracy of AMP forecasts and to support the updated forecast.*
>
> *The updated forecasts will support the runway length justification study by identifying the current and future levels of critical aircraft operations. The critical aircraft operations are used to establish the corresponding Airport Reference Code (ARC) and Runway Design Code (RDC) designations for Runway 17/35 that define the applicable FAA design standards and length requirements.*

How can such an assertion be made?

Because while the study says this about current Total Operations data from the Air Traffic Control Tower:

The 2012 AMP forecasts provided reasonable growth assumptions for both based aircraft and annual aircraft operations that reflected both broad regional economic conditions and airport-specific factors. An updated discussion of the underlying economic conditions and airport events is provided in the existing conditions section of this memo (see 2012 AMP for additional information).[1] The evaluation of critical aircraft activity contained in this forecast update confirms that the current and future C-II ARC and RDC defined for Runway 17/35 in the 2012 AMP remain valid.

However, the availability of new data sources, particularly air traffic control tower (ATCT) operations counts (adjusted to include aircraft activity when the tower is closed) indicates that recent UAO activity is currently about 25 percent below previously forecast levels. The ability to rely on actual traffic counts improves the accuracy of the overall forecasts, although it appears that the original long term growth rate assumptions were reasonable.

It then goes on to pass over the very fact that Total Operations forecasts in the 2012 Master Plan were dramatically overstated and the forecast error was very large, by pivoting to make the case that it doesn't matter because the MIX of aircraft has changed, and now the major aircraft at Aurora Airport are corporate jets:

However, the availability of new data sources, particularly air traffic control tower (ATCT) operations counts (adjusted to include aircraft activity when the tower is closed) indicates that recent UAO activity is currently about 25 percent below previously forecast levels. The ability to rely on actual traffic counts improves the accuracy of the overall forecasts, although it appears that the original long term growth rate assumptions were reasonable.

Although the recalibration (lowering) of overall air traffic volumes at UAO is significant, data confirms that this adjustment does not affect critical aircraft (business jet) determination at UAO. Table 9, provided later in this chapter, illustrates that the volume of high performance business jet activity at UAO increased by 40 percent between 2012 and 2018.[2] This most recent five-year period of business jet activity represents an average annual growth rate of 7 percent, which is slightly lower than the 9.7 percent annual growth experienced at UAO between 2009 and 2018. This trend provides a strong indication of future growth potential at UAO.

On the face of it, how can it be asserted in the same paragraph that forecast levels were off by 25% and then also state that "it appears that the original long-term growth rate assumptions were reasonable?"

What is obviously taking place is enticing larger corporate jets to base at or regularly operate into Aurora State Airport. Because the airport only has a 5,000 foot runway with a strength rating of 45,000 pounds, it is clearly not designed to accommodate large corporate jets, let alone commuter jet aircraft like the Bombardier Global Express.

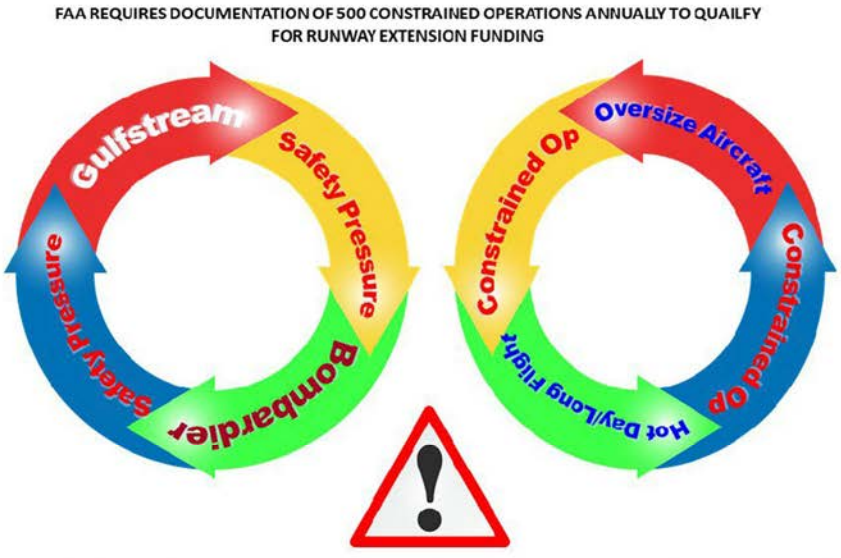
Yet, the airport owner and sponsor, Oregon Department of Aviation, has been aiding and abetting this undertaking by granting waivers for oversize aircraft (oversize in wingspan and in total weight). Because oversize aircraft are granted waivers and can operate at Aurora, many (if not all) of their operations now qualify as "constrained" by virtue of the aircraft being heavier

than the runway strength rating, or having to takeoff with lighter load/less fuel because of the runway length.

There appears to be very little objective criteria other than bad weather that are to be applied in the determination of whether a takeoff or landing is “constrained” beyond the personal opinion of the pilot. The subjective nature of assessing constrained operations themselves, is then further compounded by 1) an airport sponsor that has openly approved ever increasing operations by oversized aircraft at Aurora and 2) a data collection method used by the sponsor’s consultant that was based on **unvalidated pilot survey**s to arrive at the annual number of constrained operations.

The straightforward data errors concerning Minimum Take Off Distances are striking. That a single aircraft can be included in this study to have more constrained operations than actual operations illustrates calls the data itself into question, while the subjective nature of data collection via unvalidated surveys demonstrates flawed methodology. All of this is compounded by the fact that the Constrained Operations Study was conducted with no public involvement. In spite of eight years of legal dispute over the 2012 master plan, there was no public notice for the Scope of Work or the contract award, nor of the completion of the Draft study. We only received a copy via Public Records Request. There was, correspondingly, no public notice about FAA approval of the Draft study, not that the Final version was released. Yet it is now being used as a major element in the current master planning process.

This absence of public transparency is compounded by the practice of allowing more and more oversized aircraft operate at Aurora, not only causing safety problems, but directly driving constrained operations even as overall aviation activity has dropped in the last decade.



UNVIRTUOUS REINFORCEMENT CYCLE AT THE AURORA AIRPORT

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Notes:

1. ' MTOW exceeds 60,000

2. Alrcnft ldentrhed 1n Table l-2111 A.C lS0/5325-48 JUSbfv\nC Runway Lencth Analysts w,th ficure 3-2.100 Percent of flttt at60or90Percent Useful load ldent,lltd by blur, h I t

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4 Takeoff Distance calculnlons utilized prnlousdata and methodolocv proY!dtd in 20U ""1>0rt Master Plan

ASTRA 1125

IAI Astra 1125

Technical Specifications

Occupancy

Crew: 2

Passengers: 6

Operating Weights

Max T/O Weight: 23501 Lb

Max Landing Weight: 24650 Lb

Empty Weight: 12670 Lb

Fuel Capacity: 9365 lbs Lb

Payload Useful: 10700 Lb

Payload W/Full Fuel: 1335 Lb

Max Payload: 2900 Lb

Range

Max Range: 3110 nm

Service Ceiling: 45000 ft

Distances

Takeoff Distance: 5250 ft

Landing Distance: 2250 ft

Performance

Rate of Climb: 3500 fpm

Max Speed: 465 kts

Normal Cruise: 424 kts

Economy Cruise: 412 kts

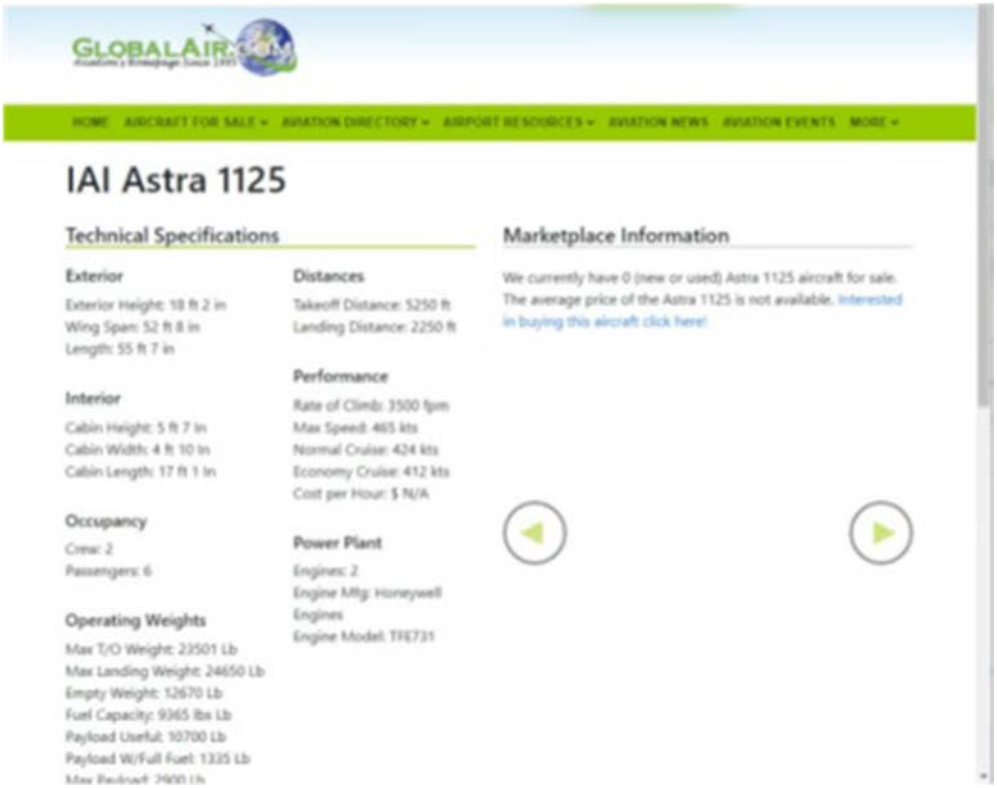
Cost per Hour: $ N/A

Power Plant

Engines: 2

Engine Mfg: Honeywell Engines

Engine Model: TFE731



BOMBARDIER GLOBAL EXPRESS

Global Express Specifications, Ca

globalair.com/aircraft-for-sale/Specifications?specid=845

Bookmarks | Login | MailChimp -... | Inbox (2) - benw.in... | IOMFATS | International Picku... | ILGA-Europe | ILGA... | National LGBTQ Tas...

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Bombardier Global Express

Technical Specifications

Exterior

Exterior Height: 25 ft 5 in
Wing Span: 94 ft 0 in
Length: 99 ft 4 in

Interior

Cabin Height: 6 ft 3 In
Cabin Width: 8 ft 2 In
Cabin Length: 48 ft 4 In
Cabin Volume: 2140 cu ft
Door Height: 6 ft 2 In
Door Width: 3 ft 0 In
Internal Baggage: 195 cu ft

Occupancy

Crew: 2
Passengers: 8-19

Operating Weights

Max T/O Weight: 98000 Lb
Max Landing Weight: 78600 Lb
Operating Weight: 51200 Lb
Fuel Capacity: 44642 lbs Lb

Range

Normal Range: 6055 nm
Max Range: 6226 nm
Service Ceiling: 51000 ft

Distances

Balanced Field Length: 6170 ft
Landing Distance: 2670 ft

Performance

Rate of Climb: 3300 fpm
Climb Rate One Engine Inop: 474 fpm
Max Speed: 511 kts
Normal Cruise: 488 kts
Economy Cruise: 471 kts

Power Plant

Engines: 2
Engine Mfg: Rolls Royce
Engine Model: BR 710-A2-20

Marketplace Information

We currently have 5 (new or used) Global Express aircraft for sale. The average price of the Global Express is $12,250,000.
Interested in buying this aircraft click here!

Bombardier Global Express

Description | Performance | Cabin

Description

The Global Express was the pioneer of ultra-long-range private jets. At the time of its release, no other private jet had a cabin nearly as large, nor could any jet make such long-range direct flights like New York to Tokyo or Paris to Singapore. The Global Express offers everything an airliner does – range, comfort, and speed –- without the hassle. The cabin of the Global Express is designed to offer maximum comfort and amenities for the duration of long, transoceanic flights. The cabin can be configured to hold between thirteen and nineteen passengers in a space that is 6.3 feet high, 8.2 feet wide, and 48.4 feet long. The cabin can be divided into three areas for increased privacy in conferences. Two fully-enclosed lavatories are located in the cabin, one of which can be equipped with a shower, if desired. Extensive cabin insulation cuts down on noise, and improved engines produce less audible vibration. There is a wide range of standard and optional cabin amenities, including a 17 channel SATCOM, fax machine, cabin entertainment system with VHS, DVD, and CD players, as well as individual video screens and a full-sized galley.

The engines themselves are BMW/Rolls-Royce BR710A2-20 turbofans, which produce 14,750 pounds of thrust each on takeoff. The Global Express can climb to 37,000 feet in nineteen minutes. Its maximum certified flight ceiling is 51,000 feet, but it generally cruises around 42,000 feet –well above most commercial and private jets. For long-distance flights, the Global Express can reach speeds of 488 knots, and reach 499 knots when cruising at high speed.

Fortunately, one of the strengths of the Global Express is its ability to fly at high speeds without sacrificing range. Its maximum range is 7,000 miles (6,100 nautical miles) at a speed of .85 Mach.

Despite a fairly high maximum takeoff weight of 95,000 pounds, the Global Express needs only 5,820 feet of runway to take off at sea level, and 7,880 feet to take off from a runway 5,000 feet above sea level.

The avionics and flight control systems were designed to be intuitive and easy to operate. Many systems require almost no input from the pilots. The Express' cabin pressurization system, for example, automatically adjusts cabin pressure throughout the flight. The pilot merely has to enter the altitudes of the runways at the initial and final destinations. The cabin is rated to 10 psi, meaning it can maintain a sea level cabin while at an altitude of 26,500 feet. Engine startup is very simple, as is the fuel balance system, which automatically adjusts the fuel levels in the two wet wing tanks. Besides being easy to fly, the Global Express is very reliable. Most of its critical systems have two or three backup systems in place.

The avionics system equipped in the Global Express is the Honeywell Primus 2000XP suite. It has six 7 x 8 inch screens. Some screens display flight and environment information, while others are blank (to minimize distractions), except when notifying the pilots of an emergency. The avionics system comes standard with a triple LASEREF IV inertial reference system, a GPS receiver, avionics computers, nav/comm radios, and can be configured to include almost any piece of avionics equipment desired.

DASSAULT FALCON 50

FROM WIKIPEDIA: https://en.m.wikipedia.org/wiki/Dassault_Falcon_50

Data from Flight International[15]

General characteristics

- **Crew:** 2
- **Capacity:** 8 to 9 passengers / 1,080 kg (2,381 lb) payload with full fuel
- **Length:** 18.52 m (60 ft 9 in)
- **Wingspan:** 18.86 m (61 ft 11 in)
- **Height:** 6.98 m (22 ft 11 in)
- **Wing area:** 46.83 m^2 (504.1 sq ft) [16]
- **Max takeoff weight:** 18,008 kg (39,701 lb)
- **Max Landing Weight:** 16,200 kg (35,715 lb)
- **Powerplant:** 3 × Honeywell TFE 731-40 turbofan engines, 16.46 kN (3,700 lbf) thrust each

Performance

- **Maximum speed:** 1,015 km/h (631 mph, 548 kn)
- **Maximum speed:** Mach 0.86
- **Cruise speed:** 903 km/h (561 mph, 488 kn) / M0.85 at 15,000 m (49,000 ft)
- **Range:** 5,695 km (3,539 mi, 3,075 nmi)
- **Service ceiling:** 14,936 m (49,003 ft)
- **Rate of climb:** 10.433 m/s (2,053.7 ft/min)
- **Take-off run:** 1,504 m (4,934 ft)
- **Landing run:** 685 m (2,247 ft)

DASSAULT FALCON 50 TECHNICAL SPECS

From GLOBAL AIR: https://www.globalair.com/aircraft-for-sale/Specifications?specid=209

Technical Specifications

Exterior

- Exterior Height: 22 ft 9 in
- Wing Span: 61 ft 8 in
- Length: 60 ft 8 in
- External Baggage: 90 cu ft

Interior

- Cabin Height: 5 ft 9 In
- Cabin Width: 6 ft 1 In
- Cabin Length: 22 ft 11 In
- Cabin Volume: 569 cu ft
- Internal Baggage: 25 cu ft

Occupancy

- Crew: 2
- Passengers: 9

Operating Weights

- Max T/O Weight: 38320 Lb
- Max Landing Weight: 35715 Lb
- Operating Weight: 22000 Lb
- Fuel Capacity: 15520 lbs Lb
- Payload W/Full Fuel: 1280 Lb
- Max Payload: 3570 Lb

Range

- Normal Range: 3057 nm
- Max Range: 3200 nm
- Service Ceiling: 31000 ft

Distances

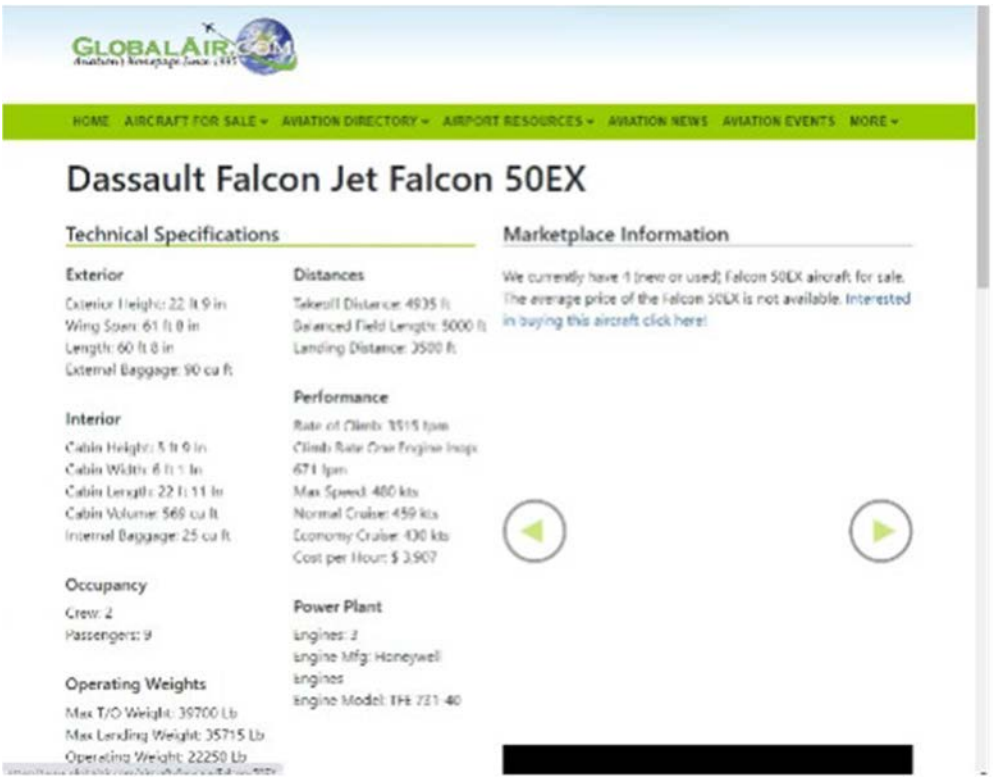
- Take Off Distance: 4.935 ft
- Landing Distance: 3500 ft

Performance

- Rate of Climb: 3430 fpm
- Climb Rate One Engine Inop: 601 fpm
- Max Speed: 480 kts
- Normal Cruise: 431 kts
- Economy Cruise: 410 kts
- Cost per Hour: $ 4,444.65

Power Plant

- Engines: 3
- Engine Mfg: Honeywell Engines
- Engine Model: TFE 731-3-1C



TECHNICAL SPECIFICATIONS FOR FALCON 50

FROM PLANEPHD: https://planephd.com/wizard/details/670/DASSAULT-FALCON-50-specifications-performance-operating-cost-valuation

1980 - 1996 DASSAULT FALCON 50 Multi engine turbofan aircraft. The FALCON 50 seats up to 8 passengers plus 2 pilot(s).

Performance specifications

Thrust: 3 x 3,700 N

Best Cruise Speed: 468 KIAS

Best Range (i): 3,500 NM

Fuel Burn: 229.0 GPH

Stall Speed: 77 KIAS

Rate of climb: 3,430 FPM

Rate of climb (1 engine out): 2,200 FPM

Ceiling: 49,000 FT

Ceiling (1 engine out): 31,000 FT

Takeoff distance: 4,700 FT

Landing distance: 2,150 FT

Takeoff distance over 50ft obstacle: 4,700 FT

Landing distance over 50ft obstacle: 2,800 FT

Weights

Gross Weight: 38,800 LBS

Empty Weight: 20,170 LBS

Maximum Payload: 3,570 LBS

Fuel capacity: 15,520 LBS

TECHNICAL SPECIICATIONS FALCON 50

FROM AIRCRAFT EXCHANGE: https://planephd.com/wizard/details/670/DASSAULT-FALCON-50-specifications-performance-operating-cost-valuation

Dassault Falcon 50 Range:

Normal Range: 3,057 nm

Maximum Range: 3,200 nm

Service Ceiling: 31,000 ft

Dassault Falcon 50 Performance

Rate of Climb: 3430 fpm

Maximum Speed: 480 kts

Normal Cruise: 431 kts

Economy Cruise: 410 kts

Dassault Falcon 50 Distances

Balanced Field Length: 5000 ft

Takeoff Field Length: 4,950 ft

Landing Distance: 3,500 ft

Dassault Falcon 50 Operating Weights

Max T/O Weight: 38,320 lb

Max Landing Weight: 35,715 lb

Operating Weight: 22,000 lb

Fuel Capacity: 15,520 lb

Payload with Full Fuel: 1,280 lb

Maximum Payload: 3,570 lb

Dassault Falcon Jet Falcon 900EX

Technical Specifications

Exterior

Exterior Height: 24 ft 10 in
Wing Span: 63 ft 5 in
Length: 66 ft 4 in

Interior

Cabin Height: 6 ft 2 In
Cabin Width: 7 ft 8 In
Cabin Length: 33 ft 2 In
Cabin Volume: 1218 cu ft
Internal Baggage: 127 cu ft

Occupancy

Crew: 2
Passengers: 12

Operating Weights

Max T/O Weight: 48300 Lb
Max Landing Weight: 44500 Lb
Operating Weight: 24700 Lb
Fuel Capacity: 21000 Lb
Payload W/Full Fuel: 2800 Lb
Max Payload: 6164 Lb

Distances

Takeoff Distance: 5215 ft
Balanced Field Length: 5215 ft
Landing Distance: 3750 ft

Performance

Rate of Climb: 3880 fpm
Climb Rate One Engine Inop: 755 fpm
Max Speed: 482 kts
Normal Cruise: 459 kts
Economy Cruise: 430 kts
Cost per Hour: $ 4,090.01
Avionics: Rockwell Collins system

Power Plant

Engines: 3
Engine Mfg: Honeywell Engines
Engine Model: TFE 731-60

Marketplace Information

We currently have 2 (new or used) Falcon 900EX aircraft for sale. The average price of the Falcon 900EX is not available. Interested in buying this aircraft click here!

Re: Comments in advance of PAC Work Session today

ben.williams@liturgica.com <ben.williams@liturgica.com>

Tue 4/5/2022 2:12 PM

To: PECK Heather <heather.peck@odav.oregon.gov>

Cc: LUCAS Sarah <Sarah.LUCAS@odav.oregon.gov>; Brandy Steffen <brandy.steffen@jla.us.com>; benjamin.j.mello@faa.gov <benjamin.j.mello@faa.gov>

Heather;

Thank you for your email. Since today's PAC Working Session concerns Forecasts, I would like to submit two questions that I think it would be important for you or someone from Century West to address at the outset, given the complexity of the subject.

They are:

1. Why does the master plan not use historical tower data (ATCT) for particular types of aircraft when determining existing design aircraft for taxiway and runway separation and runway length?

2. Why does the master plan not use tower data to determine its forecast for particular types of aircraft?

The confusion arises from the use of TFMSC data which is based on flight plans, and in rather tables presented that data goes back to 2009 when there was no tower and thus flight operations were mainly estimates as opposed to hard data from the FAA ATADS database from 2017 to present.

Sincerely

Ben Williams
Friends of French Prairie

> On Apr 5, 2022, at 12:10 PM, PECK Heather <heather.peck@odav.oregon.gov> wrote:
>
> Thank you again, for your comments and we will include them in the record, files and forward to the FAA.
> For clarification however, while you are correct that the State Aviation Board did not approve the 2012 Master plan, the FAA did approve the methodology, the data as related to the forecast, the forecast and the final ALP, as also signed and dated by the FAA.
>
> Kind Regards,
> Heather

HEATHER PECK
OREGON DEPARTMENT OF AVIATION
PLANNING & PROGRAMS MANAGER

EMAIL heather.peck@aviation.state.or.us
3040 25TH STREET SE, SALEM, OR 97302
WWW.OREGON.GOV/AVIATION

From: LUCAS Sarah <Sarah.LUCAS@odav.oregon.gov>
Sent: Tuesday, April 5, 2022 11:42 AM
To: ben.williams@liturgica.com <ben.williams@liturgica.com>; brandy.steffen@jla.us.com <brandy.steffen@jla.us.com>
Cc: benjamin.j.mello@faa.gov <benjamin.j.mello@faa.gov>; PECK Heather <heather.peck@odav.oregon.gov>
Subject: RE: Comments in advance of PAC Work Session today

Ben,

Thank you for your comments. We have received and will include in the Working Session Meeting Summary document, which will be posted to the website and included as an appendix in the Master Plan.

See you this afternoon.

Sarah Lucas, MPA
OREGON DEPARTMENT OF AVIATION
Planner

OFFICE 503-378-2211 **CELL** 971-304-5467
EMAIL sarah.lucas@odav.oregon.gov
3040 25TH STREET SE, SALEM, OR 97302
WWW.OREGON.GOV/AVIATION

From: ben.williams@liturgica.com <ben.williams@liturgica.com>
Sent: Tuesday, April 5, 2022 10:34 AM
To: LUCAS Sarah <Sarah.LUCAS@odav.oregon.gov>; brandy.steffen@jla.us.com
Cc: benjamin.j.mello@faa.gov
Subject: Comments in advance of PAC Work Session today

Sarah and Brandy;

Please see attached comments from Friends of French Prairie in advance of the April 5 PAC Work Session.

Please confirm receipt and that they will be entered in the record.

Thank you

Ben Williams
Friends of French Prairie

1. **Why does the master plan not use historical tower data (ATCT) for particular types of aircraft when determining existing design aircraft for taxiway and runway separation and runway length?**

Century West Engineering Response:

The FAA-approved data entry method used at air traffic control towers captures aircraft operations (takeoffs and landings) by general use categories only and not by aircraft types. The categories include Air Carrier, Air Taxi, General Aviation, and Military.

2. **Why does the master plan not use tower data to determine its forecast for particular types of aircraft?**

The confusion arises from the use of TFMSC data which is based on flight plans, and in rather tables presented that data goes back to 2009 when there was no tower and thus flight operations were mainly estimates as opposed to hard data from the FAA ATADS database from 2017 to present.

Century West Engineering Response:

As noted in the previous response, ATCT operations data does not provide aircraft-specific information. However, the 2015-2021 ATCT data are used to establish current and historical air traffic levels at the Airport. The TFMSC (instrument flight plan) data provides the best indication of business aircraft flight activity, since these aircraft operate predominately with instrument flight plans. The TFMSC data also provides the ability to discern activity among common aircraft types, for example small, medium and larger business jets. The references to the historical (pre-ATCT) TFMSC data provide an extended record of business jet (design aircraft) activity at the Airport.

April 12, 2022

Sent via email to:

Martha Meeker, Chair, and Oregon Aviation Board — *aviation.mail@aviation.state.or.us*
Betty Stansbury, Aviation Director — *betty.stansbury@aviation.state.or.us*
Sarah Lucas, Aviation Planner — *Sarah.LUCAS@odav.oregon.gov*
Oregon Department of Aviation

Benjamin Mello, Airport Capacity Program Manager — *Benjamin.j.mello@faa.gov*
Federal Aviation Administration Seattle Airports District Office FAA Northwest Mountain Region Airports Division

RE: Comments on Draft 2022 Aurora State Airport Master Plan Chapters 1-3

Dear Chair Meeker, Director Stansbury, members of the Oregon Aviation Board, Manager Mellow and Aviation Staff:

The City of Wilsonville is a jurisdiction impacted by the operations of the Aurora State Airport and adjacent through-the-fence private properties that are conducted under the auspices of the Oregon Department of Aviation (ODAV) and the Federal Aviation Administration (FAA). The City of Wilsonville has been an active participant for over 20 years in relation to the Aurora State Airport, including serving on the Planning Advisory Committees (PAC) of the Aurora State Airport Master Plan process in 2011/12 and 2022. The City has sought to collaborate with local governments and state agencies to comply with Oregon public-process and land-use laws and engage in coordinated planning.
The following comments review general, structural problems and issues of concern with the current 2022 Draft Aurora State Airport Master Plan and process, and also catalog a set of specific questions pertaining to Chapters 1-3.

1. **Failure to Provide Public Notice of Public Comment Opportunity on Draft Master Plan Chapters 1-3**

ODAV failed to publish any kind of public notice of the public comment opportunity on 2022 Draft Master Plan Chapters 2 through 3 that has a due date of April 12. Rather, notice of the opportunity to comment and the deadline for public comments was only provided verbally by ODAV and consultant during the April 5 PAC Work Session meeting. This kind of public engagement failure is endemic to how ODAV operates in general, and specifically during the 2022 Aurora State Airport Master Plan process.

Rhetorically speaking, how are members of the public to be aware that there is a public comment opportunity if no public written notice is published or advertised in advance of the comment deadline?

Century West Engineering Response:

The opportunity for the Public and Planning Advisory Committee (PAC) to provide comments on all presentations and work product has been discussed at each public meeting. Per the Frequently Asked Questions (FAQ) summary on the website, "All PAC members, as well as members of the public, are welcome to submit written comments at any point of the project." The April 12 deadline was set to collect comments on Working Paper No. 1 and provide ODAV responses to comments to submit to the FAA to be considered with the FAA Forecast chapter review. Additional comments on Working Paper No. 1 will still be accepted through the end of the project.
The draft of Working Paper No. 1 was delivered to the PAC on February 25, 2022 and available to the public on March 1, 2022.

2. Reference and Reliance on Invalid 2012 Aurora State Airport Master Plan Taints Current 2022 Draft Master Plan.

During the past 10-years-plus, the City has seen ODAV act without due regard to Oregon land-use and public-process procedures and laws in relation to implementing the invalid Aurora State Airport Master Plan of 2011/2012. The City has been forced by ODAV to file administrative appeals with the state Land Use Board of Appeals (LUBA) and to file lawsuits in state Circuit Court and subsequently file appeals to the Oregon Court of Appeals and Oregon Supreme Court to force the agency to comply with Oregon law. The City and other parties have been successful in various cases seeking judicial remedies to correct unlawful land-use actions by ODAV and county seeking Airport expansion.

On June 16, 2021, the Oregon Court of Appeals ruled that ODAV misapplied state land-use laws in approving the contentious 2012 Aurora State Airport Master Plan; see *Schaefer v. Oregon Aviation Board,* 312 Or App 316 (2021). The Court reversed and remanded to LUBA the decision on the master plan, finding that LUBA erred in excluding the prior critical 2011 master plan work from the record; in erroneously finding that the master plan did not propose airport development on an Exclusive Farm Use (EFU) zoned land; and also erroneously finding that any proposed new uses at the Aurora State Airport are considered rural uses for land-use purposes.

The City of Wilsonville together with the City of Aurora, 1000 Friends of Oregon, Friends of French Prairie and Aurora Planning Commission Chair Joseph Schaefer filed an appeal with the court in March 2021 regarding a LUBA decision that dismissed their appeal challenging the legality of the 2012 master plan. LUBA ruled in December 2020 that it did not have jurisdiction to hear the appeal as land-use decisions of the Department of Aviation's adoption of 'findings of compatibility' and approval of the 2012 Master Plan.

The Oregon Aviation Board, acting contrary to advice from the Oregon Attorney General's Office, elected in September 2021 to appeal the Court of Appeals ruling to the Oregon Supreme Court. Acting in judicially lightning-fast time, on Dec. 9, 2021, the Oregon Supreme Court dismissed an appeal by ODAV and others that resulted in upholding the June 16, 2021, decision by the Court of Appeals, which declared that ODAV misapplied state land-use laws in approving the contentious 2012 Aurora State Airport Master Plan.

The Supreme Court denied review of the Court of Appeals decision that reversed and remanded a December 2020 Land Use Board of Appeals (LUBA) decision approving the master plan, finding that LUBA erred in excluding the prior critical 2011-12 master plan work from the record; in erroneously finding that the master plan did not propose airport development on Exclusive Farm Use (EFU) land; and also erroneously finding that any proposed new uses at the Aurora Airport are considered rural uses for land-use purposes.

The 10-year-long controversy over the 2012 Aurora State Airport Master Plan originated with a confusing, convoluted process over several years, resulting in an invalid master plan that ignored Oregon public-process and land-use laws. Rather than seek to work with the impacted local communities adjacent to the Airport, ODAV pressed forward with airport expansion efforts contrary to state law, including an unsuccessful attempt in September 2018 to seek legislative permission for a $37 million grant application to the FAA to extend the Airport runway.

And now, after all of this effort at obfuscation by the agency, ODAV staff have finally confirmed what the Oregon Attorney General's Office communicated in March 2021 And acknowledged that there is NO Valid 2012 Aurora State Airport Master Plan — "the State Aviation Board *did not approve* the 2012 Master plan" (emphasis added):

> **From:** PECK Heather <heather.peck@odav.oregon.gov>
> **Date:** April 5, 2022 at 12:10:29 PM PDT
> **To:** LUCAS Sarah <Sarah.LUCAS@odav.oregon.gov>, ben.williams@liturgica.com, brandy.steffen@jla.us.com
> **Cc:** benjamin.j.mello@faa.gov
> **Subject: Re: Comments in advance of PAC Work Session today**
>
> Thank you again, for your comments and we will include them in the record, files and forward to the FAA.
>
> For clarification however, while you are correct that the State Aviation Board did not approve the 2012 Master plan, the FAA did approve the methodology, the data as related to the forecast, the forecast and the final ALP, as also signed and dated by the FAA.
> Kind Regards, Heather
>
> HEATHER PECK
> OREGON
> DEPARTMENT OF
> AVIATION PLANNING
> & PROGRAMS
> MANAGER
>
> OFFICE 503-378-3168 CELL 503-881-6966
> EMAIL heather.peck@aviation.state.or.us 3040 25TH
> STREET SE, SALEM, OR 97302
> WWW.OREGON.GOV/AVIATION

By definition, a master plan that is not adopted by the governing body Oregon Aviation Board remains an unapproved draft plan. Thus, ODAV now concedes after losing in the judicial process the absence of a valid 2012 Aurora State Airport Master Plan that was never adopted by the Oregon Aviation Board. As an invalid plan without adopted findings and conclusions, for all practical purposes the 2012 Aurora State Airport Master Plan is an unapproved draft without any standing in law.

The current 2022 Draft Aurora State Airport Master Plan Chapters 1 through 3 reference on over 20 occasions the invalid 2012 Aurora State Airport Master Plan. By referencing a nonexistent master plan—or more precisely an invalid draft plan—the new 2022 Draft Master Plan becomes tainted.

The only remedy in this instance is remove all references to the invalid, draft 2012 Aurora State Airport Master Plan from the 2022 Draft Aurora State Airport Master Plan. As the next Section 2 discusses, a pertinent question is What Prior Version of the Aurora State Master Plan is valid? Based ODAV's actions—or inaction—it would appear that the 1976 Master Plan is the current, adopted and codified appropriately version.

Century West Engineering Response:

It is correct to state that the 2012 Aurora State Airport Master Plan was not formally adopted by Marion County and subsequently is not a recognized planning document from a State land-use perspective. However, the Aviation Activity Forecasts and the Airport Layout Plan were reviewed and approved by the Federal Aviation Administration. Subsequently, both approved elements of the 2012 Aurora State Airport Master Plan are relevant historical data points.

The 2022 Aurora State Airport Master Plan (AMP) is a stand-alone planning effort that utilizes newly collected data and historical operations data as the basis of planning following the FAA prescribed planning process. The 2012 Aurora State Airport Master Plan was used as a historical reference, but the inventory, forecast, and subsequent planning tasks for the 2022 AMP are entirely new analysis of the conditions at the Aurora State Airport.

3. ODAV "Packs the PAC" with Self-Serving Financial Interests Benefiting from Taxpayer-Funded Airport Expansion.

As the City called-out earlier at the start of new master plan process, ODAV's composition of the Master Plan Planning Advisory Committee (PAC) is "packed" with self-serving special interests that benefit from taxpayer-funded expansion of the Aurora State Airport. A review of the PAC members listed on p 1-5 shows that:

- 19 PAC members (59%) represent vested financial interests that have expressed a desire for increased development and expansion of the Airport;
- 7 PAC members (22%) are local governments and public-interest organizations that have expressed issues of concern regarding operations of the Airport'
- 6 PAC members (19%) are neutral state and tribal-government agencies.

As an agency funded primarily by a state tax on aviation fuel, ODAV itself is a financial beneficiary of Airport runway extension and expansion plans that result in increased use and sales of aviation fuel.

ODAV omitted two key state agencies from the PAC—Oregon Department of Agriculture and Oregon Department of Environmental Quality. Each agency is charged with a mission and areas of responsibility that would have benefitted ODAV's Airport master planning effort. The Department of Agriculture could advise on the rural agricultural farming traded-sector component of the regional economy of French Prairie surrounding the Airport, and DEQ could advise on issues of environmental pollution that the Airport emits.
Certainly having a wide representation of various stakeholders is beneficial to the master plan process; however, stacking the PAC with pro-Airport expansionists could appear as though ODAV has manipulated the new 2022 Aurora State Airport master planning process from the outset to ensure that a majority of the PAC members would favor Airport expansion. In a similar fashion, one could surmise that ODAV ensured that local community and public-interest voices would be overwhelmed by being a minority of the PAC membership.

Century West Engineering Response:

The composition of the Planning Advisory Committee is intended to represent the broad range of stakeholders that have interest in the future planning for the Aurora State Airport. The Airport Master Plan is primarily a facility plan intended to provide guidance on future development of the airport to accommodate forecasted needs and modifications to existing facilities to comply with current FAA standards. The airport has a broad group of airport users that have differing needs based on how the utilize the facility. The airport users represented on the PAC are intended to provide input from a variety of users. Similarly, there are many local governments, public-interest organizations, neutral state, and tribal-governments that have either expressed interest in participating on the PAC and/or have jurisdictional authority that have also been included on the PAC. All PAC members are intended to represent the viewpoint of their respective organizations and serve as the conduit for dissemination of information to their constituents and to solicit comments from them to be presented to the PAC as a whole for consideration. The PAC is an advisory group that does not vote on matters presented.

The Planning Advisory Committee was developed for a facility plan; it is not project specific. A PAC is not the best way to interact with these agencies (i.e., DEQ/Department of Agriculture). Appropriate agencies will be engaged once specific projects are defined and those agencies are able to provide meaningful content. The environmental review process for specific projects demands engagement with the appropriate agencies and allows for further public response.

4. ODAV Appears to Manipulate Federal Process to Trump State Law.

The citation above from ODAV staff indicates that while "the State Aviation Board did not approve the 2012 Master plan, the FAA did approve the methodology, the data as related to

the forecast, the forecast and the final ALP, as also signed and dated by the FAA." This statement reveals the agency's motive to seek to use a *federal* decision/document as a method to evade *state* land-use and public-process procedures and laws.

That is, in Oregon statutes, a state agency must apply to the land-use jurisdiction for an exception to zoning land uses. In this instance, ODAV is to apply to Marion County for a goal exception to the County Comprehensive Plan that includes adoption of the airport map, assumed to the ALP, or FAA Airport Layout Plan. As was noted at the April 5 PAC Work Session meeting by Matthew Crall, Planning Services Division Manager for the Oregon Department of Land Conservation and Development, ODAV must comply with Oregon land-use laws requiring the agency like any other party apply for a goal exception to the county comprehensive plan that includes adoption of the airport map.

On March 30, 2022, the Oregon Court of Appeals reversed and remanded an October 2021 LUBA determination that a private-property development project near the Airport was exempt from the state's land-use process. LUBA erroneously found Marion County did not need to grant exemptions to state land use goals involving the preservation of farmland, adequate public facilities, and urbanization.

The Court of Appeals ruled in *Schaefer v. Marion County,* 318 Or App 617 (2022), that the rezoning from Exclusive Farm Use (EFU) to an airport use would have to go through state land-use procedures. To do so, a map that includes the expansion of the airport development would have to be adopted by Marion County, which the Court of Appeals determined has not been done since 1976.

The Court of Appeals opinion goes on to say, "The statute itself does not modify the procedure for expanding the airport boundary." *(Id.* at 634). That means the Airport's boundaries cannot be expanded just because ODAV says so in the Airport Master Plan. Rather, the agency must effectuate the proposed Master Plan and follow the law like other parties without assuming that ODAV has an FFA trump card to play that allows the agency to bypass state land-use laws.

The 2022 Draft Aurora State Airport Master Plan Chapter 2, p 2-4, states that "Several planning studies have been completed through the Airport's history, including FAA-funded master plans in 1976, 1988, and 2012." Based on a lack of changes to the Marion County Comprehensive Plan, ODAV failed to apply for a Comprehensive Plan goal exception or Airport ALP Map for any Aurora State Master Plan update conducted in 1998 or 2012. As the Court of Appeals found in *Schaefer v. Marion County,* the last Comprehensive Plan update for the Aurora State Airport Master Plan occurred in 1976. "The 1976 Aurora State Airport Master Plan, including its airport layout plan, which is a map of the airport, is part of the Marion County Comprehensive Plan." *(Id.* at 620).

Thus, ODAV is unable to use or reference an FAA-approved ALP Map that the agency has failed to gain an exception for in the Marion County Comprehensive Plan. The last such Master Plan to have been done correctly is the 1976 Aurora State Airport Master Plan.

Century West Engineering Response:

The referenced ODAV quote is in response to the concern regarding referencing previous planning efforts for context in the development of new aviation forecasts and also stating that the FAA had approved the 2012 Airport Layout Plan (ALP). The FAA approval of the 2012 Forecasts and ALP indicates that the planning complied with applicable FAA standards at the time which provides guidance for future planning. The current planning effort is based on new analysis of data collected during the ongoing project that will be reviewed by ODAV, the Planning Advisory Committee, the public, and the FAA. Comments generated during this review will be addressed and changes to the draft documents will be made as required prior to FAA approval.

This is a planning project and any projects defined will require additional NEPA evaluation and engagement of land use process (as appropriate). At this point of the planning process, no work product has been provided that has recommended or proposed any change to current land-use for ODAV owned property that would require a goal exception. If the preferred development alternative does require a goal exception, the land use implications will be thoroughly discussed, and follow-on studies or actions will be identified in the master plan.

5. Goals of the Draft Master Plan Do Not Relate to the Output of the Plan.

In discussing the "Goals of the Airport Master Plan," ODAV indicates that the "primary goal of the master plan is to provide the framework and vision needed to define future facility needs at Aurora State Airport." The Goals enumerated raise a number of questions, and also demonstrate the Draft Master Plan fails to meet the "primary goal" of "future facility needs" at the Airport.

- Goal 6 states "identify potential environmental and land use requirements that may impact development." What are some examples of both environmental and land use requirements in this context?

  Century West Engineering Response:

  Environmental, land use, and other requirements will be identified in Chapter 4 – Facility Goals and Requirements and subsequent implementation sections of the AMP.

- Goal 8 indicates that the Master Plan is to "Develop an Airport Layout Plan to graphically depict proposed improvements" and "Prepare a supporting Capital Improvement Plan." This goal raises a number of questions, including will there be a new ALP created as part of this process? If not, why? What ALP will be used? When was it created? Was there an opportunity for public input on the ALP? Furthermore, as is discussed later, the "supporting Capital Improvement Plan" (CIP) falls far short of the actual infrastructure needs at the Airport. The CIP portion of Chapters 2 and 3 demonstrate a lack of compliance with Oregon regulations for

major new, urban-level development in terms of infrastructure planning and financing, especially in high-value EFU ag lands.

Century West Engineering Response:

The Airport Layout Plan and Capital Improvement Plan will be presented in Tasks 8 and 9 of the planning process as identified in the scope of work. The draft documents will be available for comment after they are presented to the PAC and the public. As with other master plan elements, these tasks represent new work products that will replace previous planning guidance for the Airport.

- Goal 9 seeks to "Provide recommendations * * * to remove barriers to appropriate growth at the Airport – What are some examples of recommendations to improve land use and zoning oversight to "remove barriers to appropriate growth at the airport"? How is "appropriate growth" measured in this context?

Century West Engineering Response:

Recommendations will be provided in the Task 8 Implementation Plan section of the master plan.

  - How specifically will potential environmental and socioeconomic impacts be measured, weighed or evaluated in the context of 'future development' at the airport?

Century West Engineering Response:

Task 7.4 – Evaluation of Development Alternatives in the scope of work describes the evaluation process.

  - Was the utilization of federal funds to construct projects (air traffic control tower) identified in an un-adopted master plan legal?

Century West Engineering Response:

Yes. Individual projects completed at the Aurora State Airport were completed with approvals of Marion County that has land use authority over the Airport. The Federal Aviation Administration follows all applicable federal law in the utilization of its congressionally defined funding for airports.

6. ODAV's Permissive Attitude Towards Overweight/Oversized Aircraft at Aurora State Airport Creates Constrained Operations.

The 2022 Draft Master Plan cites on multiple occasions the 2019 Constrained Operations Runway Justification Study that "indicated in excess of 500 annual operations," p 2-18. Chapter 3, Aviation Activity Forecasts, is largely based on the 2019 Aurora State Airport Constrained Operations Runway Justification Study, which determined that aircraft operating at the Airport experienced 645 constrained operations in 2018. It should be noted that this number was based on pilot surveys that were *not validated* against flight plans, and did not take into consideration that ODAV's practice of allowing an increasing number of oversized aircraft to operate at the Airport was the major factor driving the number of constrained operations.

Further, that number of 645 purported constrained operations in 2018 represents a 33% increase over that reported in the unapproved 2012 Master Plan, in spite of a 24% reduction in Total Operations since 2010. That increase can only be attributed to ODAV's practice of allowing an increasing number of oversize jets to operate at the Airport which drives the increase in constrained operations.

Thus, the 2022 Draft Master Plan *never* discusses that the constrained operations are caused by ODAV's very actions of granting permission for overweight/oversized aircraft to use the Aurora State Airport. A public records request of ODAV by the City of Wilsonville reveals over a hundred waivers have been granted by ODAV over the past 10 years 2012-2021 to aircraft that are overweight or oversized for the Aurora State Airport runway, also thereby creating a public safety issue.

The Aurora State Airport runway is 5,003 feet and has a strength rating of 45,000 pounds. ODAV has regularly granted permission for aircraft with manufacturer-specified minimum runway lengths at maximum takeoff weight that exceed 6,000 feet and have a maximum takeoff weight of 70,000 pounds. ODAV regularly provides overweight waivers to a Global Express aircraft that has a maximum takeoff weight of 92,500 pounds, a minimum takeoff distance of 6,170 feet and weighs 50,200 pounds when empty. In addition to creating situations that create constrained operations, ODAV creates long-term pavement maintenance problems and public safety concerns by regularly granting permission for overweight and oversized aircraft to use the Airport.

Additionally, the 2019 Constrained Operations Runway Justification Study appears to use a faulty methodology and inaccurate data to arrive at conclusions. For instance, the Minimum Takeoff Distances listed for the four jets listed in the 2022 Draft Master Plan with the most constrained operations are higher than the published Minimum Takeoff Distances from the aircraft manufacturers. The Falcon 50, which had the single largest number of reported constrained operations in 2018 at 160, is shown on p 16 of Chapter 1 to have a Minimum Takeoff Distance of 5,413 feet when, the published manufacturer's specification is 4,935 feet.

Moreover, in the 2019 Constrained Operations Runway Justification Study data listing annual operations and constrained operations, the Falcon 50 is shown to have had 226 (p 1-16) operations at Aurora in 2018, of which 160 (p 1-18) were constrained. That is almost 71% constrained operations for a jet with manufacturer's minimum takeoff distance shorter than the runway at Aurora.

Compounding questions on the accuracy of the data presented in the 2019 Constrained Operations Runway Justification Study, the Falcon 900 is listed on p 1-16 as having 68 operations at Aurora in 2018, of which 75 were reported from the survey (p 1-18) to be constrained. That is to say, the aircraft is reported to have 110% of the operations constrained, which seems to be mathematically impossible.

We also note that operations flight data of the 2019 Constrained Operations Runway Justification Study and the 2022 Draft Master Plan tables of TFMSC activity operations often do not match for the two plans' years 2012 – 2018. It seems odd for FAA historical TFMSC activity operations data to vary so substantially over a two-year period between 2019 and 2022. For example:

Aircraft: Falcon 50		**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
2022 Draft Master Plan		16	332	1088	228	320	332	276
2019 Constrained Operations Study		10	18	96	220	310	316	276
# Variance	6		14	12	8		10	16	0
% Variance	60%		78%	13%	4%		3%	5%	0%

Aircraft: Falcon 900		**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
2022 Draft Master Plan		180	148	448	10	56	82	70
2019 Constrained Operations Study		180	144	48	8	54	80	68
# Variance	0		4	0	2	2	2	2
% Variance	0%		3%	0%	25%	4%	3%	3%

Data sources:
2022 Draft Master Plan, Chapter 3, Table 3-8: Historical TFMSC Activity by ARC (Select Jets), p 3-14
2019 Constrained Operations Runway Justification Study, TFMSC IFR Data - Select Jet Aircraft

Operations Table, p 1-16

Furthermore, the Draft Master Plan fails to acknowledge ODAV's financial benefit for providing permission for overweight/oversized aircraft to use the Airport. ODAV's primary funding source is a tax on aviation fuel, of which increased sales benefit the ODAV financially. Thus, ODAV has a motivation to increase the number of constrained operations in order to justify a longer runway that allow aircraft to take on more fuel, and thereby benefit ODAV financially. ODAV is artificially producing the conditions that create constrained operations by granting permission for overweight/oversized aircraft to use the Aurora State Airport. Based on the public-records review, if the agency did not grant these permissions, the number of constrained operations would be insignificant.

Century West Engineering Response:

This section primarily comments on constrained operations. Constrained operations are not discussed in Working Paper #1. The references to the 2019 Constrained Operations Runway Justification Study were intended to reference the forecast elements of that study. Constrained operations will be discussed in detail in Chapter 4 – Facility Goals and Requirements.

Overweight aircraft are reviewed and allowed to land at Aurora State Airport or denied based on a review of the weight request and the ability of the structural section of the runway to accommodate the traffic. Aurora State Airport improvements are funded in part by FAA Airport Improvement Grants the include grant assurances that require the airport to be available for public use. To comply with FAA grant assurances, ODAV has developed an overweight land policy intended to protect the runway pavements while allowing public use for aircraft that meet the criteria.

The forecasts developed for the 2022 AMP are based on new analysis completed for the project and do not rely on the 2019 study referenced.

Based on review of the comments regarding a discrepancy in the Traffic Flow Management System Counts (TFMSC), we did identify a data discrepancy and appreciate the detailed review that identified the issue. We have determined how the discrepancy occurred and have corrected it in an updated Working Paper #1 that is addressed in a memo to the FAA that will also be provided to the PAC and the public on the project website. Updated tables and figures consistent with the 2019 study will be included in the updated draft of the report.

7. ODAV's Push for Urban-Level Development to Expand Aurora State Airport's Footprint Is Contrary to State Law.

ODAV's effort to expand the Aurora State Airport's footprint through an extended runway and new through-the-fence nearby private properties rely on the conversion of surrounding EFU ag farmland and result in new development and increased activity. The agency's effort to extend the Airport runway is well documented, including prior desire for longer runway in the now invalid 2012 Master Plan, 2018 legislative request to apply for

$37 million in FAA funds for runway extension, and 2019 Constrained Operations Runway Justification Study.

Airport expansionists ODAV and private developers appear to have elected to not follow Oregon land-use law procedures that call for seeking a Goal exception and Comprehensive Plan amendment to accommodate both public- and private-sector EFU land conversion for development. The Court of Appeals has ruled now in two separate but related cases cited above, *Schaefer v. Oregon Aviation Board,* 312 Or App 316 (2021) and *Schaefer v. Marion County,* 318 Or App 617 (2022), pertaining to land-use procedures by public entities—ODAV and Marion County—and private developers. In both lawsuits, the Court of Appeals reversed and remanded to LUBA the base case for review with compliance with Oregon public process and land-use laws that require Goal exception and Comprehensive Plan amendment.

Oregon land-use law calls for urban-level development that includes new pavement, public and commercial structures, increased jobs and automobile traffic, etc., to be sited in cities that provide municipal governance and public utility infrastructure, including domestic water service, wastewater/sewage processing, stormwater treatment facilities, appropriate surface transportation infrastructure, including safe roadways and alternative bike/ped facilities. Oregon land-use law disfavors urban-level activities outside of cities that occurs in unincorporated county, prime EFU lands, such as the situation with the Aurora State Airport. The 2022 Draft Master Plan fails to address this core issue of compliance with Oregon land-use law and the corresponding need for municipal governance and public infrastructure.

While ODAV may seek to claim that the new 2022 Draft Master Plan deals only with the limited amount of public agency-owned land at the Airport, considerable amount of the Master Plan directly addresses issues associated with adjacent and nearby private-property development that is dependent on a proposed public-use finding of the Master Plan that is to facilitate EFU land conversion. The Landside Facilities section of Chapter 2, pp 2-37 – 2-39, "includes the landside facilities (depicted in Figure 2-12) designed to support airport operations, including aircraft storage and maintenance. This section of the existing conditions analysis includes a discussion of General Aviation (GA) Terminal Areas and 'Through-The-Fence' (TTF) development, hangars/airport buildings, airport surface roads, vehicle parking, airport fencing, and utilities."

Neither the Landside Facilities section, pp 2-37 – 2-39, nor the Airport Vicinity Zoning/Land Use section, p 2-23, present any analysis for how ODAV is to comply with Oregon land-use law and local zoning ordinances to implement plans for Airport expansion. In a similar manner, the 2022 Draft Master Plan provides no analysis regarding needed public utility infrastructure to support proposed new developments of runway extension and Airport through-the-fence commercial properties.

By advancing Master Plan objectives to lengthen the Aurora State Airport runway and increase the conversion of nearby high-value EFU lands to airport use to accommodate new

commercial developments, ODAV is violating a key tenant of Oregon land-use law. The agency appears to rely on the limited FAA federal airport master plan process to evade Oregon land-use law procedures for Airport development.

Century West Engineering Response:

ODAV through coordination with FAA agreed that completing a new Airport Master Plan for the Aurora State Airport was needed to determine the facility needs at the Airport for the next 20 years. The FAA defined master planning process determines how needed improvements are defined and identifies options for accommodating the needs. At this point of the planning process the consultant is evaluating existing conditions, current activity, and preparing forecasts to estimate the growth anticipated over the planning period.

The next steps of the planning process will include an analysis of conformance with current FAA standards and to also define the facility requirements or needs to accommodate current and future operations at the airport. This will include needs to safely accommodate aircraft arriving and departing the aircraft and landside elements including aircraft storage and other related needs. How these needs are accommodated on the Airport will be analyzed and evaluated in the Development Alternatives chapter. The planning advisory committee, public, ODAV, and FAA will provide input on the alternatives proposed to arrive at a preferred development alternative. Once the preferred alternative is approved, the land use implications and steps necessary to implement the plan will be evaluated and summarized in future chapters of the report which will be made available for comment.

This process is consistent with FAA planning guidelines and Oregon Administrative Rules Division 13 AIRPORT PLANNING 660-013-0010 which includes the following purpose and policy statement:

Purpose and Policy
(1) This division implements ORS 836.600 through 836.630 and Statewide Planning Goal 12 (Transportation). The policy of the State of Oregon is to encourage and support the continued operation and vitality of Oregon's airports. These rules are intended to promote a convenient and economic system of airports in the state and for land use planning to reduce risks to aircraft operations and nearby land uses.
(2) Ensuring the vitality and continued operation of Oregon's system of airports is linked to the vitality of the local economy where the airports are located. This division recognizes the interdependence between transportation systems and the communities on which they depend.

The Airport has seen considerable growth and increased demand in the last 10 year and explored numerous alternatives to satisfy aviation demand. As indicated in Working Paper No. 1, increased activity at the Airport is consistent with population growth occurring in unincorporated Marion and Clackamas counties and within nearby communities. The AMP is another step in the planning process that is intended to maintain a safe facility and serve the air transportation needs of the local area. Relocating the Airport to an urban area is not a feasible alternative to accommodate aviation demand. The "do-nothing" alternative will be evaluated and considered in this AMP planning effort along with a series of alternatives that satisfy the forecast demand.

8. ODAV's Airport Master Plan Fails to Meet Oregon State Standards for Urban-Level Development.

In Oregon, urban-level development plans that propose major new development and infrastructure improvements such as a new air traffic control tower, runway extension, aircraft hangers, public-service facilities, commercial office space and the like that impact land-use zoning, surface transportation facilities, environmental resources, surface and groundwater, emergency-response services, etc. devote considerable study to needed public infrastructure utilities to accommodate new development. The 2022 Draft Aurora State Airport Master plan spends a paltry eight pages on key infrastructure components that directly impact public safety and environmental quality.

Chapter 2 section "Applicable Planning Studies/Documents," p 2-16 through p 2-23, covers in a cursory manner crucial infrastructure issues of public concern, including

- Applicable Planning Studies/Documents, including the Marion County Comprehensive Plan, Marion County Rural Transportation System Plan (RTSP), City of Aurora Transportation System Plan (TSP), Oregon Aviation Plan, Oregon Resilience Plan and 2019 Constrained Operations Runway Justification Study.
- Environmental Data
- Environmental Screening/NEPA Categories, including Air Quality, Biological Resources, Hazardous Materials, Solid Waste and Pollution Prevention, Natural Resources and Energy Supply, Water Resources,
- Local Surface Transportation
- Area Land Use/Zoning, including Airport Vicinity Zoning/Land Use.

Century West Engineering Response:

FAA Airport Master Plans are not a National Environmental Policy Act (NEPA) document. The planning effort is focused on defining airfield facilities needs and providing feasible options for meeting those needs. The narrative included in the chapter is provided for context to inform the FAA and the airport owner of likely environmental issues that will need to be addressed as part of the design for individual improvements. A NEPA environmental process is required as part of any FAA funded development project and is coordinated with the FAA, who serves as the Lead Federal Agency for NEPA, at the project formulation stage for each project.

The 2022 Draft Master Plan Chapter 2, p 2-16 through p 2-23, reveals a host of environmental problems and issues of public health and safety concerns without addressing mitigation or remediation for infrastructure shortcomings:

Century West Engineering Response:

The Existing Conditions Analysis is a summary of the existing conditions of the airport landside and airside facilities as well as the regional context of the Airport. Subsequent tasks in the planning process and future environmental planning studies will discuss mitigation and/or remediation as required by local, state and federal law.

- Unsafe public utilities:
    - "[A]bove ground storage tank fueling facility and one recently decommissioned fueling facility with underground storage tanks located on ODAV-owned property that are planned to be removed. There are also other privately-owned facilities surrounding the Airport property that have their own fueling facilities.
    - "Water at the Airport is provided from a system of wells. In the early 2000s, with the assistance of Marion County, the Aurora Airport Water Control District was created to address major fire and life safety needs for privately-owned land adjacent to ODAV property at the Airport. The system included an underground tank system, a pump house, underground water pipes, fire hydrants, and numerous connections for fire sprinkler systems.
    - "Sanitary sewer is provided by individual and shared drain field/septic tank systems. There are at least nine individual drain fields located on ODAV owned property that are shared for both aviation related uses on both private and publicly owned land.
    - "The Airport's stormwater system is made up of a network of edge drain, culverts and surface drainage features which generally flow to the east, west, and south sides of the Airport. Most of the stormwater runoff originating on ODAV-owned property and airfield facilities like the runway, taxiway, and apron flows to the west side of the Airport."

  The Draft Master Plan fails to note that DEQ data appears to indicate that the NPDES (National Pollution Discharge Elimination System) permit for ODAV;'s Aurora State Airport discharge into Mill Creek-Pudding River watershed expired June 30, 2017. Is this information still current? If so, does the Master Plan recommend that ODAV come into compliance with environmental laws?
- Air Pollution:
    - "The Aurora State Airport property falls within a census block where all air quality-related environmental hazard indexes are between the 24th and 73rd percentile nationwide. The Airport property scores within the 51st percentile for diesel particulate matter, the 73rd percentile for PM2.5 levels, the 24th percentile for ozone summer seasonal average of daily maximum eight-hour concentrations in the air, the 51st percentile for cancer risk from the inhalation of air toxics, and the 69th percentile nationwide for other respiratory hazards exposure."
- Water Pollution:
    - "Many of the surface waters in the vicinity of the Aurora State Airport property are contaminated and listed on the DEQ 303(d) list. Contaminated surface waters in the vicinity of the Airport include:
        - "A segment of the Pudding River east of the Airport is on the 303(d) list of impaired waterways for guthion, water temperatures, and dieldrin. It is impaired for fish and aquatic life, fishing, and public and private domestic

water supplies.
  - "The entire Mill Creek-Pudding River sub-watershed (1st–4th order streams) is listed on the 303(d) list for benthic macroinvertebrates bioassessments and inorganic arsenic. It is considered impaired habitat for fish and aquatic life, fishing, public and private domestic water supplies, and recreational contact with the water.
  - "A segment of the Molalla River that intersects the Pudding River east of the Airport is not a 303(d)-listed waterway but is listed by the EPA's 'How's My Waterway' tool as impaired for fishing due to flow regime modification.
  - "The segment of the Willamette River that the Molalla River flows into north of the Airport is also a 303(d)-listed waterway. It is listed for the following factors: noxious aquatic plants, aldrin, benthic macroinvertebrates bioassessments, temperatures, 4,4'-DDE, 4,4'DDT, dieldrin, and PCBs. It is considered impaired for aesthetic quality, boating, fish and aquatic life, fishing, and public and private domestic water supply.
- "Compromised waters in the vicinity of the Airport property include critical habitat for federally threatened Upper Willamette River Chinook and steelhead populations. These waters also flow downstream to additional critical habitat areas for other species of federally listed fish species in the Columbia River."

What is the role of ODAV, FAA and the Aurora State Airport in creating these adverse environmental conditions? How does Airport septic and stormwater pollution figure into the water pollution issues cited above? Where is the arsenic coming from and what are the ppm compared to the US Environmental Protection Agency (EPA) tolerances?

The Draft 2022 Master Plan also fails to note that the EPA and the Oregon Department of Environmental Quality (DEQ) are reported to be testing locations at the Aurora State Airport for known or suspected use of 'forever chemicals' of per- and poly-fluorinated substances or PFAS, where growing evidence points to their adverse health effects, including some cancers. ODAV elected to omit DEQ from the PAC.

Century West Engineering Response:

ODAV is a property owner in Marion County and is required to comply with County, State, and Federal requirements. Each project developed at the Aurora State Airport is completed under the jurisdiction of Marion County and permitted, as required. When DEQ and/or EPA regulations apply, they will be identified by Marion County and addressed in the designs to obtain permits for the proposed development.

- Endangered species impacts:
  - "[T]he Molalla River (three miles northeast of the Airport), the Pudding River (0.85 mile east of the Airport), and Mill Creek (0.75 mile southeast of the Airport) are designated as habitat for Chinook salmon (federally threatened;

state classified sensitive critical), Pacific lamprey (federal species of concern; state classified sensitive vulnerable), and steelhead (federally threatened; state classified sensitive vulnerable) based on records of historic sightings.

- "Sub-watersheds surrounding the Airport are considered Essential Fish Habitat (EFH) for Chinook and coho salmon. Federal agencies are required to consult with the National Oceanic and Atmospheric Administration (NOAA) Fisheries regarding any action authorized, funded, or undertaken that may adversely affect EFH. Stormwater runoff from the Airport property flows into the Chinook and steelhead critical habitat areas as well as the Chinook and coho EFH areas."

- Airport Vicinity Zoning/Land Use:

  - "The Airport is generally surrounded by Marion County Exclusive Farm Use (EFU) districts, and a few parcels of Acreage Residential (AR) and Industrial (I) located in the immediate vicinity of the property.

  - "The intent of the EFU zone (Marion County Code 17.136) is to provide and preserve the continued practice of commercial agriculture. It is intended to be applied in areas composed of tracts that are predominantly high-value farm soils. EFU zone generally prohibits the construction, use, or design of buildings and structures except for facilities used in agricultural or forestry operations, replacing or restoring a lawfully established dwellings, supporting exploration of geothermal or mineral resources, or supporting agri-tourism destinations and events."
    ODAV's mission to expand the footprint of the Aurora State Airport with a runway extension and additional through-the-fence commercial operations, located in prime EFU ag land of French Prairie, would appear to contradict the intent of both Oregon and Marion County's EFU zone, which "prohibits the construction, use, or design of buildings and structures except for facilities used in agricultural or forestry operations."

Century West Engineering Response:

ODAV is required to coordinate environmental review for any proposed project at the Airport with the FAA, the who serves as the Lead Federal Agency for NEPA compliance. Individual projects are assessed by the FAA and the FAA identifies the appropriate level of environmental study to be completed based on the elements and location of the project. If mitigation is identified as an outcome of the environmental process, it is included in the design of the proposed improvements.

The NEPA nexus is determined for defined projects. All projects to be listed in the Master Plan's Capital Improvement Plan will undergo NEPA review/determination prior to full project design and construction. The FAA determines which NEPA analysis is required (i.e., Categorical Exclusion, Environmental Assessment, etc.). FAA Order 1050.1F, Environmental Impacts: Policies and Procedures, serves as the FAA's policy and procedures for compliance with the NEPA and implementing regulations issued by the Council on Environmental

Quality (CEQ).

The 2022 Draft Master Plan provides no analysis of surface transportation impacts of Airport-related operations on area roads. In effect, by advocating for Airport expansion without any infrastructure recommendations to accommodate new development, ODAV is externalizing Airport-related costs onto local roads of Clackamas and Marion Counties and City of Aurora without providing compensation for mitigation. The Draft Master Plan merely notes a couple of relevant transportation plans, including the Marion County Rural Transportation System Plan and the City of Aurora Transportation System Plan, while ignoring the adjacent Clackamas County Transportation System Plan and the Oregon Department of Transportation (ODOT) Region Two/Mid-Willamette Valley Council of Governments Regional Transportation Plan.

Century West Engineering Response:

The 2022 AMP is focused on airfield facilities and will examine the impacts on local surface transportation facilities adjacent to the Airport in subsequent tasks. The adoption of the 2022 AMP in the Marion County Transportation System Plan may require additional planning level analysis to coordinate surface transportation improvements in the region.

The short Local Surface Transportation section indicates that the "Airport is located between Interstate 5 and State Highway 99E. Interstate 5, which is an essential north-south commerce link for the western United States, runs west of the Airport providing access to the Portland metro area. Access to the Airport is also provided by Highway 551 (Canby *(sic)* Wilsonville-Hubbard Highway) from the north and south, Arndt Road from the east and west, and Airport Road from Aurora. Keil Road is located south of the Airport and provides additional airport business access from Highway 551 and Airport Road. State Highway 99E, accessible to the Airport via Ehlen Road off of Highway 551 and Airport Road, provides access to the nearby communities of Canby, and Oregon City." Highway 551 (mislabeled as Canby-Hubbard Highway; actual label is Wilsonville-Hubbard Cut-off) is an ODOT facility, as is Highway 99E and I-5 and the nearby at-capacity I-5 Boone Bridge; segments of Arndt Road, Airport Road and Ehlen Road fall under jurisdiction of Clackamas and Marion Counties.
So while acknowledging the roadways of other jurisdictions that provide access to Airport, the 2022 Draft Master Plan fails to provide any analysis of Airport-related traffic on these roads or impacts to these surface transportation facilities. How do businesses at the Airport use these roads? What is the traffic volumes and capacity of area roadways to accommodate new development at the Airport? None of these questions are answered the Draft Master Plan.

In a similar manner, the 2022 Draft Master Plan provides no strategies to mitigate the impacts of Airport expansion onto local roads, nor potential resources to fund needed roadway improvements to accommodate increased activities at the Airport. For

example, the Draft Master Plan cites on p 2-6 "that there are 2,672 direct, indirect and induced jobs at the Airport." Assuming that there are hundreds or thousands of employees working at public and private employers at the Aurora State Airport, the Draft Master Plan provides no traffic analysis and no origination/destination trip data to determine impacts to surface transportation facilities. Given that there is no public transit service nor sidewalks nor shoulders on roads in the vicinity of the Airport, anyone who works at the Airport must drive in an automobile. So while the 2022 Draft Master Plan is shaping up to recommend runway extension and "through-the-fence" Airport expansion

Century West Engineering Response:

Traffic Impact Analysis is outside the scope of work for this project. Specific transportation studies may be required in conjunction with specific development projects if the projects are anticipated to generate additional trips to and from the airport. Marion County has jurisdiction over the Airport and will determine if transportations studies are required based on the nature of the proposed development.

The 2022 Draft Master Plan acknowledges a host of environmental resource degradation and public safety issues and transportation plans, but then does nothing to address these issues in terms of analysis or mitigation recommendations. On its face, the 2022 Draft Master Plan fails the test for an Oregon land-development master plan.

Century West Engineering Response:

Working Paper No. 1 identifies existing conditions on the Airport and summarizes environmental conditions based on recent studies. Environmental impacts associated with individual development projects and any proposed mitigation are reviewed by the FAA as a required step during project implementation to comply with state and federal requirements.

9. ODAV's Failure to Accurately Communicate to FAA Status of Prior FAA-funded 2012 Aurora State Airport Master Plan Violates FAA Grant Assurances that Should Result in an FAA Finding of Noncompliance that Results in a Denial of Future Funding.

As a component of obtaining the nearly $1 million FAA grant to fund the new 2022 Aurora State Airport Master Plan effort, ODAV made assurances in writing to FAA that all grant procedures were followed to produce a previous final, adopted 2012 Aurora State Airport Master Plan that would qualify agency to receiving funding for a new master plan. However, ODAV now admits that there is no valid, final adopted 2012 Aurora State Airport Master Plan, which is contrary to the grant assurances provided by ODAV to FAA.
The 2020 Draft Master Plan, p 2-42, states:

> "As a recipient of both federal and state airport improvement grant funds, the airport sponsor is contractually bound to various sponsor obligations referred to as

> 'Grant Assurances', developed by FAA and the State of Oregon. These obligations, presented in detail in federal and state statute and administrative codes, document the commitments made by the airport sponsor to fulfill the intent of the grantor (FAA or state) required when accepting federal and/or state funding for airport improvements. *Failure to comply with the grant assurances may result in a finding of noncompliance and/or forfeiture of future funding."* (Emphasis added).

The 2020 Draft Master Plan, p 2-43, states: "Consistency with Local Plans (Assurance #6)

> "*All projects must be consistent with city and county comprehensive plans, transportation plans, zoning ordinances, development codes, and hazard mitigation plans.* The airport sponsor should familiarize themselves with local planning documents before a project is considered *to ensure that all projects follow local plans and ordinances."* (Emphasis added).

As has been demonstrated and ODAV has conceded, there is no valid adopted Aurora State Airport Master Plan 2012, and neither the Master Plan nor its ALP were submitted to Marion County for amendments to the Comprehensive Plan. Thus, ODAV has failed to follow through on Grant Assurance #6, Consistency with Local Plans.

ODAV also fails to the test to fulfill FAA Grant Assurance #2, Compatible Land Use, which states in 2020 Draft Master Plan, p 2-44:

> "Compatible Land Use (Assurance #21)
>
> "Land uses around an airport should be planned and implemented in a manner that ensures surrounding development and activities are compatible with the airport. Aurora State Airport is located in unincorporated Marion County."

As Figure 2-8: Zoning Map on p 2-22 illustrates, the Aurora State Airport is located in unincorporated Marion County in high-value agricultural land zoned EFU. Oregon land use law seeks to protect EFU lands; ODAV's master-plan analysis seeks to convert EFU lands near Airport into an Airport use, contrary to state law, without a goal exception process that the agency has not pursued.

Thus, there is a question if ODAV has complied with FAA Grant Assurance #2, Compatible Land Use, by failing to ensure that "surrounding development and activities are compatible with the airport." By definition, EFU agricultural land is not compatible with Master Plan development proposals to extend runway and convert nearby EFU lands into Airport use. ODAV's failure to meet FAA Grant Assurance #6 that "All projects must be consistent with city and county comprehensive plans" and potential lack of compliance with FAA Grant Assurance #21, Compatible Land Use, should prompt the FAA to take action. The appropriate remedy in this situation for ODAV'S failure to comply with one or more of the grant assurances is for FAA to issue a finding of noncompliance that results in the forfeiture of future funding.

Century West Engineering Response:

The FAA has not indicated any grant assurance compliance issues with past planning grants at Aurora State Airport. The 2022 AMP will comply with FAA requirements and grant assurances.

The Airport's land use and zoning requirements are defined by Marion County. All proposed development at the Airport requires Marion County approval, consistent with all applicable land use laws.

10. Chapter 2, "Existing Conditions Analysis," Omits Key Information Needed to Determine Actual Site Conditions.

The 2022 Draft Master Plan cites on p 2-6 the OAP to indicate that there are 2,672 direct, indirect and induced jobs at the Airport. However, this information does not disclose how many jobs are there specifically at the Airport? This kind of data would tend to support the need for municipal governance and the provision of city utilities and transportation alternatives, all of which are missing at Airport.

Chapter 2 contains contradictory information: p 2-6 states that there are 281 aircraft based at the Airport; however, Figure 2-2 states that there are 396 'based aircraft.' What accounts for the difference here?

Century West Engineering Response:

As noted on Page 2-6 "The most recent FAA Airport Master Record Form (5010) data available is presented for these airports to provide common reporting of activity. It is noted that the FAA 5010 data listed for Aurora State Airport is obsolete but will be revised to reflect the 2021 baseline data developed in the airport master plan. Current based aircraft and aircraft operations data for Aurora State Airport are provided later in this chapter and will be used to develop the aviation activity forecasts (Chapter 3)."

In a similar fashion, Figure 2-2 shows 94,935 annual operations; however, the Baseline is shown as 76,028 operations. Is Figure 2-2 incorrect?

Century West Engineering Response:

Same as previous comment.

The text on p 2-10 states that the based aircraft does not include helicopters; however, Figures 2-5 and 3-8 shows 10 helicopters contributing to the 281 based aircraft at the airport. Which is correct?

Century West Engineering Response:

See Page 2-10, paragraph 3 "As noted above, the current based aircraft count does not include helicopters located at two privately owned heliports located adjacent to the Airport."
Unknown reference (Figure 2-5 depicts annual rainfall graph and there is no Figure 3-8 in Chapter 3). However, Table 3-14 does correctly identify 10 existing helicopters in the 281 based aircraft count for 2021. These helicopters are located on ODAV property or on privately owned property with ODAV-approved through the fence agreements.

How many gallons of jet fuel is stored on ODAV property? Has ODAV accounted for any underground fuel-storage tanks? Are there any documented leaks in the underground storage tanks located on ODAV property?

Century West Engineering Response:

We will add a summary of existing aviation fuel storage tanks, capacities, tank types (underground or above ground), for on-airport fuel facilities to the "Fuel Services" section of Chapter 2. As noted on Page 2-36, there are two above ground fuel storage tanks currently located on ODAV property.

If the 2019 Constrained Operations Study concluded that a runway extension of 7888' was justified, why was the recommendation only for 6002'?
What is the level of accuracy expected from the survey conducted in the 2019 Constrained Operations Study?

Century West Engineering Response:

See prior studies for evaluation details. The 2021-2041 Airport Master Plan does not rely on previously developed planning evaluations and any references to previous studies are for historical context only.

Page 2-20 states that Columbia Helicopter is identified by EPA as a RCRA Corrective Action Site. What does that mean exactly? What was found there? Were there any fines? Is the site in compliance now?

Century West Engineering Response:

References to U.S. Environmental Protection Administration (EPA) documents and mapping. Please contact EPA for additional information. See Airport Master Plan Appendix 2 for full environmental review technical memorandum.

Page 2-22 raises the question if FAR Part 77 overlay airspace extend over any part of the city of Wilsonville? Why is the FAR 77 overlay not included inside the Wilsonville corporate limits on figure 2-8?

Century West Engineering Response:

The northern section of the FAR Part 77 Airspace defined for Runway 17/35 does extend over the City of Wilsonville boundary. Figure 2-8 Zoning Map depicts surface zoning and overlay zoning related to the Part 77 surfaces. The status of existing airport overlay zoning is summarized on Page 2-23, which includes the following:

"Marion County, Clackamas County, and the City of Aurora have adopted airport overlay zoning districts intended to enhance the protection of airport airspace, and compatible land use planning. The City of Wilsonville has not adopted an overlay zoning district.

The airport overlay zones based on FAR Part 77 imaginary surfaces, applicable within each jurisdictional boundary, are included in the following codes:
- *Marion County Code (Chapter 17.177)*
- *Clackamas County Code (Chapter 713)*
- *City of Aurora Municipal Code (Chapter 16.24)"*

Figure 2-8 does not properly identify city of Wilsonville zoning, it would appear to be a generic categorization. That should be noted, or changed.

Century West Engineering Response:

We will review current City of Wilsonville zoning mapping and correct, as needed.

Page 2-23, where exactly are the two areas of residential property that are located under the primary, approach, or transitional surfaces?

Century West Engineering Response:

The noted residential areas are depicted on Figure 2-8 Zoning Map, colored coded by land use and jurisdiction.

Is pavement condition a consideration in allowing operations that exceeding weight limits? Who approves such requests? Are all requests granted? How many requests are granted versus denied? Please provide numbers.
Does a runway expansion cause the RPZ to impact other residential homes not currently impacted?

Century West Engineering Response:

Issues related to pavement strength, operational constraints, and RPZs will be addressed in Chapter 4, Facility Requirements. A stand-alone Runway Protection Zone (RPZ) evaluation technical memo will also be prepared as part of the Airport Master Plan.

Should the utilities section on page 2-39 address fire and police protection?

Century West Engineering Response:

We will add a summary of existing fire and police protection responsibilities and services to expand on the following description.

"In the early 2000s, with the assistance of Marion County, the Aurora Airport Water Control District was created to address major fire and life safety needs for privately-owned land adjacent to ODAV property at the Airport. The system included an underground tank system, a pump house, underground water pipes, fire hydrants, and numerous connections for fire sprinkler systems."

What are some examples of 'FAA noncompliance' as described on p 2-41?

Century West Engineering Response:

See FAA Order 5190.6B, Airport Compliance Manual for additional information on airport sponsor noncompliance. The FAA has not indicated any grant assurance compliance issues for this airport.

11. Chapter 3, Aviation Activity Forecasts, Raises Questions that Are Unanswered.

Chapter 3 lists Annual Aircraft Operations only for the years 2016 thru 2021; however, the same chapter uses 2012 thru 2021, for example Aurora State Airport Instrument Flight Operations. The same, consistent set of years should be used for all data tables and analysis, 2012 thru 2021. In consistent use of comparison years does not provide for the public to be able to determine accurate data, and could be interpreted as agency data/process manipulation.

Century West Engineering Response:

Historical annual aircraft operations for 2016-2021 (Table 3-6) corresponds to the operation of the air traffic control tower (ATCT). Instrument flight plan data (TFMSC) (Table 3-7) is collected independently by FAA based on instrument flight plan filings; these data predate the opening of the ATCT, and the extended historical period provides valuable information that is relevant to the development of new aircraft operations forecasts and fleet mix analyses. Both data sets are generated by the Federal Aviation Administration (FAA); the FAA ATCT data has been adjusted to account for operations that occur outside of normal ATCT hours of operation (methodology noted).

Page 3-8, if the number of active commercial and private pilots will decline as indicated, how will operations increase? This appears to be contradictory information.

Century West Engineering Response:

See FAA Long Range Aerospace Forecast (FY2021-2041) for forecast assumptions. The forecast average annual growth rates for each component are based on national activity trends within the entire civil aviation system.

Is there a decibel level that should not be exceeded in residential areas near GA airports?

Century West Engineering Response:

A summary of FAA noise exposure and land use compatibility standards will be provided as part of the noise contours to be presented later in the master plan. FAA noise compatibility criteria is based on a day/night average of cumulative noise exposure, not single events. A review of Oregon airport noise regulations (Rule 340-035-0045 Noise Control Regulations for Airports) will also be included.

How many of the total aircraft operations are touch-and-go landings? That is, many members of the public suspect that ODAV is "artificially" inflating the operations count by including pilot training touch-and-go landings, each of which counts as two operations (touching down to runway and then lifting off of runway).

Century West Engineering Response:

FAA ATCT data provides local and itinerant break outs of aircraft operations in accordance with standard FAA air traffic counting methodology. Touch and go operations are included in the local subtotal. Yes, each touch and go sequence is counted as 2 operations (one landing and one takeoff) per aircraft. As a result, 2 recorded operations correspond to 1 aircraft, so any number of touch and go operations can be divided by half to approximate the number of aircraft being accommodated for this activity. ODAV does not have the authority to modify ATCT-reported activity data.

How many of the based aircraft are seasonal – that is, located at Airport more than half the calendar year? How is seasonality measured and through what process? Are there multiple surveys in a year?

Century West Engineering Response:

The validated based aircraft count in the FAA National Based Aircraft Inventory Program (www.basedaircraft.com) includes aircraft that are permanently based at an airport or based at an airport for at least half of the preceding 12 months. The process of validating the based aircraft count performed by ODAV in consultation with FAA included eliminating aircraft that appeared in the FAA database at more than one airport, when the aircraft could be not verified as meeting the 6-month standard. The based aircraft counts are updated periodically as required by FAA, but not typically more than once per calendar year.

12. ODAV's Prior Master Plan Historical Forecasting Track Record Consistently Over Estimates the Projected Number of Based Aircraft and Operations.

Century West Engineering Response:

The assessments of current and forecast aviation activity presented in Chapter 3 (Working Paper No. 1) were developed independently for this master plan. These data are not influenced by previous forecasts or FAA forecast approvals.

As noted in Chapter 3, several factors are identified that make direct comparisons of current and previous analyses unreliable and would render any resulting conclusions unsound. Improved data accuracy has been achieved through use of six years of actual ATCT aircraft operations counts, 20 years of instrument flight plan (TFMSC) data, and a detailed verification of based aircraft at Aurora State Airport by ODAV airport management. In addition, based on FAA guidance, based aircraft and operations associated with the two privately owned adjacent helicopter facilities are no longer included in Aurora State Airport data, since the facilities operate independently.

The cited references (below) to previous forecasts are not relevant to the current airport master plan, although they are part of the historical record.

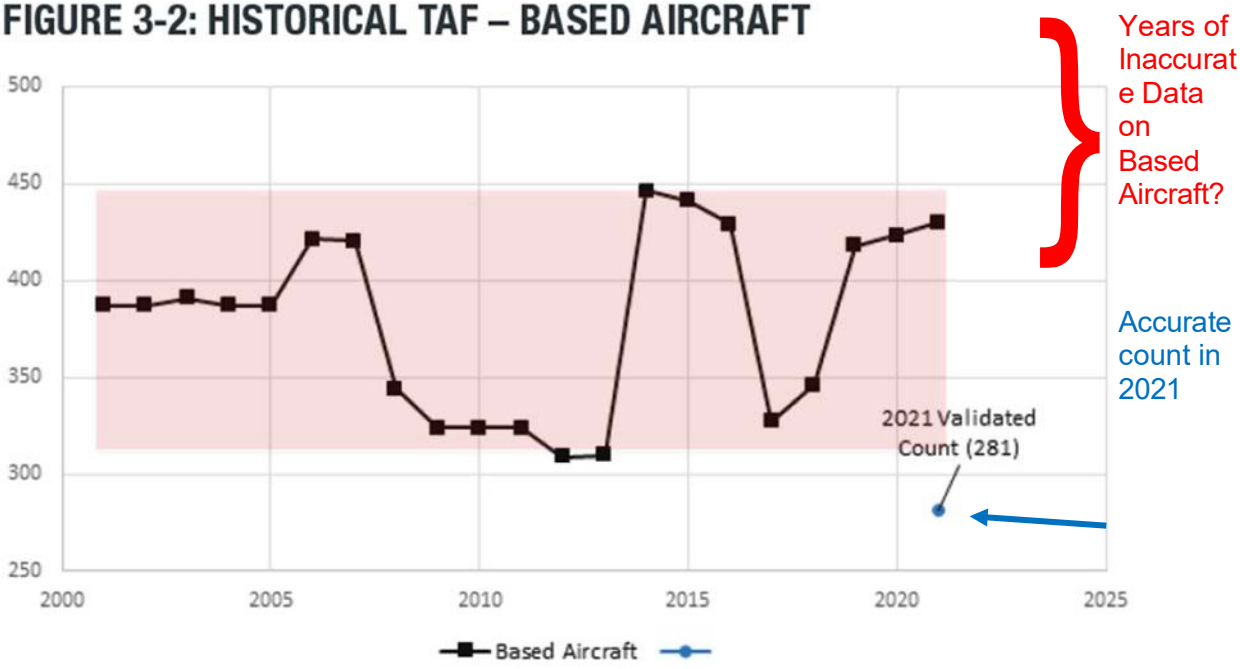
A review of prior ODAV master plan work in comparison to current data used in the 2022 Draft Master Plan demonstrates a historical track record of a high rate of error and most often overestimating the forecasted number of based aircraft, fleet mix and operations. Wide divergence between projections estimated 10 years ago and those of 2022 provide substantial reason to doubt the accuracy or validity of new 2022 Master Plan projections. When comparing the 2012 Aurora State Airport Master Plan Based Aircraft and Fleet Mix Forecast compared to the new Draft 2022 Aurora State Airport Master Plan, the prior forecast for total based aircraft was off by 44%—overestimating the total number of Based Aircraft. Additionally, most of the Fleet Mix Forecast was also off substantially:

2012 and 2022 Master Plans Forecast of Based Aircraft and Fleet Mix Forecast: 2020/2021 Timeframe

Year		Single Engine	Multiengine Piston	Turboprop	Jet	Helicopter	Other	Total
2012 Master Plan	2020	288	25	20	33	34	5	405
2022 Draft Master Plan	2021	216	6	13	36	10	0	281
# Variance		72	19	7	-3	24	5	124
% Variance		33%	317%	54%	-8%	240%	—	44%

ODAV's historical track record of overestimating the number of Based Aircraft at the Aurora State Airport is reflected in this graph in the new 2022 Draft Master Plan, p 3-15. Only when ODAV conducted an actual inventory of Based Aircraft in 2021 with a "Validated Count" of 218 did the public learn the actual number of Based Aircraft was substantially lower than ever previously reported or estimated.

FIGURE 3-2: HISTORICAL TAF – BASED AIRCRAFT



Source: FAA TAF 2000-2045 (Aurora State Airport) www.taf.faa.gov

Century West Engineering Response:

The detailed verification of based aircraft at Aurora State Airport completed by ODAV in January 2022 through the FAA's National Based Aircraft Inventory Program is an example of the FAA's ongoing efforts to improve airport activity reporting by airports. Wide ranging fluctuations in TAF data are not uncommon, which is why the data is viewed as an approximation that requires additional verification. Based on a review of historical trends, it appears that the fluctuations depicted in historical TAF data for the Airport reflect both counting anomalies and actual fluctuations in activity. For example, the 2021 count reflects recent FAA guidance requesting that aircraft based at the two privately owned adjacent helicopter facilities not be included in the Aurora State Airport data, where they have historically been reported.

When projecting out an additional 10 years to 2030 timeframe, the 2012 forecast margin of error increases by a third—increasing the over-estimate from 44% to 65%—compared to the 2022 forecast. The 2012 Master Plan projected a total 464 based aircraft by 2030, while the new 2022 Master Plan projects 281 based aircraft by 2031, representing a 65% overestimate compared to the new 2022 estimate.

2012 and 2022 Master Plans Forecast of Based Aircraft and Fleet Mix Forecast: 2030/2031 Timeframe

Comparison by Plan of Based Aircraft	Year	Single Engine	Multiengine Piston	Turboprop	Jet	Helicopter	Other	Total
2012 Master Plan	2030	316	27	26	47	43	5	464
2022 Draft Master Plan	2031	240	6	15	15	16	0	281
# Variance		76	21	11	32	27	5	183
% Variance		32%	350%	73%	213%	169%	—	65%

Data sources:
2012 Master Plan Table 3J. Based Aircraft and Fleet Mix Forecast, p 3-22
2022 Draft Master Plan Table 3-14: Forecast Based Aircraft Fleet Mix, p 3-19

The point here is that the prior 2012 Master Plan Based Aircraft and Fleet Mix Forecast was substantially off the mark on most counts. As listed below with the Operations Forecast, it appears that overestimating is common problem with Aurora State Airport Master Plans. When comparing the 2012 Aurora State Airport Master Plan Operations Fleet Mix Forecast compared to the new Draft 2022 Aurora State Airport Master Plan, the prior forecast overestimated operations by 40% compared to the new 2022 estimate.

2012 and 2022 Master Plans Forecast of Operations Fleet Mix Forecast: 2020/2021 Timeframe

	Year	Single Engine	Multiengine Pisto	Turboprop	Jet	Helicopter	Total
2012 Master Plan	2020	37,218	7,444	11,697	15,951	34,028	106,338
2022 Draft Master Plan	2021	60,823	760	3,041	5,322	6,082	76,028
# Variance		-23,605	6,684	8,656	10,629	27,946	30,310
% Variance		-39%	879%	285%	200%	459%	40%

When projecting out an additional 10 years to 2030 timeframe, the 2012 forecast margin of the Operations Fleet Mix continues a pattern of overestimating total operations and mis-estimating the fleet mix operations count.

2012 and 2022 Master Plans Forecast of Operations Fleet Mix Forecast: 2030/2031 Timeframe

	Year	Single Engine	Multiengine Pisto	Turboprop	Jet	Helicopter	Total

2012 Master Plan	2030	37,316	8,707	14,926	22,389	41,047	124,386
2022 Draft Master Plan	2031	75,143	764	4,297	7,638	7,638	95,480
# Variance		-37,827	7,943	10,629	14,751	33,409	28,906
% Variance		-50%	1040%	247%	193%	437%	30%

Data sources:
2012 Master Plan Table 3Table 3M. Operations Fleet Mix Forecast, p 3-29
2022 Draft Master Plan Table 3-16: Operations Fleet Mix, p 3-22

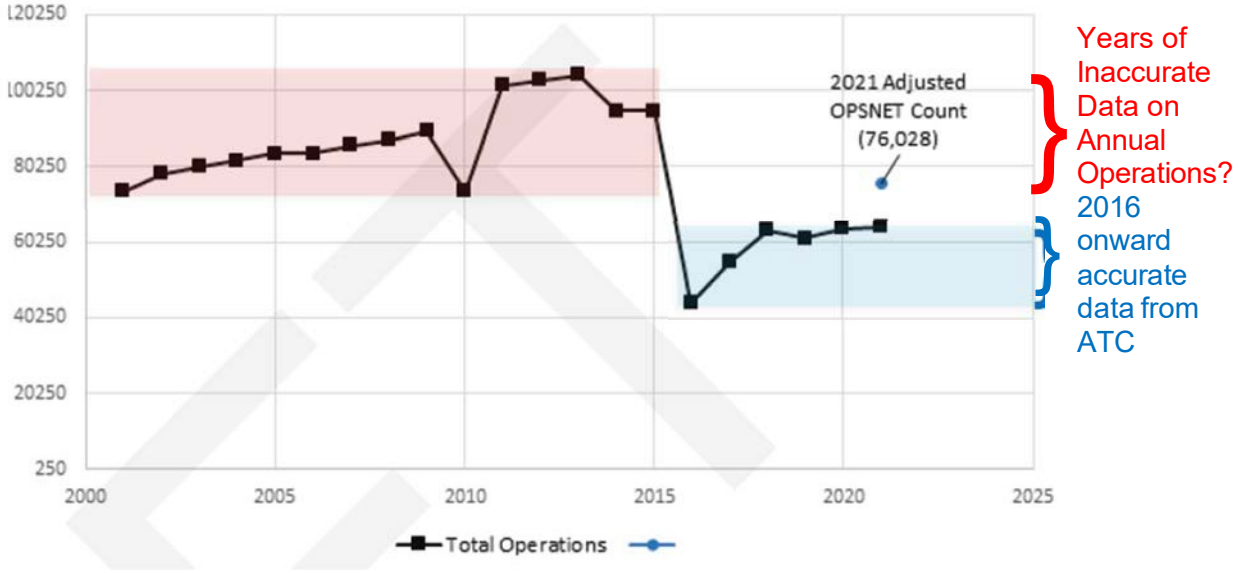
ODAV's historical record of inaccurate, over-estimated Operations count at the Aurora State Airport is reflected in this graph in the new 2022 Draft Master Plan, p 3-15. Only when the Aurora State Airport Air Traffic Control Tower opened in 2015 did accurate operational data become available that showed ODAV's gross overestimation of prior years' annual aircraft operations.

Additionally, despite having FAA Operations Network (OPSNET) Traffic Counts datasets that show 69,742 total operations in 2021 (2022 Draft Master Plan Table 2-6: OPSNET Airport Traffic Counts, p 2-10) ODAV inexplicably inflated the annual aircraft operations count by 6,286 or 9%, providing an even higher starting point for forecast operations.

Century West Engineering Response:

The adjusted airport operations totals presented in Table 3-6 were developed by Century West Engineering as part of its technical analysis of FAA OPSNET data. The rationale for the adjustments is explained in the text immediately preceding Table 3-6. As noted in chapter, the FAA OPSNET data for the Airport captures aircraft operations only during the 13-hour per day ATCT hours of operation. Failing to account for operations that occur when the ATCT is closed would underestimate actual activity.

FIGURE 3-3: HISTORICAL TAF – ANNUAL AIRCRAFT OPERATIONS



The highly inaccurate 2012 Aurora State Airport Master Plan Based Aircraft and Fleet Mix Forecast and Operations Fleet Mix Forecast compared to new Draft 2022 Draft Aurora State Airport Master Plan does not provide confidence in aviation forecasting. This becomes even more so when the Draft 2022 Draft Aurora State Airport Master Plan opts to ignore data contained in the recent 2019 Constrained Operations Study.

Century West Engineering Response:

As noted in Chapter 3, several factors are identified that make direct comparisons of current and previous analyses unreliable and would render any resulting conclusions unsound.

13. 2022 Draft Master Plan Ignores Recent 2019 Forecast Operations.

The new Draft 2022 Master Plan appears to ignore ODAV/FAA compiled operational flight data and forecast developed in the 2019 Constrained Operations Runway Justification Study for the Aurora State Airport, funded with a $70,000 ODAV grant. The Draft Master Plan does not justify or explain why the 2022 Draft Master Plan's forecasts vary so considerably from the previously FAA-approved 2019 Constrained Operations Runway Justification Study.

The forecast of operations variance between the new 2022 Draft Master Plan and the already approved FAA 2019 Constrained Operations Runway Justification Study starts with a 6% or 4,315 increase in 2021 and escalates to a differential of 58% or 44,033 annual operations by 2041.

It seems implausible that an FAA-approved aviation operations forecast conducted in 2019 just two years prior to the 2021 baseline date of the 2022 Draft Master Plan could be so utterly incorrect as forecast in the 2022 Draft Master Plan. A more plausible explanation is that ODAV is continuing an established pattern of overestimating operations forecast that result in a decision to extend the runway and expand the Airport's through-the-fence footprint onto prime EFU ag land.

The comparison of Forecast Operations between the new 2022 Draft Master Plan and the 2019 Constrained Operations Runway Justification Study demonstrates a significant variation from the Study's just-published forecast. Rhetorically speaking, if we can't rely on the 2019 forecast, why would we trust the 2022 forecast?

2022 Master Plan and 2019 Constrained Operations Study Forecast of Operations

	2021	2026	2031	2036	2041
2022 Draft Master Plan, p 3-23	76,028	85,201	95,480	107,000	119,909
Constrained Operations Study, p 1-14	71,713	72,706	73,939	74,788	75,876
# Variance	4,315	12,495	21,541	32,212	44,033
% Variance	6%	17%	29%	43%	58%

Data sources:
2022 Draft Master Plan Table 3-16: Operations Fleet Mix, p 3-22
2019 Constrained Operations Runway Justification Study, p 1-14

Century West Engineering Response:

The assessments of current and forecast aviation activity presented in Chapter 3 (Working Paper No. 1) were developed independently for this master plan. These data are not influenced by previous forecasts or FAA forecast approvals, nor was there any attempt to link the various forecasts. Previous forecasts are part of the historical record for the Airport, but they are not relevant for the purposes of statistical comparison with the 2021-2041 forecasts.

14. Draft Master Plan Fails to Account for Federal and State Effort to Reduce Climate-Changing Carbon and Greenhouse Gas (GHG) Emissions.

Finally, the 2022 Draft Master Plan makes NO effort to address the highly relevant issue of federal and state effort to reduce climate-changing carbon and greenhouse gas (GHG) emissions. In fact, by advocating for Airport runway extension and increase in fuel flowage that benefits ODAV's coffers, the agency is directly contradicting Oregon Governor's Office Executive Order 20-04 on Climate Action "Directing State Agencies to Take Actions to Reduce and Regulate Greenhouse Gas Emissions" that directs DEQ to develop strategies that "Cap and Reduce Greenhouse Gas Emissions."

The 2022 Draft Master Plan documents that over 4.2 million gallons of fuel have been sold at the Airport between 2016 and 2021 (Table 3-4: Fuel Flowage (Gallons)). Based on a standard conversion factor of 22.38 pounds of CO2 produced by burning a gallon of diesel fuel, the Airport has emitted an estimated 95 million pounds of CO2 during this timeframe. The 2022 Draft Master Plan anticipates generating additional CO2 by advocating development without addressing remediation or reduction strategies.

One of the major reasons stated during OAB meetings and PAC meetings by OAB members,

ODAV staff and aviation interests in support of Aurora State Airport runway extension is to increase the sale of aviation fuel so that a larger class of aircraft may takeoff from the airport with full tanks of gas. Again, note that the tax on aviation fuel is the primary source of operational revenue for ODAV. Thus, the agency itself has a direct pecuniary interest in advocating for increased aviation-gas fuel sales that would accompany expansion of the Aurora State Airport, seemingly in direct conflict with the Governor's Executive Order on Climate Action.

Century West Engineering Response:

Addressing leaded aviation fuel concerns is not within the scope of the Airport Master Plan project or ODAV authority. Under the Clean Air Act (CAA), the Environmental Protection Agency (EPA) has the authority (in consultation with the FAA) to regulate emissions from aircraft. Currently there are no regulations that apply to emissions from aircraft that use leaded fuel. There are ongoing nationwide efforts to address leaded fuel use in aviation and also emissions from jet exhaust. The purpose of these efforts is to investigate fuel alternatives to reduce emissions and the presence of lead in aviation fuel.

More information on these programs is available at:
https://www.faa.gov/airports/environmental/air_quality and
https://www.faa.gov/newsroom/leaded-aviation-fuel-and-environment

The City of Wilsonville appreciates consideration of our comments and looks forward to ODAV and FAA responses to the issues of concern and questions raised regarding the 2022 Draft Master Plan Chapters 1-3. Thank you for your time and consideration.
Sincerely,

Mark Ottenad, Public/Government Affairs Director
City of Wilsonville

Exhibits:

A. December 13, 2021: Mayors of the Aurora State Airport Communities—Aurora and Wilsonville—Letter to The Honorable Kate Brown, Governor of Oregon, c/o Staff of the Office of the Governor, RE: Issues of Public Concern with Oregon Department of Aviation's Aurora State Airport Master Planning Process
B. August 4, 2021: City of Wilsonville Mayor Julie Fitzgerald Letter to Martha Meeker, Chair, Oregon Aviation Board, and Betty Stansbury, Aviation Director, RE: Public Disenfranchisement by the Oregon Aviation Board for the Proposed 2021-22 Aurora State Airport Master Planning Process
C. July 6, 2021: City of Aurora Mayor Brian Asher and City of Wilsonville Mayor Julie Fitzgerald letter to The Honorable Ron Wyden, U.S. Senator, and The Honorable Jeff Merkley, U.S. Senator, RE: Request for Your Intervention in Ensure Proper Award of FAA Grant Funds to the Oregon Department of Aviation for Aurora State Airport Master Plan Update
D. June 17, 2021: Representative Courtney Neron, HD-26, and Representative Susan

McLain, HD-29, letter to Martha Meeker, Chair, Oregon Aviation Board, Betty Stansbury, Aviation Director, RE: 2021 Aurora State Airport Master Planning Process

E. June 14, 2021: City of Wilsonville Mayor Julie Fitzgerald Letter to Martha Meeker, Chair, Oregon Aviation Board, and Betty Stansbury, Aviation Director, RE: Concerns with Proposed 2021-22 Aurora State Airport Master Planning Process

F. August 8, 2018: Clackamas County Board Chair Jim Bernard and City of Wilsonville Mayor Tim Knapp letter to the Governor, Senate President and House Speaker: RE: Request to Cancel Oregon Department of Aviation application to Federal Aviation Administration (FAA) for funds to extend the Aurora State Airport runway

cc: Members of the Oregon Congressional Delegation: Senator Wyden, Senator Merkley, Congressman Schrader

Office of Governor Kate Brown

Members of the Oregon Legislature: Speaker Rayfield, Senate President Courtney, Representative McLain, Representative Courtney Neron

Leading Oregon Gubernatorial Candidates Christine Drazan, Tina Kotek, Bud Pierce, Tobias Read, Bob Tiernan, Betsy Johnson

FAA Northwest Mountain Region administrators: Director Fernuik, (Acting) Manager Seattle Airports District Office Manager Ferrell, Planning & Programming Branch Manager Schaffer, Safety & Standards Branch Manager Ritchie

Mayors of the Aurora State Airport Area Communities

Aurora Wilsonville

December 13, 2021

The Honorable Kate Brown, Governor of Oregon
c/o Staff of the Office of the Governor — *Submitted via email to:*
Gina Zejdlik, Chief of Staff — *gina.zejdlik@oregon.gov*
Amira Streeter, Policy Advisor–Climate, Energy and Transportation — *amira.streeter@oregon.gov*
Annie McColaugh, Director–Federal Affairs — *annie.mccolaugh@oregon.gov*
Jason Miner, Policy Director–Natural Resources — *jason.miner@oregon.gov*
Leah Horner, Director–Regional Solutions — *leah.horner@oregon.gov*
Jody Christensen, Mid Valley Regional Solutions Coordinator — *jody.christensen@oregon.gov*

RE: Issues of Public Concern with Oregon Department of Aviation's Aurora State Airport Master Planning Process

Dear Governor Brown:

We write to you as the elected leaders of the communities located in closest proximity to the Aurora State Airport to express our profound disappointment at the Oregon Department of Aviation's biased handling of the Aurora State Airport Master Planning process. Our communities bear the brunt of impacts of the airport's operations, and yet the Aviation Department appears to be discounting our concerns and is primarily responsive to vested financial interests at the airport.

This observation is true in general, as Department of Aviation staff and board members indicate meeting constantly with private-sector airport interests, while rarely meeting with local community members, city councilors and staff. Multiple communications from officials at the Cities of Aurora and Wilsonville to the Aviation Department over the past several years are generally ignored and not responded to.

The Cities of Aurora and Wilsonville, along with other Planning Advisory Committee (PAC) members to the Department of Aviation's Aurora State Airport Master Planning process such as 1000 Friends of Oregon and Friends of French Prairie, seek to raise significant issues of public concern. This federally funded master plan has gotten off to a rocky start in a manner that demonstrates the Department's apparent bias and inability at providing fair public processes that meet Oregon's standards for meaningful public engagement.

We are concerned that the Department of Aviation is again making similar mistakes as it did with the 2011 or 2012 Aurora State Airport Master Plan process that both the Oregon Supreme Court and the Oregon Court of Appeals found in 2021 violated Oregon land-use and public-process laws. We request that the Governor's Office demonstrate decisive leadership that provides confidence to local-government officials that federal and state planning processes are

conducted in a legal and ethical manner above reproach, which at this time appears questionable.

A primary concern pertains to the extremely lopsided membership composition of the Planning Advisory Committee (PAC). The Department of Aviation has stacked the Planning Advisory Committee with self-dealing financial interests at the Airport that benefit from taxpayer-funded Airport operations and capital improvements. A review of the PAC membership demonstrates that well over half of the PAC membership is comprised of entities with direct pecuniary interest in furthering airport expansion at taxpayer expense.

The same pro-airport expansion entities are represented multiple times on the PAC. Two associations placed on the PAC are composed of a majority of Airport financial interests:

- The attorney for the Aurora Airport Improvement Association represented at the June 3, 2021, Oregon Aviation Board meeting that most of the businesses at the Aurora State Airport belonged to the Aurora Airport Improvement Association.
- In a similar manner, most of the same airport entities are also members of Positive Aurora Airport Management association, a local airport operations management group.

By all appearances, the process and committee composition has the appearance of a "tick the box" exercise in public involvement. This leaves us to conclude that the outcome is predetermined and that the inevitable result will lead to airport expansion regardless of the impacts on safety, the environment and surrounding infrastructure.

Another key problem is that the Department of Aviation has omitted two key state agencies as PAC members: Department of Agriculture and Department of Environmental Quality (DEQ). The Aurora State Airport is located in the heart of the Oregon's best "foundation farmland" of French Prairie, which hosts some of Oregon's foremost traded-sector ag producers, nurseries and food processors. Real-estate speculation and uncontrolled urban-level development—as are occurring at the Aurora State Airport area—are harmful to this prime ag-sector economic cluster. By excluding the Department of Agriculture from the public process, the Department of Aviation continues a trend of excluding parties that may provide valuable information or may question the Aviation agency's objectives.

We read in the media that the US Environmental Protection Agency (EPA) indicates that 750 Oregon sites could expose residents to 'forever chemicals' of per- and poly-fluorinated substances or PFAS, where growing evidence points to their adverse health effects, including some cancers. In Oregon, the state Department of Environmental Quality (DEQ) is testing locations including the Aurora State Airport for known or suspected PFAS use. Again, the Department of Aviation's exclusion of DEQ demonstrates an on-going pattern of discriminatory conduct.

We understand that the Governor's Office Executive Order 20-04 on Climate Action "Directing State Agencies to Take Actions to Reduce and Regulate Greenhouse Gas Emissions" (GHG)

directs DEQ to develop strategies that "Cap and Reduce Greenhouse Gas Emissions." We are concerned that representatives of the Governor's Office appointed to the Oregon Aviation Board and Department of Aviation staff simultaneously are advocating for major expansion of the Aurora State Airport that results in substantial increases in aviation-gas fossil-fuel consumption and GHG emissions, contrary to the Executive Order on Climate Action.

One of the major reasons stated by aviation interests for Aurora State Airport runway extension is to increase the sale of aviation fuel so that a larger class of aircraft may takeoff from the airport with full tanks of gas. We note that the tax on aviation fuel is the primary source of operational revenue for the Department of Aviation. Thus, the Department of Aviation has a direct pecuniary interest in advocating for increased aviation-gas fuel sales that would accompany expansion of the Aurora State Airport, seemingly in direct conflict with the Governor's Executive Order on Climate Action.

Additionally, DEQ data appears to indicate that the NMPDES (National Pollution Discharge Elimination System) permit for the Department of Aviation's Aurora State Airport discharge into Mill Creek-Pudding River watershed expired June 30, 2017. We understand that area residents have expressed concerns for surface-water, ground-water and well-water quality due to prospective airport run-off pollutants, unregulated septic systems and potential ground water pollution. Cumulatively, these all appear to be good reasons from the Department of Aviation's perspective to exclude DEQ from Airport planning efforts.

The Department of Aviation's tightly controlled master planning process fails to meet the test for meaningful public engagement. The Zoom meeting format used by the Department of Aviation does not list or show all participants in the meeting and provide clear labeling of names and affiliations. It is unclear to the public who is attending the meetings and who or what entity that participants represent. At the November 16, 2021, PAC meeting, it was difficult to ascertain from many of the name labels who was attending in what role. Names and affiliations of all PAC members and staff/consultants should be clearly evident.

Additionally, some PAC members were allowed to have two representatives participate in the meeting, while some PAC members were ignored and not allowed to participate in the meeting. These elements indicate a failure of meaningful public process.

The facilitators for the PAC meeting used a series of unscientific "polls" to gauge participants' thoughts or perspectives; however, it was unclear who was participating — was it PAC members, Aviation staff and consultants, and/or the public? Moreover, the facilitators interpreted the results of the poll that may or may not be an accurate reflection of the participants involved.

The Department of Aviation states that "As the airport sponsor, ODA staff will be the final decision-making authority. They will decide what is included in the Master Plan." Setting aside the fact that this pronouncement at the start of a "public involvement" process sends a message that is contrary to Oregon's Statewide Planning Goal Number 1, we believe this is false

information; only the appointed body *(i.e.,* the Oregon Aviation Board) can legally approve a master plan. The failure of the Aviation Board to adopt the 2011 or 2012 Aurora State Airport Master Plan was a centerpiece for the Oregon Supreme Court's affirmation of the Court of Appeal's decision against the Department of Aviation for failure to comply with Oregon law.

During the November 16, 2021, PAC meeting, aviation consultants indicated that they would consider nearby external "outside the fence" proposed urban-level developments in the Airport master-planning process — implying that such proposed developments would favor Airport expansion. However, the consultants gave no indication of reviewing such information in light of Oregon's EFU land-use laws, nor the potential reality of such proposed developments ever actually occurring. Additionally, consultants gave no indication of considering the "negative" aspects of proposed developments outside the Airport, such as increased surface-transportation impacts/traffic congestion and potential mitigation, increased land-speculation harming the ag industry, and increased pollution and environmental impacts.

The Department of Aviation has allowed and promoted the dissemination of false information about the seismic resilience of the Aurora State Airport. At the October 6, 2021, Oregon Aviation Board planning session and at the November 16, 2021, PAC meeting, misinformation about the seismic conditions of the Aurora State Airport area was provided without rebuttal. At the October meeting, the Aviation Board had considerable discussion on resilience, and the importance of selling the resilience concept to the public and government officials as a component of building support for state and federal funds for the Aurora State Airport expansion. Aviation Board Chair Meeker indicated a desire to improve "lines of communication" between the Governor's Office and airport businesses to promote resilience.

Contrary to statements that depict the Aurora State Airport as a crucial facility for the projected 9.0 Cascadia Subduction Zone Earthquake, the Aurora State Airport is listed at the lowest-level of Tier 3 airports in the Oregon Resilience Plan. The Tier designations "indicate the priorities for making future investments." In other words, the Department of Aviation is effectively targeting one of the lowest priority airports to prepare for recovery in the Oregon Resilience Plan for potentially one the largest airport capital improvement projects ever planned by the state.

With respect to the airport's ability to withstand a Cascadia Subduction Zone Earthquake, reports by the Oregon Department of Geology and Mineral Industries (DOGAMI) show that the Aurora State Airport is located in an area subject to major potential damage in a projected 9.0 Cascadia Subduction Zone Earthquake. The "Mid/Southern Willamette Valley Geologic Hazards, Earthquake and Landslide Hazard Maps, and Future Earthquake Damage Estimates," DOGAMI publication IMS-24, shows that the Aurora State Airport specifically is located in an area:

- Rated High for Ground Shake Amplification
- Rated High for Amplification Susceptibility
- Rated Moderate to High for Liquefaction Susceptibility

The same deep, fine soils that make the French Prairie area such exemplary foundation farmland also mean these soils are subject to amplification and liquefaction. As a result of such an earthquake, the airport runway would likely be unserviceable for a long period of time (6-12 months) post-earthquake. Rather than allow aircraft to take off or land due to an inoperable runway, the most likely role of the Aurora State Airport will be to accommodate vertical take-off and landing of heavy-lift helicopters with locally-based Columbia Helicopters and Helicopter Transport Services, neither of which require a runway extension to operate.

In all of our years of government service, we have never seen a state agency act with such disregard to the concerns of the local communities, and appropriate and fair public process. We request your intervention now to provide for an unbiased process that produces trust-worthy results. We believe that if the Department of Aviation were to comply with—rather than seek to evade—the letter and spirit of Oregon's land-use and public-process laws, judicial intervention to set a course correction would not be a necessary remedy that must be pursued by local governments and concerned citizens.

Again, we appreciate your time and consideration of these important issues, and we look forward to your response. Thank you.

Sincerely,

Brian Asher, Mayor
City of Aurora

Julie Fitzgerald, Mayor
City of Wilsonville

Enc:

- Letter from Cities of Aurora and Wilsonville to Sen. Lee Beyer and Rep. Susan McLain, Co-Chairs Joint Committee on Transportation, RE Request for Public Hearing on HB 2497 – Proposed Legislation to Create Transparent Public Process for State Aviation Department Agency Communications and Coordination with Local Governments and Communities on Aurora State Airport Issues of Concern, March 11, 2021
- Aurora State Airport in Relation to The Oregon Resilience Plan and DOGAMI Earthquake Susceptibility Maps – 2019

cc: Oregon Aviation Board
Senator Ron Wyden
Senator Jeff Merkley
Congressman Kurt Schrader
Congresswoman Suzanne Bonamici
House Speaker Tina Kotek
Senate President Peter Courtney
Representative Susan McLain (HD 29)
Representative Courtney Neron (HD 26)
Representative Christine Drazan (HD 39)
Senator Bill Kennemer (SD 20)
Metro Council President Lynn Peterson
Metro Councilor Garrett Rosenthal
Clackamas County Board of County Commissioners
Marion County Board of County Commissioners
FAA Mountain Region staff
Heather Fernuik, Director
Chris Schaffer, Planning & Programming Manager
Warren Ferrell (Acting) Manager, Seattle Airports District Office

March 11, 2021

Senator Lee Beyer, Co-Chair — *Sen.LeeBeyer@oregonlegislature.gov*
Representative Susan McLain, Co-Chair — *Rep.SusanMcLain@oregonlegislature.gov*
Joint Committee on Transportation — *patrick.h.brennan@oregonlegislature.gov*
Oregon Legislative Assembly

RE: Request for Public Hearing on HB 2497 – Proposed Legislation to Create Transparent Public Process for State Aviation Department Agency Communications and Coordination with Local Governments and Communities on Aurora State Airport Issues of Concern

Dear Co-Chairs Beyer and McLain and Members of the Committee:

We are writing to you as the elected leaders of two cities each located near the Aurora State Airport to request your support this legislative session in resolving a decade's-long controversy between the Oregon Department of Aviation (ODA) and our communities regarding the agency's uncooperative attitude with respect to the Aurora State Airport Master Plan and management of the airport.

At the request of the Aurora and Wilsonville City Councils, Representative Courtney Neron (HD-26) has introduced HB 2497 as a "process bill" that does not dictate predetermined results. Rather, the proposed legislation creates an open transparent, public process to establish formal channels of intergovernmental communication and coordination between the state Aviation agency and directly impacted local governments, which has been sorely lacking over the past 10 years.

We believe that ODA circumvented Oregon public-process laws regarding the purported adoption of the *2012 Aurora State Airport Master Plan.* Ever since we began disputing what we view as an illegal process, the state agency has been virtually unresponsive to our local communities. We are alarmed about the agency's efforts to promote increasingly urbanized levels of activity in unincorporated county territory of high-value EFU farmland without inviting meaningful public input and without supporting public infrastructure — all contrary to Oregon Goals for citizen-involvement and land-use planning. The PSU Oregon Solutions' *Aurora State Airport Assessment Report* commissioned by the legislature in 2018 found a host of agency management troubles, improper influence and poor public engagement and communications problems regarding ODA's operations and planning at the Aurora State Airport.

HB 2497 also provides for updating the controversial *2012 Aurora State Airport Master Plan* that has been the subject of significant community concern and litigation, conducting a much-needed environmental assessment of current airport pollution levels, and planning for eventual annexation of the airport by the City of Aurora to provide municipal governance and urban services.

We respectfully request that the Joint Committee on Transportation provide a public-hearing opportunity for HB 2497 as a way to prepare a roadmap forward for resolving the 10-year-long Aurora State Airport conflict between the state agency and local communities. To date, *the only open public forum* on ODA's efforts to expand the Aurora State Airport was held by the Wilsonville City Council in November 2018 that drew 200 attendees.

Sincerely,

Brian Asher, Mayor
Mayor@ci.aurora.or.us

Julie Fitzgerald, Mayor
Mayor@ci.wilsonville.or.us

cc: Senate President Peter Courtney; House Speaker Tina Kotek; Gina Zejdlik, Governor's Chief of Staff

Aurora State Airport in Relation to The Oregon Resilience Plan and DOGAMI Earthquake Susceptibility Maps - 2019

The Oregon Resilience Plan

Reducing Risk and Improving Recovery for the Next Cascadia Earthquake and Tsunami

Report to the
77th Legislative Assembly

from
Oregon Seismic Safety Policy Advisory Commission (OSSPAC)

Salem, Oregon
February 2013

Air Transportation

The state of Oregon has an extensive aviation system that provides valuable transportation options for the public, ranging from small airports in remote regions of the state to large commercial service airports. Ninety-seven public-use airports provide support to the economic health and vitality of Oregon and contribute to the quality of life for its citizens and visitors.

- Fifty-seven public-use airports are partially supported by FAA and included in the National Plan of Integrated Airport System (NPIAS).
- Sixteen public-use airports are either owned by other municipalities or are privately owned.
- Over 400 private airports and landing strips are located within Oregon.

The 2007 Oregon Aviation Plan established five categories of airports, based on the definitions outlined within the National Plan of Integrated Airports System (NPIAS), the design criteria outlined by the Airport Reference Code (ARC), and the facilities inventory.

CATEGORY I: COMMERCIAL SERVICE AIRPORTS
These airports support some level of scheduled commercial airline service in addition to a full range of general aviation aircraft. This includes both domestic and international destinations.

CATEGORY II: URBAN GENERAL AVIATION AIRPORTS
These airports support all general aviation aircraft and accommodate corporate aviation activity including business jets, helicopters, and other general aviation activity. The primary users are business related and service a large geographic region, or they experience high levels of general aviation activity.

CATEGORY III: REGIONAL GENERAL AVIATION AIRPORTS
These airports support most twin and single engine aircraft, may accommodate occasional business jets, and support regional transportation needs.

CATEGORY IV: LOCAL GENERAL AVIATION AIRPORTS
These airports primarily support single engine, general aviation aircraft, but are capable of accommodating smaller twin-engine general aviation aircraft. They also support local air transportation needs and special use aviation activities.

CATEGORY V: REMOTE ACCESS AND EMERGENCY SERVICE AIRPORTS
These airports primarily support single-engine, general aviation aircraft, special use aviation activities, and access to remote areas; or they provide emergency service access.

The following list identifies airports within each category that have the potential to maintain or quickly restore operational functions after a major earthquake. The Transportation Task Group arranged these 29 airports into a tier system to indicate the priorities for making future investments. Tier 1 (T1) is comprised of the essential airports that will allow access to major population centers and areas

considered vital for both rescue operations and economic restoration. Tier 2 (T2) is a larger network of airports that provide access to most rural areas and will be needed to restore major commercial operations. Tier 3 (T3) airports will provide economic and commercial restoration to the entire region after a Cascadia subduction zone event.

Category I	Category II	Category III	Category IV	Category V
*Redmond (T1)	Scappoose (T2)	Tillamook (T2)	Mulino State (T3)	Independence State (T3)
PDX (T1)	Troutdale (T3)	Roseburg (T1)	Albany (T3)	Siletz Bay State (T2)
Salem (T1)	Hillsboro (T2)	Bandon State (T2)	Lebanon (T3)	Cape Blanco State (T2)
Eugene (T1)	Portland Heliport (T3)	Grants Pass (T3)	Florence (T3)	
Rogue Valley Medford (T1)			Creswell (T3)	
Klamath Falls (T1)	McMinnville (T3)		Cottage Grove State (T3)	
	Newport (T2)		Myrtle Creek (T3)	
	Corvallis (T3)		Brookings (T2)	

*Primary emergency response airport for FEMA Region X: Redmond municipal airport, centrally located in central Oregon, is ideally situated to be the primary FEMA emergency response airport.

Figure 5.16: Oregon Airports (Source: Oregon Department of Aviation)

The Portland International Airport (PDX) is one of Oregon's vital transportation network links. As the state's major airport, PDX will play a key role in re-establishing our economy by facilitating the movement of people, goods, and services after a major statewide emergency event. Other airports in Oregon will also play a vital role during the post-disaster emergency response and initial recovery phase. During the emergency response, for example, displaced residents, injured people, and the elderly may need to be evacuated by means of airports; and airports will also provide a staging area for needed supplies (such as water, food, medical supplies, and materials for temporary housing). Until highway and rail transportation can be fully restored, air transportation, along with ships off the coast, will be the lifelines for Oregon's citizens.

Oregon Transportation Resiliency Status

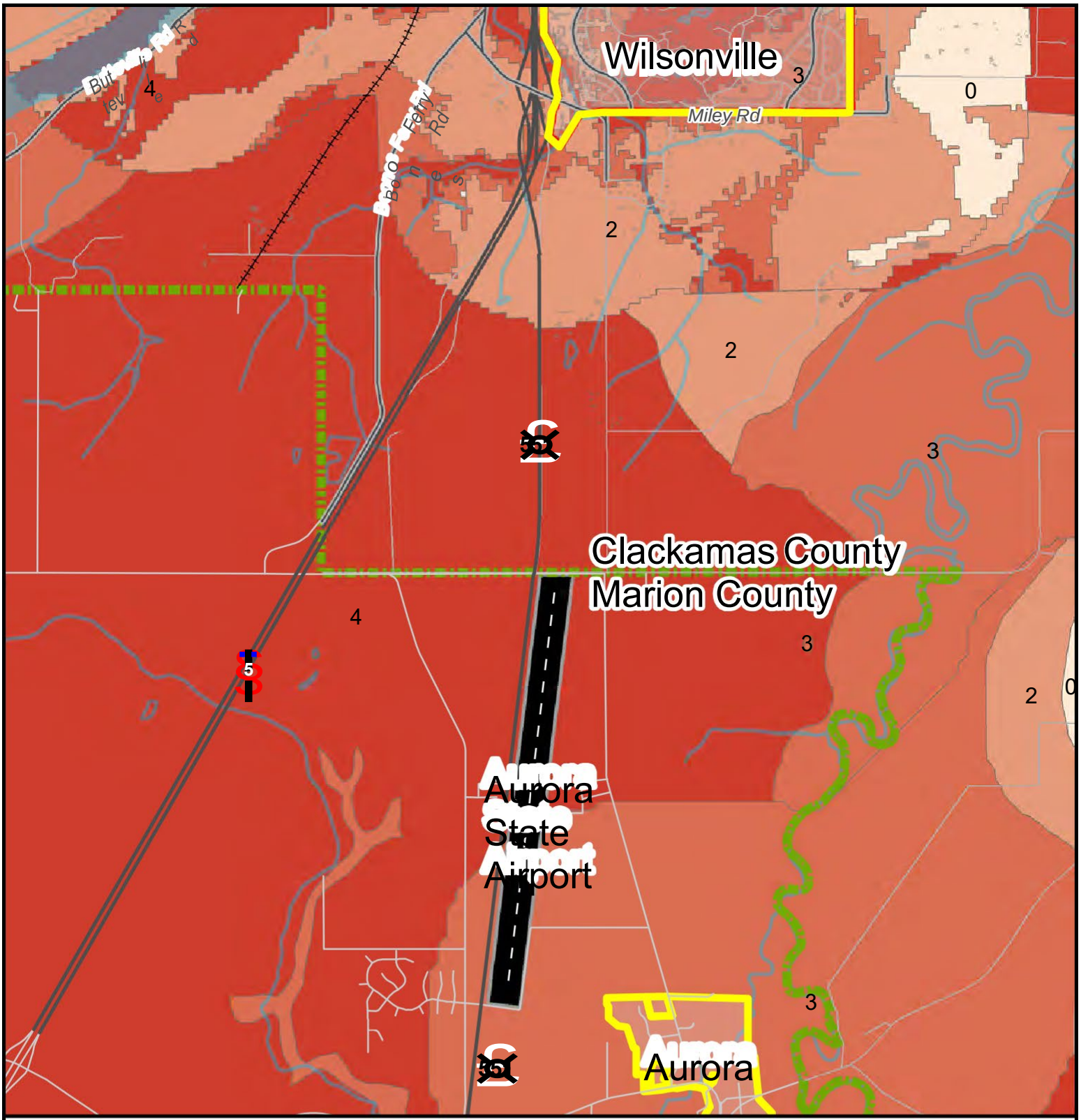
***Key to the Table**

TARGETS TO ACHIEVE DIFFERENT LEVELS OF RECOVERY:	
Minimal: (A minimum level of service is restored, primarily for the use of emergency responders, repair crews, and vehicles transporting food and other critical supplies.)	R
Functional: (Although service is not yet restored to full capacity, it is sufficient to get the economy moving again—e.g. some truck/freight traffic can be accommodated. There may be fewer lanes in use, some weight restrictions, and lower speed limits.)	Y
Operational: (Restoration is up to 90% of capacity: A full level of service has been restored and is sufficient to allow people to commute to school and to work.)	G
ESTIMATED TIME FOR RECOVERY TO **60%** OPERATIONAL GIVEN CURRENT CONDITIONS:	S
ESTIMATED TIME FOR RECOVERY TO **90%** OPERATIONAL GIVEN CURRENT CONDITIONS:	X

Comparison of Target States and Estimated Time for Recovery

Infrastructure Facilities	*Event Occurs*	*0 – 24 hours*	*1 – 3 days*	*3 – 7 days*	*1 – 4 weeks*	*1 – 3 months*	*3 – 6 months*	*6 – 12 months*	*1 – 3 years*	*3+ years*
Central Oregon Zone										
► OREGON STATE HIGHWAY SYSTEM										
State Highway System - Tier 1 SLR [1)]			R	Y	G			S	X	
Roadways			R	Y	G/S		X			
Bridges			R	Y	G		S	X		
Landslides			R	Y	G			S	X	
State Highway System - Tier 2 SLR			R		Y	G			S	X
Roadways			R		Y	G/S		X		
Bridges			R		Y	G		S	X	
Landslides			R		Y	G			S	X
State Highway System - Tier 3 SLR				R		Y	G		S	X
Roadways				R		Y	G/S		X	
Bridges				R		Y	G		S	X
Landslides				R		Y	G		S	X
State Highway System - Other Routes					R		Y	G	S	X
Roadways					R		Y	G	X	
Bridges					R		Y	G	S	X
Landslides					R		Y	G	S	X
► AIRPORTS & AIR TRANSPORTATION										
Tier I - Oregon Airports System										
Redmond Municipal Roberts Field Airport - FEMA		R	S		Y	G	X			
Klamath Falls Airport		R	S		Y	G	X			
FAA Facility			R	Y	G					
► OREGON RAIL TRANSPORTATION										
UPRR										
CA/OR State Line to Bieber Line Jct. (Klamath Falls)			Y	G	S	X				

Infrastructure Facilities	*Event Occurs*	*0 – 24 hours*	*1 – 3 days*	*3 – 7 days*	*1 – 4 weeks*	*1 – 3 months*	*3 – 6 months*	*6 – 12 months*	*1 – 3 years*	*3+ years*
Bieber Ln Jct. (Klamath Falls) to Chemult (Shared			Y	G	S	X				
Chemult to Eugene					Y	G	S	X		
BNSF										
CA/OR State Line to Bieber Line Jct. (Klamath Falls)		G	S	X						
Chemult to Redmond		G	S	X						
Redmond to O.T. Jct. (connection with UP at Columbia			Y	G	S	X				
► OREGON PUBLIC TRANSIT										
Admin & Maintenance Facilities [2)]						R	Y	G	S	X
Local Area Paratransit On-Demand Service (critical				R	Y	S	G	X		
Local Area Paratransit On-Demand Service (full						R	Y	G	S	X
Local Roadway Fixed Route Service (emergency				R	Y	S	G	X		
Local Roadway Fixed Route Service (regular						R	Y	G	S	X
Intercity & Commuter Bus [4)]						R	Y	G	S	X
Willamette Valley Zone										
► OREGON STATE HIGHWAY SYSTEM										
State Highway System - Tier 1 SLR [1)]			R	Y	G			S	X	
Roadways			R	Y	G		S	X		
Bridges			R	Y	G			S	X	
Landslides			R	Y	G			S	X	
State Highway System - Tier 2 SLR			R		Y	G			S	X
Roadways			R		Y	G	S	X		
Bridges			R		Y	G			S	X
Landslides			R		Y	G			S	X
State Highway System - Tier 3 SLR				R		Y	G		S	X
Roadways				R		Y	G	S	X	
Bridges				R		Y	G		S	X
Landslides				R		Y	G		S	X
State Highway System - Other Routes					R		Y	G	S	X
Roadways					R		Y	G	S	X
Bridges					R		Y	G	S	X
Landslides					R		Y	G	S	X
► AIRPORTS & AIR TRANSPORTATION[5)]										
Tier I - Oregon Airports System										
Portland International Airport (PDX) (Tier 1)		R			Y	S		G	X	
Salem McNary Field		R			Y	S		G	X	
Eugene Mahlon Sweet Filed		R			Y	S		G	X	
Rogue Valley International Medford		R			Y	S		G	X	
Roseburg Regional Airport		R			Y	S		G	X	
Tier III Oregon General Aviation Airport System										
Troutdale			R		S	Y		G		X
Portland Heliport			R		S	Y		G		X
Aurora State			R		S	Y		G		X
McMinnville Municipal			R		S	Y		G		X
Corvallis			R		S	Y		G		X



The City of Wilsonville, Oregon

Clackamas and Washington Counties

Liquefaction Susceptibility

Lower Higher

County Boundary

City Limits

M:\projects\2018\100918_Liq\Liq.mxd

WILSONVILLE OREGON

WILSONVILLE GIS

y: This map shows liquefacc

tion susce ptibilit y fo Orego

Airport Area Earthquake Liquefaction Susceptibility

n calculated following the methods of FEMA's 2011 HAZUS-MH MR4 technical manual. The map was prepared in support of a series of ground motion and ground failure maps for a scenario Magnitude 9.0 Cascadia Subduction Earthquake developed by the Oregon Department of Geology aand Mineral Industries. The scenario maps were prepared for the Oregon Sesimic Safety Policy Advisory Commission for its use in preparing a report to the 77th Oregon Legislative Assembly entitled " The Oregon Resilience Plan; Reducing Risk and Improving Recovery for the Next Cascadia Earthquake and Tsunami".

10/19/2018

0 **Miles** 0.5

01:EGON DEPARTMENT OF GEOLOGY AND MINERAL IND'USTRJES
IN1TE|RPRH1IVEMAP SE|RIIES 24

GEOLOGIC f-M.ZAR[)S, EARTHQUAKE AND LANDSLIDE HAZARD MA S. AND FUTURE EARTHQUAKEDAMAGE ESTIMATESFOR SIX COUNTIESIN THE MID/SOUIIHER!NW,ILLAMETTI VALLEY INUUDING YAMHILL, MAR[ON, POLK,. BENTON, LIINN, AN[) LANECOUNTIES AND IIHE CITY OF ALBANY, OREGON

APPENDIX E:
MARION COUNTY

CRUSTAL EARTHQUAKE SCENARIO

Scenario Detai.ls
Ground Motion Map

SUBDUCTIONIZONEEARTHQUAKE SCENARIO

Scen:irio Details
Ground Motion Map

GEOLOGIC HAZARD MAPS

Relative Ground-Shaking Amplification Susceptibl!ity Map
Relative Liquefaction Hazard Susceptibility Map
Relative Eanhquake-induced Lanwlide Susceptibility Map
Identified Landslide Areas Map

HAZUS,-MH G,LOBAL REPORTIFORCRUSTAL SCENARIO
HAZUS-M.H GU)BAL REPORT FORSUBDUCTION ZOIIIE SCENARIO

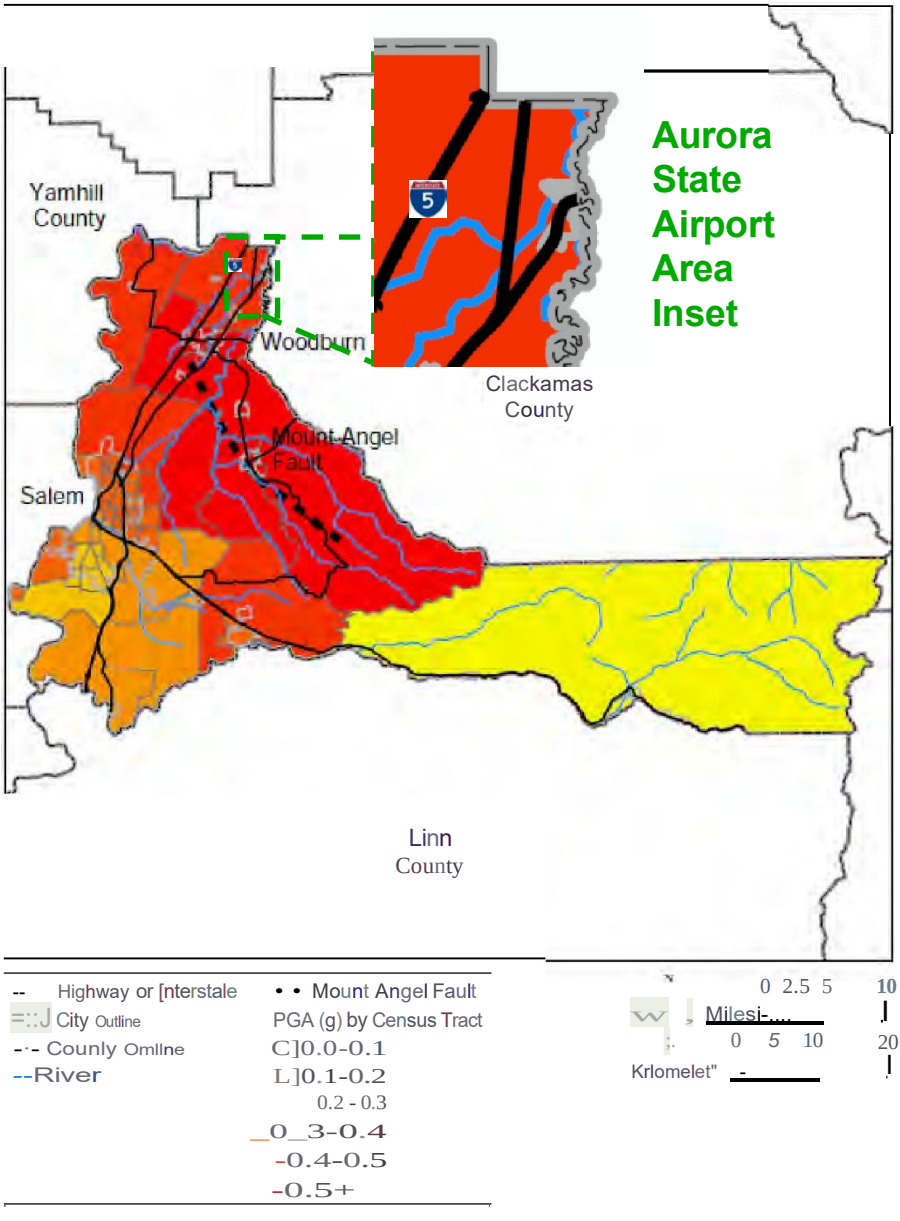
CRUSTAL EARTHQUAKE SCENARIO DETAILS FOR MARION COUNTY

Cm tal Ea1·thqnake' <:enario: A magnitude 6.9 ea1th.quake on the Mount Angel Fault

For the magnitude 6.9earthquake on the Mount Angel.Fault scenario, we defined the fault source using the "de-tenninistic seismic source" option within HAZUS-MH (Figure E1) (FEMA, 2003b). The fault and earthquake event were chosen by examirn1tion of USGS (2004) data .and data in the Geom:atrix Consultants, lnc. (1995) *Seism.k Design Mapping, State of Oregan* report prepared for the Oregon Department of Transportation. In genernl, a likely worst-casescenmio was selected. Figure El has the location ofthe fault, shown as the dark line, and the census tracts ,within Mmion County. Figure E2 displays the peak ground aC'celeration (PGA) for the crustal scenario.

Scenario Name	Mount Angel M6.9
Type or:E:arthquake	Source
Fault· ame	Mount Angel Fault
Historical Epicenter ID #	67
Probabilistlc Return Period	NA
.Longitude of Epicenter	-1?'1..83
.Latitude ofEpicenter	45,05
Earthquake Mag.nihlde	6.90
Depth (km)	0.00
Rupture length (km)	30.,69
Rupture Orientation (degrees)	0.00
AttenMtion Function	'Project 2000 West - Non Extensional

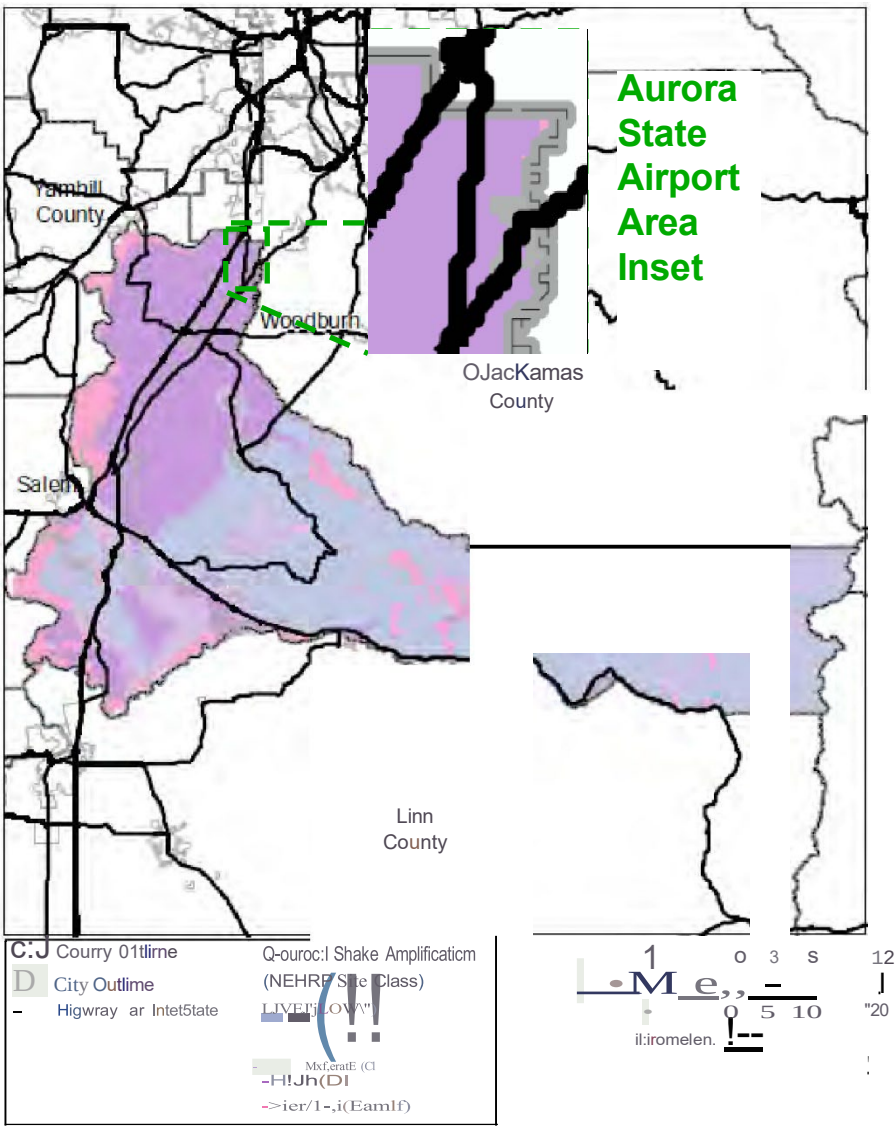
Crustal EartliquakeScenario Ground Mo:tion Map



Flgu:rnE.2. Peak ground ;irreleration WGAI by censusuaas map for the crustal eartlnquake scena o. rion County, Oregon IFEMA, 21l03b)

GEOLOGIC HAZARD MAPS

Relative Gro1md·S.ha.k.i119Amplifkation Susceptibility Map



Rgue ES. Relative ground-shaking amplificaHon 5.lliceptibility map for Marion County, Oregon.

Canby-Barl1w-Aur1ra Urban Area

Relative Amplification Hazard Map

Hazardzonesarebasedonthe degreetowhich ground shaking fromagivenearthquakeis likelytobeamplified

- Highestamplification hazard (UBCSoil Type E)
- Medium amplification hazard (UBCSoil Type D)
- Low amplification hazard (UBCSoil Type C)
- No amplification hazard (UBCSoil Type B)

See the accompanying text for an explanation of how these zones were defined and what the relative hazard means.

IMPORTANT NOTICE

This map depicts seismic amplification hazard zones that are based on limited geologic and geophysical data as described in the accompanying report. At any given site in the map area, the maps for other types of hazards may show different hazard levels and need to be taken into consideration along with this map. This map cannot replace site-specific investigations. Some appropriate research is discussed in the accompanying report.

Aurora State Airport

This map was produced by the Oregon Department of Geology and Mineral Industries with funding by the State of Oregon and the U.S. Geological Survey (USGS), Department of the Interior, under USGS award #1434-97-GR-03118.

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Canby-Barlow-Aurora Urban Area

Relative Earthquake Hazard Map

Hazard zones are based on the combined effects of ground shaking amplification, liquefaction, and earthquake-induced landsliding.

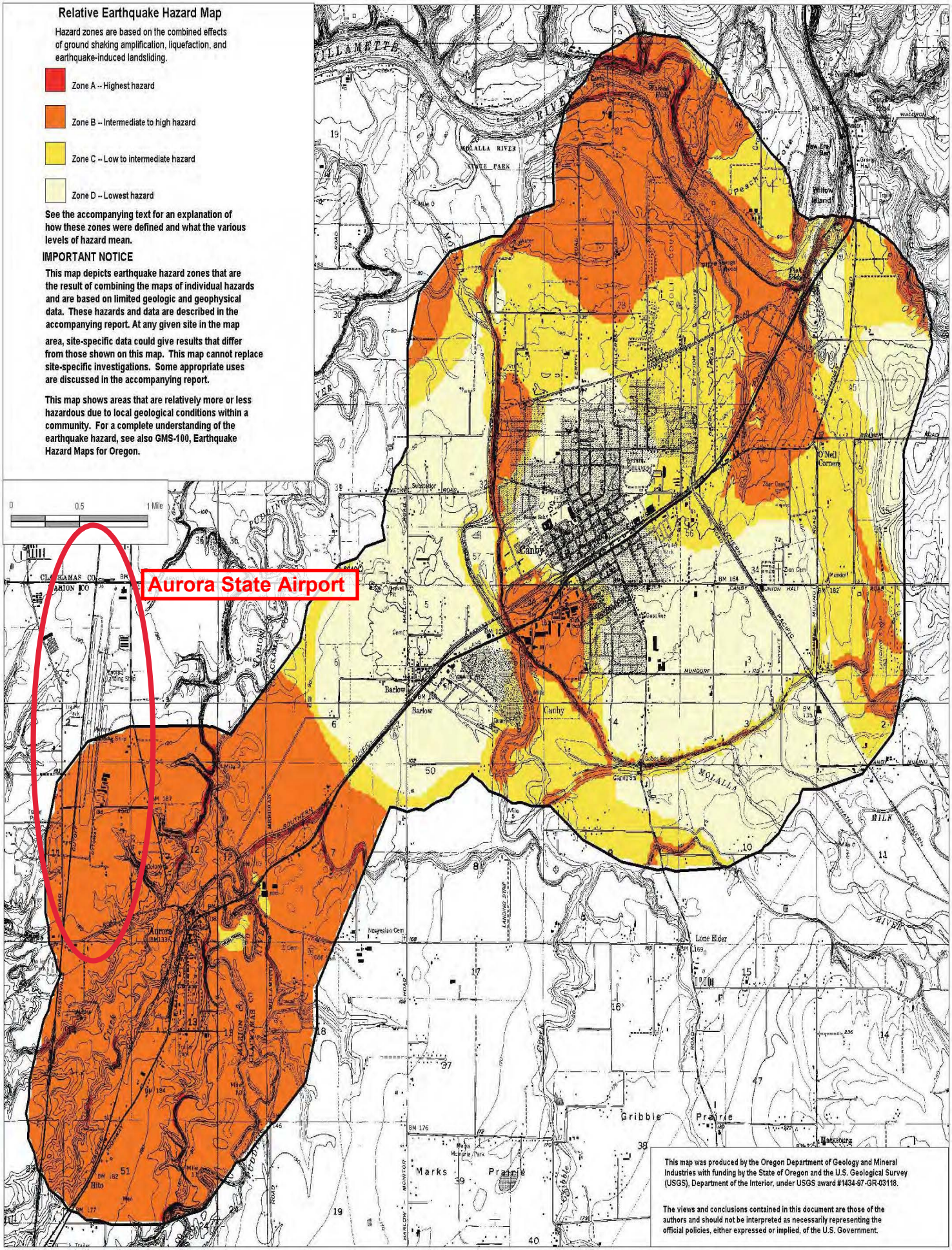
- Zone A -- Highest hazard
- Zone B -- Intermediate to high hazard
- Zone C -- Low to intermediate hazard
- Zone D -- Lowest hazard

See the accompanying text for an explanation of how these zones were defined and what the various levels of hazard mean.

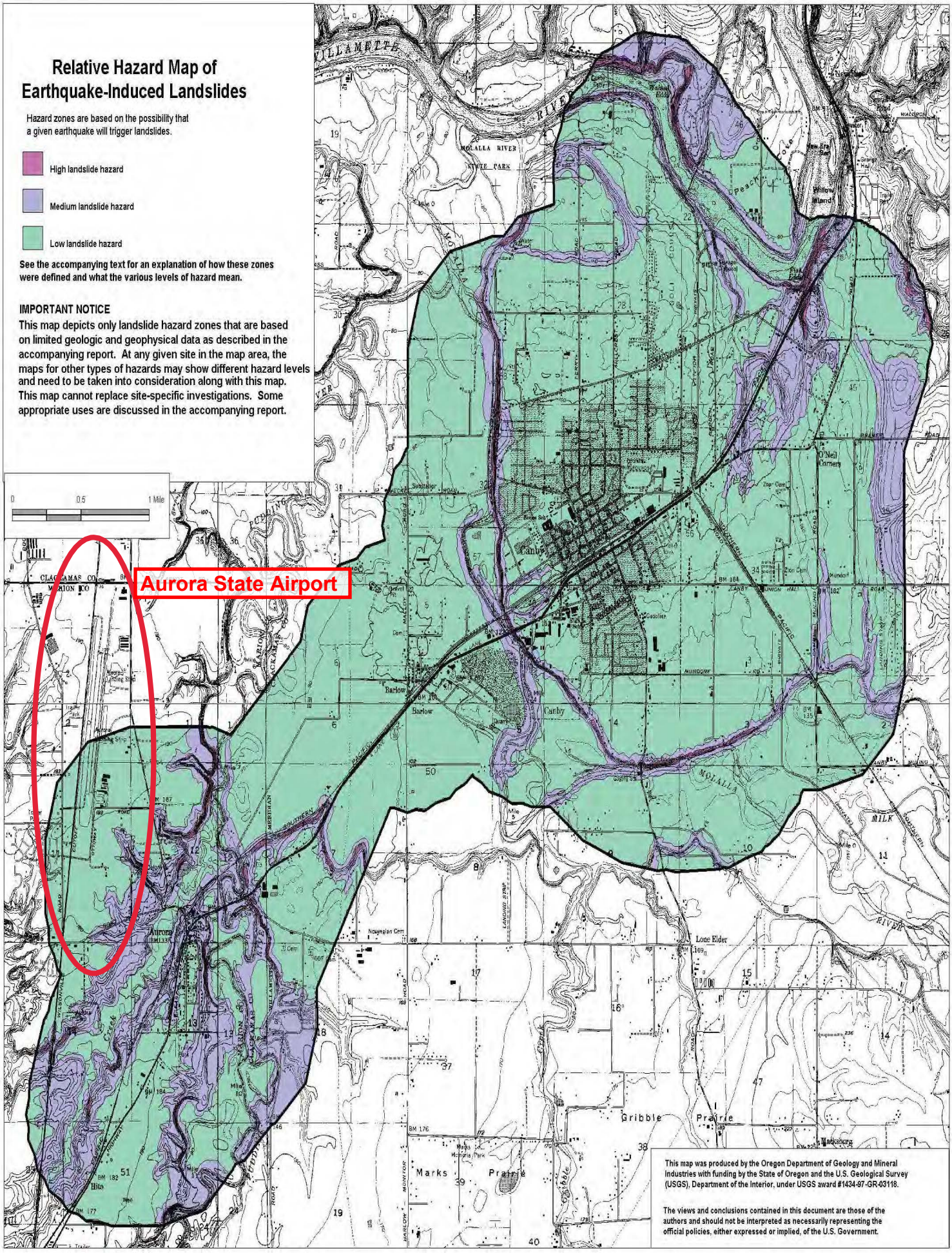
IMPORTANT NOTICE

This map depicts earthquake hazard zones that are the result of combining the maps of individual hazards and are based on limited geologic and geophysical data. These hazards and data are described in the accompanying report. At any given site in the map area, site-specific data could give results that differ from those shown on this map. This map cannot replace site-specific investigations. Some appropriate uses are discussed in the accompanying report.

This map shows areas that are relatively more or less hazardous due to local geological conditions within a community. For a complete understanding of the earthquake hazard, see also GMS-100, Earthquake Hazard Maps for Oregon.



This map was produced by the Oregon Department of Geology and Mineral Industries with funding by the State of Oregon and the U.S. Geological Survey (USGS), Department of the Interior, under USGS award #1434-97-GR-03118.


Relative Hazard Map of
Earthquake-Induced Landslides
Hazard zones are based on the possibility that a given earthquake will trigger landslides.
High landslide hazard
Medium landslide hazard
Low landslide hazard
See the accompanying text for an explanation of how these zones were defined and what the various levels of hazard mean.
IMPORTANT NOTICE
This map depicts only landslide hazard zones that are based on limited geologic and geophysical data as described in the accompanying report. At any given site in the map area, the maps for other types of hazards may show different hazard levels and need to be taken into consideration along with this map. This map cannot replace site-specific investigations. Some appropriate uses are discussed in the accompanying report.
0
0.5
1 Mile
Aurora State Airport
Canby
Barlow
Aurora
Gribble Prairie
Marks Prairie
Lone Elder
This map was produced by the Oregon Department of Geology and Mineral Industries with funding by the State of Oregon and the U.S. Geological Survey (USGS), Department of the Interior, under USGS award #1434-97-GR-03118.
The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Government.

STATE OF OREGON
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
JOHN D. BEAULIEU, STATE GEOLOGIST

Canby-Barlow-Aurora Urban Area

IMS-8

Relative Earthquake Hazard Maps
for Selected Urban Areas in Western Oregon

By Ian P. Madin and Zhenming Wang

CANBY-BARLOW-AURORA

Relative Liquefaction Hazard Map

Hazard zones are based on the likelihood that liquefaction will occur in a given earthquake.

- Highest liquefaction hazard
- Medium liquefaction hazard
- Low liquefaction hazard
- No liquefaction hazard

See the accompanying text for an explanation of how these zones were defined and what the various levels of hazard mean.

IMPORTANT NOTICE

This map depicts only liquefaction hazard zones that are based on limited geologic and geophysical data as described in the accompanying report. At any given site in the map area, the maps for other types of hazards may show different hazard levels and need to be taken into consideration along with this map. This map cannot replace site-specific investigations. Some appropriate uses are discussed in the accompanying report.

0 0.5 1 Mile

Aurora State Airport

This map was produced by the Oregon Department of Geology and Mineral Industries with funding by the State of Oregon and the U.S. Geological Survey (USGS), Department of the Interior, under USGS award #1434-97-GR-03118.

WILSONVILLE
OREGON

August 4, 2021

Sent via email to:
aviation.mail@aviation.state.or.us
betty.stansbury@aviation.state.or.us
cathy.rb.clark@aviation.state.or.us

Martha Meeker, Chair
Oregon Aviation Board
Oregon Department of Aviation
3040 25th Street SE
Salem, OR 97302

RE: Public Disenfranchisement by the Oregon Aviation Board for the Proposed 2021-22 Aurora State Airport Master Planning Process

Dear Chair Meeker and Aviation Board Members:

I listened with pronounced disappointment to Aviation Board members and staff conversations concerning the proposed new Aurora State Airport Master Plan, following public testimony, at the last public Oregon Aviation Board (OAB) meeting on July 15, 2021.

The majority of the meeting discussion was devoted to efforts by airport business interests to pressure the OAB into filing an appeal of the Court of Appeals decision—finding several errors and violations of state law by the Aviation Department in the adoption of the 2011 or 2012 master plan—to the Oregon Supreme Court.

As we saw today in *Schaefer v. Oregon Aviation Board,* 313 Or App 725 (2021), the Court of Appeals roundly rejected the appeal by the airport business interests of the Court's reversal and remand of the Land Use Board of Appeals decision that upheld the flawed master plan.

What was not discussed at the July 15 OAB meeting was citizen testimony, once again, requesting a more balanced and inclusive Planning Advisory Committee (PAC) for this new master plan update. In fact, the only discussion we heard on this topic was a rhetorical question by Board Member Granato to Chair Meeker asking, even if the parties requesting a seat at the table were not granted one, couldn't they still attend all the meetings? The response from Chair Meeker response was a delighted, why of course they could!

Citizens have repeatedly asked to be equitably represented with a balance of seats on the Planning Advisory Committee. Instead, they are effectively told by OAB that they can silently attend and sit at the back of the room. This action demonstrates more of the same attempts by the OAB to hear only from those they wish to hear from, to the exclusion of the greater community public interest.

The PAC does *not* need a representative for every airport business, to the exclusion of those citizens whose lives and properties will be most impacted by the proposed airport expansion and runway extension. At the June 3 and July 15 OAB meetings, the attorney for the Aurora Airport Improvement Association indicated that she represented all or a vast majority of

businesses at the airport; the appointment of an Association representative satisfies any and all needs for airport business representation on the PAC.

We are still disappointed that the Aviation Department still has not responded to my letter of June 14, 2021, and prior City of Wilsonville communication attempts to the Department.

Thank you for your consideration.

Sincerely,

Julie Fitzgerald
Mayor, City of Wilsonville

Enc. (1)
cc: Members of the Oregon Congressional Delegation:
- Senator Ron Wyden
- Senator Jeff Merkley
- Congressman Kurt Schrader

Aurora Mayor Brian Asher
Members of the Oregon Legislature:
- Speaker Tina Kotek
- Senate President Peter Courtney
- Representative Susan McLain (HD 29)
- Representative Courtney Neron (HD 26)
- Representative Christine Drazan (HD 39)
- Senator Bill Kennemer (SD 20)

Clackamas County Board of County Commissioners
Charbonneau Country Club
Aurora-Butteville-Barlow Citizens Planning Organization
Friends of French Prairie
1000 Friends of Oregon

Presentation Slides from July 15, 2021, Oregon Aviation Board Meeting

This slide shows the lopsided composition of the PAC that seats a majority of vested airport financial interests to advise on Aurora State Airport Master Planning process.

Planning Advisory Committee (PAC) Membership: To Date

AABC/TLM Holdings - Ted Millar
AAIA - Bruce Bennett
Aurora ATC - TBD
Aurora CTE, Inc - Bill Graupp
City of Aurora - Brian Asher
City of Canby - TBD
City of Wilsonville - Julie Fitzgerald
Clackamas County - Tootie Smith
Columbia Helicopters - Rob Roedts
DLCD - Matt Crall

Lynx Aviation, FBO - Tristan Dorian
Marion County - Danielle Bethell
Marion County Planning Dept. – Austin Barnes
ODA - Tony Beach, Airport Manager
ODOT - Naomi Zwerdling
Oregon Aviation Board - John Barsalou
Oregon Farm Bureau - Mary Anne Cooper
PAAM - Tony Helbling
Governor's Office - Regional Solutions - Jody Christensen
Vans Aircraft - Rian Johnson
Willamette Aviation, FBO - David Waggoner

Wilsonville Chamber of Commerce - Kevin O'Melley

This slide appears to show how community organizations and public interest groups may be relegated to a "second class" Citizens Advisory Committee (CAC).

Citizen Groups Requesting to Participate as PAC/CAC Member(s)

Charbonneau Country Club - TBD
Deer Creek Estates - TBD
Prairie View Estates - TBD
Aurora-Butteville-Barlow CPO - TBD
1000 Friends - TBD
Friends of French Prairie - TBD
Seismic/Wildfire/Emergency Management –DEOM – TBD
Local Farmer's Representative - TBD

AUR.OR.A
OREGON

WILSONVILLE
OREGON

July 6, 2021

The Honorable Ron Wyden, U.S. Senator
The Honorable Jeff Merkley, U.S. Senator

RE: Request for Intervention in Ensuring Proper Award of FAA Grant Funds to the Oregon Department of Aviation for Aurora State Airport Master Plan Update

Dear Senators Wyden and Merkley:

We write to you collectively, representing the local communities of over 27,000 residents in closest proximity to the Aurora State Airport (Airport), to request your assistance. The update to the Airport Master Plan provides an opportunity for improved relations among the Airport and the communities it directly impacts. This must be an integral goal of the pending master plan update. It is vital that the Scope of Work for the update be sufficient to carry out this goal. We are, however, concerned that the presently proposed Scope of Work is inadequate to achieve that goal or to bring the Airport into land use compliance. We therefore respectfully request that your offices intervene on our behalf with the Federal Aviation Administration (FAA) Northwest Region to either place on hold or add specific conditions to the award of a pending grant to the Oregon Department of Aviation (ODA) for the Airport Master Plan update in order to provide ODA with the opportunity to adopt a Scope of Work appropriate to the task.

We support and agree with the FAA's requirement that a new master plan for the Airport is past due and necessary, but the Scope of Work proposed by ODA is inadequate and does not comply with key elements of federal and state law and public processes. Rather, ODA's proposed Scope of Work for this new update is based on the legally flawed and, we contend, never legally adopted 2011 or 2012 Master Plan, as noted in more detail below. Furthermore, ODA has already publicly announced an intent to complete the new plan in as short a time frame as possible and with as little environmental due diligence and traffic analysis (air and ground) as possible. This is all being done at the urging of private airport businesses with significant speculative financial stakes in a major Airport expansion.

We believe that the legal status of the 2011 or 2012 Airport Master Plan is invalid due to failure to comply with Oregon public process and land use laws. In June, the Oregon Court of Appeals agreed. The court reversed and remanded Land Use Board of Appeals (LUBA), in our favor, for admission of critical evidence that had not been produced and reconsideration of key legal issues in accordance with the Court's direction.

As summed-up by the Salem *Statesman Journal* on June 23, 2021:

> "Oregon's aviation authority tried to circumnavigate the state's land-use system in adopting a plan to extend the runway at Aurora State Airport, the state's Court of Appeals determined.
>
> "The state's Land Use Board of Appeals' decision to uphold the aviation board's plan was flawed because "there is no evidence in the record to support LUBA's erroneous findings" in the case, the court said in reversing and remanding the body's decision.
>
> "The court said that the Land Use Board of Appeals "misunderstood its task" and mistakenly relied on testimony from Department of Aviation staff and associated businesses around the airport when making its decision."

CITY OF WILSONVILLE
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As a result of the apparent undue influence of private businesses and jet owners, ODA has consistently demonstrated a failure to follow the law, including the FAA Grant Assurance around land use compliance, nor the capacity and an unwillingness to undertake appropriate public processes, we believe that it is imperative that the FAA ensure that ODA rigorously follows the FAA Grant Assurance requirements regarding land use, which previously did not happen.

On June 3, 2021, the Oregon Aviation Board (the Board) approved, without any documentation, accepting nearly $1 million of FAA grant funds to update the Airport master plan. There was no staff report, no resolution of adoption, and no proposed Scope of Work provided to the Board. The Board voted to accept the FAA grant to perform the master plan update but has delayed awarding the consultant's contract to do that work because of the omission of the proposed Scope of Work and the then pending Court of Appeals decision.

As necessary as a new master plan is, it is equally necessary that it be updated correctly. We obtained the proposed Scope of Work in response to a public records request. Among other things, the Scope of Work does not consider the impact of the Court of Appeals decision or pending LUBA and judicial review proceedings. Additionally, ODA has stacked the new Master Plan Public Advisory Committee with a clear majority of vested financial aviation and commercial interests, to the exclusion of impacted neighborhood associations, property owners, and conservation and public interest organizations. A momentary pause in funding the master plan update may help provide ODA with the incentive necessary to ensure an adequate Scope of Work and to provide all stakeholders a seat at the table.

Thank you for your time and consideration of our request. The favor of a response would be most appreciated.

Sincerely,

Bnan Asher, Mayor
Mayor@ci.aurora.or.us

Julie Fitzgerald, Mayor
Fitzgerald@ci.wilsonville.or.us

encl: Media reports and Summary on the Oregon Court of Appeals decision on *Schaefer v. Oregon Aviation Board*, 312 Or App 316 (2021).

cc: Oregon Department of Aviation

SUMMARY OF COURT OF APPEALS RULING ON AURORA AIRPORT MASTER PLAN

prepared by Ben Williams, Friends of French Prairie

1. The 2012 Master Plan was not properly approved and adopted.
Therefore the current 2012 Master Plan is invalid and cannot be updated, requiring a new master plan!

…it is impossible to tell from the 2012 Master Plan what material was added and what was removed after 2011. LUBA erred in concluding that the 2012 Master Plan includes the 2011 Master Plan… the board never formally approved or adopted the 2012 Master Plan after October 27, 2011.

2. The master plan was never adopted into Marion County's Comprehensive Plan, and achieving compliance in itself does not provide an exemption from statewide planning goals.
Therefore airport master plans must comply with statewide planning goals to be valid!

The Master Plan proposes airport development on EFU land… LUBA misunderstood its task… But the question is not what the [Aviation] board's development plans are; the question is what development the Master Plan proposes, and whether that development is consistent with the MCCP and the goals... the Board of Commissioners "acknowledges and supports" the 2012 Master Plan… is not a determination, formal or otherwise, of the plan's compliance with the MCCP.

3. The airport and the proposed development (runway extension) are not rural uses.
Therefore, ORS statutes cannot be misapplied to achieve desired outcomes!

ORS 836.640 does not apply… LUBA misconstrued the statute… The text does not suggest that the legislature intended any section of ORS 836.642 to affect how land use requirements apply to the programs or uses of land at the identified airports; to the contrary, it explicitly makes the programs subject to "applicable statewide land use requirements.

4. The development proposed (runway extension) permits service to a larger class of airplanes.
Therefore, airport sponsors may not misrepresent FAA regulations for their benefit!

LUBA adopted the reasoning in the response briefs and concluded, without elaboration, that the improvements contemplated by the 2012 Airport Plan do not permit service to a larger class of airplanes… an upgrade to design standards for a greater ARC or a longer runway to serve planes with greater MTOW [Maximum Take Off Weight] is an expansion or alteration that permits—authorizes—service to a larger class of airplanes. Accordingly, the Master Plan proposes an alteration or expansion of the airport that permits service to a larger class of airplanes.

Summary of the Ruling [*Schaefer v. Oregon Aviation Board, 312 Or App 316 (2021)*]

To summarize, LUBA erred in excluding the 2011 Master Plan—the Master Plan document that was before the board on October 27, 2011—from the record; in holding that the 2012 Master Plan did not propose airport development on EFU land; in relying on ORS 836.642 to conclude that proposed new uses at the Aurora State Airport are rural uses for land-use purposes; and in determining that OAR 660-012-0065(3)(n) applied.

Reversed and remanded.

Court of Appeals Sides with Opponents of Aurora Airport Expansion

BY TYLER FRANCKE, CANBY NEWS -

JUNE 16, 2021

https://canbyfirst.com/court-of-appeals-sides-with-opponents-of-aurora-airport-expansion/

The Oregon Court of Appeals handed down a sweeping ruling Wednesday in favor of the cities of Aurora and Wilsonville, the land-use advocacy groups Friends of French Prairie and 1000 Friends of Oregon and others who had joined together to oppose further expansion of the Aurora State Airport.

Airport opponents hailed the ruling as a "sweeping victory" in their battle to stop a proposed 1,000-foot runway extension that supporters say is needed to safely accommodate the numbers and classes of aircraft currently using the airport.

But opponents fear the runway extension and other planned upgrades will bring larger, louder aircraft — and more of them.

Most recently, the complicated land-use case has centered on the 2012 Aurora Airport Master Plan, which is a necessary prerequisite to the expansion, and which — opponents discovered in 2019 — may have never been formally adopted by the Oregon Department of Aviation.

Aurora airport supporters, along with the state aviation board itself, maintained that the plan was approved in October 2011 — but were unable to produce any minutes, final orders or other records verifying this.

An audio recording of the October 2011 meeting — which Friends of French Prairie President Ben Williams obtained through a public records request — appeared to confirm opponents' suspicions that the master plan was never given a final stamp of approval.

The board attempted to skirt the issue in a controversial meeting held on Halloween 2019 in Sunriver, in which it attempted to formalize its version of events by approving a statement saying it had "adopted the Master Plan at its October 27, 2011, meeting."

Opponents challenged the move to the Oregon Land Use Board of Appeals, or LUBA, which dismissed the case last year, saying it did not have jurisdiction.

But the Court of Appeals disagreed, saying LUBA wrong on both the law and procedure. What's more, the court sided with appellants on the matter of the master plan, concluding "the board never formally approved or adopted the 2012 Master Plan after October 27, 2011."

The decision sends the case back to LUBA, which will now have to decide the original appeal on the merits, with no shortage of input from the appellate court. The Aviation Board and Oregon Department of Aviation may also appeal the ruling to the Oregon Supreme Court.

Opponents hailed Wednesday's ruling as a long-awaited vindication of their claims that airport backers had ignored public input, established procedure and even state law in their efforts to push through the expansion.

"This decision is a major victory for Oregon land use, affirming that even a state agency cannot create methods to circumvent the state land-use system, especially by trying to do so through

simply asserting without proof compatibility with a county comprehensive plan," Williams said in an email.

"It specifically negates the Department of Aviation's attempt to claim it was not expanding onto [exclusive farm use] land when its own master plan for Aurora shows it does, and further negates their attempt to argue that increasing the airport classification will not bring in larger aircraft when that, in fact, is precisely what airport classifications are designed to do."

"The city was right on the issues and right to act to preserve citizens' role on land use in Oregon," said Aurora Mayor Brian Asher. Aurora Planning Commission Chair Joseph Schaefer and the city had been the first to enter the fray, before being joined by Wilsonville and the Friends groups. "The decision agrees with everything we have long been saying without being heard. We have now been heard."

Wilsonville Mayor Julie Fitzgerald also weighed in a statement to *The Canby Current*, saying the June 16 decision validated her city's longstanding concerns that "the controversial 2012 Aurora State Airport Master Plan does not comply with state land-use laws."

"This ruling mandates that the state aviation agency should seek to pilot for a pending new 2021-22 Aurora State Airport master plan update a transparent, fair and equitable public process in accordance with Oregon land-use laws," she said.

"The city looks forward to the Department of Aviation balancing the new master plan advisory committee with representatives of local-area community planning organizations, homeowners associations and other conservation/public-interest organizations so as to avoid having a majority of vested airport financial interests."

But airport backers appeared unfazed by the setback.

"Supporters and businesses of the airport are still looking into the court's ruling and how it impacts the long-planned safety improvements," Friends of the Aurora State Airport spokesman Dylan Frederick said. "Regardless, the ruling doesn't distract our airport or our businesses from doing what we've always done best: conducting work that is mission-critical to local communities.

"It has long been the mission of the Aurora State Airport to be the safest and most emergency-ready general aviation airport in the state. We will keep striving toward that every day."

Aviation board accepts grant funding for Aurora plan update

By Corey Buchanan, Woodburn Independent

June 15 2021

https://pamplinmedia.com/wbi/152-news/511984-409065-aviation-board-accepts-grant-funding-for-aurora-plan-update

Improvement association lawyer asks board to move forward with disputed runway extension project rather than update plan

The Oregon Aviation Board accepted 100% funding from the Federal Aviation Administration to complete an Aurora Airport master plan update during a meeting on June 3.

However, the board agreed to wait to hire a contractor for the update until the Oregon Court of Appeals makes a decision this month on whether to uphold a Land Use Board of Appeals ruling that dismissed complaints from the city of Wilsonville and other entities about the most recent airport master plan update in 2012.

Along with the unanimous vote to accept the funding, the meeting included a plea from attorney Wendie Kellington with the Aurora Airport Improvement Association, which represents businesses and pilots at the airport, asking the board to greenlight a 1,000-foot runway extension — the main source of controversy for the past decade — without completing the master plan update. The Wilsonville government has vigorously opposed the runway extension project as well as the process that led to its addition to the 2012 plan.

She relayed a message from an airport pilot saying the extension is crucial for ensuring safe flights there. She indicated the state hasn't reciprocated the considerable investments the private sector has put into the airport.

"Isn't it worth a discussion that this runaway extension doesn't need yet another alternatives analysis and really what we need to do is move forward?" she said.

OAB Chair Martha Meeker said she understood Kellington's concern about safety, but that the department and board had no choice: They must complete the master plan update to receive FAA grant funding for airport projects.

"The bottom line is the ODA can't pay for the extension unless we have FAA money. End of story," she said.

Kellington also suggested that the master plan update likely will lead to another legal challenge from groups that oppose the extension, such as the cities of Wilsonville and Aurora and Friends of French Prairie.

Meeker and ODA Director Betty Stansbury noted that the majority of master plan updates are not legally challenged while Meeker indicated that a letter Stansbury sent early in her tenure stating that the 2012 master plan update had not been finalized (she later reversed her stance) precipitated the current litigation.

"Litigation is the exception rather than the norm," Stansbury said. "We will do everything we can to do it right and limit the potential for litigation."

Stansbury also said during the meeting that she doesn't expect the Oregon Supreme Court to take up the current airport litigation if the OCOA decision is appealed.

While the runway extension project likely will be delayed at least until after the master plan update and a subsequent environmental assessment is finalized, Stansbury expressed motivation to move quickly on a tree removal project, which Kellington said pilots also desire to improve safety.

"Those trees shouldn't be there. I will personally direct efforts to get them down as quickly as we can," she said.

The city of Wilsonville will have a seat on an advisory committee for the plan update that will have 22 other members. The department hopes to complete the update by the end of 2022.

Oregon Court of Appeals reverses Aurora Airport ruling

By Corey Buchanan, Wilsonville Spokesman

June 17 2021

https://pamplinmedia.com/wsp/134-news/512473-409771-oregon-court-of-appeals-reverses-aurora-airport-ruling

The Land Use Board of Appeals will take on the case again after initially dismissing it.

After appealing an unfavorable opinion levied by the Oregon Land Use Board of Appeals, the cities of Wilsonville and Aurora — and other groups that have objected to planning efforts at the Aurora State Airport — received the validation they wanted from the Oregon Court of Appeals.

The court not only reversed LUBA's decision to dismiss the case and remanded it for another examination by the land use body, but documented deficiencies in the 2012 airport master plan update in a decision released Wednesday, June 16. The court determined that the master plan was changed following its purported adoption in 2011 and that, contrary to LUBA's ruling, projects added to the plan would encroach on agricultural land.

Along with the cities of Wilsonville and Aurora, 1000 Friends of Oregon (with Friends of French Prairie) and Aurora Planning Commissioner Joseph Scheader, filed the litigation to contest the Oregon Aviation Board's 2019 decision to adopt the findings of compatibility and compliance with statewide planning goals, which essentially validated the plan update. The Oregon Department of Aviation and Oregon Aviation Board defended the case.

Despite the decision, the legal process will likely continue as LUBA now must revisit its original case while taking the OCOA's findings into account.

The city of Wilsonville has concerns about a runway extension project that could lead to more flights flying into the airport — potentially exacerbating noise and traffic — while the city of Aurora wants the airport to be annexed into its jurisdiction. The mayors of both cities rejoiced in the ruling in separate press releases.

"The Court of Appeals decision validates the city of Wilsonville's long-stated concerns that the controversial 2012 Aurora State Airport Master Plan does not comply with state land-use laws," Wilsonville Mayor Julie Fitzgerald said. "This ruling mandates that the state aviation agency should seek to pilot for a pending new 2021-22 Aurora State Airport master Plan update a transparent, fair and equitable public process in accordance with Oregon land-use laws."

"The city was right on the issues and right to act to preserve citizens' role on land use in Oregon," said city of Aurora Mayor Brian Asher. "The decision agrees with everything we have long been saying without being heard. We have now been heard."

On the other hand, ODA Director Betty Stansbury did not comment on the decision and said starting the new master plan update, which will begin soon, is her primary focus. The Federal Aviation Administration stipulated restarting the process as a requirement for the department to receive grant funding.

Bruce Bennett, the owner of Aurora Aviation and intervenor in the case, said the decision was disappointing but felt that it was based on technicalities and wouldn't considerably affect airport planning moving forward. He also felt that LUBA had a better understanding of land use law than the OCOA.

"Projects will continue to be done," he said. "There's not a huge change coming."

In its opinion, LUBA ruled that the ODA did not have to simultaneously comply with the Marion County Comprehensive Plan and statewide planning goals. This point alone nullified many of the arguments established by petitioners. The body also said it lacked jurisdiction in the case.

The OCOA disagreed with LUBA's opinion regarding county and statewide law.

"The agency respondents do not explain, and we do not perceive, how ODA's ability to deem the draft plan compatible with the MCCP (Marion County Comprehensive Plan) affects the board's obligation to "adopt findings of compatibility with the acknowledged comprehensive plans of affected cities and counties and findings of compliance with applicable statewide planning goals when it adopts the final facility plan," OCOA's ruling reads.

Though she knew the restarting of the master planning process was imminent months ago, city of Wilsonville Attorney Barbara Jacobson has said the local government decided to appeal LUBA's decision in large part because they felt that it would create a dangerous precedent where local control usurps state law. OCOA's ruling also states that Marion County didn't perform an analysis of the master plan's compliance with its own laws, but simply acknowledged and supported the plan.

"If LUBA's ruling would have been allowed to stand the kind of approval Marion County did for this master plan means any county could have done a resolution for any airport without any analysis and skipped over land use planning goals and analysis, which would have been really bad land use law," Jacobson said.

While LUBA did not include the original master planning document (which has yet to be produced) for the record for the case, the OCOA disagreed with that decision and expressed that the plan had been modified between the time the document was approved and when it was sent to the Federal Aviation Administration. Wilsonville has long argued this point and Jacobson said that LUBA would not need to include the document, if it exists, in the record when it revisits the case.

"That document indisputably was substantially modified after Oct. 27, 2011, by -- for example -- identifying a different development option as the preferred alternative (for the runway extension) and omitting some of the discussion and documentation relating to the original preferred alternative," OCOA wrote.

The ruling also objected to LUBA's conclusions that future projects at the airport should be considered "rural" rather than urban use and that projects listed in the plan would not extend onto land zoned for exclusive use. It asserted that LUBA must now examine whether the document complies with Marion County agricultural land policies.

"We've contended for years that the long-term consequence of the intended expansion, meaning the 35 acres of ag land, would set all the other ag land south of Keil Road and north of Ellen Road up for rezoning as commercial or light industrial aviation-related development," Friends of French Prairie President Ben Williams said.

Finally, the court rejected defendants' argument that projects in the master plan did not need to comply with certain land use goals because projects were not expansionary, i.e. would not "permit service to a larger class of airplane." Jacobson said the airport had already brought in larger planes but that improvements will make that easier and potentially more prevalent. Airport proponents have advocated for the runway extension to improve flight safety.

What this ruling means for the current master planning process remains to be seen. However, the city of Wilsonville, Rep. Courtney Neron, D-Wilsonville, and Rep. Susan McLain, D-Hillsboro, have already voiced displeasure about the composition of the advisory committee that will help oversee the update, which has fewer citizen interest groups and more business interests involved in the process than during the controversial 2011 update. Officials have posited that business interests have undue influence over airport planning.

"I don't have a high level of confidence," Williams said about the potential for an improved planning process. "What has happened so far looks very much like starting the same troubled process that began in 2009 all over again."

He also felt that the prospect for legal battles to continue after the completion of the new plan update was highly likely.

Stansbury said she did not close the door on the possibility of amending committee representation.

"We tried to get a balanced group that represented all types of interest in the airport and surrounding communities," she said. "We tried to include agriculture and education, Marion County, Clackamas County, the cities of Wilsonville and Aurora; we tried for a broad representation. If there needs to be any tweaks to that I'll consider Rep. Neron and Rep. McLain's letter."

The Spokesman could not reach attorneys representing airport businesses, which intervened in the case, for comment.

Charbonneau Country Club wants placement on Aurora Airport committee

By Corey Buchanan, Wilsonville Spokesman

June 22 2021

https://pamplinmedia.com/wsp/134-news/512842-410217-charbonneau-country-club-wants-placement-on-aurora-airport-committee

The homeowners association says it will bear the consequences of decisions made.

Local organizations, including the Charbonneau Country Club homeowners association, are lobbying the Oregon Department of Aviation to reserve spots for them on a committee that will oversee the upcoming Aurora State Airport master planning process.

Friends of French Prairie, an organization focused on farmland preservation, and the Aurora-Butteville-Barlow Community Planning Organization have joined CCC in sending letters to ODA Director Betty Stansbury asking for inclusion on the Planning Advisory Committee for the formulation of the master plan update. The committee will advise the planning effort but doesn't have decision-making power.

The department is undergoing the effort after the Federal Aviation Administration stipulated that it needed to do so to receive federal grants. The process will include assessing current and future facility needs.

Last week the city of Wilsonville, Rep. Courtney Neron, D-Wilsonville, and Rep. Susan McLain, D-Hillsboro, raised concerns that the proposed committee wouldn't have representation from community groups. The committee is also slated to have a higher percentage of business-interest representatives than the committee that advised the 2012 master plan, which has faced legal challenges from the city of Wilsonville, Aurora and others for the past two years. Stansbury told the Spokesman last week she was open to tweaking committee representation but hadn't decided yet.

Charbonneau has a strong contingent of folks who have aired concerns about noise and pollution from the airport and vehemently disagree with plans for expansion, especially a proposed and long-disputed runway extension project. The CCC also said they're concerned about property values, traffic and road construction.

"The greatest number of people, approximately 3,000 residents (1,627 residences), live in our well-planned and popular community less than 9,000 feet from the north end of the Aurora Airport runway. Take-offs and landings are increasingly disruptive to the quality of life in our community, local roads are increasingly congested and concerns about air and water pollution are increasing among area residents," CCC homeowners association president Gary Newbore wrote in a letter. "For these facts alone, Charbonneau's strong voice should be heard regarding proposed changes that impact the quality of their lives, health or property values, and the effect on our 13 neighborhood homeowners associations. We will be the ones who will live with the consequences of the decisions made about the future of the Aurora State Airport and the use of federal taxpayer funds to make changes at this airport."

As currently proposed, the cities of Wilsonville, Canby and Aurora are included in the committee along with Clackamas and Marion counties, seven businesses, the business-affiliated Aurora Airport Improvement Association and Positive Aurora Airport Management groups, the

Wilsonville Area Chamber of Commerce, four state agencies and the North Marion School Board.

Along with CCC, McLain and Neron also wanted Deer Creek Estates (a mobile home park in Aurora) to be involved in the process.

"While we appreciate that the department has accounted for business and economic interests with nine representatives, we believe the nearby communities of Charbonneau and Deer Creek Estates, community planning organizations (CPOs), conservation and land-use groups, seismic safety, wildfire and emergency management experts need to be included in the Public Advisory Committee (PAC) representation, as well," Neron and McLain wrote in a letter to Stansbury. "We note their absence in the current PAC composition and hope you will consider adding their diverse perspectives to the process."

Appeals court halts efforts to extend runway at Aurora Airport

Bill Poehler, Salem Statesman Journal

June 23, 2021

https://www.statesmanjournal.com/story/news/2021/06/23/oregon-appeals-court-halts-efforts-extend-runway-aurora-airport/5312110001/

Oregon's aviation authority tried to circumnavigate the state's land-use system in adopting a plan to extend the runway at Aurora State Airport, the state's Court of Appeals determined.

The state's Land Use Board of Appeals' decision to uphold the aviation board's plan was flawed because "there is no evidence in the record to support LUBA's erroneous findings" in the case, the court said in reversing and remanding the body's decision.

The court said that the Land Use Board of Appeals "misunderstood its task" and mistakenly relied on testimony from Department of Aviation staff and associated businesses around the airport when making its decision.

The airport, located just outside the Aurora city limits, is the third busiest in Oregon and one of 28 the state owns.

For years, the state and associated businesses advocated to extend the runway to 6,004 feet from its current 5,004 feet, arguing it wouldn't be used for allowing bigger aircraft, but would allow the planes that currently use it to fly out with larger fuel loads.

The appeal of the December 2020 ruling by LUBA was brought by Aurora planning commission chair Joseph Schaefer, who was joined by land-use advocacy groups and the cities of Aurora and Wilsonville, against the state's Department of Aviation and the Aviation Board. Several businesses that are based out of the airport joined the case on the state's side.

The Court of Appeals reversed LUBA on issues including:

- The airport's 2011 master plan was not in the state or LUBA records.
- The expansion can't be justified solely because the airport is in a rural area.
- The board incorrectly construed state law by saying the proposed changes wouldn't allow a larger class of airplane and that the plan complies with the state's land-use goals.

"It is a pretty important case because it does talk about the relationship of this state agency and (the associated businesses). It is remarkable," said Edward J. Sullivan, former legal counsel to Gov. Bob Straub and professor in planning and land use law at Willamette, Lewis & Clark and Portland State.

The plan that was never completed

The case stems from the Department of Aviation starting a new master plan for the airport in 2009.

In 2011, the state's aviation board adopted the new master plan. But the Federal Aviation Administration rejected the "displaced threshold" option for the runway extension in that plan, and the master plan was modified in 2012.

The state applied to the Federal Aviation Administration for over $30 million in 2018 to extend the airport without it being in the most recently legally adopted master plan, which came in 2000. It wasn't awarded the funds.

In 2019, the Aviation Board voted to adopt the findings from the 2012 airport plan after Department of Aviation director Betty Stansbury backtracked on a letter in which she stated the plan had not been submitted for adoption.

The 2012 master plan was never formally approved or adopted by the Oregon Aviation Board, the Court of Appeals found, rejecting that the 2019 adoption was a component of the final decision.

In its December opinion, LUBA excluded the 2011 master plan from the record and found the 2012 master plan did not propose development on exclusive farm use.

But the Court of Appeals found that LUBA "misunderstood its task" and relied on testimony from associated businesses that the state did not intend to extend the runway on land zoned for farm use.

"There's all this stuff trying to undercut the land-use system. At least this time these guys got called out on it," said Ben Williams, president of land-use advocacy group Friends of French Prairie, one of the petitioners in the case.

The state argued that the master plan was not a land-use decision, and that component would be determined later by Marion County.

As the 2012 master plan was not properly adopted, Williams said, the airport will be required to have a new master plan.

Oregon Department of Aviation planning and projects manager Heather Peck told the Marion County commissioners in May the state is at the beginning of updating the Aurora Airport master plan and will be seeking money for that.

The Court of appeals found that airport development is not an allowed use on land zoned for farm use.

What's next?

With the decision, LUBA is required to reconsider its 2020 decision and determine whether the master plan complies with Oregon's agricultural lands policies.

The Department of Aviation and the Oregon Aviation Board have 35 days, until July 14, to file a notice of intent to appeal the ruling to the Oregon Supreme Court.

"The grounds for taking something up to the Supreme Court, is it just merely wrong or is it important and wrong? If a party who did not prevail tries to take it up they bear that burden," Sullivan said.

"I would say that maybe 1 out of 20 cases is accepted for review. It's a hard sell."

It's unclear whether the defendants will appeal.

“Supporters and businesses of the airport are still looking into the court’s ruling and how it impacts the long-planned safety improvements,” the Friends of Aurora Airport, which represents business interests involved as defendants in the case, said in a statement.

“Regardless, the ruling doesn’t distract our airport or our businesses from doing what we’ve always done best — conducting work that is mission-critical to local communities. It has long been the mission of the Aurora State Airport to be the safest and most emergency-ready general aviation airport in the state. We will keep striving toward that every day.”

Unless the Supreme Court takes the case and overturns the latest ruling, the long-sought runway extension has to go back to the drawing board.

“We won round two with a knockout,” Williams said.

June 17, 2021

Sent via email to:

Martha Meeker, Chair, Oregon Aviation Board — *aviation.mail@aviation.state.or.us*
Betty Stansbury, Aviation Director — *betty.stansbury@aviation.state.or.us*
Oregon Department of Aviation

RE: 2021 Aurora State Airport Master Planning Process

Chair Meeker and Director Stansbury:

As the State Representative for one of the impacted communities and as Chair of the Joint Committee on Transportation, we write to you with both appreciation for the task at hand and with counsel for a smooth and inclusive process aligned with Oregon Land Use Goal 1 for Citizen Involvement and Goal 2 for Land Use Planning.

We appreciate that on June 3, 2021 the Aviation Board approved acceptance of an FAA AIP Grant for funding of the Aurora State Airport Master Plan update. This aligns with proposed legislation introduced in the 2021 session (HB 2497) that, among other provisions, would have required the Department to develop a new master plan update for the Aurora State Airport. We are pleased to see that the Department is advancing the new master plan update in a timely manner without the need for legislative mandate. As legislators, we hope to look to the work you are embarking on as a model for how a master planning process should proceed.

We believe the State Master Plan process should create an inclusive table for a comprehensive conversation. Best standards and practices must make sure that those that are part of the dialogue feel heard and respected. Thoughtfully adding diverse voices from impacted communities will assist in this goal and show the Oregon Department of Aviation is committed to hearing all voices. Community impact, environmental impact, economic impact and emergency preparation, must be part of the robust planning and conversation and planning. Effective collaboration will result in a resilient, strategic, and functional airport plan that is responsive to its state and local roles.

It is our sincere hope and expectation that the Oregon Department of Aviation will incorporate additional components of HB2497 relative to public engagement and collaborative state and local intergovernmental planning throughout the process, in order to ensure the best possible service to our communities, honor existing land use goals, produce an agreeable outcome, and avoid the need for future legislation.

Elected leaders of Aurora and Wilsonville, located closest to the Aurora State Airport facility and

flight paths, have indicated their concerns to the legislature regarding the need for the Department to consider important issues impacting local communities. The mayors of Aurora and Wilsonville seek to discuss land-use planning, surface transportation impacts, public infrastructure provision, agriculture-sector effects, environmental concerns and quality-of-life issues pertaining to noise and overflights with the Department. The new master-planning process is a logical place for such conversations and we hope that the Department will take full advantage of the opportunity to improve agency communications in a public forum.

While we appreciate that the Department has accounted for business and economic interests with nine representatives, we believe the nearby communities of Charbonneau and Deer Creek Estates, community planning organizations (CPOs), conservation and land-use groups, seismic safety, wildfire and emergency management experts need to be included in the Public Advisory Committee (PAC) representation, as well. We note their absence in the current PAC composition and hope you will consider adding their diverse perspectives to the process.

Being mindful of the PSU Oregon Solutions' "Aurora State Airport Assessment Report", commissioned by the legislature in 2018 that found a number of issues relative to agency planning efforts and public engagement, we anticipate that the Oregon Department of Aviation has plans to correct these issues. It is our sincere hope that the Department moves forward with an understanding of the importance of conducting an open public process for the Aurora State Master Plan that engages local communities and all stakeholders.

Given the amount of public interest and significant issues of local concern regarding the Aurora State Airport, we request that the Department undertake a transparent, inclusive and comprehensive public process with model structure that complies with Oregon's Land Use Planning Goals.

Thank you for your consideration of our concerns and expectations. We stand ready to support the process and we welcome further dialogue with the Oregon Department of Aviation throughout the phases of planning and implementation.

Sincerely,

Representative Courtney Neron, HD-26

Representative Susan McLain, HD-29

WILSONVILLE
OREGON

June 14, 2021

Sent via email to:
aviation.mail@aviation.state.or.us
betty.stansbury@aviation.state.or.us

Martha Meeker, Chair, Oregon Aviation Board
Betty Stansbury, Aviation Director
Oregon Aviation Board
Oregon Department of Aviation
3040 25th Street SE
Salem, OR 97302

RE: Proposed 2021-22 Aurora State Airport Master Planning Process

Dear Chair Meeker and Director Stansbury:

Several members of Wilsonville City staff attended the June 3, 2021 Oregon Aviation Board meeting, wherein the board accepted the FAA's AIP Grant for the funding of a new comprehensive Aurora State Airport Master Plan update. Needless to say, Wilsonville is pleased to hear that an updated Master Plan will be done, using what you both stated will be an all-inclusive and transparent process.

What Wilsonville is not pleased to see, however, is the proposed composition of the Master Plan Public Advisory Committee (PAC), which appears to be packed with self-serving special interests. In the past, both Wilsonville and Aurora, the two host communities located closest to the Aurora State Airport, have found the Department's lack of responsive communications and unwillingness to consider important issues impacting the local communities extremely troublesome. During this new Master Plan process, the mayors of Aurora and Wilsonville certainly hope to have an open dialogue with you concerning land-use planning, surface transportation impacts, public infrastructure provision, ag-sector effects, environmental concerns, and quality-of-life issues pertaining to noise and overflights. While we are hoping this will be an open, fair, and transparent process, it is not getting started that way. Wilsonville, its citizens, and its constituents are extremely concerned about the lopsided representation of vested financial interests in the proposed composition of the proposed PAC.

ODA has certainly accounted for airport business interests, with 10 representatives that constitute the majority of the PAC. The PAC, however, lacks any representation from other important members of the area community, including the nearby HOAs of Charbonneau, Prairie View Estates, and Deer Creek Estates, as well as public-interest bodies, including community planning organizations (CPOs) such as Aurora-Butteville-Barlow CPO and conservation/land-use groups, including 1,000 Friends of Oregon and Friends of French Prairie. A fair and open process requires equitable representation of both sides of any given interest. Therefore, we ask that you please add the above participants to equitably counter balance all of the airport special interest groups and also think about removing some of the duplicative special interest members. If Wilsonville is going to find this to be a fair and open process, there need to be voices on the PAC without direct financial interests at stake in expanding airport operations and extending the runway.

It is interesting to compare the composition of the proposed PAC for this 2021 Master Plan to the last go-around:

Composition of Proposed 2021-22 Public Advisory Com (PAC):

- 10 business interests reps – 43%
- 6 local gov't reps – 26%
- 5 state gov't reps – 21%
- 1 federal gov't rep – 5%
- 1 public interest rep – 5%
- **0 citizen interest reps – 0%**

Composition of 2010-12 Planning Advisory Com (PAC):

- 6 business interest reps – 38%
- 5 local-gov't reps – 31%
- **4 citizen interests reps – 25%**
- 1 state gov't rep – 6%

At the June 3 Board meeting there were several statements made about trying to push this Master Plan through in 18 months or less, rather than the standard 24-month time frame. There was also a discussion of whether an environmental assessment of any kind could be avoided. Rushing this Plan and avoiding the critical environmental work is not a good idea if ODA is hoping to avoid future litigation.

Cumulatively, between ODA's packing the PAC with airport special interests and rushing the Master Planning process, we are getting a negative sense of déjà vu. I attach, for your reference, a letter written by some of the PAC members from the last 2010-12 Master Plan, who expressed "grave concerns" that participation in the process was not intended to be meaningful:

> "As local-government and community-organization members of the Planning Advisory Committee (PAC) to the Aurora State Airport Master Plan, we have grave concerns that our participation in the process is not intended to be meaningful.
>
> * * * * *
>
> "[W]e are very concerned that the Aurora Airport master planning process is being rushed on a condensed schedule—reduced by one-third from the original timeline—without adequate discussion of issues at the PAC level in order to satisfy preconceived outcomes of a few special interests that may be detrimental to the greater public good.
>
> * * * * *
>
> "This is not the meaningful public-input practice that the Federal Aviation Administration (FAA) recommends for stakeholders in the master-planning process."

On a final note concerning the June 3, 2021 meeting, it was surprising to find that at a meeting that did not advertise or invite public testimony, an attorney who claimed to represent all of the airport businesses was allowed to present a lengthy argument about how a Master Plan

update was not needed, nor was any environmental assessment, but rather ODA should instead focus on getting that runway extended now. Fortunately, Chair Meeker clearly articulated that ODA has no funds to do so without going through the FAA's required Master Plan update first. That being said, providing the lawyer for one side of the Aurora State Airport controversy unfettered time to lobby the Board appears to demonstrate, once again, ODA's apparent airport expansion bias, as opposed to advancing a fair and equitable Master Plan process.

As this new and hopefully more open and transparent process begins, we are especially mindful of the PSU Oregon Solutions' "Aurora State Airport Assessment Report," commissioned by the legislature in 2018, that found a number of problems with agency planning efforts and public engagement. We anticipate and expect that the Department's leadership intends to correct these deficiencies and understands the importance of conducting an open public process for the Aurora State Airport Master Plan that engages local communities and all stakeholders.

I understand one of your Board members expressed concern that the new Master Plan update might just generate more protracted litigation. We certainly hope not. Given the great amount of public interest and significant issues of local concern regarding the Aurora State Airport, we expect that the Department will, in fact, seek to undertake an open, transparent public process for all interests, that is not rushed and that complies with Oregon's Planning Goals, specifically Goal 1 Citizen Involvement and Goal 2 Land Use Planning.

Thank you for your consideration.

Sincerely,

Julie Fitzgerald
Mayor, City of Wilsonville

Enc. (1)

cc: Oregon Aviation Board
Members of the Oregon Congressional Delegation:
Senator Ron Wyden
Senator Jeff Merkley
Congressman Kurt Schrader
Aurora Mayor Brian Asher
Members of the Oregon Legislature:
Speaker Tina Kotek
Senate President Peter Courtney
Representative Susan McLain (HD 29)
Representative Courtney Neron (HD 26)
Representative Christine Drazan (HD 39)
Senator Bill Kennemer (SD 20)
Clackamas County Board of County Commissioners

Members of the Planning Advisory Committee to the Aurora State Airport Master Plan

Charbonneau Country Club • City of Wilsonville • Clackamas County
Deer Creek Estates • Friends of Marion County

Mark Gardiner, Chair
State Aviation Board
Oregon Department of Aviation
3040 25th St. SE
Salem, OR 97302-1125

September 14, 2010

RE: Request for meeting to discuss Aurora State Airport master planning process and role of the Planning Advisory Committee

Dear Mr. Gardiner:

As local-government and community-organization members of the Planning Advisory Committee (PAC) to the Aurora State Airport Master Plan, we have grave concerns that our participation in the process is not intended to be meaningful. We see serious deficiencies in how the process is being conducted by the consultant, W.H. Pacific, and we seek to resolve these issues of concern.

In a nutshell, we are very concerned that the Aurora Airport master planning process is being rushed on a condensed schedule-reduced by one-third from the original timeline-without adequate discussion of issues at the PAC level in order to satisfy preconceived outcomes of a few special interests that may be detrimental to the greater public good. It seems fairly clear that the consultant intends to march steadily through construction of' chapters' of the master plan, according to a predetermined timetable, regardless of whether or not there has been adequate discussion at the PAC of the issues. This is not the meaningful public-input practice that the Federal Aviation Administration (FAA) recommends for stakeholders in the master-planning process.

The FAA is quite clear, as outlined in the document' Airport Master Plans,' AC 150/5070-6A, that **stakeholders must have an early opportunity to meaningfully comment before major decisions are made.** Stakeholders in the master-planning process have been asked to enunciate their individual goals, but there has been no discussion on how to integrate these into establishing the 'strategic role' and the 'study goals' as outlined by the FAA. ODA and consultant W.H. Pacific have specifically rejected the establishment of a 'vision' for the Airport as a starting point, something several members of the PAC requested at the outset of the process.

We observe from the conduct of ODA that installation of an air traffic control tower is being actively pursued prior to development of the new master plan and without consultation with the PAC. The fact that ODA is acquiring funds to build a control tower in the absence of any cost estimate and without first conducting planning demonstrates a serious lapse in judgment. ODA has indicated that concurrent to the master plan update, the agency has contracted for an air traffic control tower siting study; again an issue that the PAC should discuss has been arbitrarily removed the planning process.

Further, it seems clear that the role of the PAC has been deliberately marginalized. The forecast of future activity at the airport has apparently been compiled and is about to be sent to the FAA for

approval without any advance discussion with the PAC. It is notable that there is no accurate information available on current activity levels, since there are no records of landings and take-offs. Any methodology used to generate undocumented current activity numbers to use as a starting point for future usage projections surely should require very close scrutiny. But the PAC has not been given that opportunity for review and discussion.

Despite the absence of any discussion of the 'strategic role' and 'study goals' and any review of the activity forecast with the PAC, the process developed by the consultant, under the direction of ODA, appears to be one of justifying the preconceived idea that runway expansion and strengthening is required at Aurora Airport. The Scope of Work, dated June 19, 2009, states on page 3 that consultant "W.H. Pacific will prepare a letter on behalf of ODA to request statements [presumably from large jet operators] to *help justify* an extension" of the runway (emphasis added). This would seem to clearly demonstrate an intent that undermines any pretense of a meaningful process.

We are not aware of any impact analysis based on a fore.cast of future activity that was developed. In short, this appears to leave the simplistic assumption that if the demand can be somehow justified, then it must be supplied, no matter the impacts. Common sense tells us that increasing the size and types of airplanes, and the increase in the frequency of their use, will have impacts. Going from a general aviation airport with mostly small, propeller-and-piston-engine light-airplane and smaller jets under 45,000 pounds to an airport catering to larger, heavier turbine-engine jet aircraft cal Is for a serious, reasoned analysis of impacts.

The Aurora State Airport is located in the French Prairie area of "foundation farmland," which the Oregon Department of Agriculture indicates contains Oregon's highest-quality agricultural soils, and bas been able to co-exist with its neighbors as a small-aircraft airport. However, the airport is within a mile of the Portland Metro Urban Growth Boundary and dense residential development to the north. There are serious traffic-congestion problems on roads around the airport and on nearby Interstate 5 at the Boone Bridge "bottleneck" over the Willamette River. As the FAA document 'Airport Master Plans' makes clear, the regional setting of the airport must be examined "because the impact of airport planning decisions can extend well beyond the airport property line." 'What will be the impacts of this greater development at the airport be on noise, pollution, the sun-ounding farm lands, off-site surface transportation facilities including the interstate highway, and nearby residential areas? What, if any, mitigation should occur?

While the PAC's role has been marginalized, ODA plans to select interviewees outside of the PAC and master-planning process who will be asked to give their views on at least one of the major master-planning issues. The Scope of Work, page 8, states that "up to 20 people [will be interviewed] regarding future activity at the airport." That is a critical task. Who are these people and how has ODA directed the consultant to choose them? What meaningful process is there for the PAC in this regard? Again, there has been no discussion by the consultant with the PAC on this matter.

The Scope of Work, page 5, lists the main areas under which data will be collected. Under Item E, Environmental Inventory, there is no mention of collecting data on noise and traffic impacts on nearby communities and on their transportation infrastructure, key aspects listed by the FAA on page 123 with the title 'Environmental Overview for Master Plan Purposes,' FAA AC 150/5070-6B. Nor

is there any discussion in the Scope of Work of National.Environmental Policy Act (NEPA) requirements and whether or not an Environmental Impact Statement (EIS) is required. The Scope of Work states that noise contours will be developed, but only to show existing conditions and those five years into the future. As the activity forecasts will be generated for five years, 10 years and 20 years into the future, the noise contours should be developed for the same time periods.

We are very concerned that the Aurora Airport master planning process is being rushed through on a condensed schedule without adequate discussion of the issues at the Planning Advisory Committee level in order to satisfy the preconceived outcomes of a few special interests. This is not the meaningful, due process input the FAA intended in their Master Plan process.

We respectfully request that a meeting be arranged at the earliest opportunity for the undersigned with you, the Acting Director of ODA, the consultant, and appropriate representatives of the FAA to discuss these concerns. Furthe1more, we request that this letter be memorialized as a part of the record of the Aurora Airport Master Plan update. Too many issues of previous inside dealings connected with ODA's handling of matters at the Aurora Airport have recently come to light, and it is important that now, under new management direction, ODA not be a part of a process that lacks meaningful input, good planning, and transparency.

We thank you for your time and consideration.

Respectfully submitted by the undersigned members of the Planning Advisory Committee to the Aurora State Airport Master Plan.

Tony Holt, Chair, Civic Affairs Committee
Charbonneau Country Club

Jim.. rnard, Commissioner
Clackamas County Board of Commissioners

City of Wilsonville City Council

RickKosta, President
Deer Creek Estates Ffomeowners' Association

Roger Kaye, President
Friends of Marion County

CLACKAMAS COUNTY
2051 Kaen Road
Oregon City, OR 97045

WILSONVILLE OREGON
29799 SW Town Center Loop E
Wilsonville, OR 97070

August 8, 2018

Honorable Kate Brown
Governor
900 Court Street, Suite 254
Salem, OR 97301-4047

Honorable Peter Courtney
Senate President
900 Court St. NE, S-201
Salem, Oregon 97301

Honorable Tina Kotek
House Speaker
900 Court St. NE, Rm. 269
Salem, Oregon 97301

RE: Request to Cancel Oregon Department of Aviation application to Federal Aviation Administration (FAA) for funds to extend the Aurora State Airport runway

Dear Governor Brown, President Courtney and Speaker Kotek:

We have just learned that the Oregon Department of Aviation ("ODA") intends to apply today for federal funding for a $33 million project to extend the runway by 1,000 feet of the Aurora State Airport. As the elected leaders of Clackamas County and the City of Wilsonville, we believe that this application is premature until the proposed project undergoes the required public-involvement process to assess potential impacts of a major airport expansion and mitigation strategies to address those impacts. We therefore request your assistance to table the pending application by ODA as referenced in a July 27, 2018, letter to the Senate President and House Speaker.

In June 2010 ODA agreed to exclude Clackamas County and the City of Wilsonville from the Intergovernmental Agreement on the Coordination of Growth Management and Transportation Issues ("IGA") pertaining to the Aurora State Airport. The IGA contained an exhibit showing a "gerrymandered" Aurora Airport Impact Area map where the 10,000-foot impact area from the airport runway intentionally excludes lands under the jurisdiction of the County and City.

The subsequent 2012 Aurora State Airport Master Plan failed to follow state law in terms of public process and resulted in an Oregon Aviation Board decision to extend the runway that was contrary to the findings and conclusions in the plan. A project of this magnitude with potential, substantial impacts to nearby surface transportation facilities, area quality-of-life, and a vital agricultural economic cluster requires a robust public-input process. Due to a lack of public review of the proposed runway extension, neither impacts nor mitigation strategies have been considered.

The County and City have a valid public interest in protecting the welfare of our residents and businesses. We respectfully request that the proposed ODA grant application to the FAA be withdrawn and a new IGA be drawn-up that includes all of the local jurisdictions in the airport impact-area and the Oregon Department of Transportation. Furthermore, we call for a new Aurora State Airport master plan to be developed that meaningfully engages the public. We can state unequivocally that the County and City are committed to working with all of the stakeholders surrounding the Aurora State Airport in an open and transparent manner. Thank you for your time and consideration.

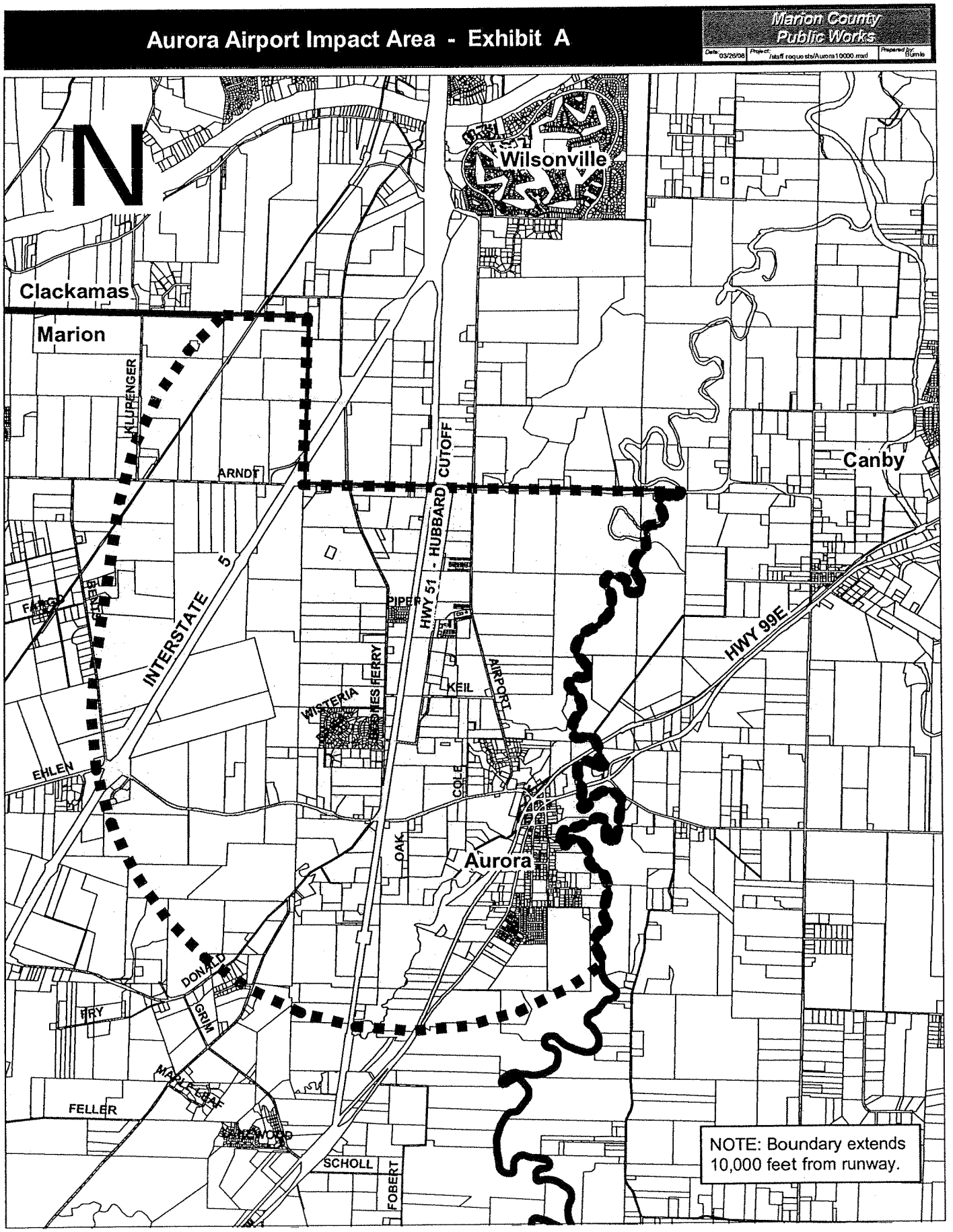
Sincerely,

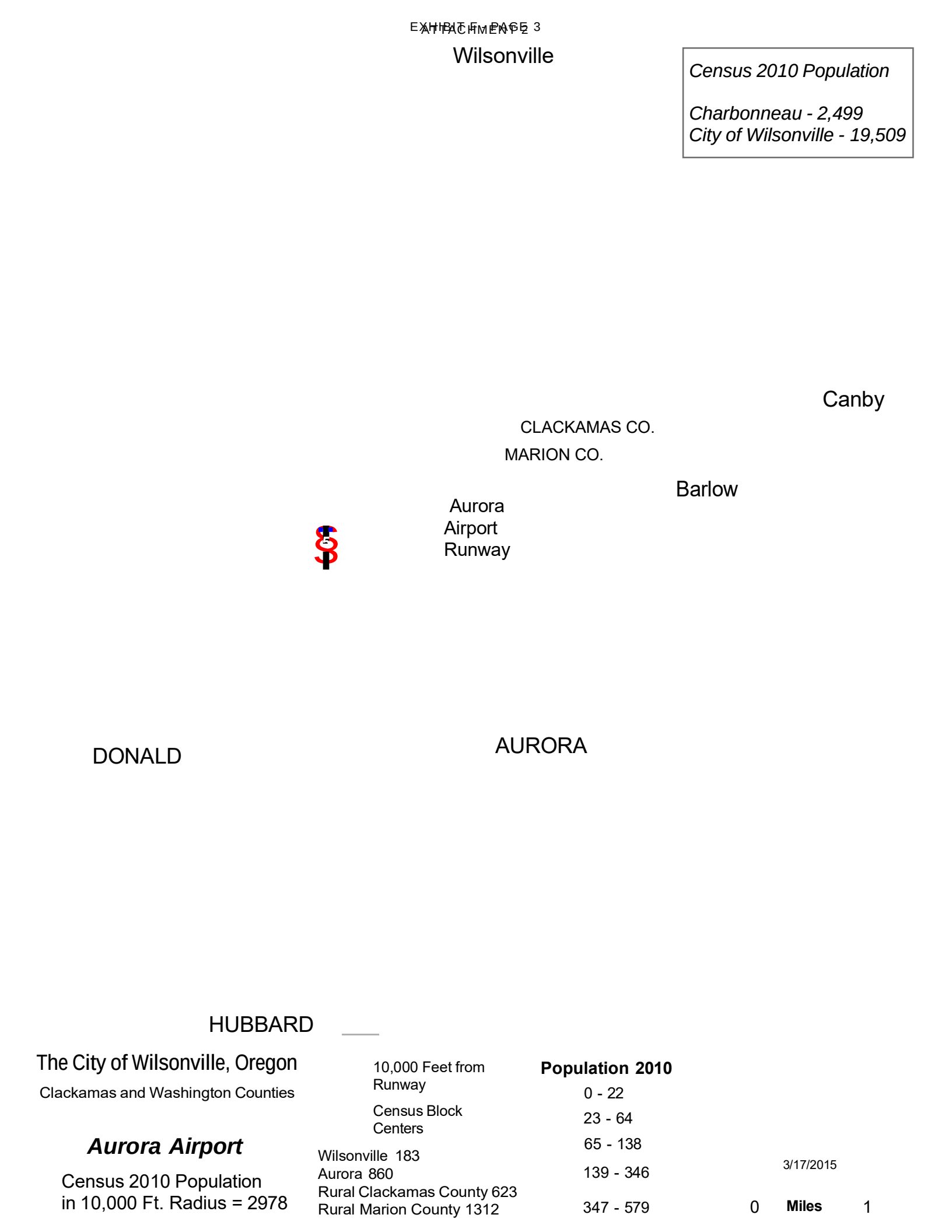
Jim Bernard, Chair
Clackamas County Board of Commissioners

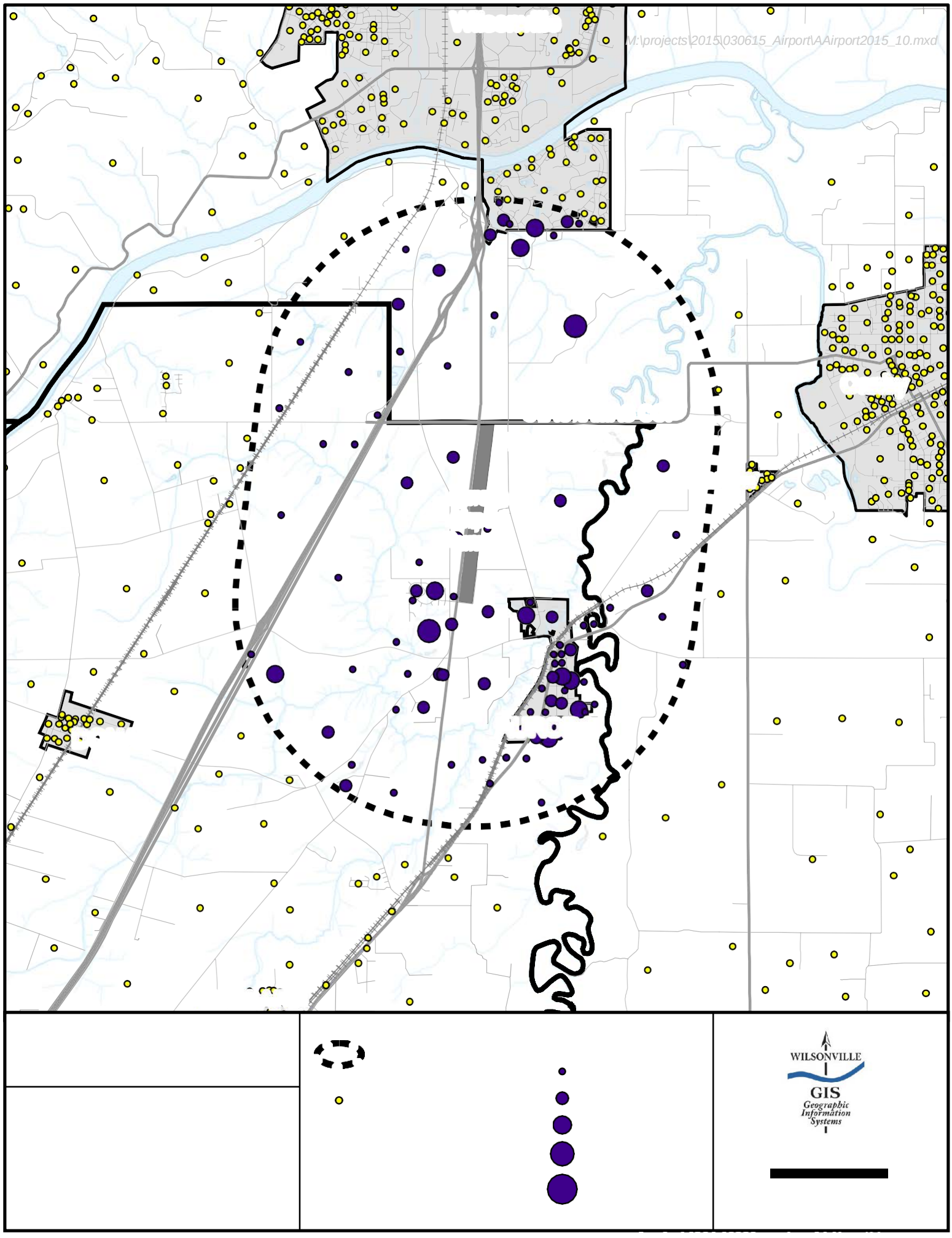
Tim Knapp, Mayor
City of Wilsonville City Council

Enclosures (6)

cc: FAA—Randall Fiertz, NW Mountain Region Airports Div. Director; Joelle Briggs, Seattle Office Dist. Manager
ODA—Martha Meeker, Oregon State Aviation Board Chair; Brian DeForest, Interim Director


Aurora Airport Impact Area - Exhibit A
Marion County Public Works
Date: 03/26/08
Project: /staff requests/Aurora10000.mxd
Prepared by: Stumle
N
Wilsonville
Clackamas
Marion
Canby
Aurora
KLUPENGER
ARNDT
CUTOFF
HUBBARD
HWY 51
INTERSTATE 5
PIPER
FERRY
KEIL
AIRPORT
HWY 99E
WISTERIA
EHLEN
COLE
OAK
DONALD
MILLER
FELLER
SCHOLL
FOBERT
NOTE: Boundary extends 10,000 feet from runway.


Wilsonville
Census 2010 Population
Charbonneau - 2,499
City of Wilsonville - 19,509
Canby
CLACKAMAS CO.
MARION CO.
Barlow
Aurora
Airport
Runway
5
DONALD
AURORA
HUBBARD
The City of Wilsonville, Oregon
Clackamas and Washington Counties
Aurora Airport
Census 2010 Population
in 10,000 Ft. Radius = 2978
10,000 Feet from Runway
Census Block Centers
Wilsonville 183
Aurora 860
Rural Clackamas County 623
Rural Marion County 1312
Population 2010
0 - 22
23 - 64
65 - 138
139 - 346
347 - 579
3/17/2015
0
Miles
1


M:\projects\2015\030615_Airport\AAirport2015_10.mxd
WILSONVILLE
GIS
Geographic Information Systems

CLACKAMAS COUNTY

BOARD OF COUNTY COMMISSIONERS

PUBLIC SERVICES BUILDING
2051 KAEN ROAD I ORE.GON CITY, OR 97045

November 3, 2009

Mr. Gregg Del Ponte
Acting Administrator
Oregon Department of Aviation
3040·25th SE
Salem, OR 97302-1125

Honorable Jim Meirow, Mayor
City of Aurora
21420 Main Street
Aurora, OR 97002

Honorable Patti Milne, Commissioner
Marion County Commission
Courthouse Square
555 Court Street N.E.
P.O. Box 14500
Salem, OR 97309-5036

Dear Director Del Ponte, Commissioner Milne and Mayor Meirow:

Consistent with our discussion concerning the Aurora Airport over the last several years, we are formally requesting that Clackamas County be added to the Aurora Airport Intergovernmental agreement as currently written.

With the commencement of the Aurora Airport Master Plan, the timing is good to have all of the local governments adjacent to the Aurora Airport at the table to discuss issues related to the Aurora State Airport planning and development.

We appreciate your favorable consideration of our request to join the Aurora Airport Intergovernmental agreement.

Sincerely,

CLACKAMAS COUNTY BOARD OF COMMISSIONERS

On Behalf of the Clackamas County Board of Commissioners

LAP/sp/kjb

P. 503.655.8581 | F. 503.742.5919 | WWW.CLACKAMAS.US

Lynn Peterson

City of
WILSONVILLE
in OREGON

29799 SW Town Center Loop E
Wilsonville, Oregon 97070
(503) 682-1011
(503) 682-1015 Fax Administration
(503) 682-7025 Fax Community Development

November 20, 2009

Mr. Gregg Del Ponte, Acting Administrator
Oregon Department of Aviation
3040 25th SE
Salem, OR 97302-1125

Honorable Patti Milne, Commissioner
Marion County Commission
P.O. Box 14500
Salem, OR 97309-5036

Honorable Jim Meirow, Mayor
City of Aurora
21420 Main Street
Aurora, OR 97002

RE: **Request to Join Aurora Airport Intergovernmental Agreement**

Dear Director Del Ponte, Commissioner Milne and Mayor Meirow:

Consistent with our discussions concerning the Aurora Airport over the last several years, we are formally requesting that the City of Wilsonville be added as a partner jurisdiction along with Clackamas County to the April 2008 "Intergovernmental Agreement on the Coordination of Growth Management and Transportation Issues" pertaining to the Aurora Airport area ("Aurora Airport Intergovernmental Agreement").

With the commencement of the Aurora Airport Master Plan process, the timing is good to have all of the local governments adjacent to the Aurora Airport at the table to discuss issues related to the Aurora State Airport planning and development.

We appreciate your favorable consideration of our request to join the Aurora Airpmi Intergovernmental Agreement. Thank you for your time and consideration.

Sincerely,

Tim Knapp
Mayor

cc: Honorable Lynn Peterson, Commission Chair, Clackamas County

Marion County
OREGON

Read 6/22/10 SCL

(503) 588-5212
(503) 588-5237 - FAX

June 21, 2010

Commissioner Lynn Peterson
Clackamas County
Board of Commissioners, Chair
2051 Kaen Road
Oregon City, Oregon 97045

Knapp
City of Wilsonville
29799 SW Town Center Loop E
Wilsonville, Oregon 97070

Dear Lynn 4&- \

On behalf of Marion County, the Oregon Department of Aviation and the City of Aurora, I would like to present to you an updated, revised, and signed Intergovernmental Agreement regarding communications relating to the Aurora State Airport.

Over the past couple of years we have built strong working relationships that have allowed us to successfully face challenging issues that are of mutual interest to each of our individual jurisdictions. Maintaining open channels of communication will be critical as we continue to work together and face new challenges.

This revised agreement requires the signing jurisdictions to communicate with Wilsonville and Clackamas County about land use actions that affect the airport or are impacted by the airport.

As we all know, the state will begin the master plan process for the Aurora Airport with the first PAC meeting on July 22, at 6:00 p.m. in Charbonneau. We would like to invite you attend a meeting with Marion County, the City of Aurora and the Department of Aviation prior to that meeting. Please let me know your availability and we will schedule the meeting.

Please do not hesitate to contact me if you have any questions or suggestions.

Sincerely,

Patti Milne
Commissioner

cc: James Meirow, City of Aurora
Doug Hedlund, Oregon Department of Aviation

INTERGOVERNMENTAL AGREEMENT ON THE COORDINATION OF GROWTH MANAGEMENT AND TRANSPORTATION ISSUES BETWEEN CITY OF AURORA, MARION COUNTY, AND THE OREGON DEPARTMENT OF AVIATION

This Agreement is entered into by and between the City of Aurora ("Aurora"), Marion County ("Marion County"), and the Oregon Department of Aviation ("ODA"), pursuant to ORS 190.003 to 190.110, which allows units of government to enter into agreements for the performance of any or all functions and activities which such units have authority to perform.

RECITALS

WHEREAS, the Aurora Airport Impact Area ("Impact Area") - Exhibit A is expected to experience substantial population and employment growth by the year 2050; and

WHEREAS, anticipated growth within the Impact Area will affect land areas within the jurisdictional boundaries of the City of Aurora, Marion County, and the State of Oregon Department of Aviation; and

WHEREAS, Aurora, Marion County, and the ODA wish to coordinate growth management and transportation related development processes and decisions within the Impact Area to ensure an appropriate opportunity is given for affected parties to review and address anticipated impacts; and

WHEREAS, to achieve this coordination, Aurora, Marion County, and the ODA are interested in identifying the Impact Area and establishing a process for coordination and cooperation; and

WHEREAS, Statewide Planning Goal 2 - Land Use Planning, requires that local government comprehensive plans and implementing measures be coordinated with the plans of affected governmental units and that local government, state and federal agency and special district plans and actions, relating to land use, be consistent with the comprehensive plans of cities and counties and regional plans adopted under ORS Chapter 197; and

WHEREAS, OAR 660, Division 12 requires coordination of state, regional and local transportation system plans establishing a coordinated network of transportation facilities to serve state, regional and local transportation needs; and

WHEREAS, ORS Chapter 836 and OAR 660, Division 13 requires planning and coordination of local, state and federal agencies to encourage and support the

continued operation and vitality of Oregon's airports and recognizes the interdependence between transportation systems and the communities on which they depend.

NOW, THEREFORE, Aurora, Marion County, and ODA agree as follows:

AGREEMENT

I. Purpose

The parties agree that they are mutually interested in and will work together to:

A. Establish and amend, as necessary, the Aurora Airport Impact Area ("Impact Area") as identified on Exhibit "A" attached to this Agreement.

B. Identify and resolve issues and concerns related to transportation and growth management in and around the Impact Area for the benefit of the parties as well as affected adjacent landowners, airport users, and other interested parties.

C. Coordinate on growth management and transportation development decisions within the Impact Area.

D. Encourage and support the continued operation and vitality of the Aurora Airport and recognize the interdependence between air and ground transportation systems within the Impact Area and the communities on which they depend.

E. Provide notice and an opportunity to comment on land and transportation developments within the Impact Area which may reasonably affect the parties.

F. Nothing in this Agreement shall be construed to require the parties to exercise jurisdiction beyond that which is required by state law.

II. Definitions

"Aurora Airport" means that area of land located at what is commonly known as the Aurora Airport that is designed, used or intended for use for the landing and take-off of aircraft, and any public or privately owned appurtenant areas and structures, including open space, used for airport buildings or other airport facilities or rights-of-way or which is located on lands located within the Marion County Public Zone.

"Impact Area" means the Aurora Airport, the Aurora Airpark, and those portions of North Marion County the development of which impacts the parties to this Agreement

and existing residents and businesses within each party's jurisdiction, as shown on the Aurora Airport Impact Area Map, attached as Exhibit A.

III. Amendment of Aurora Airport Impact Area Boundaries

A. Impact Area boundaries may be amended by Marion County upon its own initiative or upon the written request of Aurora and/or the ODA.

B. When amending boundaries, Marion County shall give notice to and work in cooperation and coordination with Aurora and the ODA, and shall consider the following factors:

1. Existing and future land development;

2. Existing and future local and state transportation corridors;

3. Existing and future Aurora Airport usage and flight patterns; and

4. Each affected jurisdictions' Comprehensive Plan boundaries ,and related goals and policies.

IV. Comprehensive Planning within the Impact Area

A. Existing Comprehensive Plan designations and zoning, as currently designated by each party to lands within its jurisdiction, shall continue to apply to those lands within the Impact Area.

B. Any party formally considering a Comprehensive Plan Amendment for lands within Impact Area boundaries shall provide for notice and opportunity for comment to the other parties to this Agreement in a manner provided in Article VI below.

C. Special plans and studies undertaken that involve lands within the Impact Area such as infrastructure, environmental, or economic planning shall be shared amongst the parties.

V. Land Use Development and Coordination within the Impact Area

A. This Agreement shall have no effect on the current local and statutory zoning and regulatory authority of each jurisdiction within the Impact Area boundaries, nor any existing intergovernmental agreements between the parties.

B. Aurora and Marion County respectively agree to provide ODA, Wilsonville, and Clackamas County, with notice and an opportunity to comment, in the same manner as currently required for affected property owners by their

respective development codes for land use applications within the Impact Area. The parties shall provide each other with requested data, maps, and other information in hard copy or digital form in a timely manner.

C. ODA shall provide Aurora, Wilsonville, Clackamas County, and Marion County with notice and opportunity to comment for all Airport Master Plan amendments, new access agreements (through-the-fence agreements), and for proposed development or infrastructure improvements, relative to the Aurora Airport.

D. The parties shall discuss and work cooperatively to determine whether specific uses which would otherwise be permitted within existing exception areas under County zoning should be prohibited or restricted within the Impact Area to implement the purposes of this Agreement.

VI. Notice and Coordination Responsibilities

A. Aurora and Marion County each shall provide ODA, Wilsonville, and Clackamas County with notice and an opportunity to comment prior to the first scheduled public hearing, in the same manner provided to property owners in their applicable codes, for all of their respective legislative plan amendments, zone changes, or new land use regulations and amendments affecting property within the Impact Area.

B. Aurora and Marion County each shall provide ODA, Wilsonville, and Clackamas County with notice and an opportunity to comment prior to all of their respective administrative or public hearing actions, in the same manner provided to property owners in their applicable codes, for any quasi-judicial development applications (including, but not limited to, plan and zoning code amendments, conditional use permits and design review) within the Impact Area.

C. ODA shall provide reasonable notice and opportunity to comment to Aurora, Wilsonville, Clackamas County, and Marion County for all Airport Master Plan amendments, new access agreements (through-the-fence agreements), and for its proposed development or infrastructure improvements, relative to the Aurora Airport.

D. In order to fulfill the cooperative planning provisions of this Agreement, Aurora, Marion County, and ODA shall provide each other with all requested reasonable data, maps, and other information in hard copy or digital form in a timely manner.

VII. Amendments to this Agreement

This Agreement may be amended in writing by the agreement of all parties and may be reviewed by the parties at any time.

VIII. Termination

This Agreement may be terminated by any party as to the rights and responsibilities of that party within 60 days written notice to the other parties. Termination of the rights and responsibilities of one or more parties does not affect the rights and responsibilities of the remaining parties as to each other.

IX. Reservation of Rights and Authorities

This Agreement is intended only to achieve the purposes set forth in Section I of the Agreement and is not intended to create any right or responsibility which is legally enforceable by any person or entity against any Party and creates no rights in third parties or the right to judicial review regarding the acts or omissions of any Party. Each Party reserves all rights or authorities now or hereafter existing and nothing in this Agreement waives or forecloses the exercise of any such rights or authorities.

X. Severability

If any section, clause or phrase of this Agreement is invalidated by any court of competent jurisdiction, any and all remaining parts of the Agreement shall be severed from the invalid parts and shall remain in full force and effect.

XI. Effective Date

This Agreement is effective on the date it is fully executed.

IN WITNESS THEREOF, the respective parties have caused this Agreement to be executed by their authorized 9fficer or representative on their behalf:

Z! RORA

James Meir
Mayor, City of Aurora

unl<t/ ru
Date

ATTEST:

By: _____
City Recorder

MARION COUNTY

GjJ #h

6/7/10

hair, sx!d of Commissioners

ATTEST:

By: _____
Recording Secretary

Approved as to form:

-Ge

Legal Counsel

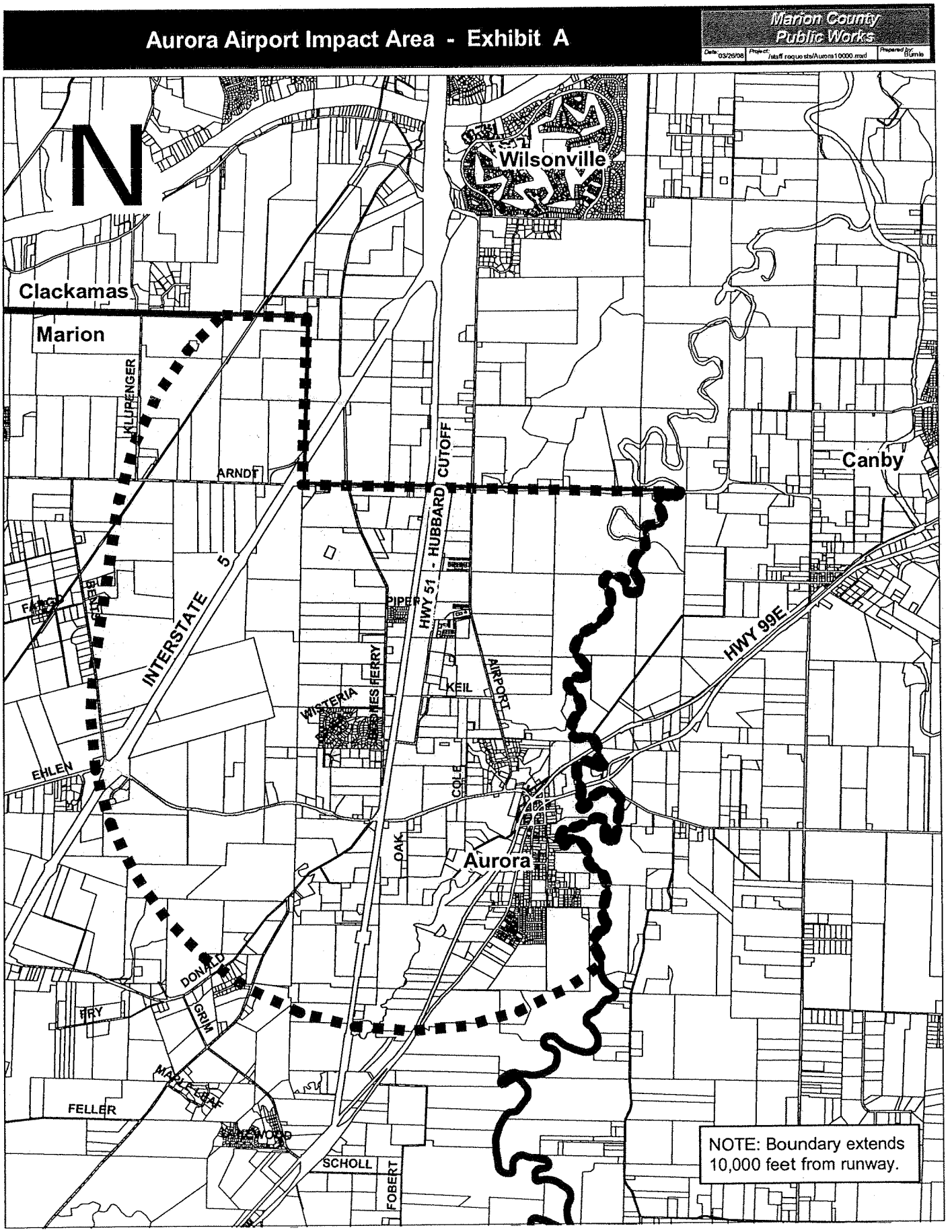
APPROVED AS TO FORM:
Marion County Contracts 6/7/10 Date

OREGON DEPARTMENT OF AVIATION

IAP< 0

6/8/10

Doug Hedlun
Director, Oregon Department of Aviation


Aurora Airport Impact Area - Exhibit A
Marion County Public Works
Date: 03/26/08
Project: /staff requests/Aurora10000.mxd
Prepared by: Stumle
N
Wilsonville
Clackamas
Marion
Canby
Aurora
KILDEER
ARNDT
CUTOFF
HUBBARD
HWY 51
INTERSTATE 5
PIPER
HWY 99E
FARGO
FERRY
KEIL
AIRPORT
WISTERIA
EHLEN
COLE
OAK
DONALD
GRIM
FELLER
SCHOLL
FOBERT
NOTE: Boundary extends 10,000 feet from runway.

A LETTER OF CONCERN

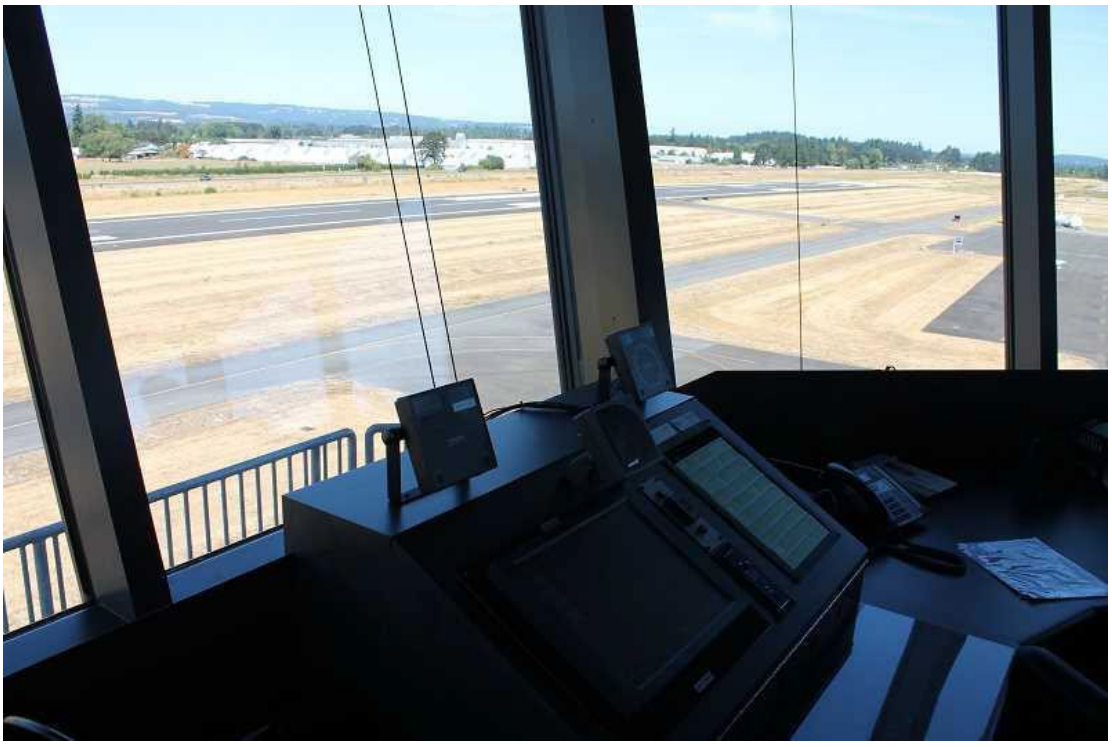
WilsonvilleSpokesman

Corey Buchanan, Wilsonville Spokesman

Tuesday, January 16, 2018

https://portlandtribune.com/wsp/134-news/384055-272627-a-letter-of-concern

City of Wilsonville expresses uneasiness about Aurora Airport legislation and the potential traffic impacts it might bring



SPOKESMAN FILE PHOTO -
A legislative bill that would expedite the process for the implementation of an Aurora Airport extension could be introduced at the Oregon State Legislature February session.

Potentially in unison with Clackamas County, the City of Wilsonville is expected to deliver a draft letter this month to Oregon Senate President Peter Courtney (D-Salem) and House Speaker Tina Kotek (D-Portland) expressing concern about a bill — which could be introduced in the Oregon State Legislature's February "short" session — that would "circumvent standard Oregon land-use and public process laws to allow a special interest to 'carve-out' to extend the runway at the Aurora State Airport," according to a draft of the letter obtained by the Spokesman.

The City of Wilsonville approved the letter Jan. 4 and sent it to the Clackamas County Board of Commissioners — which will then review the letter and determine whether to sign on. The letter could be revised before it's sent to state legislators.

Wilsonville City Council discussed the concept bill at length during a meeting Dec. 18.

"I have met with several different entities and communicated the opinion that we think it's not appropriate to have a legislative action to make an end run around Oregon land use process that would normally allow stakeholders to be part of the decision process but that's exactly what this legislation proposes," Knapp said at the meeting.

Multiple city councilors expressed concern that an airport extension could lead to increased traffic in the Wilsonville area.

"On a basic level I think back to our community survey that we do every year. The big theme from that is people are concerned about traffic. So that's all of the people that live in Wilsonville and come into work in Wilsonville, commute in, commute out. I think that has to be carefully considered, what this issue might do," Councilor Kristin Akervall said.

The legislative concept, which was put forth by Rep. Rick Lewis (R-Silverton), posits that the Aurora Airport, which is the largest state-owned airport in Oregon and employs 1,200 people, needs additional investment in order to "maintain aviation safety and commercial viability" and that the current runway is "inadequate and unsafe."'

The current runway is 5,004 feet and, according to the Aurora Airport Improvement Association, the airport is the state's third busiest and ranks 31st in terms of runway length. This plan has been in the works since the 1976 Aurora Airport Master Plan proposed increasing the runway length to 6,000 feet — which is also the proposed length in the updated master plan.

The concept bill proposes to extend the airport's boundaries, add or expand airport taxi areas and add new or expand facilities for aviation related equipment.

The letter from the City of Wilsonville says the proposed bill would set a precedent that parties who "seek special treatment" should go directly to the legislature rather than go through the goal exception process in order to pass legislation.

Lewis said he wasn't sure exactly what legislative steps the bill would be avoiding but that he assumes the process would include public hearings.

Ben Williams of Friends of French Prairie was not happy when he caught wind of the bill's legislative concept when he spoke with the Spokesman in December.

"If the public was fully informed about A, what has happened, and B, the scope of the consequences, you can bet that the majority would be opposed to it because of the consequences and the precedent," he said.

Lewis, however, says that an extensive public process took place during the crafting of the Aurora Airport Master Plan, which was updated in 2013, and would rather not use more state money and prolong the project's implementation.

He added that additional public hearings will take place if the legislative concept becomes a bill and is assigned to a committee.

"Had the state not done a recent master plan update and this bill hadn't had public hearings, there would need to be more of a public process involved but that's all been done," Lewis said.

According to the Aurora Airport Master Plan, the current runway of 5,004 feet accommodates all small aircrafts with fewer than 10 passenger seats but larger aircraft require a longer runway. Also, the runway's shorter length constrains about 500 flights a year and forces them to "eliminate fuel and cargo to take off and land," according to the Aurora Airport Improvement Association.

The airport extension could allow corporate jets to take off at the airport. According to the master plan, the extension would cost over $3 million.

Lewis is not sure why Wilsonville has raised concerns.

"As far as Wilsonville, I don't know (why) because they stand to benefit if larger corporate jets are able to land there. Corporate jets are less noisy. I would think people would look for lodging, restaurants in Wilsonville, so I'm not really sure what their issues are," he said.

Before the bill had been released, Wilsonville Chamber of Commerce CEO Kevin Ferrasci O'Malley said the WACC would likely support it.

"The Aurora Airport is a member in good standing of the Wilsonville Chamber of Commerce. Our stated WACC vision is to create and promote economic vitality for business in the south metro region," the chamber wrote in a statement. "Historically, the WACC has fully supported efforts to help the Aurora airport realize its potential. It's a powerful local generator of economic development and jobs to Wilsonville and the surrounding local area."

O'Malley says talks of massive changes regarding the airport are overblown.

"There are comments being made about it becoming an Orange County Airport by simply having a runway safety zone," he said. "That's not happening. It's fear mongering. This is allowing the small business aircrafts that are landing and taking off to do so more efficiently. That's what it's about."

Aurora Airport Improvement Association board member Tony Helbing, says the airport currently provides ample economic benefits to surrounding communities and the extension will increase the positive impact. Helbing also says businesses are more likely to use the Aurora Airport if a safer runway is implemented.

"It's important to know that as we want this runway extension, it has to do with our choice to be in business and that business we choose to do here has big ripple impacts into the surrounding community," Helbing said.

Williams believes the benefits of the expansion are more limited. "At the end of the day, the beneficiaries are developers who can have larger airport, larger jets, sell more fuel and more hangars," Williams said. "A few people are going to make a lot of money and there will be a few employment jobs working at aircraft hangars or pumping fuel but that doesn't translate to a lot of benefits for say Wilsonville or the city of Aurora. Most of the economic benefit goes to a small number of businesses and developers."

The Wilsonville letter also addresses concerns regarding "a lack of transportation options in the area," "unfair competition to adjacent jurisdictions," "environmental concerns" and "potential harm to the important agriculture economic cluster brought about by increased land-speculation and difficulty in conducting farming operations."

Additionally, the letter posits that the proposed legislation is too large and significant to be deliberated at the "short" 35-day February session, which will begin Feb. 5.

PLANNING ADVISORY COMMITTEE (PAC) MEETINGS
&
PUBLIC OPEN HOUSE SUMMARIES

AURORA STATE AIRPORT

AIRPORT MASTER PLAN - PAC MEETING #1

MEETING SUMMARY

Date: Tuesday, November 16, 2021
Time: 3:00-5:00 pm
Location: Zoom Webinar

In Attendance

PAC Members Present

Roger Kaye, *1000 Friends of Oregon*
Ted Millar, *AABC/TLM Holdings*
Bruce Bennett, *Aurora Airport Improvement Association*
Ken Ivey, *Aurora Butteville Barlow Community Planning Organization*
Bill Graupp, *Aurora CTE, Inc*
Steve Switzer, *Charbonneau Country Club*
Brian Asher, *City of Aurora*
Chris Neamtzu, *City of Wilsonville*
Commissioner Tootie Smith, *Clackamas County*
Rob Roedts, *Columbia Helicopters*
Bob Buchanan, Alternate, *Columbia Helicopters*
Cheryl Pouley, *Confederated Tribes of the Grand Ronde Community of Oregon*
Matt Williams, *Deer Creek Estates HOA*
Ben Williams, *Friends of French Prairie*
Ben Clayton, *Life Flight Network*
Tristan Dorian, *Lynx Aviation*
Matt Lawyer, Alternate, *Marion County*
Tony Beach, Oregon Dept of Aviation
Naomi Zwerdling, *Oregon Dept of Transportation*
Matt Crall, *Oregon Dept of Land Conservation and Development*
Nicole Mardell, Alternate, *Oregon Dept of Land Conservation and Development*
Bill Martin, *Oregon Office of Emergency Management*
Sarah Puls, Alternate, *Oregon Office of Emergency Management*
Tony Helbling, *Positive Aurora Airport Management*
Jody Christensen, *Regional Solutions*
Rian Johnson, *Vans Aircraft*
David Waggoner, *Willamette Aviation*
Patrick Donaldson, *Wilsonville Chamber of Commerce*
Kevin Ferrasci O'Malley, Alternate, *Wilsonville Chamber of Commerce*

PAC Members Absent

Raul Suarez, *Aurora Air Traffic Control*
Scott Archer, *City of Canby*
Robert Kentta, *Confederated Tribes of Siletz Indians*
Christian Nauer, *Confederated Tribes of Warm Springs Reservation of Oregon*
Robert Fournier, *Helicopter Transport Service*
Commissioner Danielle Bethell, *Marion County*
Mary Anne Cooper, *Oregon Farm Bureau*

Agency Representatives

Sarah Lucas, *ODA*
Heather Peck, *ODA*
Seth Thompson, *ODA*
Benjamin Mello, *FAA*
Betty Stansbury, *ODA*
Kate Key, *FAA*

Staff and Consultants

Matt Rogers, *Century West*
David Miller, *Century West*
Mike Dane, *Century West*
Samantha Peterson, *Century West*
Mark Steele, *Century West*
Brandy Steffen, *JLA Public Involvement*
Tracie Heidt, *JLA Public Involvement*

Audience / Members of the Public

Loraine Crouch
Robert Zakian
Aron Faegre
F Caughlin
Austin Barnes
Ron Looney
Lisa Brice
Bruce Bergman
Jake Jacobs
Otto Horvath
Cheryl van Grunsven
Greg Leo
jging
Joe Mollahan
James Pererson
Kathryn Kelley
n cs
Jason Paolo
Mark Ottenad
Bill Horton
Jon Denney
James Kirby
Joyce Williams
Tom Herzog
Greg Drew
Wayne Richards
Todd Williams
Linette Dobbins
John Wilson
Council President Hensley
Jake Farrens
Richard VanGrunsven
Leticia Martinez de Cervantes
Dr John
David Carlson
Joseph Schaefer
Dan Fricke
John Rachor
Frank Vedack
Mark Steele
Tyler Meskers
Derek Holland
Barbara Jacobson
Jan Gagnon Zakian
Neal White
Patricia Allen-Sleeman
Mayor Julie Fitzgerald
Josh Pruzek
Maurice Gunderson
Prateek Vasudev
Loita Colebank
City Councilor Charlotte Lehan
Tom Maletis
Carolyn Lee
Richard
Eric Winston
Trevor Conroy
Greg Strecker
Betty Ann Arrasmith

Overview

The meeting goals were to introduce the project, understand the role/expectations for the PAC, prepare for upcoming meetings, and to receive public input.

Welcome and Introductions

Brandy Steffen, JLA Public Involvement, welcomed everyone to the meeting and reviewed the agenda and basic Zoom meeting tips. **Sarah Lucas introduced Oregon Department of Aviation (ODA)** staff and the consultant teams. **Matt Rogers, Century West,** introduced the subconsultants that are involved with the project. Brandy posted a poll question asking if members had concerns about the fact that the meeting was being recorded. There were no concerns. Brandy introduced the PAC members and then posted an icebreaker poll question on the screen to see how people were doing, using a weather metaphor as a gauge.

Meeting Process Roles and Responsibilities

Brandy clarified the PAC's roles, reviewed the meeting guidelines and ground rules and described her role as facilitator. She explained the decision-making process, noting the PAC is an advisory group; a sounding board that will review information and provide feedback but not make a recommendation because ODA staff are the final decision-making body. She stated that the project team will gather all PAC members' viewpoints, consider them, and include them in the meeting summary notes.

Brandy said ODA is committed to a fair and transparent public process. There will be many opportunities for the public's questions and comments during future open houses and interviews. The public is always welcome to attend PAC meetings and at each meeting there will be a 15-minute period for verbal comments.

Brandy polled the members to see if they needed any clarification on the agenda, decision-making process, or public involvement and to make sure they understood the protocols/ground rules.

History and Master Plan Overview

David Miller, Century West, gave a history of the Aurora State Airport from the 1940s through current times. He provided parameters for the project. The Master Plan is a facility plan that follows the requirements set by the Federal Aviation Administration (FAA). The goal is to provide a framework for a cost-effective improvement of airport facilities in response to aviation demands. He explained that the 20-year planning horizon was divided into three periods: short-term, intermediate-term and long-term and gave an existing conditions overview. He shared the 18-month project schedule, noting there would be seven PAC meetings and four open houses (although the schedule is subject to change).

Brandy posted a poll to see if anyone had clarifying questions. Two said they would ask their questions in the chat and six people indicated that they might follow up with her later.

PAC Questions and Comments

Brandy opened up a PAC question and comment session, in which committee members could ask questions about the master plan, give general comments about the information presented, list some goals they would like the plan to accomplish, and share their local expertise and airport knowledge. Full comments, along with responses are provided in the table at the end of the document.

Public Comments

Brandy opened the meeting up to public members in attendance that wanted to provide verbal comments to the PAC and reminded everyone that written comments would be collected anytime through the project website. Four people provided comments, which are listed in the tables below along with responses to their questions.

ODA only endorses/supports data and statements that are released from this study and posted to the project website. All other statements by members of the Planning Advisory Committee and public are personal opinions. Other documents may not be endorsed by the ODA because they are out of date, unless otherwise noted.

Next Steps

Brandy thanked everyone for coming and said the recording of the meeting and Power Point Presentation slides would be posted on the website within the next couple of days.

The meeting summary will be posted to the project website in about two weeks and will include all questions and responses, even to those questions that were asked in the chat and weren't answered today. We will also email the PAC members the meeting summary. Brandy advised members to send the team any other questions they might have in the coming days and announced that the second PAC meeting will be scheduled in the future, but it is anticipated for January/February 2022.

Sarah, Heather, and David all thanked the PAC and members of the public for coming and Brandy closed the meeting.

Questions/Comments and Responses Related to the Meeting Topics

Name	Affiliation	Question/Comment	Response
David Waggoner	Willamette Aviation	Will any elements of last master plan be added to this one?	Past studies are being reviewed for historical reference. This Airport Master Plan (AMP) Project will include a comprehensive evaluation of existing conditions, evaluation of compliance with current FAA standards, and development of alternatives to address forecasted activity at the airport.
Ben Williams	Friends of French Prairie (FOFP)	A Master Plan that actually takes into account the local communities and neighborhoods and the airport impacts upon them!	Maintaining a transparent and thorough process that involves listening to and understanding all comments from the public, surrounding neighbors, and PAC members is a critical component of this AMP Project. ODA will utilize comments in an advisory manner, as applicable to the FAA-approved Scope of Work (SOW) and in accordance with best practices of airport operations management.
Ted Millar	AABC/TLM Holdings	I have been part of the airport for 20-some years and the state of Oregon is making emergency preparedness a major priority in	To clarify, the scope of work approved by the FAA for this master plan doesn't include any resiliency scope, so a future special study might address this, but it

		the case of major disasters, such as earthquakes and fires. The state study indicates that within the first 90 days of an earthquake, the emergency response is going to have to be by air. The Aurora Airport was one of 12 airports designated as an emergency response location. Geo technical studies show that in case of a major earthquake, this airport won't be affected by the liquification like PDX, Hillsboro and McMinnville. He said we already have control towers with all of the emergency preparedness companies located here, such as Columbia Helicopters, Helicopter Transport, Wilson Construction, etc. He thinks it's important that this airport gets special attention because of its capabilities.	is not part of this specific process. Thank you for sharing.
Roger Kaye	1000 Friends of Oregon	I have questions about the scope of work document they all received in advance but wanted to wait until today to ask his questions. The scope of work identified a lot of particulars that are not identified here in this first meeting. Everyone should look at it and see how this process fits within the scope. He had concerns about certain statements made in the scope of work and wanted them addressed by ODA. He wondered if the scope of work was part of this process.	Yes, the scope of work came via email to all committee members in October as part of the packet, and if you didn't receive it, please email Sarah Lucas.
Bruce Bennett	Aurora Airport Improvement Association (AAIA)	Have been on the airport field for 47 years straight and that it was important to keep everything in perspective. He said the runway lengthening safety improvement that has been planned since 1976 has been hugely exaggerated and it is important to keep in perspective that Aurora will never be a long runway, but it should be normal anyway. In the state of Oregon, 30 airports are longer than this one, and only 4 are busier. He said the prior master plan would put Aurora Airport at number 11,	Comment noted; no response required.

		and that was a reasonable target.	
Bruce Bennett	Aurora Airport Improvement Association (AAIA)	Safety improvements that have been delayed for decades are paramount based on my 43 years operation here and lifetime in the Aviation industry.	Comment noted; no response required.
Bruce Bennett	Aurora Airport Improvement Association (AAIA)	Wanted to clarify for the non-pilots in the group that the original runway length requirements for the airport in 1943 were okay. The regulations were that the runway needed to be long enough for an airplane to take off; but today, for safety reasons, the requirements are for take off plus a landing. It is critical that the length is adequate. One of Bruce's best friends died in an accident due to insufficient runway length. Looks can be deceiving on a runway, he said.	Century West will be looking at that. FAA has strict runway length minimum standards.
Naomi Zwerdling	Oregon Department of Transportation	What are the approval processes with land use and transportation? Does ODOT and City go through approval processes?	Marion County is the governing jurisdiction for the Aurora State Airport. Once the AMP is complete there will be a separate process for any Comprehensive Plan amendment or Transportation System Plan (TSP) updates, as required by Marion County. The processes that will be followed are set by Marion County's requirements.
Brian Asher	Mayor, City of Aurora	Will the local community utilities, noise, fire protection needs be addressed in the master plan	Yes. This master plan will include an analysis of noise exposure both for the current traffic and forecast periods. We will go over an inventory of some of the utilities that exist at the airport so you can be more familiar with what the airport's needs are for water, other resources and fire protection.
Ben Williams	FOFP	Also, for the record, we have no knowledge that there was any public notice or comment period for the Scope of Work (SOW) before it was approved and awarded. In other words, this PAC has no input about the SOW.	This AMP is a Federal Aviation Administration (FAA) Airport Improvement Program (AIP) funded project. SOW development and approval is an FAA process. For all projects funded by the FAA AIP, the FAA works directly with airport owners/sponsors to determine and approve the SOW in accordance with the FAA's requirements.

Bill Graupp	Aurora CTE, Inc.	Added Goal: Account for future enhancements in aviation technology, including fuel/power and navigation technology, and changes to transportation standards (e-based technology).	ODA and the Consultant Team will address these issues, in accordance with the SOW.
Ken Ivey	Aurora Butteville Barlow Community Planning Organization	In the introduction packet, page 4 of Frequently Asked Questions refers to a "previous planning studies". Where can we access those studies?	The Project Website's resource page will be updated with any and all prior studies that may be deemed necessary and helpful for this project. Previous studies are currently available on ODA's website.
Ben Williams	FOFP	According to the State Geology Dept. the south end of the runway is subject to liquefaction and will disintegrate in a major earthquake!	Please feel free to provide the technical studies and evaluations to which you are referring. No new geotechnical studies are included in the SOW of this project.
Patrick Donaldson	Wilsonville Chamber of Commerce	I look forward to whatever plan is submitted because it seems so comprehensive. From the Chamber's perspective, the ability for people to work at the airport and go back to their homes and further the economy and have a safe work environment that they can return to is essential. He said it's important for the committee to bring forth all their ideas and documents they have questions about (such as liquification in the event of an earthquake) and we can independently look at the veracity of them and if they are contemporary.	We will review existing and past engineering studies that have been done on the runway, current pavement strength data, and other data. That will definitely be in our review of the inventory and incorporated into future planning for facility improvements. We will look at what information is available so we can understand current conditions. We will not be doing direct Geotech investigations with this work. We will review current studies done by professional engineers on the subject of liquification and review any additional documents that are available, as well.
Tony Helbling	Positive Aurora Airport Management	His group is focused on respectful operations of the aircraft and the airport in conjunction with their neighbors. He has worked with ODA in the past and done outreach. Their members, Bruce Bennett, for example, have worked with Charbonneau and others to get some of the routes in and out of the airport changed. John Wilson worked hard on the VFR routes for voluntary noise complaints. Tony is glad this is moving forward. His group wants to operate safely and respectfully of their neighbors.	Comment noted; no response required.

Tristan Dorian	Lynx Aviation	Agrees with Tony. Lynx has some big priorities as an FBO network. Items such as maintaining an efficient and sustainable site for operation, taxi way widening and weight limitations are important to them and their operation.	Comment noted; no response required.
Tristan Dorian	Lynx Aviation	Will CFR-Part 139 categorization of UAO likely be included in this master plan, bringing minimum security/safety standards and AOA (Airport Operating Area)?	No. For clarification, 14 CFR Part 139 requires FAA to issue airport operating certificates to airports that: • Serve schedule and unscheduled air carrier aircraft with more than 30 seats; • Serve scheduled air carrier operations in aircraft with more than 9 seats but less than 31 seats; and • The FAA Administrator requires to have a certificate. Certification is not an objective of this AMP or ODA.
Tristan Dorian	Lynx Aviation	Tristan Dorian wanted to circle back on the 139 piece. He recognizes it is not an immediate priority but because Aurora Airport is in the Portland metro area, it would bring a lot of economic benefit and efficiency in minimal standards for safety and security for the airport. He said this is a huge priority for them, their customers, base tenants and everyone on this call. Because it seemed like a logical step in the journey for Aurora, he wanted to challenge why Part 139 is not a priority item.	Comment noted. The goal is to operate at the highest level of safety. The Aurora Airport implements as many of the components of 139 as we can, but those components that require certification are less feasible to achieve. NOTE: 139 is a FAR (Federal Aviation Regulation) for commercial service airports and lays out a set of safety and security measures.
Bruce Bennett	AAIA	Ben's information is outdated and inaccurate, I'll provide correct information.	Please feel free to provide the technical studies and evaluations to which you are referring. No new geotechnical studies are included in the SOW of this project.
Tony Helbling	Positive Aurora Airport Management (PAAM)	The claim the south end of the runway will disintegrate is inaccurate. New geotechnical studies show differently.	Please feel free to provide the technical studies and evaluations to which you are referring. No new geotechnical studies are included in the SOW of this project.
Chris Neamtzu	City of Wilsonville	Is it a goal of this AMP process to comply with Oregon land use and public process goals?	Yes. ODA will complete the AMP in compliance with the Department of Land Conservation and Development's (DLCD) State Agency Coordination (SAC) Program. Compliance with

			Oregon's Statewide Planning Program is a core requirement of the SAC Program. The ODA will ensure the Aurora State Airport AMP is completed in accordance with ORS 187.180; OAR 660-30 & 31. Oregon's Statewide Planning Program also emphasizes the importance of public involvement, which is a key component of the SAC Program. Accordingly, the ODA has established a Planning Advisory Committee (PAC) that includes members from all affected Federal, State, Local Special Districts, and Interested Parties. The PAC will meet up to nine times throughout the 18-month Aurora State Airport AMP project timeline. All PAC meetings are open to the public.
Tristan Dorian	Lynx Aviation	Just to make sure it's on record - weight limitation from 45,000lbs dual to 110,000lbs and taxiway widening to 50ft is a huge priority for this process.	Comment noted; no response required.
Chris Neamtzu	City of Wilsonville	Want to recommend ODA (Oregon Department of Agriculture) and DEQ (Oregon Department of Environmental Quality) as entities that warrant seats at the table.	Comment noted. All project information for this AMP will be readily available to all state, federal and local agencies and jurisdictions. ODA works with DEQ and Agriculture, as required, on all Capital Improvement Projects.
Ken Ivey	Aurora Butteville Barlow Community Planning Organization	Will you be sending out contact information for the hosts?	Contact information was shared in the presentation and is available on the project website.
Bruce Bennett	AAIA	Great points to strengthen the runway and widen the taxiway Tristan, somehow that was mistakenly communicated as "commercial service" use. So that will need to be sorted out.	The AMP will address current (existing) conditions and future facility requirements.
Wayne Richards	FOFP	I wonder about the airport operational count? Predications from 2012 were extremely high compared to actual use. Pilots need landing strip that is long enough to take off and land. Are they allowed to take off?	In the AMP forecasting effort, a variety of contributing factors, as well as the validated count of based aircraft, will be reviewed. The answer to that question will be studied in the aeronautical activity forecasting effort and the resulting facility requirements analysis.
Steven Benson and Lisa Brice	--	I live at Daydream Ranch near Charbonneau. Why aren't we represented on the committee because we are most impacted	You will be added to the mailing list, and it is recommended you reach out to a PAC member that represents your

		by the noise? We live in the City of Wilsonville.	area (City of Wilsonville and/or Clackamas County).
Lori Crouch	--	I live across street on Highway 551 in sunset estates. What is a noise contour and I wonder what noise volume this project will add? Will there be a wall added?	The AMP will develop noise contours (which are a representation of the average noise level) for both the existing and forecasted airport geometry and operations. More information on this item will be available as the project progresses.
"n cs" Nancy	--	I'm a neighbor and it used to be very peaceful and nice but now it feels like warzone with noise volume of 105 decibels. Expanding the airport can't make it better. What will be done to address that? I would like representation of the neighbors on the PAC. Didn't receive a note about this meeting.	Postcards were mailed to residents and property owners within 1,000 feet of the airport. Additionally, notice was printed in multiple papers and sent via GovDelivery email to those signed up for that service. All future meetings will be noticed in the same manner. PAC meetings are open to the public and allow comment opportunities, as well as providing opportunities to connect with PAC members. It is too early to talk about outcomes of the AMP, as the process is just beginning. **Brian Asher** commented in the chat: "If you let Nancy know, I will be an ear for her area."

Additional Questions/Comments and Responses

Name	Affiliation	Question/Comment	Response
Roger Kaye	1000 Friends of Oregon	Will need a video of this presentation before he can evaluate all of this information and asked when the recording will become available.	The recording of this meeting will be posted to the project website in the next few days.
Ben Williams	Friends of French Prairie (FOFP)	Does ODA, JLA and Century West own and operate an embarrassment meter. The PAC members were informed in advance that they are a sounding board but no recommendations will be made by the committee. How are they an "advisory" committee if they won't take advice from the committee, he asked.	Throughout this Aurora State Airport Master Plan Project, ODA is interested in all comments from the public and PAC members. We are committed to a transparent and thorough process. ODA is committed to listening and understanding the comments we receive and utilize the comments in an advisory manner as applicable to the scope of work and in accordance with the best practices of airport operations management. ODA will review and utilize comments as applicable to our requirements as a general aviation airport owner and sponsor, and in compliance with federal grant

			assurances and Oregon Revised Statutes. ODA will be seeking recommendations from the PAC at various times. All recommendations will be submitted to the Aviation Board.
Matt Williams	Deer Creek Estates HOA	Glad you had this meeting and look forward to the next! Thank you	Comment noted; no response required.
Commissioner Tootie Smith	Clackamas County Board of Commissioners	Happy to be here and listen to the comments	Comment noted; no response required.
Bill Martin	Oregon Office of Emergency Management	Thank you for a most interesting and efficient first meeting. Looking forward to the process.	Comment noted; no response required.
Brian Asher	Mayor, City of Aurora	thank you good meeting	Comment noted; no response required.
Linette Dobbins	--	I own property on Boones Ferry across from south end of airport and changed approaches since last plan and going over their property and home. I received letter about cutting down trees.	Please reach out to Tony Beach, State Airports Manager (contact information on ODA website). The referenced letter was about existing conditions at the airport and is unrelated to this Master Plan Project.
Ben Williams Frank Vedaqk	FOFP	Frank Vedaqk, resident on Lower Boones Ferry Road can't get recognized for Public Comment and asks: 1) How do they plan on forcing residents into the aviation easement regarding the RPZ, and 2) Is ODA accounting for the negative impact on property values there and in the impact area within Deer Creek Estates?	This comment appears to be about a different project. Please Contact Tony Beach for information pertaining to the Aurora State Airport Obstruction Removal Project.

AURORA STATE AIRPORT

AIRPORT MASTER PLAN
OPEN HOUSE #1 SUMMARY

Overview

The first open house for the Aurora State Airport Master Plan provided an overview of the Airport Master Plan process, as well as an opportunity to collect oral and written comments from the community. About 40 people attended the virtual event, which included 19 Planning Advisory Committee (PAC) members. The event was held virtually on Zoom on Tuesday, March 1, 2022 from 5:00 to 7:00 pm. Additional comments were collected via email before and after the event. *An online survey was also available at the time of this open house, but the results of that survey will be summarized in a separate document when the survey closes on March 25, 2022.*

The open house, as well as the second PAC meeting and online survey, was advertised by the Oregon Department of Aviation (ODAV) in the following ways:

- 01/26/2022 – Project website updated with meeting dates and registration link.
- 01/26/2022 and 02/15/2022 - Email sent to the mailing list of interested individuals and organizations (through GovDelivery).
- 01/27/2022 and 02/24/2022 - Ad placed in Pamplin Media newspapers (including Canby Herald, Wilsonville Spokesman).
- 01/27/2022 and 02/12/2022 - Ad placed in the Statesman Journal.
- 01/28/2022 – Postcard mailed to residents, organizations, and government agencies within 1,000 feet of the airport (state-owned property).
- 01/28/2022 – Flyers posted at the airport and nearby locations.
- 02/22/2022 - Press release was sent to Canby Herald, Wilsonville Spokesman, El Latino and Statesman Journal 02/23/2022 – Article ran in the Canby Herald by Emily Matlock “ODAV seeks public input on Aurora State Airport plan.”

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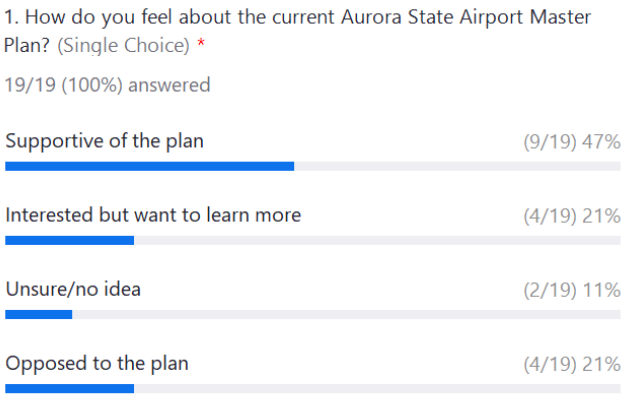
Open House Content

Brandy Steffen, JLA Public Involvement, welcomed everyone to the meeting and reviewed the agenda and basic Zoom meeting tips. She explained that those in attendance could submit comments in the Q & A section and there would also be time at the end of the presentation for verbal comment. **Sarah Lucas, Oregon Department of Aviation (ODAV),** and **Matt Rogers, Century West,** introduced the **ODAV** staff and the consultant teams. Sarah explained that members of the public could reach out to the project's Planning Advisory Committee (PAC) members with questions or if they wanted representation.

Brandy polled the attendees to see if they had been involved with past planning efforts at the Aurora State Airport. Thirty percent said they had, 20% "sort of" had, and 52% of respondents were not previously involved (19 people responded). The next poll asked how attendees felt about the Airport Master Plan. Forty-one percent were supportive, 21% were interested or wanted to know more, 11% were unsure, and 21% were opposed to the plan (19 people responded).



Aurora Airport: Past, Present, and Future

David Miller, Century West, gave a brief overview of the Aurora Airport Master Plan project. He mentioned the history of the airport and highlighted key improvements throughout the years. The Master Plan is a facility plan that follows the requirements set by the Federal Aviation Administration (FAA). The FAA has funded the project cost in its entirety and the goal is to provide a framework for improvements to airport facilities in response to aviation demands over a 20-year planning horizon (divided into three periods: short-term, intermediate-term and long-term). He gave an existing conditions overview to explain what is currently happening at the airport, followed by forecasted information for the next 20 years. He explained that everything in the forecast category of the working paper document is preliminary pending feedback from the PAC, FAA, and surrounding communities.

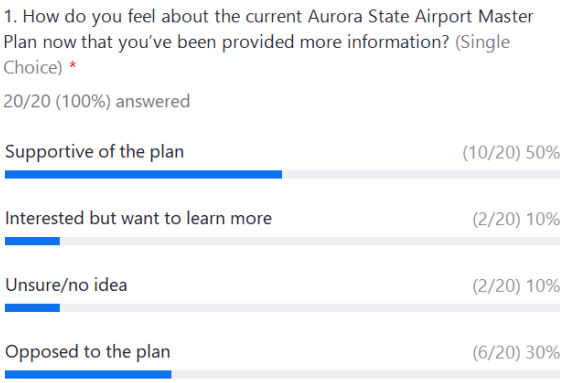
The presentation and additional reference materials are available on the project website.

Next Steps

David informed the attendees that the Planning Team and FAA will next adjust and finalize the Draft Working Paper #1 after considering Advisory Committee and public comments. After the reviews are completed, the technical team will work on applying the preferred forecasts to the facility requirements and future goals. This information will be the topic of the next PAC meeting and public open house tentatively scheduled in May 2022.

Brandy explained there would be several PAC meetings and open houses in the future for people to attend and give feedback or ask questions.

She polled the attendees, asking how they feel about the Master Plan now that they have more information. Fifty percent were supportive, 10% were interested but wanted to know more, 10% were unsure, and 30% are opposed to the plan (20 people responded; this is an increase in people supportive and opposed to the plan). She also asked how people heard about the event. Thirty-eight percent received information through the project email, 29% through word of mouth, 24% said “something else”, 10% said social media, 5% saw a project poster, 5% read an article in paper, and 14% saw a project postcard.



Public Comments

Before facilitating the town hall style public comment portion of the meeting, Brandy mentioned other ways attendees could give feedback, which included the website comment form and an online survey which will be available through March 25, 2022. She reiterated the appreciation the project team has for everyone who attended and gave comments, and how important it is to hear everyone’s concerns so the technical team can understand and address these concerns within the planning documents. She reminded the group that any comments not answered live in the meeting would be answered in the meeting summary, which would be posted to the website.

Name	Affiliation	Question/Comment	Response
Cornelia Gibson	Community member	I'd like to know how increased sewer demands will be handled. What type of sewage system is at the airport?	Per Page 2-39 of Working Paper #1 "Sanitary sewer is provided by individual and shared drain field/septic tank systems. There are at least nine individual drain fields located on ODAV owned property that are shared for both aviation related uses on both private and publicly owned land." Septic systems are permitted by Marion County.
Julie Fitzgerald	Mayor, Wilsonville	Will aircraft that currently use the Aurora Airport but are overweight and/or require a longer runway than at this airport be included in the future needs of the airport?	While larger aircraft may be based at or use the airport, the FAA uses the most demanding aircraft that has 500 operations (take-offs or landings) at the airport to set the standards for future planning that apply to elements of the airport including runway length. Larger aircraft that have fewer than 500 operations may be able to use the airport, but the planning decisions will

			not based on accommodating the needs of the larger aircraft.
Anonymous	City of Wilsonville	How will the public find out about that question asked by Julie Fitzgerald?	The meeting summary will include all questions and responses, and will be posted to the project website within a couple weeks.
Eric Hoem	Community member	I appreciate the information, but at this point I do not support expansion, because to me, the negative impacts outweigh any economic benefits. My wife and I live in Charbonneau. We are 2.8 miles from the control tower, and therefore well within the impact zone. We've lived here 15 years and have noted a tremendous increase in airport takeoffs and landings, especially corporate jets. We don't object to the airport's existence; we knew it was here and there are certain aspects of the present airport that we completely support such as life flights. We have friends who work at Columbia Helicopters. But increasing the airport with more business and corporate jet flights isn't something that we can support at all. It's too much noise. It increases the chance of air pollution from the pollutants that are left over from the jet aircraft. This is a farm area. I know we are the final urban community south of the river, but I really support the idea of the rest of the Valley being kept as farmland, and I don't see the development of an elaborate airport that caters to corporate jets as a part of that. At this point I'd like to see more information about how air pollution and noise pollution are being addressed and especially traffic patterns. The roads around here are completely full, and I can't imagine doubling or tripling the traffic as they suggest. Air traffic would increase, and so would the ground traffic. There isn't the infrastructure around the airport to support that. Thank you for taking my comment and I'll continue to stay in contact with the process.	At this point of the project we are evaluating existing conditions, documenting current airport activity, and forecasting future demand over the 20-year planning horizon. In future Task 6, Facility Goals and Requirements, existing conditions will be compared with current FAA standards and identify potential improvements to accommodate forecast demand. That information will be used in the development alternatives to determine how improvements could be accommodated physically on the airport. Public comments will be considered on future draft chapters including the facility requirements and development alternatives. The Airport Master Plan is not an environmental document. Future development projects on the airport are subject to National Environmental Policy Act (NEPA) requirements and greenhouse gas emissions and noise are impact categories that are required to be reviewed in the environmental process. More information on NEPA is available at: National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions – Order 5050.4B (faa.gov) Surface transportation impacts would require additional study if required by Marion County and are beyond the scope of this project.
Cornelia Gibson	Community member	To a large degree, I have to agree with what the gentleman prior (Eric Hoem) said. I am also opposed to any kind of expansion. I know from road expansion that once you have bigger roads you get more traffic, and at the airport it's probably going to be the same.	We have not done the technical analysis required to answer that question. Runway length has not been addressed in any form. These conversations are coming, but we can't speak to them at this moment.

		I am a gardener and feel very strongly that the Willamette Valley is some of the most precious land that we have in the world. In some places the topsoil is 12 feet deep, and it is where we grow our food. It is not where we want to have expansion of businesses, pavement, pollution, and traffic. I think we need to do everything we can to keep the growth north of the Willamette Valley and keep our Willamette Valley farmland. And don't we have that as farm zoning? How can we even talk about expanding an airport when it's farm zoning? Is there an answer to that?	And yes, certainly there are land use processes for the State of Oregon and Marion County that are applicable. The land use requirements will be evaluated and discussed in the materials presented in the development alternatives task.
Julie Fitzgerald	Mayor, Wilsonville	My parents are both private pilots, and as a kid we landed at the Aurora Airport and Troutdale Airport at different times in a Cessna 172. I'm familiar with airports because of my parents. I remember reading that the Troutdale Airport was losing money for the Port of Portland, and it was mainly used for flying lessons. I used to live near the Salem Airport, and I remember reading articles about that airport looking for more revenue sources. I'm going to be watching this process closely. Why does the airport need to expand so much when we are right on the edge of the French prairie, which is one of the most valuable traded sector functions in the state of Oregon? For example, Oregon is the only state in the US that grows blueberries of acceptable quality to the country of South Korea. We have incredible productivity of wine, hazelnuts, and other products. We have Salem airport and many other airports around us, and I want to make sure that we understand why the sacrifice needs to be made here to lengthen the runway. This seems to be the goal when we have many other options. We also have dilapidated country roads and I5 crossings, which cannot accommodate the incredible addition of business development that we've heard about. It seems like this expansion is trying to happen when there are so many other alternatives and I want to make sure that in this process the public can find out about these things and understand why the sacrifices should be made in order to allow this great increase of jets from other places to convert the use of this part of Oregon.	At this point of the planning process airport expansion has not been proposed. We are evaluating existing conditions, documenting current airport activity, and forecasting future demand over the 20-year planning horizon. In future tasks, the facility requirements will look at existing conditions compared with current FAA standards and identify potential improvements to accommodate forecast demand. That information will be used in the development alternatives to determine how improvements could be accommodated physically on the airport. Public comments will be considered on future draft chapters including the facility requirements and development alternatives. Potential funding for future airport projects will come from FAA Airport Improvement Program (AIP) or other airport specific funding sources. AIP funding is derived from airport user fees and can only be used for projects supporting airport improvements. Funding for off-airport transportation facilities is the responsibility of the applicable City, County, or Oregon Department of Transportation (ODOT) and is beyond the scope of this project.
Lori Loen	Community member	I am a resident of Wilsonville and concerned about the increased air traffic over our homes and the schools. Will the increased traffic,	This was a misunderstanding of a comment from the Planning Advisory Committee on March 1. The comment

		especially with Amazon coming in, be required to avoid populated areas?	was referencing an Amazon facility at the Troutdale Airport. Airport arrival and departure routes are dictated by the Air Traffic Control Tower. ODAV does not have control of how air traffic is routed to and from the airport.
David Waggoner	Willamette Aviation	Is Amazon coming to the airport?	This was a misunderstanding of a comment from the Planning Advisory Committee on March 1. The comment was referencing an Amazon facility at the Troutdale Airport.
Elaine Swyft	Community member	On several occasions, I thought we were experiencing an earthquake. My home shook. It was a plane flying overhead. I pray we consider the impact on the quality of our lives here.	Thank you for the comment and we understand your concern. We will be conducting a noise analysis and evaluate noise generated by the Aurora State Airport as part of the Master Plan. ODAV encourages pilots to reduce noise impacts, which is further explained on our agency's website.
Joanne Linnville	City Councilor, Wilsonville	I appreciate the openness and the process that is being used and the effort to get public input to the technical staff who are assisting with the production of the document. I was pleased to hear during the PAC meeting that both Marion County and Clackamas County are included in the process. In previous planning documents that are related to the Aurora Airport, the northernmost line for the impact air area of the airport was drawn at the county line at Arndt Road. The area beyond that was within Clackamas County and not included. I'm hopeful given what I've heard today that that will not be done in this planning process and a natural radius, regardless of county boundary, will be used as the impact area for the study and the planning of the airport.	The area considered in the planning process is dictated by FAA defined and protected surfaces.
Cornelia Gibson	Community member	I live in Wilsonville, so I'm not in the direct path of the planes, but when we sit on our deck, they fly over relatively low and make unpleasant noise. I'm always concerned about the environmental impact of jet fuel and other pollutants that come out of the planes in and around the airport. I sent a letter about that. I also listened to the work session earlier today and Mr. David Miller mentioned the type of airplanes that will be flying in there. Class C-III, C-II design. Is that correct? Those are high performance business jets which meet the FAA special design. Does this mean these jets and the air travel in and	The airport codes can be confusing. C-II is representative of that category of aircraft that are already operating at the airport today and meet the FAA's threshold. We are expecting the traffic to grow along with the community and overall area. General aviation as a category includes everything from flight training to executive business aircraft. There are many factors in that, including medevac flights. There are a variety of aircraft types such as small jets or

		out of the airport is for businesspeople? Who benefits from the travel and planes that go in and out of the airport? Is it business executives who fly over to Hillsboro or wherever their offices are? The rest of us are stuck in traffic on I-5 for hours because the freeway bridge has not been improved. Is part of the expansion going to include fixing up our freeway bridge? Why should someone else be able to surpass that when we pay the taxes for this? I don't think the farmland area is a good place for an airport. Who does it serve? Does it serve all of us?	higher performance jets. Business travel, charter flights, etc. are all included in this. Business aviation allows companies to do business in areas and communities where they wouldn't otherwise have access to commercial air service. Funding for off-airport transportation facilities is the responsibility of the applicable City, County, or ODOT and is beyond the scope of this project.
Rian Johnson	Vans Aircraft	I was the one who previously made the comment about the Troutdale airport. I'm based there with my personal airplane (I'm not rich and live in Portland). The plan has been delayed, but Amazon is moving into the north side of the runway at Troutdale. That runway has already been shortened because of trees, which has limited the traffic in and out of there. It will be further shortened when Amazon moves in. Everything will be off the runway, including the control tower. The Port of Portland promised to put hangars on the south side, but they haven't done that yet. There may be airplanes displaced because of all of this. If you're coming in for business, you want to be close to a freeway, which leaves Aurora and Hillsboro to serve the city of Portland based on their proximity to these. This isn't just the Wilsonville area. Flying into PDX on a business jet is time consuming and expensive. It's better to fly into a surrounding sub flight airport. Once Troutdale goes through its changes, that leaves 2 locations, and Aurora makes more sense than Salem. I have a business here at the airport. Prior to Covid I had 65 employees, and now I have 130. That is a lot of jobs that were brought to the area. We pay well and are bringing money into the local economy. Relocating south would be difficult for me and my employees. Additionally, as a pilot, I always try to avoid the Charbonneau and Aurora area on my approach. We try to make the least amount of noise coming in. The tower came in and now controls where we go, so I try to approach the airport in a way so they don't route me in those paths. The issue needs to be brought	Thank you for the comment.

		up to the FAA and how they route approaching traffic for noise mitigation. I am also on a committee designing regulations for airplanes like quadcopters, package delivery, etc. This has been lobbied for and we will have different types of airplanes within 10 to 20 years. The noise will be different, but air traffic will increase over time, and nothing is going to change that.	
Julie Fitzgerald	Mayor, Wilsonville	Of all of 218 aircraft, can you please remind us of what percentage are the high-end corporate jets?	The number of current based aircraft is 281. In the working paper, table 3-8 indicates some of those jet aircraft. Appendix 6 has a full listing of all FAA approved aircraft. There are 36 jets; 13% of the 281.
Mary Closson	Community member	I'd like to know the status of expansion at Salem Municipal Airport. I've heard that they would accept improved air traffic It's such a short distance from Aurora so it seems like charter flights, executive flights, etc., could be handled from Salem. I also want to say, for the record, that I'm aware that we're talking about Aurora STATE Airport. OUR tax dollars help cover operational costs of this airport. Bottom line: I oppose expansion of the Aurora State Airport for environmental reasons, traffic reasons, agricultural reasons and traffic safety reasons!	To clarify – funds for airport improvements in the US are derived from the aviation trust fund, which is 100% funded by user fees. For example, taxes on airline tickets are a user fee that contributes to the aviation trust fund. The trust fund provides monies to the airport improvement program for capital projects. Additionally, ODAV does not receive state general funds – no Oregon tax dollars are spent by the agency to support the Aurora State Airport. ODAV operations are sustained wholly on user fees, registration, leases, and other sources that are detailed on the agency's website. The City of Salem recently completed a master plan, and all of their documents should still be online. You can contact them for more information.
Elaine Swyft	Community member	Is there data yet on the environmental impact of lead pollutants? I apologize if this question was already answered. If no data yet, is there a plan to collect this.	The project FAQs have information regarding the NEPA process. It is project specific, and the FAA leads that process.
Mary Closson	Community member	I meant to say that Salem Municipal Airport would accept ADDITIONAL air traffic if they expand. Also, for the record, I live in Wilsonville. Thanks for the info re the Salem airport.	Thank you for the comment.
Julie Fitzgerald	Mayor, Wilsonville	How does the Aurora State Airport currently provide drinking water and sewage treatment	Marion County issues building permits, and would be able to answer

		facilities for the restroom facilities to all of their businesses? As they plan to expand, will they continue to offer the same method of providing water and sewer services to the office buildings planned to be built adjacent to the tarmac?	this question, since those businesses are on private property ODAV doesn't have access to the county requirements for private property. ODAV does have two wells and a septic tank and pump for on-airport property.
Kriss Wright	Community member	What's the GPM [gallons per minute] on the well on site? There was an airplane that landed on one of the houses here. I encourage emergency plans. What is your emergency response plan for potential disasters?	ODAV has two wells for State-owned property. One well only serves the air traffic control tower (ATCT) and has a pump rated for 10gpm. The other well serves other on-airport needs and had a potential yield of 275gpm at the time of installation in 1981. However, the pump is set to 35gpm. Other wells exist on adjacent lands, which have through-the-fence access (TTF) to the Airport but ODAV does not keep those records – they would be recorded with Marion County. The Airport is served by local Fire Districts for on/off airport emergency response.
Bruce Bennett	Aurora Airport Improvement Association	I keep hearing about expansion, but it's clear that the property has been the same for a while and I don't believe there are plans to change it. The runway expansion would be on airport property which is currently an overrun and wouldn't change the type or noise of aircrafts. There has been a lot of misinformation distributed that is worrying people. My family has had property on Aurora airport since 1968. Most flights are emergency or medical flights.	Thank you for the comment.
Nancy CS	Community member	I grew up in Aurora and I work the farm with my dad. It's been so hard to see the developments happening here. The airport has really impacted me in just the last few years. When I'm on the phone for work, it is jarring. It makes it difficult to hear clients. A helicopter flew so close that the house shook. The airport forced my parents to sell some property, so I have built distrust in what may happen at the airport. It used to be agriculture and woods, and now that is gone. The noise is unacceptable, and there have been readings of 105 decibels on several occasions. There have been readings of 70-80 decibels inside my house. They're doing exercises, and fluids are dropping from aircraft onto your fields. I couldn't hear what someone was saying in the PAC meeting	Helicopter Transport Services (HTS) was permitted through Marion County and is independent of Aurora State Airport. ODAV does not control how they operate their aircraft. If you have noise or concerns with impacts to your property you can contact HTS directly or Marion County code enforcement. If you have safety concerns you can also contact the Portland FAA Flight Standards District Office (FSDO) at (503) 615-3200.

		because a jet was taking off. We are agriculture people and were here before the airport.	
Tony Helbling	Positive Aurora Airport Management	I'm the president of Positive Aurora Airport Management. We are made up of airport operators, owners as well as representatives of surrounding communities. We've held events in conjunction to with ODAV to help our neighbors understand what is going on at the airport. There seems to be quite a few questions the MP consultants can't answer. If people would like - as soon as Covid allows, etc... I'd be willing to put together an event that would be open to the neighbors to talk about what's going on at the airport. It seems like there are concerns and questions about what happens on the ground at the airport and septic systems. There are multiple wells, septic systems, and sanitation systems on the property in addition to the state one mentioned. We could put together some outreach to help concerned neighbors come talk to us and dispel rumors.	Thank you for the comment.
Joanne Lindville,	City Councilor, Wilsonville	One of the graphics showed that the Aurora Airport was the 3rd busiest state airport, but busier ones are run by the city or a port. I have great concerns that it is run by ODAV, and is projected to grow while not incorporated into a city. It has well water and a septic tank instead of a sewer. It's on rural roads and has one of the only traffic control towers. It's managed by a state agency which has other responsibilities and we've been fortunate to not have safety issues such as crashes. As this study is being done, I think the projected growth, current usage, and location to surrounding urban areas needs to be looked at regarding management and ownership of the airport itself.	Thank you for your comment. ODAV owns and operates 28 airports of varying sizes and levels of use throughout Oregon, many of which are in rural and urban areas. Current ownership and operation of the airport is addressed in the Existing Conditions chapter.
Benjamin Mello	FAA	Just a couple of comments - The EPA currently plans to issue a proposed endangerment finding in 2022 regarding leaded fuel which will undergo public notice and comment. After evaluating comments on the proposal, they plan to issue any final endangerment finding in 2023. The FAA, together with government and industry stakeholders, is in the early stages of developing a multi-layered transition strategy to reduce and ultimately eliminate lead from aviation gasoline. More information about FAA's programs can be found here: https://www.faa.gov/about/initiatives/avgas/ The Salem Municipal Airport (SLE) is starting	No response needed.

		a new master plan this year. John Paskell, C.M., Airport Manager City of Salem | Salem Municipal Airport 2990 25th Street SE, Salem OR 97302 jpaskell@cityofsalem.net.	
Cornelia Gibson	Community member	Thank you, Councilor Linville. Excellent point.	No response needed.
Nancy CB	Community member	I've also had concerns about septic and water. As more development happened, our water pressure went down, and we were going to have to dig another deeper well.	Thank you for the comment. The only recent improvement on state-owned property was the addition of the 10gpm well for the ATCT in 2015. There have been no other changes since the main well was installed more than 40 years ago. All development is subject to Marion County requirements.
Bruce Bennett	Aurora Airport Improvement Association	Traffic has become a major issue as the area has grown and needs to be addressed. I don't believe the Airport is the cause of it, rather it's victim of it.	Thank you for the comment.

Emailed Public Comment and Testimony

Name	Question/Comment	Response
William A. Wallace	I am reviewing the Aurora State Airport Draft Airport Master Plan of February 2022. What is conspicuously absent in the current draft is any mention of climate change and its potential impact on future operability of the Aurora State Airport. Over the next 20 years and beyond, climate change in this locale is likely to have significant impacts on airport operations and economics. Some of these impacts are described below. Not taking climate change into account makes the Plan deficient. The Environmental Data section on Page 2-19 provides a recitation of the weather and climate conditions at the airport based on historical climate information. However, according to respected scientific organizations such as NASA, NOAA, the National Academies, and the Intergovernmental Panel on Climate Change (IPCC), the climate is changing significantly. In the past, historical climate conditions were reliable predictors of future climate conditions. That is no longer true. Thus, the elements of the Plan that are based on historical climate conditions are not reliable. There is now irrefutable scientific evidence that the climate is changing and that the change is human caused. Since the beginning of the industrial age, the Earth has warmed by about 1.1℃ (2℉) caused primarily by the burning of fossil fuels for heat and power. Carbon dioxide (CO2) and other heat-trapping gases released into the atmosphere have disrupted the Earth's climate regulating systems. This increase in thermal energy has not only produced warmer temperatures but more frequent and extreme weather events. Furthermore, climate scientists have told us that unless the warming is kept below 1.5℃ (2.7℉), extreme weather events will get markedly worse. Some changes are likely irreversible. While the Northwestern U.S. may not be affected as much as other U.S. locations, the Aurora Airport locale has already experienced the impacts of climate change. Last February's exceptional ice storm and the unprecedented	There are ongoing nationwide efforts that the FAA, in coordination with EPA, is undertaking to address greenhouse gas emissions related to aviation and also emissions from jet exhaust. The purpose of these efforts is to investigate fuel alternatives to reduce emissions. More information is available at: https://www.faa.gov/airports/environmental/air_quality Opportunities to mitigate these issues are not within the scope of the Airport Master Plan project. However, future development projects on the airport are subject to National Environmental Policy Act requirements and greenhouse gas emissions is one of the impact categories identified to be reviewed. More information is available at: National Environmental Policy Act (NEPA) Implementing

	110+°F heat wave in June of 2021 are recent examples and harbingers of things to come. Extreme heat events and extreme storms will affect the ability of aircraft to land and take off safely and disrupt airport operations. In response to such events, civil infrastructure assets including airports need to become more climate resilient, able to withstand or recover from extreme climate and weather events. Yet the resilience plan for the Aurora State Airport only deals with seismic resilience. While cities and counties across the country are developing plans to make their communities climate resilient, the Airport Plan makes no mention of climate resilience. The latest draft IPCC report issued this week concludes that the window for action is closing rapidly and is urging the U.S. and other countries to reduce carbon emissions to net zero by 2050 and be half way there by 2030, less than 8 years from now. Efforts are now underway to reduce carbon emissions, and the transportation sector one of the largest carbon emitters. While aviation accounted for 2.4 percent of the total CO2 emissions, other aircraft engine emissions such as nitrous gases, water vapor, soot, sulphates and particulate matter pushed their warming contribution to 3.5 percent. In response, auto manufacturers have committed to stop production of gas-powered cars, selling only zero emission vehicles by 2040. For aircraft manufacturers, zero emissions power is not a feasible option. Continuing to operate fossil fuel powered aircraft will become an economic and regulatory burden on aircraft and airport owners and operators as countries including the U.S. seek to reduce their carbon footprint. Some kind of carbon tax or regulations requiring the reduction of carbon emissions is inevitable. Yet, there is no discussion of carbon emissions and its impact in the Plan. In reviewing the Scope of Work for the Aurora State Airport Master Plan Update, climate is mentioned briefly (page 16) and not in the context of changing climate conditions. I encourage the Oregon Department of Aviation and the consultant, Century West Engineering, to study this issue in more depth and incorporate the potential impacts into the plan.	Instructions for Airport Actions – Order 5050.4B (faa.gov)
Cornelia Gibson	We live in the Willamette Valley, -a valley which is considered among the best farmland in the world with several feet of topsoil! It is common knowledge that airports create significant environmental cost and hugely impact the locality where they are built. In addition to noise pollution, emissions from aircraft in the air and at ground level degrade air quality severely and thereby directly impact human health. Additionally ground support equipment increases the air pollution and pollutant runoff into our nearby waterways, the Willamette river. Whether piston engine planes or jets which use AV fuel, the contaminants are harmful for the farmland of the Willamette valley, our rivers and our local food supply. Why would we want an expanded airport with all its negative side effects of increased airport waste, on this valuable farm land ? What and whose interest is best served that it warrants increased airport waste in our local food supply? The general public? The farmers nearby?	There are ongoing nationwide efforts that the FAA, in coordination with EPA, is undertaking to address greenhouse gas emissions related to aviation and also emissions from jet exhaust. The purpose of these efforts is to investigate fuel alternatives to reduce emissions. More information is available at: https://www.faa.gov/airports/environmental/air_quality Opportunities to mitigate these issues are not within the scope of the Airport Master Plan project. However, future development projects on the

	Or is it some select investors, airplane owners and executives who can fly to their offices instead of driving across our single freeway bridge? Growth of an airport should not be at the cost of negative impacts on the environment and the people who live nearby! Much less on the best farmland in the world. There are several other airports in the area. Please do not condemn this best farmland in the world to airport pollution.	airport are subject to National Environmental Policy Act requirements and greenhouse gas emissions is one of the impact categories identified to be reviewed. More information is available at: National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions – Order 5050.4B (faa.gov)
Klaus Gibson	In the past 25 years that we have lived in Wilsonville we have seen enormous change in the community. The I-5 Corridor has become more and more the major commercial arterial between Canada and Mexico. Wilsonville Road under the I-5 underpass was a 2 Lane road. Travel north and south on I-5 was very accessible and efficient. Today, Wilsonville Road is heavily traveled and five lanes. Today between 3:30 PM and 6:30 PM we avoid going across town because traffic is backed up on the west side most of the time all the way to Brown Road because of the bottleneck on the southbound I-5 Willamette River bridge. Now traveling south on I-5, traffic begins to jam up during that time in Tigard and homeward bound we need to exit the North Wilsonville exit because all lanes are standing still with traffic snarled because of the bottleneck at the I-5 bridge. I-5 northbound south of the Willamette River Bridge, too becomes often congested with traffic slowing to between 25 and 35 mph until northbound across the bridge. The area north of the I-5 bridge has had tremendous population and commercial expansion. The truck traffic is ever increasing, vehicle traffic is ever increasing, yet across the Willamette River no major projects have been accomplished since its construction virtually 70 years ago in 1954. The River Crossing is totally archaic. The proposed expansion of the aurora airport undoubtedly will compound this bottleneck. Proponents of the expansion minimize the impact. We need to be visionary, we need to think of the area and the surrounds in 20 to 40 years from now. Will this recently small provincial airport basically serving piston small plane enthusiasts incrementally become a major regional air freight hub? Sounds outrageously alarmist? Really? There will be continued population and commercial expansion in Canby, Aurora and Woodburn area. To accommodate that expansion in the next 20 to 40 years another I-5 freeway bridge is an absolute must to maintain the livability and economic vitality of the area. Before the expansion of the airport let's talk about paying for, and constructing an additional I-5 bridge.	There are no known plans to create a freight hub at Aurora State Airport. Funding for off-airport transportation facilities is the responsibility of the applicable City, County, or ODOT and is beyond the scope of this project.
Mary Closson	I've been a Wilsonville resident since 2010 and an Oregon resident since 1990. I'm writing today because I'm deeply concerned about the proposed expansion of the Aurora State Airport. I bolded the word "State" because I'm aware that my tax dollars support the Aurora State Airport and the ODA. Over the past few years, I have made it a priority to understand the history of this airport and the efforts that have taken place to expand it, specifically by lengthening the main runway, but also	At this point of the planning process airport expansion has not been proposed. We are evaluating existing conditions, documenting current airport activity, and forecasting future demand throughout the 20-year planning horizon. In future tasks, the facility requirements

	through placing more commercial buildings in and around the airport. Included in my research is the ruling given by the Oregon Court of Appeals (June 16, 2021) which stated that your organization misapplied state land-use laws in approving the contentious 2012 Aurora State Airport Master Plan. I support the City of Wilsonville and the City of Aurora's stance on the Aurora State Airport Master Plan. I am against the expansion of this airport (runway expansion, additional buildings on the land surrounding the airport, etc.) based on my awareness of infrastructure limitations (water/sewer among them), environmental impacts and increased traffic congestion. In terms of environmental impacts, I support the Friends of French Prairie and their work to preserve the valuable rich farmlands that would be severely impacted as a result of airport expansion. I also support the many residents of Charbonneau, Aurora and Wilsonville (north of the river), who have voiced concerns about the severe noise impacts from increasing jet and airplane traffic. Along with the noise, we are troubled by the health issues resulting from emissions from aircraft in the air and at ground level. I have also been made aware of increased traffic on I-5 and the roads in and around Aurora, Wilsonville, Charbonneau and Canby should this airport be expanded. I have read reports that document a surge in traffic accidents and related injuries/fatalities as a result of the current high volume of traffic on I-5 and on the roads connecting I-5 and the airport. We already have a major problem with the Boone Bridge/I-5 bottleneck and it would surely be made worse should the airport be allowed to expand. It is also my understanding that the Salem Municipal Airport is open to expansion that would include more small jet traffic. With its close proximity to Wilsonville/Charbonneau, Aurora and Canby, why is your agency not giving more attention to the Salem Municipal Airport? We residents/taxpayers deserve to live in communities that are safe from airport pollution and from the hazards of increased traffic on our already burdened roads and freeways. We also need to recognize and place a priority on the unique agricultural value of the farmland surrounding the Aurora State Airport. I urge you to focus your time and attention on the win/win scenario offered by expanding services at the Salem Municipal Airport.	will look at existing conditions compared with current FAA standards and identify potential improvements to accommodate forecast demand. That information will be used in the development alternatives to determine how improvements could be accommodated physically on the airport. Public comments will be considered on future draft chapters including the facility requirements and development alternatives. Potential funding for future airport projects will come from FAA Airport Improvement Program (AIP) or other airport specific funding sources. AIP funding is derived from airport user fees and can only be used for projects supporting airport improvements. Funding for off-airport transportation facilities is the responsibility of the applicable City, County, or ODOT and is beyond the scope of this project. To clarify – funds for airport improvements in the US are derived from the aviation trust fund, which is 100% funded by user fees. For example, taxes on airline tickets are a user fee that contributes to the aviation trust fund. The trust fund provides monies to the airport improvement program for capital projects. Additionally, ODAV does not receive state general funds – no Oregon tax dollars are spent by the agency for the Aurora State Airport. ODAV operations are sustained wholly on user fees, registration, leases, and other sources that are detailed on the agency's website.
Gerald (Gerry) Tunstall	I am a private pilot with approximately 1000 hours of pilot time and 3200 hours as a C-130E Hercules transport navigator/flight instuctor/flight examiner. Originally from Portland, Oregon, I live in	Thank you for your comments and perspective as a user of the airport.

	Tualatin, Oregon. After my military service (USAF), which included VietNam, Cambodia, Africa, Europe, and the Pacific, bought a fractional ownership in a Cessna 172, and we rent a hangar at Aurora Airport. I am a member of the Columbia Aviation Assn., which is a social and professional organization based at the airport. Thanks to the efforts of this club, I maintain FAA proficiency and currency requirements and it is a vehicle for numerous professional lectures, fly-outs to regional destinations, and for developing connections for aircraft maintenance. Why do I love flying and why do I believe in the future of the Aurora Airport? After years of military flying, recreational flying provides an activity that puts the fun back into flying. I enjoy taking passengers to educate them on what a gorgeous state that we live in, from a completely different perspective. I try to encourage young people to consider an aviation related career. I enjoy aerial photography. When flying over noise sensitive areas, I follow the rules and voluntarily throttle back to minimize engine noise over residential areas, at my own risk. My professional and educational background includes urban planning. I think that I have a long term and local perspective on what can happen if the airport becomes threatened by human urban activity. Many airports in this area have been removed in the past 50 years: Evergreen, Troh's (twice), Bernards, etc. Pearson Airpark in Vancouver was almost lost. If Aurora Airport becomes threatened, it would heavily affect airport maintenance and manufacturing facilities, and would have an economic consequence with local businesses including restaurants and service oriented activities.	
Lee Barckmann	The planning of the Airport needs to be tightly meshed with the "quality of life" concerns of the surrounding area. This quality of life can be measured by looking very closely at the concerns of people living adjacent to or near the airport. The continual attempts of aviation business interests to override or minimize those concerns should be closely examined. Who will benefit from the airport expansion? Aurora Airport is a state owned facility, owned by all of us. A poorly conceived Master Plan, or one that does not take into consideration the views of people who live nearby will have wide ranging and long term negative consequences for the area. It will deed millions of dollars worth of public value to local aviation "oligarchs". I use that word "oligarch" perhaps too loosely, but in light of recent international events perhaps it is appropriate. Allowing wealthy individuals to corruptly leverage uncontrolled economic access to publicly owned facilities for their own benefit is one definition of an oligarch, and it is how Putin's cronies got so rich. Many in the area feel that this is what is happening or might happen. The word "Quality" was Governor Tom McCall's watchword, along with "Progress". So perhaps instead of "growth" you need to think of "Quality creates Progress", as the theme for creating the new master plan for the Aurora State Airport. Regardless of the size and number of hangars built in anticipation of expansion, control of the facility remains in State hands and should be administered with the interests of the citizens of the	Thank you for your comments. Future development projects on the airport are subject to NEPA requirements. The environmental study to satisfy NEPA requires a review of cumulative impacts of development projects at the airport.

	state put first and foremost. The desires of the private aviation industry to expand the runway and taxiways should be examined with open eyes. Please look at the negative impacts that the airport is creating now, and realistically extrapolate what those impacts would be when running bigger and bigger planes in and out at a very increased rate of landing and takeoff. Regardless of what the airport business community says are their near-term operational intentions, once the facility is built, past promises will become meaningless. The Master Plan Advisory Committee will undoubtedly receive many comments regarding the threats the airport poses to our environmental quality from the loss of farmland, from more leaded airplane fuel and exhaust being sprayed on us, along with the possibility of spills and pollution of our groundwater. I am sure many will talk about the sometimes incessant noise over adjacent neighborhoods and communities, and the very real threat to home values in the region. I concur with all of them, and so do many of my neighbors along “the Canyon Creek corridor” in Wilsonville north of the Willamette River. However, in addition to those very real threats, most of which are affecting us today, I think the Advisory Committee needs to also keep a wider focus on both our past (how we got here) and our future (where we are going). Re-engage with the original reasons why this committee exists in the first place. Our past is the legacy that Tom McCall left us. Over the last fifty years Oregon has taken a different path from that of most of the western states. McCall wanted the state to remain as pristine as possible, and he created a system, via land use laws that you in the Master Plan Advisory Committee will help to shape and administer. You must ensure we carry that vision into the future. That is your overriding mission, and I hope you remember it. This was not a partisan issue, at least not in the past. McCall, as you know, was a Republican, and his vision of economic development was that this effort to keep Oregon clean would attract like minded people from all over the world to come to the state, who would bring money and skills to grow the economy in a manner that would blend with the natural ecology of our wonderful state. And, in spite of a few hiccups here and there, he was right, that is what has happened. In addition to cleaning up the Willamette River, McCall saw the corridor between Portland and Salem as the prime region to show how Oregon can keep from becoming overdeveloped, or worse, poorly developed. For the most part, up to now, this section of the state has remained mostly farmland. It has not been paved with asphalt as has happened with so many communities. Have you ever landed in Houston’s “George Bush Airport " and then driven the 10-12 miles to the city center? It is mile after mile of semi-abandoned strip malls, with huge pot-holed paved parking lots, abandoned cars, and toxic waste sites in the making. The paving amplifies the summer heat, does nothing to clean the carbon dioxide from the air and is generally ugly and unlivable, almost post-apocalyptic. McCall saw that possible future and dedicated his political life to making sure it did not happen to Oregon. That is why so many people came to Oregon over the last fifty years. That is why those people invested their lives here. We	

	have done well with this plan. But once you lose your quality, whether old growth timber, or farmland, or groundwater, you never get it back. Every acre of land you save now is an acre we leave to our children. It is not wasted by staying the way we found it. Every limit you put on unchecked expansion will pay off with dividends for our children. When McCall pushed through the famous Senate Bill 100 in 1973, it was a prescient clarion call, not just to the nation but to the world that we can keep our QUALITY, that we will not let the profit motive be the only rule that guides PROGRESS. And we think Progress means protecting the land. That we create spaces where people can live with the amenities of civilization, but without the worst of its debilitating effects. I urge you as neighbors and fellow Oregonians to take seriously the concerns of those of us who live near the Aurora Airport. Don't create the conditions that will add to the sprawl that will blight our children's future.	

In Attendance

Agency Representatives

Betty Stansbury, *ODAV*
Heather Peck, *ODAV*
Anthony Beach, *ODAV*
Sarah Lucas, *ODAV*
Seth Thompson, *ODAV*
Benjamin Mello, *FAA*
Kate Key, *FAA*

Staff and Consultants

Matt Rogers, *Century West*
David Miller, *Century West*
Mike Dane, *Century West*
Samantha Peterson, *Century West*
Mark Steele, *Century West*
Brandy Steffen, *JLA Public Involvement*
Ariella Frishberg, *JLA Public Involvement*
Jen Winslow, *JLA Public Involvement*

AURORA STATE AIRPORT

AIRPORT MASTER PLAN
PLANNING ADVISORY COMMITTEE (PAC)
MEETING #2 SUMMARY

Date: Tuesday, March 1, 2022
Time: 3:00-5:00 pm
Location: Zoom Webinar

In Attendance

PAC Members Present

Aron Faegre (for Ted Millar[1]), *AABC/TLM Holdings*
Bob Hala, *Atlantic Aviation*
Bruce Bennett, *Aurora Airport Improvement Association*
Ken Ivey, *Aurora Butteville Barlow Community Planning Organization*
Bill Graupp, *Aurora CTE, Inc*
Steve Switzer, *Charbonneau Country Club*
Brian Asher, *City of Aurora*
Councilor Charlotte Lehan, *City of Wilsonville*
Chris Neamtzu, *Alternate, City of Wilsonville*
Rob Roedts, *Columbia Helicopters*
Bob Buchanan, Alternate, *Columbia Helicopters*
Matt Williams, *Deer Creek Estates HOA*
Ben Williams, *Friends of French Prairie*
Wayne Richards, Alternate, *Friends of the French Prairie*
Commissioner Danielle Bethel, *Marion County*
Austin Barnes, *Marion County Planning Dept.*
Tony Beach, Oregon Dept of Aviation (ODAV)
Cathryn Stephens, *ODAV Board*
Naomi Zwerdling, *Oregon Dept of Transportation*
Matt Crall, *Oregon Dept of Land Conservation and Development (DLCD)*
Nicole Mardell, Alternate, *DLCD*
Bill Martin, *Oregon Office of Emergency Management*
Tony Helbling, *Positive Aurora Airport Management*
Jody Christensen, *Regional Solutions*
Rian Johnson, *Vans Aircraft*
David Waggoner, *Willamette Aviation*
Patrick Donaldson, *Wilsonville Chamber of Commerce*

PAC Members Absent

Roger Kaye, *1000 Friends of Oregon*
Raul Suarez, *Aurora Air Traffic Control*
Scott Archer, *City of Canby*
Commissioner Tootie Smith, *Clackamas County*
Cheryl Pouley, *Confederated Tribes of the Grand Ronde Community of Oregon*
Robert Kentta, *Confederated Tribes of Siletz Indians*
Christian Nauer, *Confederated Tribes of Warm Springs Reservation of Oregon*
Robert Fournier, *Helicopter Transport Service*
Ben Clayton, *Life Flight Network*
Brandon Reich, Alternate, *Marion County Planning Dept.*
Mary Anne Cooper, *Oregon Farm Bureau*
Sarah Puls, Alternate, *Oregon Office of Emergency Management*
Greg Hughes, Alternate, *Vans Aircraft*

[1] Substitutions are not generally allowed; however, this one time substitution was granted by Oregon Department of Aviation Director.

Kevin Ferrasci O'Malley, Alternate, *Wilsonville Chamber of Commerce*

Agency Representatives

Betty Stansbury, *ODAV*
Heather Peck, *ODAV*
Sarah Lucas, *ODAV*
Seth Thompson, *ODAV*
Benjamin Mello, Federal Aviation Administration (*FAA)*
Kate Key, *FAA*

Staff and Consultants

Matt Rogers, *Century West*
David Miller, *Century West*
Mike Dane, *Century West*
Samantha Peterson, *Century West*
Mark Steele, *Century West*
Brandy Steffen*, JLA Public Involvement*
Ariella Frishberg*, JLA Public Involvement*

Audience / Members of the Public

Chad Hanson
Andria Abrahamson
Bruce Bergman
Corey Buchanan
Cornelia Gibson
Dan Fricke
Greg Leo
James Kirby
Jillian Capistrano
Joann Linville
Joe Mollahan
John Rankin
Julie Fitzgerald
Nancy CS
Neal White
Rayna Jenks
Sara Kim
Sarah Anderson
Steven Benson
Tom Herzog
Traci Hensley
Kriss Wright
Peter Shikli
Peter Murphy
Lee Barckmann
Don Richcreek
Denis Pilon
Jan Fritz
Carolyn Lee
John Hick
Lori Loen
George Van Hoomissen
Matt Lawyer

Overview

The meeting goals were to review Working Paper No. 1 and present information, then allow the members of the PAC to ask questions or provide comment.

Welcome and Introductions

Brandy Steffen, JLA Public Involvement, welcomed everyone to the meeting and reviewed the agenda and basic Zoom meeting tips. She reminded attendees that there would be a public open house immediately following the PAC meeting. There would be time for public comment at the end of the current meeting. There are also opportunities for comment through the online survey or during the public open house. **Sarah Lucas, Oregon Department of Aviation (ODAV),** introduced **ODAV** staff and the consultant teams. She briefly explained the recent change to the ODAV acronym. She thanked everyone for their attendance and participation. Brandy and **Matt Rogers, Century West,** introduced the subconsultants that are involved with the project. Brandy introduced the PAC members. Matt said that several members were displeased with the

short amount of time given to review the working paper before the meeting. He explained that the review process took longer than anticipated and staff wanted to ensure everything was presented correctly before making the document public. Future deliverables will be posted sooner for review, and everyone would be able to comment on the document. There could also be another PAC work session in a month to discuss the document after everyone has a chance to review and discuss with constituents.

Existing Conditions and Preliminary Forecast

David Miller, Century West, gave a brief overview of Working Paper No. 1 focusing on Chapter 2 and 3, which cover the existing conditions (including land use and zoning of the airport) and preliminary aviation activity forecasts. The presentation is posted to the project website. Brandy asked the PAC if they had any clarifying questions or comments.

- **Charlotte Lehan, City of Wilsonville**: Where does the issue of constrained size of aircraft come into the discussion?
    - David: That comes in at the facility requirements step. One of the technical evaluations is the constrained operations evaluation. Aircraft have different runway requirements based on different conditions and we'll be evaluating that. Larger aircraft that fall in the design group of C-II and C-III currently operate at the airport. Whether they are constrained will be dependent on various factors, and we will be evaluating that, which will tie into facility requirements and runway requirements.
- **Steven Switzer, Charbonneau Country Club**: In your 2018 study, you listed 328 based aircraft. Can you explain the number drop? Did we lose those 49 airplanes?
    - David: Yes and no. There were 20+ helicopters that were previously counted and some have moved and others are located off airport property at Columbia Helicopters and Helicopter Transport Services (HTS)[2] that do not have through-the-fence agreements[3] and are not attributed to the airport. The level of scrutiny in this update made it necessary to be more precise in the aircraft counts and we had access to more information than before.
    - **Tony Beach, ODAV:** The biggest change was the helicopters. This 2021-22 based aircraft update was the most comprehensive and thorough one we have done. There was a high level of scrutiny because of the Master Plan project.
    - Steven Switzer: Thank you, that makes sense based on the number of helicopters.
- **Rian Johnson, Vans Aircraft**: I'm based at Troutdale with my personal airplane and I fly into Aurora for work. Does your study include the possibility for reduction of capacity of other airports? The Troutdale runway will be shortened due to Amazon. When flying into an airport for business, you have Hillsboro, Troutdale, and Aurora by major freeways. Did you account for that increase?
    - David: Yes, when we forecasted the various growth scenarios, we did. Each of these airports are competing for business and movement of aircraft between airports is not uncommon. We look at the general health of aviation in the Portland metro area, and that gets factored in both

[2] Columbia Helicopters Heliport (FAA Identifier: OR68) and HTS Aurora Heliport (FAA Identifier: OR24) operate independently of the Aurora State Airport under Marion County Conditional Use Permits.
[3] Through-the-Fence (TTF) is a term used to describe how off-airport aviation users access an airport, rather than having facilities located on airport property.

based aircraft and aircraft operations projections. I suspect that as Troutdale changes, some of those aircraft will disperse around the region and some will end up at Aurora.

Brandy reminded the PAC that the AMP schedule will periodically change. She asked members if they would like an additional work session.

- **Ben Williams, Friends of French Prairie:** The paper was delivered Friday at almost end of day and I don't think I've had enough time to read it. I don't know that I can answer this question without time to digest what was said to us.
    - Brandy: If we have another work session then we can talk through it and you'll have time to read through the materials.

Seventeen PAC members said they wanted to have an additional work session and Brandy said staff will move forward with scheduling the work session.

PAC Questions and Comments

Brandy opened the PAC question and comment session, in which committee members could ask questions about the master plan, give general comments about the information presented, list some goals they would like the plan to accomplish, and share their local expertise and airport knowledge. Full comments, along with responses are provided in the table at the end of the document.

Public Comments

Brandy reminded the group that they could submit comment through the survey, website, or at the public meeting after the PAC meeting. She encouraged PAC members to distribute the survey among their constituents. The next portion of the meeting was for public comment, and full responses are provided at the end of the document.

Next Steps

Brandy thanked everyone for attending and encouraged those who wanted to attend the public open house to move to the next Zoom meeting. The next working meeting will occur in about a month, and PAC members were advised to watch for an email related to that. Brandy then closed the meeting.

Questions/Comments and Responses from the PAC[4]

ID	Name	Affiliation	Question/Comment	Response
2.1	**Aron Faegre** (for Ted Millar)	*AABC/TLM Holdings*	Will the noise contours include helicopters?	The noise contours to be generated will reflect the existing and forecasted activity once approved by the FAA. Columbia and HTS helicopter traffic is separate from the Airport's traffic, as they are private facilities. Unless the FAA says

[4] Live responses are included, along with additional information/clarification, as needed.

				otherwise, expect the noise contours to only reflect Aurora State Airport-generated traffic.
2.2	**Bob Hala**	*Atlantic Aviation*	I'm new to the PAC and happy to answer any questions. We are on the south end of the field, so come talk to us.	No response needed
2.3	**Bruce Bennett**	*Aurora Airport Improvement Association*	I want to highlight the people who aren't represented – the hundreds, thousands, or possibly millions who benefit from the fires that are put out using the Aurora Airport, but who don't have any official association with the Aurora Airport.	No response needed
2.4	**Ken Ivey**	*Aurora Butteville Barlow Community Planning Organization*	How many planes are in the category of size required to get special permissions to land at Aurora Airport due to their larger size or weight?	ODAV requires an overweight waiver for aircraft that exceed the runway's weight-bearing capacity. There are aircraft that meet our current critical design category that do exceed weight bearing capacity. When we receive those requests, we review the information and may issue those. We have one based aircraft that requires that waiver from ODAV.
2.5	**Bill Graupp**	*Aurora CTE, Inc*	I enjoyed reading the paper over the weekend and thought it was a great high-level initial set of review data.	No response needed
2.6	**Steve Switzer**	*Charbonneau Country Club*	I need more time to review this and talk it over with some of the folks here at Charbonneau. I represent the board, who represent 3,000+ people, so I'm just the voice for them. I look forward to another meeting where we can discuss this.	No response needed; work session will be scheduled.
2.7	**Mayor Brian Asher**	*City of Aurora*	I also have issue with the helicopter noise not being included or controlled in the master plan. I'd like to figure out a way to get the FAA involved and include it in the master plan, to get the noise level under control.	We understand the concern and will be coordinating with FAA to see if it is possible to include the off-airport helicopter activity in the airport's noise contours. It is also important to note that airport master plan evaluations of airport noise reflect an assessment of noise exposure, consistent with FAA methodologies. There are no "control" elements associated with master plan noise analyses. The scope of work includes an FAA noise analysis that utilizes the FAA noise model for existing and forecast activity levels, fleet mix and flight tracks. This analysis will not include any evaluation of impacts

				outside the 65DNL[5] noise contour and no evaluation of "changes" in aircraft flight tracks to mitigate overflights in adjacent communities. There will be a detailed discussion of how the noise model is developed and the resulting noise contours later in the planning process.
2.8	**Charlotte Lehan**	*City of Wilsonville*	I would like to do a deeper dive into constrained operations and waivers, and what their definitions and criteria are at the next meeting	No response needed; discussion will continue at the work session.
2.9	**Rob Roedts**	*Columbia Helicopters*	I'm happy to support this. Columbia has been a part of the airport since 1976. We try to be as mindful of the public as possible. We are noticing that some other operators are not being that way, even when flying over communities outside the airport. We need to figure out a way to fix this. We also own some airport property and have noticed times getting in and out of the airport are getting extended, sometimes by up to 20 minutes. We want to figure out a way to make things as efficient as possible, and help the airport grow successfully	No response needed.
2.10	**Matt Williams**	*Deer Creek Estates HOA*	We are within a mile of the airport and are always concerned about noise, but we appreciate the opportunity to be heard.	No response needed.
2.11	**Ben Williams**	*Friends of French Prairie*	Goal Six of the draft chapter one states, "identify potential environmental and land use requirements that may impact development." Since most PAC members and staff weren't here for the last master plan, I'd like to remind everyone that WH Pacific presented the alternatives of the 2011 master plan process to the Aviation Board. The recommendation was "no build" which means no expansion of the physical size for runway lengthening. The alternatives to lengthen the runway are what generated the legal disputes for ODAV and the airport for the last decade. The former recommendation stated ODAV has decided that any extension would prove infeasible at this time. An	Comments received. We are not yet to the point in the planning process where these issues will be evaluated. These issues will be considered in the Development Alternatives later in the process. Please note this is a new Master Plan and it will arrive to decision points using new data and information.

[5] DNL represents day-night sounds levels, a mathematical method of measuring noise exposure based on cumulative, rather than single event impacts.

			extension to the north might constrain Columbia Helicopter's ability to expand on their private property. An extension to the south might have a negative impact on farmland, a potential environmentally infeasible situation. It may also have a negative impact on private property at Keil Road. Keil Road provides necessary access for farm equipment, machinery, and emergency responders. What has changed in terms of the impact on farmland and potentially environmentally infeasible situations?	
2.12	**Commissioner Danielle Bethel**	*Marion County*	I appreciate this process and hearing from the members of the community surrounding the airport. I would love to have a conversation around helicopter noise for companies that aren't residents of the airport and see if we can encourage them to take alternative paths to support the community. I also think information needs to be provided and shared in a way that the community understands. I hope future processes going forward provide a more thorough process for communication and participation to occur for the scheduled activities that are outlined.	The project team will send materials to the PAC further in advance, particularly for meetings that require focused discussions of long-term facility planning. We understand the concern related to helicopter noise and will be coordinating with FAA to see if it is possible to include the off-airport helicopter activity in the airport's noise contours.
2.13	**Cathryn Stephens**	*Oregon Dept of Aviation Board*	I understand the helicopter operations are on private property, but are they through-the-fence operations? If you have a through-the-fence operation, those based aircraft would be included? Forecasting is tricky and it's important to get as accurate as possible. Flight plan filings are not necessarily a good indicator because there are many operations that you don't file a flight plan for. I was pleased to see how stable your 2020 operations were. I was wondering if the residential properties beneath the west transitional surface south of the Willamette River, near the runway 17 approach surface, had an avigation easement or airport development overlay zone in place?	Columbia and HTS do not have a through-the-fence agreement with ODAV. They operate from adjacent privately-owned properties without direct airfield access. These facilities (heliports) have individual airport identifier codes (OR24, OR68). There are helicopters that operate on the airport and potentially in the adjacent through-the-fence areas, but those aren't Columbia or HTS helicopters. Yes, the through-the-fence aircraft would be included. The use of instrument flight plan filings provides the most accurate data available for gauging business aviation activity at most airports. It is understood that some filed IFR flight plans are not activated or canceled enroute, and some aircraft complete their flights operating under visual flight rules (VFR). However, the Traffic Flow Management System

			Would any potential runway extension require a property purchase or rezoning?	(TFMSC[6]) data are recognized by FAA as the most accurate measure of critical or design aircraft activity for general aviation airports with significant business aviation use. In this case, the TFMSC data supplements the Aurora State Airport air traffic control tower data to identify critical aircraft use and to evaluate common off-hours activity trends. We haven't reached the point in the Plan to provide informed comments on runway lengths and if a runway extension is needed. The runway length requirements will be evaluated in the Facility Requirements and if a runway extension is justified, options for accommodating a runway extension will be evaluated in the Development Alternatives.
2.14	**Naomi Zwerdling**	*Oregon Dept of Transportation*	It was my understanding that TSP's (Transportation System Planning) would be happening in another phase of the project (related to previous questions).	Transportation System Plans are not included in the scope of work for the Airport Master Plan. Individual transportation planning studies may be required to support individual development projects that are an outcome of the planning process.
2.15	**Tony Helbling**	*Positive Aurora Airport Management*	I met with some residents of the Charbonneau area, as well as Councilwoman Joann Linville from Wilsonville. We would like for a noise study to come out of this master plan	A noise study will be included as part of this plan that includes noise exposure maps generated for current and future forecast aircraft operations and runway configuration(s).
2.16	**Rian Johnson**	*Vans Aircraft*	There are other types of airplanes that will be coming along in the future with the expansion of Mosaic. They would have different noise signatures, such as quad copter type aircraft. This will be approved by Congress in 2023 but should be considered. We at Vans try to avoid Charbonneau and Aurora, but the flight paths that the tower puts us on, put us over where we are. We still try to avoid those and be respectful.	The needs of aircraft that are anticipated to be based at Aurora over the 20-year planning horizon will be considered in the Development Alternatives. We are aware that many new types of electric aircraft will be entering the market in the next 10 years. The planning team will consider options to accommodate electric aircraft when alternative concepts are developed.
2.17	**Patrick Donaldson**	*Wilsonville Chamber of Commerce*	Prior message: As I am going to be driving, I offer this comment when you come to 'Wilsonville Area Chamber of Commerce' - Draft Airport Master Plan Working Paper	No response needed.

[6] TFMS is a data exchange system for supporting the management and monitoring of national air traffic flow.

			No. 1 appears to be a rich and deep source of helpful materials that the Wilsonville Chamber of Commerce will review and bring forward our comments at the anticipated work session. Thank you.	
2.18	**David Waggoner**	*Willamette Aviation*	How is the noise contour being developed?	Once the FAA approves the aviation activity forecasts, the noise analysis for the master plan will be driven by those numbers. There is a series of exercises done using computer modeling software, which would be inputted with the existing and forecasted future aircraft operations. Any recommendations would also be reflected in those contours. That exercise will be driven by the air traffic represented in the forecast. We agree that having an appreciation of the helicopter activity within the overall area would be valuable to the broader discussion of noise that may extend beyond the scope of an individual airport master plan.
2.19	**Wayne Richards**	*Friends of the French Prairie*	I wanted to empathize with Rob (Columbia Helicopters). We have been counting the flights over Charbonneau that are on flight aware. There have been 4,500 in the last 12 months. We are concerned about noise, and we are also concerned about leaded fuel raining down on our communities. There is no safe level of lead with that many flights. Small traces of it can affect children's neurological makeup and the health and safety of our citizens. I would like to see what the plan is for the reduction of the forever chemicals such as lead and polyfluoroalkyl in the next meeting. They are in flame retardants, and they don't break down. Jet exhaust burns sulfur, and the FAA's chief scientist has a report out that notes that jet fuel creates 11 toxic chemicals and jets that fly over Charbonneau are raining some of those sulfur compounds down on us. The overflight isn't just noise, and I'd love to address that at the next meeting.	There are ongoing nationwide efforts that the FAA, in coordination with the Environmental Protection Agency (EPA), is undertaking to address leaded fuel use in aviation and also emissions from jet exhaust. The purpose of these efforts is to investigate fuel alternatives to reduce emissions and the presence of lead in aviation fuel. More information is available at: https://www.faa.gov/airports/environmental/air_quality The opportunities to mitigate these issues are not within the scope of the Airport Master Plan project.
2.20	**Aron Faegre**	*AABC/TLM Holdings*	Ted asked that I add to the record that the development at the airport	No response needed.

			puts taxes into the public sector. According to the Marion County tax record, that is almost 2 million a year. Almost $800,000 of that goes to North Marion County School District, and $300,000 goes to Aurora Fire. There is strong support of community from the airport, so it's good to keep that in mind.	
2.21	**Bruce Bennett**	*Aurora Airport Improvement Association*	The helicopters burn fuel that has no lead in it. The trace amounts mentioned earlier are piston engines, not helicopters.	No response needed.

Public Comment

ID	Name	Affiliation	Question/Comment	Response
2.22	**Nancy Davis**	*Community member*	I live in Charbonneau, and I'm concerned about the noise. I'm also concerned there will be increased traffic on our roadways with the flight increase. It also seems like the flight paths go directly over our homes. Could the planes and helicopters fly over open space or fields instead of coming over our houses? Can rules or time limits be imposed? There are busier airports that have restricted hours.	Noise will be evaluated in the master plan based on the current and forecast activity from the FAA-approved forecasts. Flight paths, once the aircraft have left the ground, are the responsibility of the pilot in command of the aircraft and directions from Air Traffic Control when operating in the controlled airspace surrounding Aurora State Airport. ODAV does not have the ability to dictate aircraft flight paths or times of operation in accordance with FAA regulations. Surface transportation impacts are studied on a project-by-project basis when development occurs and reviewed by the controlling jurisdiction (in this instance, Marion County). If a proposed development is shown to have a significant impact on local transportation facilities, mitigation projects may be a condition of approval for the project.
2.23	**Steven Benson**	*Community member*	I live in Daydream Ranch and didn't get a copy of the working paper. It seems the forecast shows an increase of air traffic and jets are projected to increase. I'm concerned about larger planes and traffic coming with the increase in space at the airports and a longer runway. Is the forecast for the airport staying	The forecasts of aviation activity are not constrained and not dependent on airport expansion. The current activity is within the capabilities of the airport. We will be evaluating any future activity or facility needs as part of the next chapter.

			the same size, or more airport builds and development?	
2.24	**Traci Hensley**	*City Council President, City of Canby*	I also think a noise study should be a part of this process.	A noise study is included as part of this Airport Master Plan.
2.25	**Mayor Julie Fitzgerald**	*City or Wilsonville*	I appreciate the comment about the airport helping schools. That is very important to me and everyone in Wilsonville. I'm concerned about transportation around the airport, and I want to recognize that jobs are so important in keeping our freight moving. We have 21,000 jobs and combined payroll of $1.3 billion. We are developing some industrial land and managing the facilities on that land. We want to make sure freight keeps moving for Oregon's economy. I'm concerned about the expansion of facilities at the airport which would increase traffic. We have unimproved roads approaching the airport. We want to keep supporting the economy and schools, but I want to know how this will be addressed for safety.	Surface transportation impacts are studied on a project-by-project basis when development occurs and reviewed by the controlling jurisdiction (Marion County). If a proposed development is shown to have a significant impact on local transportation facilities, mitigation projects may be a condition of approval for the project.
2.26	**Nancy CS**	*Community member*	I live very close to the airport noise. In late February, one of the HTS helicopters passed over my field and dumped fluid on it. This has happened before, and it's wrong. I also have it on film, and others have seen it. I also have read decibels going from 90-105 for an extended period of time. This can impact hearing, and no one should be exposed to that at home. I can't have people over to my home when I want, and it feels like the airport dictates my life. My family was here before the airport. How do the areas outside the airport get approved to be next to homes and farms?	HTS's development was permitted through Marion County and operates independent of Aurora State Airport. ODAV has no authority to control how they operate their aircraft. If you have noise or concerns with impacts to your property contact HTS directly or Marion County code enforcement. If you have safety concerns you can also contact the Portland FAA Flight Standards District Office (FSDO) at (503) 615-3200.
2.27	**John Rankin**	*Former City Attorney for the City of Aurora*	I'm representing four different properties of about 108 acres. All but one are rural inside the growth boundary of the City of Aurora. They are south and east of Keil Road, and they will be impacted by expansion and development of the airport. We have had several interested parties and offers from airport related	Future facility needs will be identified in the Facility Requirements and Development Alternatives. If land adjacent to the airport is identified for potential airport-related activity within the proposed development alternatives, property owners will be consulted at that time.

			businesses and contractors. My clients have property that could be dedicated or sold for taxiways and that sort of thing. I have done work with different agencies regarding the future vacation of Keil Road.	
2.28	**Kriss Wright**	*Planning Commissioner, City of Newberg*	My father lives next door to the airport and our water line was breached by a fire truck. I have not seen any fire hydrants around the airport. Infrastructure is needed for that, especially since airplanes are flying over residential areas.	On-site utilities will be evaluated in the Development Alternatives task in the master plan.

Written Public Comment[7]

ID	Name	Affiliation	Question/Comment	Response
2.29	Wayne Richards	*Community member*	First, sending an 83 page detailed document to us the night before this meeting is not a good start for you. Second, allowing ten minutes for public comment with two minutes each allowed will only let five people speak! I understand that there are rules about everyone wishing to speak be allowed to. Health and wellbeing are an important part of livability. According to the a report by the US Department of Health and Human Services Agency for Toxic Substance and Disease Registry, The toxicity of lead in humans has been known for 2000 years, and is not disputed. On the Aurora State Airports voluntary agreement with our community regarding overflights, they said they would make the effort. Over the last 12 months, just on Flight Aware, there were over 4,500 flights directly over Wilsonville spewing lead from their reciprocating engines. There is a reason we don't use lead paint, lead water pipes and leaded gasoline. Jets. Jet exhaust is even more toxic. Sulfur in jet fuel is a major killer. The FAAs own Lourdes Maurice (the administration's chief scientist) notes that jet fuel creates 11 toxic chemicals in their exhaust.	Thank you for your comment; we've shared your concerns with the technical team.

[7] Letter was sent before the meeting.

			The noise is clearly a form of pollution from the Aurora State Airport and is documented as a health hazard They're known as "Forever Chemicals". Whenever fire suppressant foams (as one example) are used (for instance) it stays in the environment forever. These PFAS (polyfluoroalkyl) are in our environment now. Like lead, they do not disintegrate. PFAS are known to cause serious health problems in humans (heightened cholesterol as well as thyroid and immune system disorders) Safe is their goal? What's safe about this.	

AURORA STATE AIRPORT

AIRPORT MASTER PLAN
PLANNING ADVISORY COMMITTEE (PAC)
WORKING SESSION SUMMARY

Date: Tuesday, April 5, 2022
Time: 3:00-5:00 pm
Location: Zoom Webinar

In Attendance

PAC Members Present

Roger Kaye, *1000 Friends of Oregon*
Aron Faegre (for Ted Millar[1]), *AABC/TLM Holdings*
Bob Hala, *Atlantic Aviation*
Bruce Bennett, *Aurora Airport Improvement Association*
Ken Ivey, *Aurora Butteville Barlow Community Planning Organization*
Bill Graupp, *Aurora CTE, Inc*
Steve Switzer, *Charbonneau Country Club*
Brian Asher, *City of Aurora*
Councilor Charlotte Lehan, *City of Wilsonville*
Chris Neamtzu, *City of Wilsonville*
Commissioner Tootie Smith, *Clackamas County*
Bob Buchanan, Alternate, *Columbia Helicopters*
Matt Williams, *Deer Creek Estates HOA*
Ben Williams, *Friends of French Prairie*
Commissioner Danielle Bethel, *Marion County*
Matt Lawyer, Alternate, *Marion County*
Austin Barnes, *Marion County Planning Dept.*
Tony Beach, Oregon Dept of Aviation (ODAV)
Cathryn Stephens, *ODAV Board*
Naomi Zwerdling, *Oregon Dept of Transportation*
Matt Crall, *Oregon Dept of Land Conservation and Development (DLCD)*
Tony Helbling, *Positive Aurora Airport Management*
Jody Christensen, *Regional Solutions*
Rian Johnson, *Vans Aircraft*
David Waggoner, *Willamette Aviation*
Patrick Donaldson, *Wilsonville Chamber of Commerce*

PAC Members Absent

Raul Suarez, *Aurora Air Traffic Control*
Scott Archer, *City of Canby*
Cheryl Pouley, *Confederated Tribes of the Grand Ronde Community of Oregon*
Robert Kentta, *Confederated Tribes of Siletz Indians*
Christian Nauer, *Confederated Tribes of Warm Springs Reservation of Oregon*
Rob Roedts, *Columbia Helicopters*
Wayne Richards, Alternate, *Friends of the French Prairie*
Robert Fournier, *Helicopter Transport Service*
Ben Clayton, *Life Flight Network*
Brandon Reich, Alternate, *Marion County Planning Dept.*
Mary Anne Cooper, *Oregon Farm Bureau*
Bill Martin, *Oregon Office of Emergency Management*

[1] Substitutions are not generally allowed; however, this one-time substitution was granted by Oregon Department of Aviation Director.

Sarah Puls, Alternate, *Oregon Office of Emergency Management*
Greg Hughes, Alternate, *Vans Aircraft*
Kevin Ferrasci O'Malley, Alternate, *Wilsonville Chamber of Commerce*

Agency Representatives
Betty Stansbury, *ODAV*
Heather Peck, *ODAV*
Sarah Lucas, *ODAV*
Seth Thompson, *ODAV*
Cathy Clark, *ODAV*
Kate Glassey (Key), *FAA*

Staff and Consultants
Matt Rogers, *Century West*
David Miller, *Century West*
Mike Dane, *Century West*
Samantha Peterson, *Century West*
Mark Steele, *Century West*
Brandy Steffen*, JLA Public Involvement*
Jen Winslow*, JLA Public Involvement*

Audience / Members of the Public
Andria Abrahamson, ODAV
Candy Cates
Carolyn Lee
Cathy Clark, ODAV
Corey Buchanan
Dusty Hanson
Greg Leo
James Kirby
Jim Gingo
Joe Mollahan
Joseph Schaefer
Kirk Laubach
Kriss Wright
Lori Leon
Mark Ottenad1, City of Wilsonville
Mark Ottenad2, City of Wilsonville
Mark Shull
Mayor Julie Fitzgerald, City of Wilsonville
Nancy CS
Neal While
Pete Nickerson
Peter Rempp
Shawn Hempel
Tim Warren
Traci Hensley
Tom Herzog

Overview

The meeting goals were to continue the conversation about existing conditions and preliminary forecasts (Working Paper No. 1, consisting of Draft Chapters 1, 2 and 3); provide more time to talk and learn about the materials; ensure that everything from the scope was provided; and see if anything major was missing. Additional notes are in *italics*.

Welcome and Introductions

Brandy Steffen, JLA Public Involvement, welcomed everyone to the meeting and reviewed the agenda and basic Zoom meeting tips and etiquette. She reminded the group that all public comments received before April 12 and during the meeting would be added to the summary. **Sarah Lucas, Oregon Department of Aviation (ODAV),** introduced **ODAV** staff, consultant, and subconsultant team members involved with the project. She reiterated that the **Federal Aviation Administration (FAA)** was funding the project and the team was following the FAA-approved scope of work. She added that the schedule for the PAC meetings is flexible and may change. Brandy reminded the PAC of the decision-making process and that the PAC gives opinions and

expertise, which ODAV considers in their decision-making process. The FAA will review all elements of the Master Plan, with formal approval responsibilities for the aviation activity forecasts and the airport layout plan (ALP) drawing set. The FAA held off on their formal review of Working Paper No. 1 until after the April 12, 2022 deadline established by ODAV for receiving comments from the PAC and public. The review and approval process for the master plan aviation activity forecasts will coincide with review of Working Paper No. 1. ODAV and the consultant will document and formally respond to all review comments received.

Review of Existing Conditions and Preliminary Forecast

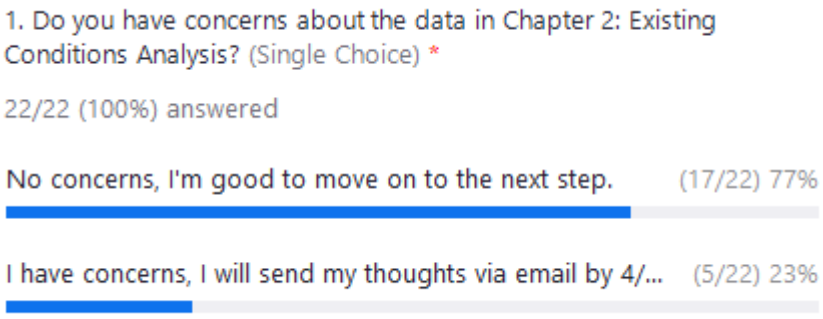
David Miller, Century West, gave a brief overview of Working Paper No. 1 focusing on Draft Chapters 2 and 3, which cover the existing conditions (including land use and zoning of the airport) and preliminary aviation activity forecasts. *The presentation is posted to the project website.*

Brandy asked if the PAC had any clarifying questions or comments about the information:

- **Bruce Bennett,** *Aurora Airport Improvement Association*: I want to make a clarification that the airport does have a fire suppression system of 600,000 gallons underground, which is independent and paid for by private property owners and ODAV. Unlike the surrounding area, the airport is completely covered by fire suppression.

Draft Chapter 2

Brandy polled the PAC members to see how they were feeling about Draft Chapter 2. Most (77%) felt good about the data presented in Draft Chapter 2 and moving on to the next step, though 23% replied that they had questions that they would email to the project team before April 12. Brandy then asked the PAC to voice their comments, questions and concerns.



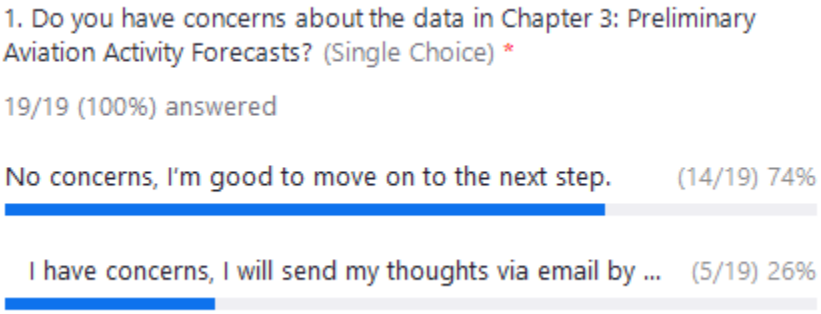
- **Ben Williams**, *Friends of French Prairie:* The Land Use section in Draft Chapter 2 is minimally treated, especially when considering the Court of Appeals ruling in September 2021 against ODAV, which was almost all about land use.
    - Can you clarify what you mean by minimally treated? This is a Master Plan, and there are no land use actions.
  - **Ben Williams:** Well, it should be noted. David pointed out that the Land Use action is the responsibility of Marion County. Is that correct?
    - That is correct for specific actions. There is no land use action for a Master Plan itself.
  - **Ben Williams:** I understand that, but this Master Plan is following preceding Master Plans. Since 1976, no Master Plan has been adopted into the Marion County Master Plan. Following

the 2012 Master Planning Process, Marion County sent a letter saying they "acknowledge the Master Plan" but it was never adopted into the Marion County Comprehensive Plan. As the Court of Appeals rulings have pointed out, that is a necessary step. I think it's important that everyone understands that we have a history here of "unconcluded" land use activity.

- History is important, but this is a new Master Plan, and we are looking to move forward despite issues with the 2012 plan which was not formally adopted. This is not an update to the 2012 plan, and I want to clarify that. We can supplement the chapter to be clearer on that history as long as everyone understands how we're moving forward.

Draft Chapter 3

Brandy then polled the PAC members and attendees to see how they were feeling going about Draft Chapter 3. Most (74%) felt good about the Draft Chapter and moving forward, though 26% replied that they had questions that they would email to the project team before April 12.



Brandy opened comments for those who wanted to speak about or ask questions about Draft Chapter 3.

- **Ben Williams**, *Friends of French Prairie:* I realize this is a new Master Plan, but the previous forecast numbers were wildly optimistic and never came close to being achieved. There was never any adjustment to the process to accommodate for that. When reading the introduction and overview for draft Draft Chapter 3 of this Master Planning process, it states that the overall goal is to prepare forecasts that accurately depict current conditions and historical trends which can be translated into airport facility needs. The most recent aviation forecast approved by the FAA were developed on the 2012 Master Plan and 2019 Constrained Operations Runway Justification Study. It fails to mention that the 2012 Master Plan was found to be invalid by the Oregon Court of Appeals in 2021. While Draft Chapter 3 may be about forecasts, I submit that the Court of Appeals ruling on the validity of the Master Plan, and much of this Master Planning Process is dependent on "current conditions and historical trends." Given the 18 references to the 2012 Master plan and the 99 references to the Constrained Operations Study, it becomes clear that the validity of the data from 2012 should be taken into consideration when assessing current conditions and relevant historical trends if a reasonable projection of future activity is to be achieved. Two major trends that impact conditions are being ignored. The first is the difference in forecasting of based aircraft for 2031, when compared to the forecast for based aircraft in 2010. There are huge discrepancies in the forecasting, including total operations. The constrained study only makes one reference to this reduction of activity, and then says

that relying on traffic count improves accuracy of the overall forecast, while saying overall growth rates are reasonable. The entire forecasting process is questionable.

- **Councilor Charlotte Lehan**, *City of Wilsonville:* The Airport is currently 5,003 square feet and is strength weighted for 45,000 pounds. There has been a decade long history of attaining waivers, which pushes the constrained operations. I'm concerned about the Falcon 900 having 68 operations of which 75 were constrained. That doesn't make any sense, because the numbers don't add up. This makes me question other numbers and I'm also concerned about manufacturer's specifications for weight and runway length. How do they differ from what is allowed at Aurora or what is in the aviation activity forecast? I'm worried these are based on pilot surveys and not validated against flight plans.
    - **Sarah:** noted that this discrepancy would be addressed when the written comment was sent in. The verification process for aircraft has evolved in the past several years.
- **Bruce Bennett**, *Aurora Airport Improvement Association:* I want to note that the helicopter operations caused the count to be reduced and that changes the forecasts. They aren't through the fence. I appreciate how the forecast has been adjusted downward which shows accuracy, and the tower helps with that. It's important to realize there were well over 100,000 a year in the 1970's and we are still not back to where we were in the heyday. It has fluctuated.
    - **David:** It's important to remember this Master Plan is independent of others and there have been many changes in the last 10 years that have had significant effects on air traffic. We don't want to correlate or bias against prior forecasts. The addition of the tower is significant. It was not in operation for previous Master Plans, and it does help with accuracy.
- **Steve Switzer,** *Charbonneau Country Club:* The table previously discussed was table 3-14 on the forecast-based aircraft and I'm comparing that to your own company's Constrained Operations Justification Study. In Table 8 you showed up to 87 jet aircraft in 2038. The current one is 50. My constituents are concerned about how many jets will be flying over their house. The 2018 study was 3 years ago, and the tower was open then. The data seems suspect and it is recent data. The overall constrained operations study has many repeating answers. Did anyone check this against actual flight plans? We are concerned about the accuracy of the data being presented.
    - **David:** Air traffic operations numbers are challenging because we are dealing with movement, and based aircraft is validated and documented, so on Table 3-14, the based year number is the important number to consider. In 2021, ODAV's data said there were 36 based jets at the Airport. That's the baseline for the forecast, so projections are applied to that current baseline count. We must acknowledge that Covid also may have impacted these numbers. I want to reiterate that 2021-41 forecasts are independent and based on established baseline numbers that were provided and the growth rates that are presented in the different forecast models. We do have a recommendation and will let the FAA review to see if there is anything questionable about it. Comments will be an important part of the record for their assessment.
- **Steve:** Did your formula change? You went from 36-50 then 38-85. Aside from Covid, did the methodology change?
    - **David:** The forecast work that was done in the 2019 study was a limited update of the 2012 Master Plan forecasts. It is recognized that the growth rates assumptions in the 2012 Master Plan were overly optimistic, so one of the reasons our numbers have changed is that the current growth rate assumptions are more modest. We are projecting 2.3%, which is in line with historical trends. We

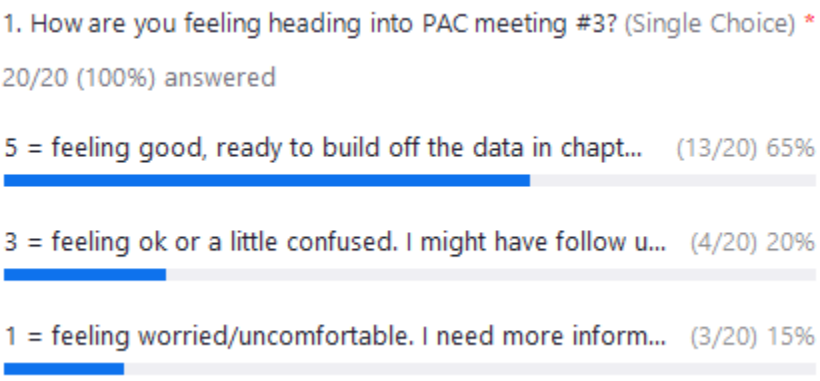
are starting with 2021 baseline numbers and developed forecast models based on the historical data that was available and a variety of relevant factors.

- **Ben Williams**, *Friends of French Prairie:* David, I appreciate your answer, but you stated the 2019 Study is separate from the 2012 Master Plan and this Master Plan is separate from both of those. But you're still using data from the 2019 Study, which has data pulled from the 2012 Master Plan. So current data is still being pulled for the current draft chapters. Hopefully the FAA can confirm if this is appropriate or not.
- **Bruce Bennett (from the chat)**, *Aurora Airport Improvement Association*: I believe it's important to understand the changes to the entire aviation industry; the loud & inefficient old piston twins have been replaced worldwide with the far safer, faster, quieter business jets. The is not just Aurora but everywhere.
- **Cathryn Stephens,** *ODAV Board:* I know the FAA relies on Terminal Area Forecast and historical trends. It looks like the choice here is to go with the 20-year historical trend, which is informed by the terminal area forecast. When we did our last Master Plan in Eugene, we didn't agree with the terminal area forecast. The FAA is always conservative with their terminal area forecast and always want to rely on historical data. There isn't a lot of wiggle room with the FAA, I think this recommendation is correct because it's the one that the FAA is going to accept. Since they have to approve the aviation forecast for this Master Plan, I think it's prudent to forward to them. They may look at it and think there is something else to take into consideration, but from my experience, that rarely happens. I think you're on track here.

PAC Questions and Comments

Brandy opened the PAC question and comment session, in which committee members could ask questions and comment about the information presented. *Full comments, along with responses are provided in the table at the end of the document.*

She then polled members to get a temperature check on how they were feeling going into the next PAC meeting. Most (65%) felt good, some (20%) were feeling okay or a little confused and may need to follow up with questions, while a few (15% or 3 people) were worried or uncomfortable and needed more information.



Snapshot of Survey Results

Brandy presented a high-level update on the recently closed online survey. *The full survey summary will be available on the project website.*

Public Comments

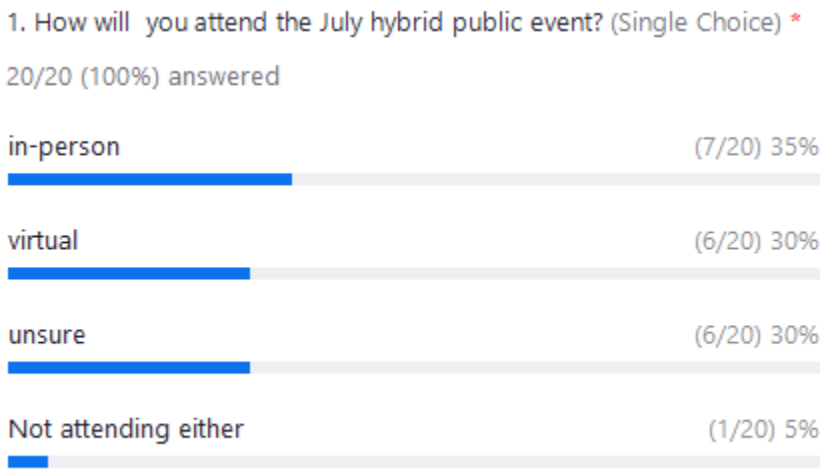
Brandy reminded the group that they could submit comments through the website at any time and public comment would be added to the meeting summary. The last day to submit public comments before they go to the FAA for review would be April 12. *Full comments and responses are provided at the end of the document.*

Next Steps

Sarah reminded the group that the deadline for comments and questions regarding Working Paper No. 1 is April 12 and that the FAA would begin their review after getting all public and PAC comments.

David briefly reviewed themes heard during previous PAC meetings, which are available on the presentation located on the website. He also mentioned how to report noise concerns, and who has responsibility for surface transportation and funding.

Brandy polled the group to see how they might attend a hybrid open house in July. Answers were split between attending in-person (35%), virtually (30%), and feeling unsure (30%). One person said they would not attend the event.



The next PAC meeting is scheduled for Tuesday, May 3, 2022, from 3:00-5:00 pm on Zoom with a focus on facility goals and requirements. Sarah and Brandy then thanked everyone for attending and closed the meeting.

Questions/Comments and Responses from the PAC[2]

ID	Name	Affiliation	Question/Comment	Response
WS.1	**Bruce Bennett**	*Aurora Airport Improvement Association*	Clarification that the airport does have a fire suppression system of 600,000 gallons underground, which is independent and paid for by private property owners and ODAV. Unlike the surrounding area, the airport is completely covered by fire suppression.	Thank you, comment noted.
WS.2	**Roger Kaye**	*1000 Friends of Oregon*	I submitted written comment, but I don't have anything in addition to that. It reports that the study goes back to 2012 master plan legal validity and going back to that previous data. I also don't believe data from 2019 counts as historical data in terms of its proximity to current projections, as it's only one year's worth of data.	Thank you, comment noted.
WS.3	**Aron Faegre**	*AABC/TLM Holdings*	In these airports, we are typically looking out 20 years, which is a long time out to forecast the future. Infrastructure takes a long time due to funding and the time to construct things. Part of this process to maintain a good airport is to look out into the future and project what the options may be and typically the FAA won't fund anything unless the operations are necessary. It's important to view airport infrastructure in that context.	Thank you, comment noted.
WS.4	**Bob Hala**	*Atlantic Aviation*	I'm the general manager for the FBO, or fuel provider and services at the airport. If there are any questions about the types of businesses we support and are bringing here, I'm happy to answer questions. It's a diverse list and they support the local economy. I also have access to aircraft tracking software called Passur if anyone has more questions about historical numbers.	Thank you, comment noted.
WS.5	**Bruce Bennett**	*Aurora Airport Improvement Association*	A large majority of operators at Aurora are people who specialize in emergencies, so try to understand the importance of safety and improvements. These are commonly	Thank you, comment noted.

[2] Live responses are included, along with additional information/clarification, as needed.

			putting out fires and restoring power to small towns and saving lives. These aren't just numbers on a sheet. If you spend time at the airport, you understand the critical nature of this. I can also answer any questions. I operated a Falcon 900 out of there and technically every operation is constrained due to the weight of the aircraft in relation to the runway. Thank you for organizing this.	
WS.6	**Ken Ivey**	*Aurora Butteville Barlow Community Planning Organization*	The concerns I will write in later – it's the large jets that request permission to go to this airport and function there. They become part of statistics used to justify a longer runway. When you have a longer runway, you can let in larger jets, and we will get into a cyclical system where we will continue to need a longer runway. I'm concerned how the information is put together aiming for a particular outcome.	Thank you, comment noted.
WS.7	**Bill Graupp**	*Aurora CTE, Inc*	I'm representing education in the county, and we're focused on the planning meeting the future needs of our kids to have careers in the area and not have to leave for better paying jobs. The airport is a big part of our economy in the region, and we want to look ahead to the future as the aviation industry evolves so that our kids have good career job options.	Thank you, comment noted.
WS.8	**Steve Switzer**	*Charbonneau Country Club*	I looked at the 126 waivers for the last 12 years, including the Global Express plane. The last 50 waivers were to one aircraft, a Gulfstream 450. I liken this to me buying a Ferrari and stating you need to move the freeway so I can drive 160 mph. The airport allows the Global Express and its base weight is more than the runway. Some of the other waivers anticipated it to be 80K pounds before takeoff. My daughter was flying a Gulfstream 450, and I asked her what she would do if there was engine trouble. She replied that she would fly to PDX and not Aurora. I'm concerned about the data and how you got the constrained operations that you are using to justify this. I	Thank you, comment noted. We will continue to work with you to help advertise future opportunities for public comment.

			hope the FAA takes a closer look. It looks suspiciously like it was put in to fit the needs, and much of it was done on surveys. The FAA also requires a public involvement program, and all of the PI fits onto one page. I'm concerned about the survey that went out, because no one in Charbonneau knew anything about it. It didn't get advertised very well. We did have meetings in Charbonneau during the last Master Plan, and I would love for more of those and more outreach in this community. Charbonneau is 3,000 people and the decisions made affect all of us. In 20 years, who will we look back on to have represented us at these meetings?	
WS.9	**Brian Asher**	*Mayor, City of Aurora*	I don't have comments, but keep the discussions going and find a happy medium.	No response necessary.
WS.10	**Councilor Charlotte Lehan**	*City of Wilsonville*	We have a lot of businesses and jobs, and our objection is to doing businesses and building businesses in farmland, one of OR's largest industries. It takes business away from other cities which provide appropriate urban services such as sewer and water. Just stating "We love business" as a reason for this misses a lot of the peripheral.	Thank you, comment noted.
WS.11	**Ben Williams**	*Friends of French Prairie*	We submitted comments in writing.	No response necessary.
WS.12	**Tony Beach**	*ODAV*	Thank you for your participation.	
WS.13	**Cathryn Stephens**	*ODAV Board*	Thank you for your work on this. Master Plans are a lot of work. Flight plans are not a good indication of activity, as many pilots don't have to file one. Historical data and terminal area forecasts are much more accurate. The FAA regulation drives this process and accommodates all kinds of aviation. If the demand is showing at an airport, they will not support trying to block that demand. The FAA has to approve aviation forecasts. Are they going to be able to review this in a timely manner?	It would not be wise to go too far into the master plan evaluations without FAA forecast approval. We have been meeting with (FAA Seattle Airport District Office - ADO) Ben Mello and Kate Key bi-weekly, but we do not have a timeline on forecast approval or discussion because they wanted to wait until the PAC/public comment period for Working Paper No. 1 was over. We will continue our bi-weekly discussions and respond to any questions the FAA may have. After the ADO completes its review, the draft forecasts will go to FAA

				headquarters for review of the ADO's review. Final FAA approval of master plan draft aviation activity forecasts occurs when all FAA comments are addressed.
WS.14	**Naomi Zwerdling**	*Oregon Dept of Transportation*	I have already heard comments I would have made.	No response necessary.
WS.15	**Matt Crall**	*Oregon Dept of Land Conservation and Development (DLCD)*	I appreciate the note about the county having land use authority and that ODAV is really just a property owner.	No response necessary.
WS.16	**Tony Helbling**	*Positive Aurora Airport Management.*	I'm the president of PAAM and have had some good recent visits with airport operators and a first in person meeting. We'd be happy to support local outreach to the community so they can learn how aviation functions work. We have a location on the airport and could show maps and charts with the why's and how's of the airport. We want to be good neighbors.	Thank you, comment noted.
WS.17	**Patrick Donaldson**	*Wilsonville Chamber of Commerce*	We continue to be impressed by the deliberative discipline process that allows all voices to come in on these calls and through comments, collecting them, and then sending them back out. This is the definition of openness and transparency and is a contemporary record that will help us in our decision-making process. At our next meeting, we need to spend some time revisiting the covenant we made to one another about openness, fairness, transparency, and respectfulness. We need to recenter on this.	Thank you, comment noted.
WS.18	**Matt Lawyer (for Commissioner Bethel)**	*Marion County*	Thank you for being able to take an additional look at this.	Thank you, comment noted.
WS.19	**Bob Hala (in the chat)**	*Atlantic Aviation*	The aircraft at UAO support the businesses in the surrounding cities rather than take away from them.	Thank you, comment noted.

Public Comment

ID	Name	Affiliation	Question/Comment	Response
WS.20	**Kriss Wright**	*Planning Commissioner, City of Newberg*	I noticed that the Appendix 2 of the Master Plan update env overview says that the ESA helps public and private sector clients plan and provide climate change regulations and limits of emissions. This purpose is to provide the environmental conditions of the airport. Under the bird species, I'm not seeing a red-tailed hawk and junior eagle. Some of the endangered species have habitat in this area and are not on this list or being considered. I wanted to make you aware of that. Additionally, I heard from last meeting that there was fuel being dumped from the air and I want to know if there is anything in place or repercussions for those found doing that.	Thank you, comment noted. ODAV: It wasn't fuel, it was a substance, and we don't want to presume we know what that was. The reported event was related to a low-flying helicopter from an adjacent private heliport. We encouraged the property owner to submit their video of the event to Marion County.
WS.21	**Peter Rempp**	*Community member*	What is the permitting process for airport projects or expansion? Who approves and makes decisions on how you build something? How do neighbors find out that there are new limitations to their property?	This is simply a Master Plan looking at how to maintain and develop the Airport. Recommendations (for implementation of individual projects) requiring local land use actions go through a public process defined by Marion County, as the land use jurisdiction for the Airport and adjacent airport-related development areas. All of that is after the Master planning process concludes. There is also a federal NEPA process that would bring in additional agencies, but that is specific to FAA-funded projects. We don't know what the next steps will look like at this time, but everything is through Marion County. This may be a question for them as well.
WS.22	**Mayor Julie Fitzgerald**	*City or Wilsonville*	The City of Wilsonville, with 27,000 residents, is very business oriented. There are 21,000 jobs and 1,000 businesses and growing, and the total payroll is $1.3 billion. We have several companies investing in our city and bringing new jobs. I'm concerned about safety and the	Thank you, comment noted.

			septic tanks that service this area. Why is a longer runway needed for a life flight?	

Written Public Comment[3]

ID	Name	Affiliation	Question/Comment	Response
WS.23	Roger Kaye	*President, Friends of Marion County*	RE: **Question of Legal Validity of 2012 Master Plan** My comments are about the propriety and legality of the data presented in the Draft chapters. Chapter 3 is titled **Aviation Activity Forecasts**, and beginning on page 8 is a section titled **Recent Events Summary.** No mention is made of the 2021 Final Judgment by the Oregon Court of Appeals, later ratified by the Oregon Supreme Court, that the 2012 Aurora Airport Master Plan is invalid because it was never legally approved or adopted by the Oregon Aviation Board, and it was never adopted into the Marion County Comprehensive plan. Certainly, this qualifies as a "recent event!" This matters because the Forecast chapter and the data therein are built on data from the **2019 Aurora State Airport Constrained Operations Runway Justification Study** and the unapproved **2012 Aurora State Airport Master Plan.** The Constrained Operations study references the 2012 master plan 99 times and includes such statements as "intended to supplement the 2012 AMP document," and "the current 2012 Airport Master Plan should be consulted for specific plans related to airport development and protection," and finally, The primary purpose of the forecast update associated with the Aurora State Airport Constrained Operations Runway Justification Study is to evaluate the forecasts of aviation activity (2010-2030) contained in the 2012 Aurora State Airport Master Plan (AMP), which supported the planned runway extension depicted on the 2012 Airport Layout Plan (ALP). On top of that, the Draft Chapters for the current master planning processes are not	Thank you for your comment; we've shared your concerns with the technical team. References to historical data contained in previous plans are provided for information only. The 2021-2041 airport master plan is a new master plan and no correlation between plans is assumed.

[3] Letter was sent before the meeting.

			only based on the Constrained Operations Study, but directly refer back to the 2012 Master Plan and include 18 references to it. This linkage and dependency is confirmed in the **Previous Airport Planning** section of Chapter 3 that states The 2012 Aurora State Airport Master Plan Update provides the most recent FAA-approved airport layout plan (ALP) drawing for the Airport. The 2019 Constrained Operations Runway Justification Study provided updated aviation activity forecasts and airside facility requirements assessment related to the critical aircraft. The Court of Appeals ruling on the 2012 Master Plan raises real legal questions about the Forecast chapter in as much as the data is built on the Constrained Operations study which in turn is dependent on the unapproved 2012 master plan. Last week's Court of Appeals ruling on a private development next to the Aurora Airport makes clear that expanding the Aurora Airport must comply with Oregon's land use laws and requires it being adopted into the Marion County comprehensive plan, something that hasn't happened since 1976.	